

G. L. Zelensky

RICE AND MORE: ACROSS COUNTRIES AND CONTINENTS



MINISTRY OF AGRICULTURE OF THE RUSSIAN FEDERATION

RUSSIAN ACADEMY OF SCIENCES

FEDERAL STATE BUDGETARY SCIENTIFIC INSTITUTION

«FEDERAL SCIENTIFIC CENTER OF RICE »

G. L. Zelensky

**RICE and more:
across countries and continents**

Krasnodar
2025

UDC 6633.18 : 581.9

BBC 42.11 : 40.9

Z-48

Reviewers

A. Kh. Sheudzhen — Head of the Department of Agrochemistry of the Kuban State Agrarian University named after I. T. Trubilin, Doctor of Biological Sciences, Academician of the Russian Academy of Sciences;

N. G. Tumanyan — Head of the Rice Quality Laboratory of the Federal Scientific Center of Rice, Doctor of Biological Sciences, Professor.

Zelensky G. L.

Z-48 Rice and more: across countries and continents: monograph / G. L. Zelensky. — Krasnodar: Rice FSC, 2025. — 460 p.

ISBN 978-5-906563-88-0

The book contains information collected in the countries of Europe, Asia, Australia, Africa and South America where the author has visited. The information on the trends and methods of rice breeding and cultivation technologies obtained during participation in international congresses, symposiums and conferences devoted to the problems of rice farming, is given. The impressions of visiting cities, museums and exhibitions are also presented. The text is illustrated with photographs by the author and from open sources. The book is addressed to agronomic specialists, as well as readers interested in rice farming.

UDC 6633.18 : 581.9

BBC 42.11 : 40.9

ISBN 978-5-906563-88-0

© Zelensky G. L., 2025

© Rice FSC

PREFACE

**I was drawn to other countries.
Across the oceans and the seas
Plowing through the fields expanses,
My path led forward.**

Traveling to other countries is an important part of learning about the world, along with reading books and watching movies. The thought of being able to see how other nations live makes every cultured person want to go on a journey.

For a specialist engaged in scientific research, foreign trips become a means of enriching knowledge. The first stage of learning about the world is reading books — novels and stories by domestic and foreign authors. Immersing yourself in the texts of the events described, you involuntarily transfer yourself to the world of your heroes, to the times when they accomplished their feats. And if the book, along with a description of the heroes' lives, also shows the beauty of nature in their habitats, then the reader involuntarily enriches himself not only with everyday scenes, but also with pictures of the surrounding world.

At some point in life, there comes a moment when you have the opportunity to see the lives of others with your own eyes, not on TV, but in reality, to breathe the air of cities and countries. And you must definitely use this chance. Otherwise, it may not present itself a second time. I have been convinced of this more than once from my own personal experience.

In terms of foreign travel, I consider myself a lucky person. I have had the opportunity to see the world, to travel across countries and continents. I first visited another country in 1968 as part of a student delegation from the Slavyansk Agricultural College, after completing my third year. It was a three-week trip to Czechoslovakia, which in many ways adjusted our views on the events around us.

While working at the All-Russian Rice Research Institute and the Kuban State Agrarian University, I traveled outside our country more than 40 times in the period 1986–2020. As part of delegations or independently, I visited a number of countries in Europe and Asia, I also went to Australia, Africa, and South America.

During my travels I took photographs and kept short travel notes, in which I noted the main events and places I saw. These notes helped me greatly in recalling what I had seen when I realized that it was time to share the information I had accumulated.

When writing essays about the countries I had visited, I was warmed by the thought that those who read them would also want to see world treasures. And there are a lot of them.

Most of my trips abroad were business trips. These were exchanges of scientific delegations between scientific institutions or participation at the invitation of organizing committees in international congresses, symposia and conferences devoted to the problems of rice growing.

On several scientific trips I was with my wife Olga Vsevolodovna (Italy in 2002, 2007, 2012, Brazil in 2020). We traveled to other countries five times on a tourist package (France in 2010, Czech Republic and Germany in 2014, Türkiye in 2015, Spain in 2016, Austria and Hungary in 2019). Some of the trips are not described here to avoid repetition.

Every time before going abroad we studied the history of the country, using reference books and guides we planned routes for visiting cities, museums and exhibitions. Therefore, the informational value of foreign trips increased significantly.

Our last trip was to Brazil in February 2020 for the International Rice Conference. We managed to return home a week before the general quarantine. The COVID-19 pandemic divided our lives into a period before and after.

Until 2020, we could not only dream about trips, but actually plan our travels. With the introduction of quarantine and against the backdrop of mass diseases of the population of all countries, it became clear that our foreign travels for the near future have probably ended.

If in previous years we lived, figuratively speaking, from trip to trip, then from March 2020 came a period of “digesting” impressions and previously received information. Then came the decision to make at least a brief description of my travels.

However, before describing what I saw in other countries, I think I should at least give brief information about my development in our difficult scientific world. I should say a kind word about my parents and teachers, the educational and work collectives that gave me an education and a start in scientific life.

In the introductory part called “My Roads” I include information about my parents and the school where I received my initial education. I briefly talk

about my studies at the Slavyansk Technical School, my work at the “Kuban” collective farm and my subsequent studies at the Kuban Agricultural Institute. I share information about my scientific growth at the All-Russian Rice Research Institute, my teaching activities at the Kuban State Agrarian University and my current breeding work at the Federal Scientific Center of Rice. I cite some historical facts about each team, note my scientific teachers and senior colleagues from whom I adopted practical experience in working with rice.

I consider it my duty to thank the rectors of the Kuban State Agrarian University I. T. Trubilin, A. I. Trubilin and the directors of the All-Russian Rice Research Institute E. P. Aleshin, E. M. Kharitonov, S. V. Garkusha, who allowed me to combine scientific work at the Research Institute with reading lectures at the University and gave me the opportunity to make numerous trips abroad, as well as my close friends A. Kh. Sheudzhen and S. V. Kizinek. After joint trips abroad they gave me the idea to share my impressions and provided support in writing this book. Special thanks to my wife Olga for her patience, dedication and editorial assistance in preparing the manuscript for publication. I express my gratitude to the translator of this text into English — Zinaida Vladimirovna Krivorotova. Her professionalism makes my impressions from my trips available to foreign readers, my colleagues from other countries.



PART 1. MY ROADS

**After reaching the top, does the road run down?
No, there are new peaks ahead...**

1. Family and School

I was born on May 1, 1950, in a family of ordinary collective farmers and grew up in the Neshchadimovsky farm in the Slavyansky district. My parents: my father — Leonid Stefanovich Zelensky (1920) was a driver, and my mother — Klavdiya Pavlovna (1921) worked in the field unit. My sister Lyuba (1947), after eight years of school, graduated from the Slavyansky Agricultural College, receiving a diploma in Zootechnics. Then until retirement she worked with the “Kuban” collective farm. In 1970, my sister got married, raised a son and a daughter, and now she takes care of her grandchildren.

My father went through the war as a tank driver, returned seriously wounded and passed away in 1975. And my mother lived to be 84, constantly working and giving her warmth to us, her children, and then to her grandchildren. In 2005 my mother left us the day before her birthday.

I had to get married twice. In 1971, we started a family with Galina Zakryva and had two sons — Alexander (1972) and Alexey (1983). In 1989, Galina passed away. Two years later, Olga Krasnikova became my wife, with whom we had a son Pavel (1991). Now the sons are grown up, have their own families and are raising their own children, our grandchildren.

From 1957 to 1965, I studied at the rural eight-year school No. 46. Now it is a municipal budgetary general education institution, the main general education school No. 46. It was opened in 1905 (according to old-timers) by the landowner Neshchadim, the name of the farmstead came from his surname. Initially, the school was a parish school and was renamed many times throughout its history.

Since 2008, the school has been awarded the status of “Cossack educational institution”. The Cossack republic was proclaimed at the school Cossack circle. The ataman of the republic was elected. Classes began to be called kurens, and each kuren was headed by a kuren ataman. The purpose of creating the

Cossack republic is the revival of the spiritual and patriotic traditions of the Kuban Cossacks.



Schoolchildren meet the veterans, 2015

I remember with warmth my first teacher Klavdiya Fedorovna Fedorenko, who taught and raised us from the 1st to the 3rd grade. Klavdiya Fedorovna's great merit is that we, reckless village boys and girls, were given not only basic general education and knowledge, but also an interest in studying the world around us was started. Sixty-five years after coming to the 1st grade and meeting Klavdiya Fedorovna, I submitted for State Trials a new rice variety I had created, named "Klavdiy".

I first learned about rice crop in the 5th grade. A team of farm boys went to weed the rice fields. My mother's brother, Vasily Pavlovich Savchenko, worked as an irrigator on the rice system. He instructed us on how to properly cut reed plants. It was necessary to hold the reed stem with your left hand, and put the sickle into the water and cut the plant at the bottom. The water got into the stump of the stem and slowed down further growth of the weed. We walked barefoot in warm water and did this important work. Uncle Vasily made sure that we did not fool around in the water and did not violate safety precautions. The sharp stumps of the cut reeds could seriously injure our feet. By the way, they paid well for this work — 4 rubles for each completed quota. The knowledge of how to fight reeds, acquired at the age of 12, has remained in my memory to this day.

How could I have imagined then that I would have to work with rice for the rest of my life?

2. Agricultural College

After finishing the 8th grade in 1965, I entered the Agronomy department of the Slavyansk Agricultural College specializing in rice growing. Our tutor, Galina Pavlovna Kondrashkina, was able to create such an atmosphere in the group that each of my classmates strove to study with maximum dedication. It was no coincidence that after finishing our studies, for the first time in the history of the college, our group had 7 excellent students who received diplomas with honors. I was among them.

Some facts from the history of the College. In November 1927, by decision of the Kuban District Executive Committee, an Agricultural Technical School was opened in the village of Slavyanskaya, which began training specialists in the “Field Farming”. In 1932, they began training agronomists in the specialty of “Fruit and Vegetable Growing and Viticulture”. In 1934, the “Beekeeping” department was opened. In the post-war years, training in the specialty of “Agronomy” continued in two forms: full-time and part-time.

In 1960, Ivan Terentievich Meshcheryakov, a participant in the Great Patriotic War, an excellent public education worker, and an honored teacher of the RSFSR, was appointed director of the College. I can say that the students of the College constantly felt the paternal care of Ivan Terentievich.

In 1966, the Agronomy department began training in the specialty of “Rice Sowing”, and in 1967 — “Irrigated Agriculture”.

In 1968, the specialty of “Economics, Accounting and Control” was opened at the College.

In addition to the basic blue-collar jobs provided by the curriculum, the College trained car and motorcycle drivers. By the end of their studies, most of my classmates, in addition to their tractor driver’s license, received the right to drive this type of transport. The documents received were an excellent help in our future work.

In 2004, a branch of the Kuban State Agrarian University (Faculty of Agronomy) was opened in the College. In the following years, training began in the



specialties of “Mechanization of Agriculture” and “Technology and Processing of Agricultural Products”.

In 2013, on the initiative of the District Council of War and Labor Veterans, a new hall of the Museum of Military and Labor Glory was ceremoniously opened in the College. The opening was timed to coincide with the 70th anniversary of the liberation of Kuban from the Nazi invaders.

In addition to studying, we were actively involved in sports and amateur performances. I became interested in cycling. My sports mentor Valentin Burlachenko, who was two years ahead of me, was able to prepare me so well that in 1968 I became the champion of the Krasnodar Region among colleges in the 25 km individual race. This physical training helped me to endure physical and mental stress for many years. For example, during my service in the Soviet Army (1969), participating in regional competitions, I became the champion of the Kyzyl-Orda Region in cross-country running.

The College had an excellent material and technical base. Under the guidance of Nikolai Petrovich Machikhin, we diligently studied tractors, combines and agricultural machinery. After the second year, we were awarded certificates of tractor drivers and most of the guys in our group went to harvest rice at the recently created rice state farm “Ordynsky”. There, after a week-long internship, we were entrusted to work as combine operators, threshing mown rice. In a month and a half, we perfectly learned the SKPR-4 combine and acquired extensive production experience.

The subject “Rice Growing” was taught by Mikhail Aleksandrovich Aleksandrov, and “Land Reclamation” by Vasily Vasilyevich Biryuk. It was they who were able to instill in us love for the rice plant, a crop so unusual for Russian conditions. Working in the rice fields, we were convinced in practice of the correctness of our tutors’ words about the need to comply with the requirements of agricultural technology when growing rice. All the plants, overfed with nitrogen, fell over by the time they ripened and it was very difficult to harvest them.

In July 1968, a delegation of 20 of the best students of the College went to Czechoslovakia under the cooperation program. I was among them. Our delegation was headed by Lidiya Akimovna Eyvaz, Deputy Director for academic work. She was able to organize us in such a way that this very interesting and eventful three-week trip passed without an incident.

After the third year, we had pre-graduation practical training on farms. I did my practical training in the Neshchadimovsky farm, the 4th division of the “Kuban” collective farm. The department manager Dmitry Leontyevich

Chernokoz and Agronomist Aleksey Ivanovich Zavgorodny were not only highly professional specialists, but also very wise mentors. They taught me all the practical basics of agronomic work with field crops and rice. In addition, they managed to instill in me the ability to communicate sensibly with people — machine operators and especially women working in the field units. Here I not only learned the basics of Agronomy, but also fell in love with this difficult specialty. It is no coincidence that the song “A young agronomist went out to the fields” sounds to me like a hymn to our profession. On March 1, 1969, we were awarded diplomas of Agronomist-Rice Grower, and I went to work in my small homeland.

3. The “Kuban” Collective Farm of Slavyansky District

Already on March 3, I arrived at the “Kuban” collective farm to apply for a job. To my displeasure, I was offered a job as an Agronomist-Entomologist. Chief Agronomist Ivan Mitrofanovich Gerus explained the situation to me caused by the lack of such a specialist, and assured me that he would give me the opportunity to work as a rice grower. And, indeed, in April, a plant protection specialist came to the farm and I was appointed foreman of the rice unit created in the 4th department. There, the fields were being prepared for sowing rice. Manager D. L. Chernokoz clearly outlined my rights and responsibilities. They came down to organizing the process of preparing the soil, sowing rice and flooding the fields on an area of 1,200 hectares.

On May 20, we were finishing the sowing campaign and on that day I was handed a summons to join the Soviet Army. My service took place in Kazakhstan, near the city of Aralsk, and ended on June 7, 1971.

After demobilization from the army, I worked during summer with the “Kuban” collective farm, and then entered the Agronomy department of the Kuban Agricultural Institute (later Kuban State Agrarian University), specializing in rice growing. As a student, I did my pre-graduation practice with the “Kuban” collective farm. And after completing my studies, I worked there for a year as an Agronomist. In 1977, after entering Post Graduate Course at the Kuban Agricultural Institute, I moved to the All-Union Rice Research Institute.

In 2022, the “Kuban” collective farm celebrated its 90th anniversary. Since ancient times, dense floodplains overgrown with reeds (bulrush, as the locals

call it) stretched across the farm and around it. The settlement of these lands began in the first half of the 19th century. Descendants of the Zaporozhian Cossacks settled permanently on the high bank of the Protoka River. A patrol headed by the Cossack Baranik was on guard on one of the hills. Suddenly, detachments of Turks appeared. The Cossack died in a heated battle. He was buried on the site of the current cemetery, and the guard post and the farm were named Baranikovsky after him.

The Cossack way of life was communal. Local conditions were not very favorable for agriculture and housekeeping. There was little arable land in the area, mostly in ridges. All the lowlands were overgrown with reeds and were often flooded in spring by the Protoka, a branch of the Kuban River. They had to reclaim arable land from the floodplains. The overwhelming majority of Cossack families lived in poverty. However, despite such conditions, the Cossack poor continued to be replenished by settlers. Soldiers and recruits from other regions of Russia fled here. The October Revolution and then the Civil war divided the population into two irreconcilable classes. The poorest Cossacks did not think about which side to take, what to fight for. They voluntarily joined the detachments that formed the Taman Army in order to defend with arms in hand the world's first state of workers and peasants. After the defeat of the White Guards, Soviet power was firmly and permanently established in the area. People began to work peacefully. The main tools left over from Tsarist Russia were a wooden horse-drawn plough, a harrow, and a hand flail for threshing sheaves. In 1919, the first partnerships for joint cultivation of land (TOZ) emerged in the local farmsteads. And in 1932, on the Baranikovsky farmstead in the Slavyansky district, local residents — peasant Cossacks — formed the “Stalin” collective farm. Agricultural enterprises for joint cultivation of land were also organized in the neighboring farmsteads (Neschadymovsky, Semisvodny, Gubernatorsky). In the collective farms, it became possible to use machinery for cultivating fields and harvesting.

The Great Patriotic War was a huge test for the people of Kuban. Almost the entire male population went to the front. Women and children replaced them in the fields and worked using the remaining equipment. In the summer of 1942, the front rolled up to the Slavyansk region. The farmsteads were occupied by German and Romanian troops. Total looting of the population began. They took everything in sight: animals and poultry, food and household utensils. If anyone tried to resist, they were killed on the spot. My mother, remembering the horrors of the occupation, often repeated: “You can survive any difficulties, as long as there is no war.”





The first machinery in the fields of a collective farm

Three brothers from my mother's family fought during the war, the eldest — Ivan fell in battle in 1943 near Sevastopol.

After the war, the collective farmers revived the economy with great difficulty. Almost all types of work were done manually.

In 1952, on the basis of the "Stalin" collective farm, a merger of small agricultural artels was carried out. Three more collective farms were added: "Karl Marx", "Voikov", and "XVIII Party Congress". The enlarged farm was called the "Kuban" collective farm. Fyodor Prokofievich Rusinov, the head of the "Stalin" collective farm, was elected chairman. The former front-line soldier made great efforts to establish the collective farm.



Work in the fields of a collective farm in the post-war years

The merger of small farms had far-reaching goals. A larger collective farm could solve more complex problems: purchase equipment faster, launch large-scale construction, produce much more agricultural products. It should be noted that those working in the "Kuban" collective farm were lucky with their leaders. The chairmen elected were smart organizers, strong business managers



who skillfully managed the team and the technological process. Here are their names: Fedor Prokofievich Rusinov (1951–1956), Feodosius Andreevich Mamera (1956–1963), Ivan Maksimovich Ryabov (1963–1969), Viktor Matveevich Latokha (1969–1974), Vladimir Viktorovich Simonenko (1975–1999), Nikolay Grigoryevich Kochka (1999–2001), Vladimir Gavrilovich Reznik (2001–2004), Andrey Vitalievich Telegin (2004–2006), Evgeny Vladimirovich Kovalchuk (2007 to present day).

By the mid-1970s the “Kuban” collective farm reached the peak of its development. The main crop, rice, was grown on an area of more than 4,000 ha. Dryland crops occupied about 6,000 ha. The farm had six dairy farms of cattle, a pig farm, three poultry farms (geese, ducks and chickens), an apiary, a fish hatchery, a separate vegetable crops unit, a garden, a melioration unit, a car garage and mechanical workshops. More than 2500 people worked in all divisions of the collective farm.

In the 1990s, as a result of perestroika carried out throughout the country, livestock farming and vegetable production were excluded from the farm as low-profit. Only field crops were left. However, the managers were able to keep the farm from fragmenting and continued its development. Today, the joint-stock company APF “Kuban” is a large, highly efficient farm equipped with modern, high-performance equipment. All types of work on the farm are performed by just over 250 employees — specialists, machine operators and workers. The annual rice yield is 7.5–7.8 t/ha.



Grain harvesting in APF “Kuban”, Slavyansky district

Here, in my small homeland, in the “Kuban” collective farm of the Slavyan-sky district, I received all my practical training in Agronomy.

4. Agronomy Faculty of Kuban Agricultural Institute

From September 1971 to April 1976, I studied at the Agronomy department of the Kuban Agricultural Institute. At that time, the Agronomy department admitted 8 groups, two per specialization: General Agronomy, Tobacco Growing, Irrigated Agriculture and Rice Growing. Our group of rice growers was called AR-57, and by the time we graduated, we had achieved second place in academic performance after group ASH-51, which recruited the best applicants.

Thanks to the wise leadership of our curator, Zinaida Grigoryevna Kovalenko, and the persistent work of the group triangle (leader of the group Grigory Zelensky, Komsomol organizer Nikolay Potapenko and trade union organizer Vladimir Tonkonog), our group moved up from the penultimate place after the first session of the 1st year to the second place after the last examination session in the 5th year. There were three reasons for this situation. Firstly, most of my classmates came from rural areas with poor results in general education subjects, and it was difficult to study during the first three semesters. Secondly, most of the guys entered the Institute after the army service. By the end of the second year, they, following the example of the leader of the group, began to form families (I got married back in August 1971, on the eve of the first year, and a year later I had a son). Everyone's attitude to study and behavior changed dramatically. A businesslike and creative atmosphere was formed in the group. Thirdly, when special subjects began, my classmates began to study well and excellently. Studying was easy for me, I knew a lot after the College. That was why I could afford to take part in the work of Students' Scientific Society and participate in sports events of the Institute's cycling team.

Our lecturers were famous scientists, professors and associate professors: Ivan Sergeevich Kosenko and Zinaida Grigorievna Kovalenko (Botany), Yakov Vasilievich Gubanov and Liliya Vladimirovna Zinevich (Plant Growing), Abraham Pavlovich Dzhulai and Valentina Pavlovna Vasilko (Rice Growing and Irrigated Agriculture), Valentina Vasilievna Efremova and Yulia Tikhonovna Aistova (Genetics, Selection and Seed Production), Vladimir Kharitonovich Zubenko (Feed Production), Evgeny Pavlovich Aleshin, Galina Ivanovna Satalkina and

Galina Stepanovna Krasnikova (Plant Physiology and Biochemistry), Fedor Savvich Baryshman and Viktor Sergeevich Chepurnoy (Forestry), Nikolay Semenovitch Kotlyarov and Evgeny Vasilievich Tonkonozhenko (Agrochemistry), Maria Ivanovna Zyryanova (Geodesy), Yuri Ivanovich Ezhov (Melioration). Dean of the Agronomy Faculty Yuri Nilovich Bagrov lectured on Soil Science. All of them not only gave us professional knowledge, but also awakened in us the desire to engage in scientific research and to learn more about the world around us.

The entire huge staff of the Kuban Agricultural Institute was headed by the Rector, Academician Ivan Timofeevich Trubilin. His efforts and care created cozy and comfortable conditions for the students' study and life.

During our studies, the Institute was actively developing, the main building (a 7-story building), dormitories and apartment blocks for lecturers were being built. We periodically took part in these construction works.

Arriving at alumni meetings, my classmates happily recalled that a part of our work was invested in the construction and development of the beautiful place the Kuban Agricultural Institute, now Kuban State Agrarian University.

5. Postgraduate Study and the All-Union Rice Research Institute

After finishing my studies at the Kuban Agricultural Institute, I went to work at home with the "Kuban" collective farm. It should be noted that when issuing diplomas to two graduates of the Agronomy faculty: Alexander Zagorulko, the leader of group ASH-51, and I were given a referral for admission to Post Graduate course. We were given such an incentive for our academic success and active participation in the social and sports life of the Agronomy faculty.

Alexander immediately took Post Graduate course at the Botany department, and I went to the collective farm, which gave me a referral to study at the Institute.

But I really wanted to enter Post Graduate course. The dream of creating rice varieties which arose during my studies at the College and was fueled during my studies at the Institute, only grew stronger in production conditions. My colleagues on the farm knew about this. As a result, the management of the "Kuban" collective farm met me halfway and let me go to enroll in Post



Graduate course at the Kuban Agricultural Institute. Initially, I thought about combining work on the collective farm and Post Graduate course. But two persons convinced me that nothing would come of it. Mikhail Vasilyevich Zenzin, an Agronomist and seed grower at the “Kuban” collective farm, shared his experience. He entered the Post Graduate course of the Kuban Agricultural Institute with Professor E. P. Aleshin, but was unable to complete the scientific work program under the conditions of the collective farm. The farm deals with its production problems but not scientific ones. The second was Professor Alexander Pavlovich Smetanin, Head of the Selection department at the All-Russian Rice Research Institute. After I successfully passed the entrance exams for Post Graduate course, Alexander Pavlovich was appointed my scientific supervisor. He set a categorical condition: “If you want to do science and especially selection, join the Institute.” I had to agree, despite the lower salary at the Institute than at the collective farm and no accommodation. At the end of March 1977, I was enrolled in a correspondence Postgraduate Program at the Department of Breeding and Seed Production of the Kuban Agricultural Institute, and on March 31 I was hired to work in the Breeding Department of the All-Union Rice Research Institute.

At the All-Russian Rice Research Institute I was engaged in the propagation of new rice varieties and, at the same time, conducted postgraduate research on intra-varietal variability and the development of methods for their primary seed production.

In August 1981, I was appointed Head of the Laboratory of Source Material of the Selection Department. The salary increased, but my workload also increased sharply. More than 20 people worked in the laboratory. Various studies were conducted: they formed and studied a rice collection, carried out hybridization and propagation of hybrids, and conducted research on rice mutagenesis. The Head’s responsibilities included not only monitoring the progress of all work, but also creating comfortable working conditions for research staff and laboratory assistants. In addition, it was necessary to solve numerous economic and general issues, participate in the work of the Academic Council of the Institute and various commissions.

To improve living conditions, our family was provided with a room in the Institute’s hostel in 1978, and in 1983, after the birth of our second son, a second one was added.

In April 1982, at the All-Russian Rice Research Institute, I was assigned to conduct scientific work on a new research topic: “Breeding Rice Varieties for Resistance to Blast”. To carry out this topic, an interlaboratory group was

created at the Institute consisting of specialists in Genetics (Titarenko L. N.), Immunity (Kharchenko E. S.) and Breeding (Zelensky G. L.). An infectious nursery (IN) was organized in the Georgian branch of the All-Russian Research Institute of Phytopathology (the city of Kobuleti) to evaluate breeding material for resistance to blast, and then to blight. In 1986, specialists from the Institute of Helminthology (Moscow) joined our research and began evaluating rice varieties for resistance to nematodes. The result was a large, comprehensive work on breeding for immunity, which was carried out very intensively.

At that time, a new phytotron began operating at the All-Russian Rice Research Institute, including artificial climate chambers (ACC), two greenhouses and a large plant house. This allowed us to set up work on a year-round cycle. Over 10 calendar years, we had 17 field seasons. It was during this period that we managed to complete the entire breeding cycle from the selection of parental forms in the IN, hybridization in the ACC, obtaining hybrid populations, evaluating them in the IN, selecting elite plants to studying in a competitive test, determining the genotypes of resistance in the ACC of the All-Russian Research Institute of Phytopathology and transferring new rice varieties resistant to blast to the State Trial.

In 1985, I passed my Ph.D. defence on rice seed production, and 8 years later, in 1993, I submitted my doctoral dissertation “Breeding Rice Varieties for Resistance to Blast, Rice Leaf Nematode and Bacterial Blight in the Conditions of the Russian Federation”. The defense was successful in the Dissertation Council of the Kuban State Agrarian University with a unanimous vote.

6. Head of the Department at Kuban State Agrarian University

In 1995, I was invited to work part-time as a Professor at the Department of Breeding and Seed Production at the Kuban State Agrarian University, and in January 1996, the Rector I. T. Trubilin offered to head this department. I could not refuse the Rector, but agreed on the condition that I continue breeding work at the All-Russian Rice Research Institute.

For 20 years, I worked as the Head of the department, lectured to students on Genetics, Breeding and Seed Production, as well as Variety Investigation.



I supervised the scientific work of post graduate and undergraduate students. At the same time, I created rice varieties.

Invaluable assistance in my development as a Head of the department and lecturer was provided by the Rector Ivan Timofeevich Trubilin, Vice-Rectors Nikolai Semenovitch Kotlyarov and Yuri Dmitrievich Severin, Professors of the Agronomy faculty Yakov Vasilievich Gubanov, Nikolai Grigorievich Mal-yuga, Georgy Evseevich Gonnik, Alexander Semenovitch Naidenov, Valentina Vasilievna Efremova, Yulia Tikhonovna Aistova, Valentina Pavlovna Vasilko, who suggested how to solve this or that problematic issue, shared their rich pedagogical experience.

In September 2016, I handed over the leadership of the department to Sergei Vladimirovich Goncharov, whose opponent I was while he defended his doctoral thesis, and I myself moved to the position of Professor.

In 2022, the Kuban State Agrarian University celebrated its 100th anniversary. The history of the university begins in 1918, when the agricultural department was formed at the Kuban Polytechnic, where Agronomists were trained. In March 1922, by decision of the Kuban-Black Sea Regional Council of Workers, Peasants, Cossacks, Red Army and Mountain Deputies, the Kuban Agricultural Institute was formed to train agronomists of a wide profile.

In 1922, the first 12 specialists graduated, in 1923 they were 68, and in 1924–120.

The staff was distinguished by its high scientific qualifications. There were 15 professors, including: V. S. Bogdan, A. I. Droboglav, I. I. Ivanov-Yudin, A. P. Loidis, A. A. Maligonov, P. I. Mishchenko, A. I. Smirnov, S. I. Tyuremnov, A. A. Shmuk. During this period, the graduates of the Institute I. S. Kosenko, A. M. Ulitin, V. S. Pustovoit joined the lecturers.

Among the first graduates were the famous scientists and breeders Vasily Pustovoit and Pavel Lukyanenko. The result of 67 years of work by Vasily Stepanovich Pustovoit was the creation of a new crop — oil sunflower. Pavel Panteleimonovich Lukyanenko created more than 40 varieties of winter wheat.

In 1941, the Great Patriotic War seriously affected the Kuban Agricultural Institute. 246 employees and students went to the front, five of whom received the title of Hero of the Soviet Union. For services in training agricultural specialists and for the development of scientific research, by decree of January 7, 1967, the Presidium of the Supreme Soviet of the USSR awarded Kuban Agricultural Institute the Order of the Red Banner of Labor.

From 1970 to 2007, the University was headed by Ivan Timofeevich Trubilin, Hero of Socialist Labor, Hero of Labor of Kuban, Honorary Citizen of

Krasnodar, Honored Scientist of the Russian Federation, Academician of the Russian Academy of Sciences, Doctor of Economic Sciences, Professor, whose name is inextricably linked with the traditions of the University and the history of its formation.



Buildings of the Kuban Agricultural Institute and State Agrarian University

In 1991, the Kuban Agricultural Institute was transformed into the Kuban State Agrarian University. Now the University is named after I. T. Trubilin.

Over the entire history of the University, more than 140,000 specialists have been trained and released, including more than 9 thousand representatives of Asia, Africa and Latin America. Among the graduates of the University are 46 Heroes of Socialist Labor, and six of them got this award twice.

In 2007, Alexander Ivanovich Trubilin headed the Kuban State Agrarian University. The priority direction was the innovative development of educational and scientific activities, strengthening the University material and technical base.

Today the University complex is a large modern student campus with a well-developed infrastructure. On 174 hectares there are 22 educational and educational-laboratory buildings, 21 student hostels for 8.5 thousand people, 2 research institutes (Research Institute of Biotechnology and Certification of Food Products, Research Institute of Applied and Experimental Ecology),

Botanical Garden with an area of 41 hectares, an Experimental Station, an Artificial Climate Center, Volunteer and Linguistic centers, a library with a collection of about 1 million publications, five museums, a student clinic, a student catering plant, an indoor sports complex with a swimming pool and a climbing wall, a stadium, tennis courts, a football field according to UEFA standards, a complex of sports grounds in the student campus. The University structure also includes two highly profitable educational and experimental farms “Kuban” and “Krasnodarskoye”, which are agro-technoparks, the Krasnodar Regional Institute of Agribusiness and the health complex “Krinitsa” on the Black Sea coast.

The University trains about 16 thousand students at a time in 17 faculties. More than 1000 lecturers successfully carry out the educational process. Among them are 10 Academicians of the Russian Academy of Sciences, more than 230 Doctors of Science and Professors, more than 600 persons with Ph. D. degrees and Associate Professors. I was lucky to be a part of the teaching staff since 1995.

Comfortable working conditions have been created for lecturers, and an ideal environment for students to study and develop scientifically.

Working for 25 years with a large number of students, I managed to select more than 50 of the best and involve them in scientific research. Most of these graduates went to work in various scientific institutions of Kuban. Many of them have passed the defence of their Ph. D theses, and some have got degrees of Doctor of Sciences.

My senior colleague, Professor Leonid Markovich Maltabar, grapes breeder, once told me that the “selection” of scientists is no less important than the creation of new varieties.

7. Federal Research Center of Rice

While working at the Kuban State Agrarian University, I continued to work part-time at the All-Russian Rice Research Institute as the Head of the source material laboratory. In 2007, the division of the breeding department into laboratories was cancelled, allocating groups according to breeding areas, and I became a Leading Research Fellow, the executor of a specific breeding theme. There were no more concerns of the Head and I had more time for practical breeding and supervision of postgraduate research.



In 2019, I was offered to be elected by competition for the position of Chief Research Fellow of the Breeding Department of the Federal Scientific Center of Rice, and to remain a Professor at the Kuban State Agrarian University on a part-time basis. I accepted this offer only in order to pay more attention to breeding work, reproduction and introduction of new rice varieties.

Several historical facts about the Rice Center. In 1931, the All-Union Research Institute of Rice Farming was created in Krasnodar to develop current problems of rice growing. In 1937, it was reorganized into the All-Union Rice Experimental Station and in 1956 it became the Kuban Rice Experimental Station. Based on the latter, the All-Union Rice Research Institute was established in 1966. In 1991, it acquired the status of All-Russian Institute. In 2019, the All-Union Rice Research Institute was transformed into the Federal State Budgetary Scientific Institution “Federal Research Center of Rice”. The Center provides scientific support for the activities of the agro-industrial complex of the Russian Federation on rice and vegetable growing.



**Federal State Budgetary Scientific Institution
“Federal Research Center of Rice”**

Initially, the created Institute concentrated all scientific research in the field of rice growing and collected the best scientists, who later made the glory of Russian rice science. Among them, the following personalities stood out: Academicians B. A. Shumakov and B. A. Neunylov, Professors P. A. Witte, G. G. Gushchin, A. P. Dzhalai, P. S. Erygin, V. B. Zaitsev, E. B. Velichko, N. B. Natalin, E. P. Aleshin, A. P. Smetanin, N. S. Tur.

In different years, the Rice Institute was headed by M. G. Ivanov, V. B. Zaitsev, E. I. Ushakov, N. G. Klimko, V. P. Dotsenko, A. T. Shadrin, A. P. Dzhalai, A. P. Smetanin, I. T. Efimov, G. A. Romanenko, E. P. Aleshin and E. M. Kharitonov.

Since May 2015, the All-Russian Rice Research Institute (now the Federal Scientific Center of Rice) has been headed by S. V. Garkusha. To implement innovative breeding programs, the Federal Scientific Center of Rice conducts fundamental research in the field of Genetics, Physiology and Biotechnology. The employees of the technology center have developed intensive and energy-saving technologies for rice cultivation with the integrated use of fertilizers, biologically active substances and plant protection products.

In 2019, a team of rice scientists (S. V. Garkusha, V. S. Kovalev, V. N. Shilovsky, G. L. Zelensky, Zh. M. Mukhina, E. V. Dubina, L. V. Esaulova, S. V. Kizinek, P. I. Kostylev) was awarded the 2018 Russian Government Prize in Science and Technology for “Creation and implementation of rice genetic resources resistant to biotic and abiotic stressors using postgenomic and cellular technologies to solve the problem of import substitution and ensure food security of the country”.

My scientific growth took place in a wonderful creative atmosphere, which existed in the All-Russian Rice Research Institute in general and the Selection Department in particular. In 1977, I was hired by the Director Gennady Alekseevich Romanenko, now the Vice-President of the Russian Academy of Sciences, a year later he was replaced by Evgeny Pavlovich Aleshin. I had the opportunity to work with him for 20 years, until 1998. Under him, I grew from a junior research fellow to the Head of the laboratory and Doctor of Sciences. The Director had a valuable quality for us — he did not interfere with the work of his employees. He set the task and asked for the result. Most of the current issues were resolved by the deputy directors: Vladimir Fedorovich Rudenko and Valery Trofimovich Rymar — for science, Boris Kirillovich Gordeychuk — for production.

The Selection Department was headed by Doctor of Agricultural Sciences Alexander Pavlovich Smetanin who carried out practical selection of mid-season varieties. A businesslike creative atmosphere reigned in the department. The following researchers with Ph. D. degrees were responsible for the main scientific topics: Valentin Nikolaevich Shilovsky — selection of early-ripening varieties, Nikolai Nikolaevich Davydov — research on mutagenesis, Lidiya Alekseyevna Kucherenko — development of biotechnology, Vladimir Alekseevich Dzyuba and Grigory Arsentyevich Singildin — study of rice genetics, Galina Danilovna Los — hybridization and propagation of hybrids, Tamara Georgievna Mazur — formation and study of the collection, Nina Petrovna Volkova — development of elements of agricultural technology for new rice varieties. All of them not only conducted scientific research, but also taught

young employees and postgraduates all the intricacies of performing laboratory, vegetation and field experiments. More than 50 persons worked in the Selection Department, most of whom were under 30 years old. Among the young colleagues were postgraduate students: Lidiya Belaya, Lyudmila Titarenko, Viktor Kovalev, Petr Kharchenko, who studied at the All-Union Research Institute of Plant Growing named after N. I. Vavilov. Subsequently, they passed the defence of their Ph.D. thesis, and V. S. Kovalev and P. N. Kharchenko also defended their doctoral thesis. P. N. Kharchenko is now an Academician of the Russian Academy of Sciences.

In 1978, a postgraduate program was opened at the All-Russian Rice Research Institute. The following postgraduate students came under the supervision of A. P. Smetanin: Eduard Davoyan from the local Biotechnology Laboratory, Gennady Zagvazdin and Gennady Larin from the Primorsky branch of the All-Russian Rice Research Institute, Valery Sudin from the Ukrainian Rice Research Institute, Umyrzak Aimukhambetov from the Kazakh Rice Research Institute, Alesha Kurbanbaev from the Uzbek Rice Research Institute, Urazbay Abylayev from the Karakalpak branch of the Uzbek Rice Research Institute. As a result, an international scientific school began to operate in the department, in which we took an active part. After the postgraduate program, the guys returned to their regions and headed the Rice Selection Departments there.

In addition to selection issues, we studied other rice growing issues, learning from our senior colleagues, who helped us in every possible way: Genetics — Vladimir Alekseevich Dzyuba (Dr. Biol. Sci.). Seed Production — Anatoly Ivanovich Aprod (Dr. Agric. Sci.), Rice Physiology — Nikolay Vasilyevich Vorobyov (Dr. Biol. Sci.), Melioration — Vyacheslav Alekseevich Popov (Dr. Tech. Sci.), Weed Control — Vladimir Dmitrievich Agarkov (Dr. Agric. Sci.), Rice Growing Economics — Vladimir Nikolaevich Polozhiy (Dr. Econ. Sci.). All of them made a great contribution to the training and scientific development of young scientists. In 1998, the All-Russian Rice Research Institute was headed by Evgeny Mikhailovich Kharitonov (Dr. Sociol. Sci.), a smart organizer with extensive experience in management. In this difficult time of crisis, after the collapse of the USSR, Evgeny Mikhailovich managed to organize the work of the scientific team so that the rice growers of Kuban managed not only to prevent a decline in rice production, but also to begin dynamically moving forward. The scientists of the All-Russian Rice Research Institute, headed by the Director, played a huge role in achieving the Kuban rice yields 7.0 t/ha and above. It is no coincidence that he was elected an Academician of the Russian Academy of Sciences. E. M. Kharitonov made a great contribution to the de-

velopment of international cooperation of the institute's team. Regular trips of the All-Russian Rice Research Institute scientists to other rice-growing regions of the country and abroad and the arrival of numerous foreign delegations to Kuban have become common practice. The inclusion of Russia in the International Consortium of Rice Growers confirms the authority of the scientists of the All-Russian Rice Research Institute.



Harvesting of rice breeding crops

In 2015, Doctor of Agricultural Sciences Sergei Valentinovich Garkusha, who previously headed the Ministry of Agriculture of the Krasnodar Territory, was appointed Director of the Institute. Having significant experience in managing production teams and the Ministry, S. V. Garkusha was able to bring a fresh stream to the work of the Institute scientists. In 2022, he was elected a Corresponding Member of the Russian Academy of Sciences.

In 2019, the All-Russian Rice Research Institute was transformed into the Federal Scientific Center of Rice. The FSC of Rice included two branches: "Rice Breeding Plant "Krasnoarmeysky named after A. I. Maistrenko", the Director D. Sc. Sergey Vladimirovich Kizinek and the Elite Seed Experimental Station "Krasnaya", Director Evgeny Petrovich Maksimenko.

Federal State Budgetary Scientific Institution "Federal Scientific Center of Rice" together with its branches annually produces up to 5.500 t of rice seeds of the highest reproductions and supplies seeds to rice-growing farms of the



Krasnodar Territory and other regions of Russia, as well as neighboring countries: Kazakhstan, Uzbekistan, Kyrgyzstan.

Currently, the main tasks of the Federal Scientific Center of Rice are:

- Creation of high-yielding varieties of rice, vegetables and melon crops;
- Production of high-quality seeds;
- Development of resource-saving and environmentally friendly technologies for rice cultivation;
- Training of highly qualified scientific personnel;
- Promotion and implementation of scientific achievements in production.

The Federal Scientific Center of Rice is one of the leading research centers in the country. It has created a unique gene pool for rice, vegetables and melon crops. The selection of rice varieties for various conditions and technologies is carried out by 4 groups under the supervision of experienced scientists V. S. Kovalev, G. L. Zelensky, N. V. Ostapenko and A. M. Ogly, a student of V. N. Shilovsky, who retired in 2018.

My labour contribution to the achievements of the Federal Scientific Center of Rice is represented by more than 30 different types of rice varieties, 22 of which were included in the State Register of the Russian Federation and approved for use. The rice variety Leader has been zoned in the Republic of Kazakhstan since 2010 and now occupies more than 70% of the rice area in the Kyzylorda region.

Working with rice and certain successes in selection gave me the opportunity to visit many rice-growing countries, get acquainted with the work of local rice growers. At the same time, I saw cultural attractions and got acquainted with the life of other peoples.

I share my impressions from these trips with my readers.



PART 2. MY TRAVELS

1. Hungary, 1986

According to available data, in the post-war years, rice growing in Hungary developed very effectively. There were built 50,000 ha of rice systems in the country. By 1980, the Hungarians were completely self-sufficient in rice. The rice-growing center was located in the city of Szarvas, where the Research Institute of Irrigation was located. Here, Professor Ibolya Simon-Kiss conducted rice breeding work.

Close scientific ties were established between the All-Union Rice Research Institute and the Hungarian Research Institute of Irrigation, and a cooperation agreement was concluded. An exchange of delegations of scientific staff took place annually. Ibolya Simon-Kiss came to Krasnodar almost every year. Our senior colleagues also regularly visited the city of Szarvas.

In May 1985, I passed the defence of my Ph.D. thesis and Viktor Savelyevich Kovalev did the same in November. At the Selection department event to celebrate the New Year of 1986, the Head of the department, A. P. Smetanin, announced to the staff that it was the turn of young Ph.D. colleagues to go abroad. We thanked the Head for his trust, although in our hearts we did not really believe his words after the third drink.

It was 1986, the sowing season was over, but no one remembered our trip abroad. We also kept a modest silence. It was even more unexpected when in June we were called to the HR department and told to fill out forms for those traveling abroad. However, it was only at the end of October that the Deputy Director for scientific work V. F. Rudenko invited us for a briefing, since the date of our departure to Hungary would soon be announced from the USSR Ministry of Agriculture.

And indeed, after the November holidays, we were given documents and tickets for a trip to Moscow, and from there to Hungary. Having arrived in Moscow, we went to the Ministry of Agriculture to see Valentina Petrovna Konokhova, who supervised the rice program. She was our fellow countrywoman, often came to Krasnodar, was acquainted with many rice growers, so she greeted us very warmly. She asked about current affairs, our plans for the

future and gave us a very detailed briefing on what we could do in Hungary and, especially, what we could not. Otherwise, this would have been our first and last trip abroad. A similar situation is vividly described in the song by V. Vysotsky "Trip Abroad". We listened attentively to Valentina Petrovna, signed the necessary papers and promised to behave well abroad.

We stayed overnight at the Ural Hotel near Exhibition of Achievements of National Economy, or VDNKh for short. Our flight to Budapest was scheduled for 8:00 in the morning, so we had to be at the airport no later than 5:00. We ordered a taxi for 3:00 and fell asleep peacefully. We woke up from a loud knock on the door. It was already about 4 o'clock, and it was the taxi driver knocking on the door. He had arrived at the hotel on time, but we did not appear. He waited, and then went into the hotel to wake up his passengers. We were grateful, otherwise our trip would have been a disaster. The taxi driver was an experienced and conscientious person, had been working as a taxi driver for many years, had seen various cases and heard the sobs of people who had missed their plane. He told us all this while we were rushing to the airport. It took us a little over an hour to get to Sheremetyevo-2. The streets were empty, and the driver was driving at top speed. We made it!

In Budapest, an employee of the Institute was waiting for us with a car, then he accompanied us almost constantly on our trip around the country. He spoke Russian well, and it even seemed to us that he was from the authorities. But we behaved very correctly, so there were no complaints.

The city of Szarvas is located in the south-eastern part of Hungary. It is a small, very clean, green and cozy town with a population of about 20 thousand people. Almost all the streets are planted with fruit trees, mainly plums.

Later we were told that the population makes "Slivovitz" from plums, similar to our moonshine. Part of the drink was left for personal consumption, and the surplus was handed over to the procurement office. The production of slivovitz by the population was approved by the state.

The program of our stay was intense. All 9 days were scheduled down to the hour. We arrived at the Irrigation Institute where we were met by Professor Ibolya Simon-Kiss. She told us about the research being conducted at the Institute, showed us the fields where scientific crops were placed. The harvesting of the experimental plots had already been completed. Only late rice samples from the collection remained in the field.

Then we were taken around the farms; we looked at the rice systems where capital planning was being carried out. The rice had already been harvested by this time. We visited the K-700 tractor repair plant, then the field where a



new rice system was being built, and then the incubator for breeding pheasants and bustards.



The centre of the city of Szarvas

As part of the cultural program, we were taken to Lake Balaton — a world-famous resort. Indeed, this was a place with stunning views. The day spent by this lake remained in our memory for a long time.

On almost all our trips, we were accompanied by Ibolya and Maria, a Russian translator. Maria was Russian from Moscow, studied at the Timiryazev Agricultural Academy. Before graduation, she married a fellow student, a Hungarian, and was teaching Russian at a technical school there for over 20 years. We were driven in a Soviet Niva car. One day, we were driving along a road along a forest belt. Suddenly, a female pheasant flew across the road from the left. She successfully flew over, and a pheasant flew out after her and hit the car radiator. The hit pheasant fell onto the road. We all gasped, and the driver didn't even slow down. I couldn't resist asking:

— Why didn't you stop and take the hit pheasant?

— Oh, you can't, today is Wednesday, and hunting day is Saturday. A month ago, I hit a hare on the wrong day and took it. There was a traffic police post 5 km away. They stopped me and said that at 21st km I hit a hare, they demanded to open the trunk. As a result, the fine is 100 times the cost of the hare.

— How did they find out?

— There is a microphone on each pole. Anyone who sees a violation calls the inspector and receives a bonus of 10% of the fine. This law has been adopted in the country and the population actively uses it.



Lake Balaton

Having visited the incubator for breeding pheasants and bustards, we learned that Hungary adopted a state program to restore the population of these birds. Next to the incubator building there were two large enclosures for pheasants and bustards - a mesh fence 3 m high. Chicks hatched in the incubator were released into the enclosure. They grew there until they started flying. Birds that could fly over the fence went into the wildness, and the rest continued to be fed there.

The country's population knew about this program. Residents found pheasant or bustard eggs in forest belts, collected them and handed them over to an incubator receiving a decent reward.

November was a pheasant hunting season. On Saturday, we saw a car with hunters returning home. It was a truck specially equipped for hunters. They were sitting on benches along the sides, and in the middle, on a stand, hung pheasants, several dozen roosters. They did not shoot hens there. We were told that on the day of the hunt, club members received permits and guns, which were stored in the society safe. They hunted in a team. Each could kill one rooster. If someone killed more, then he would take one for himself, and handed the rest over to the society. Everything was strictly regulated.

It should be emphasized that everywhere, at the institute, cooperatives, at the plant, in other organizations, we were greeted very warmly. As a rule, the CEO started and then the specialists continued the conversation. They showed us a lot, asked us questions, showed genuine interest in life in the USSR. Coffee and vodka were put on the table for each conversation. We politely refused the vodka, and drank the coffee at first to try the quality, and then out of respect for the hosts. A week later, we realized that we had drunk more coffee than the annual norm. We were told that coffee was more than a national drink for Hungarians. They drank it often and a lot. As one colleague said, his morning started with a cup of coffee, and only then he woke up.

The second thing that surprised us was the amount of pork produced and consumed per capita. In 1985, Hungary ranked first in the world in this indicator. In fact a lot of meat was served for lunch almost everywhere.

During all our trips, we were always accompanied by a translator, Maria. She asked us in advance what we would like to buy as a souvenir of Hungary. There was one peculiarity there that we did not know about. There were shops near factories and plants where they sold products without a markup. So, one day we visited a shop at a shoe factory. We saw that one woman was carrying out more than 20 boxes of shoes and loading them into her car. We asked Maria why she was buying so many. The answer amazed us. This woman had her own shop on the highway where tourists drove by, and she could sell these shoes with 25% markup.

— But this is speculation! — we exclaimed.

— No, for you it is speculation, but for us it is a business permitted by law.

We were even more surprised when we visited the “Russian Book” store. It was filled with colorfully decorated books: complete collections of almost all our famous writers, various historical novels, etc. Today our book shops are full. But back then, in the 1980s, we had a terrible shortage of books. The older generation remembers how difficult it was to get new books. There were so many new books there that our eyes ran wild. It was difficult to choose. There

was one limitation — luggage on the plane weighing no more than 20 kg was allowed and books were heavy.

After much thought, I bought a three-volume set of “Russian Folk Tales.” In the following years, I turned to them many times, reading them to my children. There is so much wisdom in these tales! You can find answers for all occasions.

We left for home with a vague feeling. It seemed that the Hungarians lived better than us. There was practically no shortage of goods. But everyone worked very hard. As a young colleague of Ibolya told us, in addition to his scientific work, he grew hot peppers on a rented plot of land. After harvesting, he dried some of the fruit and made powder, and handed over the rest to suppliers. The price of the powder was 10 times higher than that of raw fruit, but there was nowhere to dry it.

Ibolya said that the Hungarians were very rational in everyday life. For example, she had a small passenger car “Trabant” with a plastic body and a two-cylinder engine for personal use. She used it instead of a bicycle with a roof from the rain, to go to work. It used about 2 liters of gasoline per 100 km and took up little space in the parking lot. But she used a company car for trips to farms.

And one more episode at the airport before the flight home, which we remembered for a long time. We had already passed customs control and, while waiting to board, were watching the bustle of passengers. A group of girls were going through customs checks behind us. As we later learned, they were Cubans who, after graduating from a textile college in Hungary, were returning home via Moscow. There were about 50 of them, completely different types: from a white-faced Spanish woman with black hair to a typical African woman. The sight was amazing for me. Victor had worked in Cuba for two years, so he looked at them calmly. Among this whole company, one girl stood out with pronounced features of an African woman, but white-skinned and with red curly hair. Curvy, dressed in a pink pantsuit and very noisy, she stood out sharply among her friends. It all started with the fact that the customs officer did not let her through, since her suitcase weighed more than 20 kg and she needed to unload some of her things. She pretended not to understand Hungarian, waved her arms and said something loudly to two friends who were nearby and tried to help her.

Victor knew Spanish well; he listened to them and translated for me. We decided to intervene.

— Distribute her excess luggage into different suitcases, where the weight is less, — Victor said to one of the girls in Spanish.



They were happy with the practical advice, quickly distributed the things into other suitcases, and eventually successfully passed the border checkpoint.

The plane was huge — IL-86 — and for some reason half full. Everyone sat where they wanted. At that time, passengers were given wine on international flights. After receiving the drink, all the Cuban girls gathered around us and thanked us for our help. Victor chatted cheerfully with them in Spanish, answering endless questions. He told them how he worked in Cuba, asked about their studies in Hungary, and I just nodded my head. The girls were surprised that I didn't speak Spanish. I answered them briefly in English, which I had begun to study intensively by that time. There in Hungary, I made a firm decision to take English seriously, because I realized that without the language there was nothing to do abroad. But I was able to do this only in 1989, when I went on a special 10-month course with time off from work.

Having arrived in Moscow, we said a warm farewell to our new acquaintances. They were flying in transit to Havana, and we went through customs inspection.

Following the trip to Hungary, we wrote a report and then prepared a joint article on Hungarian rice growing, "Rice Breeding and Agricultural Technology in the Hungarian People's Republic," which was published in the journal "Breeding and Seed Production" in 1989. Below I will briefly provide information from this article on the state of rice growing in Hungary in the 1980s.

"The rice-growing regions of Hungary are among the northernmost in the world (located above 47° north latitude). The conditions for cultivating this crop are not favorable enough here; only early-ripening varieties with a growing season of up to 110 days can be grown.

Rice breeding work in the republic began in 1933 and is carried out at the Irrigation Institute (Szarvas). Until the 1970s, the main areas were occupied by varieties from the USSR — cold-resistant Dungan-Shaly and early-ripening Dubovsky 129, zoned in 1951 and 1956. Despite their insufficient resistance to blast and lodging, they were cultivated there for more than 20 years. In 1967, the local variety Kakai 203 was zoned, since 1975 — Sarvashi Karchu, 1978 — Nucleoriza, since 1980 — Mutashaly, since 1983 — Orizella. In subsequent years, the M-225 variety was zoned and Kalarish was recognized as promising. All varieties are sown in production, but the largest part of the area (about 80%) is occupied by Nucleoriza and M-225. Traditionally, varieties with an elongated grain are grown in Hungary, but recently the M-225 with a short grain has become more widespread. Since the purchase prices for varieties are not differentiated depending on the grain shape, farms are reorienting

themselves to growing more productive short-grain forms. This trend may also affect breeding programs.

The main requirements for the varieties being developed are their early maturity, resistance to blast and lodging, high technological qualities of grain, suitability for harvesting by direct combining. In this regard, Hungarian breeders pay great attention to replenishing their collection with the best foreign varieties. They exchange collection material with breeders from 17 countries, including the USSR.

The Irrigation Institute participates in the work on testing varieties being developed at the International Rice Institute (IRRI, Philippines). A series of 200 samples is studied for two years, and then updated. A report on the test results is sent to IRRI, and the selected samples are added to the Hungarian National Research Institute collection. The best of them are included in hybridization.

Hybridization is carried out once every two years — 80–100 combinations. It is carried out in the summer in a greenhouse, where high air humidity is maintained. Most often, simple crossings are used, involving zoned varieties or lines obtained on their basis as one of the parent forms. Flowers are castrated pneumatically or thermally — by immersing panicles for 10 minutes in water at a temperature of 43°C. Pollination is performed with fresh pollen on the day of castration. The efficiency of hybridization is low and no more than 15–20 grains are obtained for each combination.

Hybrids F1 are grown in a winter-spring greenhouse, F2 and subsequent generations are sown in the field on plots of 12–15 m², 300 grains per 1 m², with an inter-row spacing of 24 cm.

Panicle selections are carried out in hybrid populations F2 and F3, in individual combinations up to F4–F6. Grain from each panicle is sown in a row 2.2 m long, inter-row spacing 20 cm (nursery A). Annually from 12,000 to 30,000 families are obtained. In splitting families, the selections are repeated. Non-splitting families (usually after one or two reseeds by panicles in nursery A), meeting the criteria of positive selection, are used for sowing in nursery B.

In nursery B, varieties are sown on plots of 40 m² in fourfold repetition and studied for one year. In the next nursery (C), the plot area is increased to 70 m² and the testing is carried out for three years, after which the best variety is submitted for state trials.

In the final stages of the selection process, varieties are tested for resistance to low temperatures, germinating seeds for 14 days at a temperature of 12–13°C. In addition, they are tested for resistance to blast in the conditions of an infectious nursery — on single-row plots of the type of a selection nurs-



ery. The disease-sensitive Dungan-Shaly variety is sown every two rows as a source of infection. Additionally, the plants are inoculated during the panicle emergence phase. The disease-resistant Ungi 9 variety serves as a control.

The varieties submitted for state trials also undergo extensive production testing in accordance with the agricultural technology developed for them — in 15–20 farms out of 29 farms cultivating rice. At the same time, along with new varieties, all zoned varieties are sown. Annual comparative testing of new and zoned varieties in different environmental conditions allows choosing the variety most suitable for production in certain areas. The creation of new varieties is inextricably linked with the development of crop cultivation technology. Long-term study of various crop rotations has shown that in Hungarian conditions on good soils the highest rice yields can be obtained after alfalfa or clover of two years, on poor soils — after three-year alfalfa. Rice yields after alfalfa reach 5–7 t/ha, and with subsequent two-three-year cultivation it decreases annually by 1 t/ha. Growing a dryland crop as a predecessor to rice for one year increases its yield by 1.5 t/ha.

For most soils in rice-growing regions of Hungary, the optimal nitrogen rate is 120–140 kg/ha (a. i.). Much attention is paid to the issues of rational use of mineral fertilizers. The possibility of reducing nitrogen losses from the soil using nitrification inhibitors is being studied. Phosphorus fertilizers are applied to rice at a rate of 90–100 kg/ha (a. i.), and potassium fertilizers are recommended only for poor soils.

The most favorable time for sowing rice in Hungary is the last ten days of April. At later dates, the yield is higher on crops without embedding seeds in the soil. Such sowing with a reduced seeding rate (about 4.5 million seeds/ha) is used in farms on an area of no more than 700 ha.

Particular attention is paid to the planning of checks. Laser planners are used to perform this work allowing the checks to be leveled with a deviation from the horizontal line no more than ± 3 cm. Such planning provides a yield increase of 0.5 t/ha, which fully covers the costs.

Hungarian rice growers widely use the Soviet experience of growing rice. In 1983, they purchased a license for the technology of its cultivation in the USSR.

In order to rationally use water for irrigation, the Irrigation Institute was developing a technology for cultivating rice with periodic sprinkling. To select varieties suitable for such technology, they were tested in small-plot experiments. In 1986, 30 varieties were studied on an area of 1 ha, and in 1987, the best of them was sown in two farms on an area of 10 ha each. One plot was irrigated using a “Renke” sprinkler, and the other — a “Kuban”. After sowing, the soil

was treated with the herbicide “Stomp”. The irrigation frequency was once or twice a week, depending on weather conditions, the rate was 20–30 mm. The grain yield was 4.0–4.2 t/ha. Growing rice using this technology turned out to be more profitable than growing corn with a yield of 10.0 t/ha.

The successes in agriculture in the Hungarian People’s Republic are associated with the organization of production agricultural systems. One of the largest, controlling the cultivation of the main agricultural crops, including rice, is KITE Zrt. Its activities include the development and improvement of cultivation technology, selection of varieties, acquisition of necessary machines, seeds, chemical plant protection products, materials, spare parts, organization of trade, training of personnel, etc. KITE cooperates with more than 1000 Hungarian and foreign enterprises and research institutions.

The introduction of scientific achievements and best practices allowed Hungarian rice growers to increase crop yields from an average of 1.3 t/ha in 1975–1980 to 3.3 t/ha in 1981–1985. In 1986, it reached 3.97 t/ha, but the crop reserves are far from exhausted”.

In the 1990s, serious changes took place in the countries of the socialist camp, including Hungary. The economy was being rebuilt to be market regulated. Rice growing, an economically expensive industry, suffered greatly. Imported rice was cheaper than local rice, and therefore the volume of production of its own cereals decreased sharply. According to FAO, in 2019, the rice yield in Hungary was 3.96 t/ha, and the gross production was 11,971 t.

At the end of October 2014, the International Congress “Rice for the World” was held in Bangkok (Thailand). More than 4 thousand scientists from all rice-growing countries arrived at the Congress. The Russian Federation was represented by a delegation from the All-Russian Rice Research Institute by E. M. Kharitonov, V. S. Kovalev, Yu. K. Goncharova, V. P. Naumenko and G. L. Zelensky. Professor Ibolya Simon-Kiss was a member of the Hungarian delegation.

During the breaks between the sessions of the Congress, we warmly communicated with numerous colleagues, took photos to remember this meeting. In a conversation with Ibolya Simon-Kiss, Viktor Kovalev and I recalled with great pleasure our Hungarian trip of 1986.

As it turned out later, this was the last meeting with Ibolya Simon-Kiss. In December, we received a message from Hungary that our colleague, the famous scientist Professor Ibolya Simon-Kiss had passed away at the age of 86.





Meeting in Thailand: G. Zelensky, I. Simon-Kiss , V. Kovalev, 2014

Professor Ibolya Simon-Kiss had a PhD degree, she was scientific consultant, group leader at the Institute of Biochemistry, Biological Research Center, Hungarian Academy of Sciences (1996–2012); lecturer at the University of Szeged, co-founder of the International Society for Matrix Biology. An expert in the field of extracellular matrix protein genes, their cloning, expression, function and regulation during development, differentiation and regulation systems, as well as carcinogenesis — this is not the full list of her achievements. Thanks to her professionalism, our cooperation was consistently successful for many years.

Ibolya Simon-Kiss won the love and respect of all who knew her. In our memory, she will remain a very interesting scientist, a cheerful and charming person.



2. France, 1990

My senior colleagues had good relations with the French rice breeders. In August 1982, when the Breeding Department was headed by Professor A. P. Smetanin, breeder Michel Griar from the French city of Arles, where they have an experimental rice station, came to visit us. By that time, I was already the Head of the laboratory of the source material, so I also took part in this meeting.

In the summer of 1984, M. Griar visited the All-Russian Rice Research Institute again. A year before that, A. P. Smetanin had moved to work at the Kuban Agricultural Institute, and therefore I was assigned to meet the French guest at the airport and then accompany him on trips.

Before the New Year of 1989, I received a greeting card in which M. Griar said that he was going to retire early (at 58) in order to travel around the world while the “engine” was still running. And at the end there was a note that in September 1990, an International Rice Congress would be held in France, and he invited me to take part.

In response, I wrote to him that in order to travel to France, an official invitation from the organizing committee was needed to obtain a visa.

Soon I received an envelope from France, and it contained a personal invitation to the Congress. It was sent by the Chairman of the organizing committee of the Congress, Michel Jacquot. With this paper I went to the Director of the institute, Academician E. P. Aleshin, and said:

— Evgeny Pavlovich, you said that after the English language courses I could go to any point on the globe, so this point is Arles, France.

And I handed him the invitation. He read the translation and said:

— No, you will not go there.

— But why? You promised.

— Yes, I promised, I am not backing out of it. But look at the situation. You will go to this congress and even give a report, and then what? If we go, we go together. I am the Director of the Institute, a deputy of the Supreme Soviet of the USSR. I have broad powers. In addition to participating in the Congress, we will be able to visit their research centers, conclude a cooperation agreement. That will be the result.

Everything said was very logical, and I agreed with his arguments. On the same day, we sent a letter to M. Jacquot with a request to invite the Director of the All-Russian Rice Research Institute, E. P. Aleshin, to take part in the Congress. During the correspondence, it became clear that we should also take



Natalia Sergeevna Ulitina, a French translator. She had been to Paris many times with tourist groups, knew the language very well, and was a sociable person.

The conditions of the trip to the Congress were as follows: we would buy round-trip tickets, and the organizing committee would pay for our stay in France, since we were both declared speakers. This suited us very well.

On the Director's command, the necessary documents were prepared for us and in April we went to Moscow to get our visas. There was plenty of time until September. And imagine our surprise when we arrived in Moscow and found out that we would be able to obtain our passports and visas at the Ministry of Foreign Affairs on Friday evening, while the flight was at 8:00 a.m. on Monday. What if there was some kind of glitch? The tickets bought were round-trip. But everything worked out. We got our passports and visas as planned.

When leaving the Ministry, we agreed to meet at 5:00 a.m. at Sheremetyevo-2 Airport. We lived in different places, so we had to get there on our own.

Remembering the difficulties we had experienced when flying to Hungary, I decided to go to the airport in the evening and wait there. I spent the weekend walking around Moscow and after lunch I went to the airport. Everything went as planned. In the morning, our delegation was assembled. We passed security and boarded the plane.

In Paris, we landed at Charles de Gaulle International Airport. We were met by a lady, a representative of the INRA Academy. She was standing with a sign in her hands with our names written on it. Natalia started speaking quickly to her in French and introduced us. In 5–7 minutes we were invited to get our luggage. We were very surprised by such efficiency. We were surprised by many other things in France later, but this made a strong impression on us. In our airports, it took more than an hour to get our luggage, but there it was almost instantaneous. I thought that this happened only at the central airport, but it was the same with local airlines. The lady invited us to go to the car in the 5-story parking lot. We took the elevator to the 4th floor and went straight to the car. The parking lot was organized as follows: upon arrival at the airport, before departure, the driver left his car for the duration of the trip. Upon returning, he paid at the parking meter at the exit and left. (*Now there are such parking lots in Russia too — Author.*)

From the central airport we had to move to the local one to fly to Montpellier in the south of France. We had plenty of time, so we stopped at a cafe and talked there for about an hour, enjoying coffee.

At the appointed time we took off. An hour and a half later we landed at Montpellier airport. An employee met us in a car and immediately drove to

the INRA Academy. They were waiting for us there. The conversation with the President of the Academy and his colleagues, which began in the office, continued at lunch. The meeting was very warm. The hosts asked many questions. Evgeny Pavlovich Aleshin answered them, and he also asked counter questions. He spoke in Russian, and Natalia quickly translated. Several times they turned to me with questions on the problems and prospects of rice breeding.

There at the table we met the leading breeder of France in rice, Guy Clément. He was a large man with a bushy moustache and a pipe that he never took out of his mouth, even when he was not smoking tobacco. Guy was 3 years older than me, but he looked so respectable that you could add another 5–7 years to his age. He said that rice occupied about 25,000 ha in France. It was sown mainly in the Camargue Valley. There, in the city of Arles, there was a French Rice Experimental Station subordinate to the CIRAD Center, located in Montpellier. And this center was subordinate to the INRA Academy.

G. Clément promised to show his selection crops in Arles, where the Congress would be held. It was a little more than 100 km from Montpellier

After lunch, we were taken to a hotel to rest before the evening meeting. It was to take place at the house of the Vice-President of the Academy in the suburb.

At 6 p.m., a young employee and his wife arrived by car to take us to the meeting. We drove about 20 km along a good concrete road that ran between hills covered with forest. The area reminded us of the outskirts of Sochi.

When we arrived at the place, the owners met us in front of their two-story house. There were trees growing around, like in a park. There were lanterns along the paths. Everything was clean, the bushes were trimmed. Evgeny Pavlovich Aleshin could not resist praising the well-kept territory and asked:

— Who looks after all this?

— The gardener, he comes to us once a week, — the owner answered.

On the second floor of the house there was a large open veranda. There was a table set there and equipment for showing slides. About 20 people had gathered. First there was a light dinner, and then they started asking us questions. Evgeny Pavlovich spoke about the Institute, about rice growing in the USSR, showed slides and answered questions along the way. The meeting lasted until late at night. Having said a warm goodbye, we left with the same couple who had brought us there. In the car, the Director nudged me with his elbow and said:

— You see how they greet us, because of the level. And if you had come yourself, who would have greeted you like that?



I had nothing to say in response.

We drove along a secondary road for some time. We approached a highway, there was a STOP sign ahead. The driver pulled up to the sign, stopped, and then drove on. It was night, dark, there was not a soul on the highway, but he stopped, according to the rules. I could not resist and asked Evgeny Pavlovich, who always drove a Volga car:

— Would you stop in this situation?

— Never!

(But then in 1991, in almost the same situation, he got into an accident, not giving way to a car that was driving on the main road — Author.)

And this guy, apparently, followed the traffic rules to the point of automatism.

Arriving at the hotel, I immediately fell asleep. There were too many events and impressions in the past day.

In the morning, Michel Jacquot, the Chairman of the Congress organizing committee, came to pick us up. He had a Renault with a diesel engine. This car was known to us as the Moskvich 3141, only on gasoline. By 8 a.m. we reached destination, the entire journey took only 1 hour, and that included exits and entrances to cities. The highway had three lanes in each direction. Trucks with a speed limit of 100 km/h were driving in the first lane, we were driving in the middle lane at 130 km/h, and the left lane was free. And cars were flying along it, overtaking us.

I was sitting next to the driver and could talk to him. Jacquot spoke English fluently. Looking at the cars overtaking us, I asked:

— Mr. Jacquot, how fast are these cars going?

He looked to the left and said:

— 200–220 km/hour.

In Arles, a very low car, a semi-racer, was parked at the hotel. I looked through the side window at the dashboard, and the speedometer scale showed 300. Yes, it would be easy to drive at 240 km per hour.

We were put up in a luxury hotel, each in a separate large room. All expenses were covered by the organizing committee.

France is not a rice country, but an entire region is devoted to rice cultivation, and farmers have been successfully cultivating this crop for seven generations. Rice systems were built in the Camargue Valley of the Rhone River delta. At the beginning of the 20th century, rice in the Camargue occupied about 800 ha, and by the end of the century — more than 25,000 ha. These are engineered rice systems, where rice is grown using modern mechanized technologies.



File photo of rice field workers in France

The huge National Park in the French region of Camargue is a special place with unique nature. White horses roam freely, pink flamingos live there and rare breeds of bulls graze; the marshy area between the two branches of the Rhone seems to be created for growing one of the best rices in the world. Camargue rice (white, black and red) has an incomparable nutty aftertaste. Local residents annually organize a noisy festival in honor of the first rice harvested.

The Congress opened on Tuesday at 10 a.m.. Leading rice scientists from many countries of Europe, Asia and America gathered in the hall. Among other guests there were familiar to us Ibolya Simon-Kiss from Hungary and George Alionte from Romania. They had visited us at the All-Russian Rice Research Institute more than once, so the meeting with them was very warm. We quickly got to know many colleagues, especially the French, Italians and Spaniards. Knowledge of English helped me a lot. Almost all the scientists spoke this language. And the working language of the Congress was English. But there were simultaneous interpreters in French and Spanish. We listened to the reports, and during the break we talked, splitting into small groups.

After lunch, the floor was given to E. P. Aleshin. He made a report "On Rice Growing in the USSR". The Academician spoke in Russian, Natalia translated into French, and the simultaneous interpreters — into English and Spanish. Of course, it was not very convenient, but everyone listened with great atten-



tion and asked many questions. And during the break, a Frenchman asked me mockingly:

— Why doesn't your Academician speak English?

— Well, he knows Italian, but here for convenience he speaks Russian, — I answered.

After the break, there was my report "Rice Breeding in the USSR". I spoke in English and accompanied the report with a slide show. Several questions were asked, which I answered successfully. For some foreign colleagues, it was a revelation that rice was grown in the USSR and breeding work was carried out.

At the end of my report, I proposed holding an international ecological test of rice varieties. Looking ahead, I would say that the Congress accepted this proposal, and such a test was conducted two years later in 1992–1994. Six rice varieties from six countries were included in this experiment. As a result, after two years of testing in France, our Kulon variety took 1st place in yield, and the Kurchanka variety took 3rd place. The French wanted to zone the Kulon variety as high-yielding and resistant to the rice moth. This resistance was due to the increased silicon content in the Kulon tissues compared to other varieties. However, we did not have a patent for the Kulon variety (as, incidentally, for other varieties), and we were unable to patent it in France. E. P. Aleshin told me all this after his trip to France in 1994.

Everything was going smoothly until a young Dutchman spoke about the mineral nutrition of rice and presented his entire work as an innovation.

Evgeny Pavlovich listened to this speech and quietly expressed indignation that none of this was new. I could not stand it and said to him:

— Ask him a question.

As soon as the report was finished, the Academician jumped up and said:

— What is new here, I published all of this in a monograph back in the mid-1960s. Have you read this work?

In response, the Dutchman asked:

— And in what language was your work published?

— Naturally in Russian, — said Evgeny Pavlovich.

— Oh, in Russian, but no one knows it and no one reads it. Write in English if you want foreign scientists to know your work.

Evgeny Pavlovich got very angry and then repeated to me more than once that he would publish all of his main works in English. Unfortunately, he did not have time. The following year he had a car accident and was out of action for a long time.



ARLES . F.A.O . 1990



**Participants of the Rice Congress, the author in the center
of the 5th row**

On Wednesday, before the meeting, a member of the organizing committee made an announcement that, in accordance with the Congress Program, there would be a major cultural event on Saturday with a visit to rice fields, lakes in the Camargue Nature Reserve, and farms where white horses and black bulls were bred for bullfighting. There would also be a barbecue lunch in the countryside. Everyone buzzed in unison and approval.

And Natalya exclaimed:

— What a pity that we are flying home on Saturday!

And when the organizer approached us to mark the excursion list, Natalya told him this. He began to quickly say something to her.

Natalya translated that they were offering us to fly not on Saturday, but on Sunday. To which Evgeny Pavlovich categorically objected:

— We have plane tickets to Moscow on Saturday, and a visa. I have to be at the Supreme Council on Monday.

And I thought that I also have a plane ticket from Moscow to Krasnodar on Monday. But the organizer insisted:

— Stay, even for a day. After all, such an event does not happen every time. We will solve everything for you — visas and tickets, just agree.

Natasha and I also began to persuade the Academician, but he did not give way. He did not believe that the visa issue could be solved so quickly.

— We sent documents for visas six months before the trip. And changing tickets is a problem.

In the end, Evgeny Pavlovich agreed under our and Natasha's responsibility. At 10 a.m. we gave our passports and already at 3 p.m. they were returned to us with the message:

— You are flying on Sunday, the same seats. We rebooked the tickets and extended your visa.

All this was done in a few hours over the phone. We were shocked.

On Thursday afternoon we visited the Rice Experimental Station. Guy Clément showed experiments and talked about his breeding achievements. He continued the work on creating rice varieties, which had been carried out by M. Griar.

I was attracted by the fields themselves, they looked like in the picture. These were micro checks, 3 m wide and about 50 m long. On both sides they were fenced with rollers-paths. The checks were planned at "0" and held a 5 cm layer of water.

Sowing was done across the check, so each plot could be seen from the roller on both sides. As we were explained, the selection plots were laid out in a special way. Rice seeds of one sample are glued every 3 cm to a 3 m long paper tape. Thus, it was like that: one tape — one plot. After the glue dried, the tapes were rolled and signed. When sowing, the tapes were laid out on the soil every 20 cm and pressed with lumps of earth. A minimum layer of water was supplied. The seeds germinated, and the paper gradually dissolved in the water. The shoots were even with precise plant placement. I admired the beautiful plots, but I did not see anything particularly original. The type of plants was the same as our rice varieties. In addition, the rice growing season in France was longer than in Russia. Here, varieties ripened in 135–150 days, and in our country the maximum permissible period from flooding to ripening is 125 days.

Guy Clément wandered around the check in boots, drawing our attention to the plots of new samples that would become varieties. Then he left the check, came up to me and asked how I assessed his crops. Hearing my enthusiastic answer, Guy offered me to choose collection samples that he could send after harvesting. I replied that we had similar samples and added:

— Now I am interested in other material: American rice varieties resistant to rice leaf nematode. Such varieties have been created in the USA, but I cannot obtain them.

— Write their names, — Guy asked.



At the rice breeding plantings, France, 1990

I wrote the names of six varieties in his notebook. Guy looked at the list, made notes with a pen and said:

— I have these two in my collection, I will send them to you after they ripen. My Spanish friend has the next two, I will ask him. And these two are new, they are not in Europe. But I will ask my friends, and they will bring them to me.

Then Clément said goodbye to the guests, went into the station building, changed into a smart suit, got into his new Mercedes and drove away.

Evgeny Pavlovich, looking at Clément leaving, said:

— Breeders live well here.

Looking ahead, I will say that before the New Year of 1991, I received by mail a small parcel from France, which contained packets of seeds of six American varieties and a packet of red rice — a gift for the New Year holidays.



I multiplied the received seeds in a quarantine nursery and used them for hybridization in my breeding program.

On Saturday, the Congress participants left for an excursion to the Camargue in a large comfortable bus. We sat in the front row. We were driving along a concrete road, with rice fields ready for harvesting on the left and lakes on the right. A huge number of wild ducks were swimming in the water. Evgeny Pavlovich was sitting by the window and suddenly asked those sitting in the bus:

— Colleagues, why do you think these ducks don't fly to the rice?

Natalya translated into French into the guide's microphone, and the simultaneous interpreter translated into English. Everyone perked up. And indeed, the ducks were swimming on the lake, and across the road there were fields of ripening rice, but they weren't flying there.

They started making various assumptions:

— Probably the ducks weren't hungry.

— Maybe they were being chased out of the fields, etc.

The Academician listened to all this and said to me:

— Unfortunately, they don't know that ducks only sit on clear water. And look at how dense the crops are. There's no room for a duck to sit there.

And he was very pleased with his foresight.



Fauna of the Camargue



For the first time during the entire trip, I saw our Director in such a good mood. Before that, he always looked worried and not very happy. He did not let Natalya out of his sight. He made comments to me several times that I was talking too cheerfully when communicating with colleagues.

— Well, they tell jokes, why not laugh, — I explained.

— What jokes at such an event!

Maybe he was constrained because he did not know the language, and this embarrassed him.

And only during this excursion did Evgeny Pavlovich loosened up. Although in general the Academician behaved quite correctly and communicated with us very respectfully.

The excursion was a success. Everyone was very pleased and thanked the organizers for the smoothly conducted event. Even Evgeny Pavlovich proposed a toast to the health of the members of the organizing committee at the dinner table and expressed gratitude for the well-organized work. Everyone unanimously supported him.

Our flight was at 7 a.m. on Sunday from the neighboring city of Nîmes. At 4 a.m. Evgeny Pavlovich woke us up, we drank tea that he had already prepared, and at 5 o'clock everyone was standing in the hotel lobby waiting for a taxi. The organizers said that a car would arrive for us at 6 a.m. Evgeny Pavlovich asked Natalya about the departure time several times:

— How can you leave for the airport an hour before departure! You probably didn't understand or got something mixed up.

We are used to the fact that at our place one has to be at the local airport 2 hours before departure and 3 hours before flight at the international airport.

Twenty minutes passed, and there was no car, then 30, 40 minutes — no one. The Academician harassed Natasha.

— It was you who pushed me into such an adventure. We would have left yesterday without any problems. At 7 o'clock the plane will leave without us, and then what?

Natasha, almost in tears, went to the hotel administrator to find out, but he didn't know anything.

Around 6 o'clock the door opened, a short man in a uniform cap walked in:

— Who's going to Nîmes?

Natalya pounced on the taxi driver like a tigress, chattering excitedly in French and pointing to her watch. And he calmly told her (she later translated his speech for us):



– Madam, I was told to come for you at 6:00. As you can see, I arrived 2 minutes early. I’ve been working for this company for 20 years and have never been late, otherwise I wouldn’t be working here anymore. We’ll drive for 20 minutes, then you’ll drink coffee for 20 minutes, and 20 minutes before 7 a.m. you’ll board the plane and fly to Paris.

We jumped into the car and sped off at a speed of about 130 km/h. In 20 minutes we entered the airport building. We were invited to a table and served 3 cups of coffee. Sugar was on the table, take as much as you want. I was surprised, to which Evgeny Pavlovich wisely said:

— Well, how many pieces of sugar can a normal person put in a cup — 2–3. And all this is included in the price of the ticket.

And then I remembered when I studied in the College in the 1960s, in the canteen there was always a pile of sliced bread on the table. The guys took a glass of compote for 3 kopecks and 3–4 pieces of bread for breakfast. Out of poverty, of course. Then all this was cancelled.

At 7:00 a.m. boarding was announced. We took our seats and were in Paris 1.5 hours later.

Considering that it was Sunday and in order not to disturb people to transport us to the central airport, the organizers gave us money for a bus to move to the other airport. The bus ran frequently, we had not stood there even 10 minutes before we were invited to board. A young woman was walking in front of us, rolling a huge suitcase. Evgeny Pavlovich showed gentlemanly qualities, picked up her suitcase and dragged it onto the bus. She expressed her gratitude and sat down next to Natasha. They chatted briskly in French the whole way. Then Natasha briefly recounted their conversation.

The woman’s husband worked in Tahiti. The day before at about 9 p.m. she felt very sad and decided to fly to her husband. She called the airport, booked a ticket and there she was on her way, not knowing how everything would turn out. She had never left France before.

We arrived at the central airport named after Charles de Gaulle. We got off the bus. A porter ran up to this woman and carried her suitcase, and she went to the check-in counter. She showed her passport. They handed her a ticket and put a stamp in her passport “left France”. Then she went to the escalator and went to the 2nd floor to the departure hall, waving goodbye to us.

Evgeny Pavlovich, having observed this, said:

— Yes, I probably lived my life in vain. We will never have such a thing.

And now, after more than a quarter of a century, and Evgeny Pavlovich is no longer here, I can say: “A lot has changed in our lives. And we can go wherever

we want, if only we had the means.” After returning home, next time, when I met E. P. Aleshin, I sometimes reminded him of this story:

— Why don’t we fly to Tahiti?

His answer was the same every time:

— That’s what you want...

3. India, July 1991

In July 1990, a delegation of three Indian specialists visited the All-Russian Rice Research Institute. According to the agreement between the Academy of Sciences of India and our Institute, three of our scientists were to go to India. It was not clear who would go. If the exchange were identical, then two breeders and one phytopathologist were to go according to the structure of the Indian delegation.

In early June 1991, I was invited by the Deputy Director of the institute, M. I. Chebotarev, and informed that a delegation had been formed and approved by the Director for a trip to India, consisting of:

1. Chebotarev M. I.— head of the delegation,
2. Avakyan E. R.,
3. Zelensky G. L.

I asked:

— When is the trip scheduled?

— At the end of July, for 10 days. This period has been agreed upon with our Embassy in India. The necessary documents were being prepared by the Department of External Relations.

In our delegation, Mikhail Ivanovich Chebotarev and I were considered breeders, although he was an agricultural mechanization specialist, and Elmira Rubenovna Avakyan was a to represent phytopathologist, despite the fact that she was a specialist in Biochemistry and Plant Physiology. I wanted to talk to the breeder Prasad Rao, who came to visit us, and see his experimental crops. It was Prasad Rao, during his stay at our Institute, who advised me to create glutinous varieties with a clearly expressed morphological feature in order to distinguish them from other industrial varieties. Otherwise, it would be almost impossible to maintain their purity. After this conversation, I kept for further breeding work only the glutinous samples with purple panicles.



Elmira Rubenovna had already been to India two years earlier, so she instructed us on the eve of the trip.

— The main thing, — she said, — is to strictly observe personal hygiene. Drink only boiled water, treat your hands with an antiseptic, etc.

The matter was complicated by the fact that we were traveling in July, during the hottest time and the rainy season, when the epidemiological situation there worsened significantly.

At the appointed time, our delegation flew to Moscow, and then to Delhi. At the Delhi airport, we were met by the Embassy Agricultural Adviser Anatoly Nikitovich Lukyanenko, Doctor of Agricultural Sciences. He worked as a tomato breeder at the Crimean experimental station of VIR, and spoke English perfectly. But for 7 years A. N. Lukyanenko was working at the Indian embassy. It is a separate story how he got there. During the subsequent conversation, Anatoly Nikitovich told us how well tomato breeding was organized in India. He managed to collect rich source material of this crop and send it to his colleagues in the city of Krymsk. So returning home, he would have something to work with.

Anatoly Nikitovich accompanied us on our trip around the country. It was amazing to see how well he was known here. Wherever we went, he had acquaintances. Therefore, our trip was well organized and very fruitful.

At the Delhi airport Anatoly Nikitovich instructed us on how to behave there, especially in the streets of the cities.

“First: don’t pay attention to any contrasts, of which there are many here.

Second: don’t engage in conversations with local residents, especially children, who will pester you with various requests and impose souvenir purchases.

Third: strictly observe hygiene. Don’t drink raw water from the tap or other sources, only from sealed bottles opened in our presence. Don’t eat vegetables and fruits in the street. They are washed thoroughly in the restaurant. As a preventative measure, it’s not a sin to drink alcohol in the evening.”

While this conversation was going on, our luggage arrived. We received our suitcases and were already leaving the hall, when suddenly we heard a loud scream. It was emitted by a guy who took his bag from the conveyor belt, from which liquid was oozing. He was carrying 10 bottles of champagne, which was in great demand among Indians. Apparently, the bag had been thrown carelessly during unloading and the bottles exploded. His things were soaked with wine. The guy was almost in tears. We left without knowing how this story ended.

As soon as we left the airport, a crowd of about 20–25 children aged from 5 to 10 years old, ran up to us. With their hands outstretched, they shouted:

“Dai!” And they shouted in Russian. Apparently they knew that the plane had arrived from Moscow. Remembering the instructions, we, pressing our hands to our pockets, squeezed through this crowd with difficulty. Lukyanenko said something to them in the local dialect, and the children immediately recoiled. He had already learned the necessary phrases.

Anatoly Nikitovich came to pick us up in a Toyota official car, which was with a right-hand wheel, because in India they drive on the left side of the road. For us, this was very unusual. I was sitting next to the driver, and several times it seemed to me that we were taking a wrong turn or were about to collide.

We arrived in the very heart of the city to a high-rise building. That was our hotel. We settled in on the 6th floor in separate rooms, not luxurious, but very cozy. An hour later we went down to the restaurant on the second floor. We had lunch there. On the table in front of each of us was a plastic bottle of water, sealed with a cork. Before we started eating a waiter in white gloves came up to us, opened the bottles and poured water into each glass. Anatoly Nikitovich confirmed that this water was safe to drink. We spent three days in Delhi. We were shown the main sights of the city. Among them, the historical building — the Red Fort — stood out. The Taj Mahal Temple-Mausoleum amazed the audience with its unusual beauty and monumentality.



The Red Fort in Delhi is the city's calling card



The Taj Mahal temple-mausoleum is one of the main symbols of India

We moved around the city only by car. The streets were jammed with various types of transport: from luxury cars to cycle rickshaws. And rickshaws outnumbered cars. Brought up in the spirit of equality of the Soviet society, we were not happy to look at the pictures of Delhi. The rickshaw, a skinny guy of about 30, barely turned the pedals of his cart, in which two very plump ladies in chic dresses were sitting on soft cushions with umbrellas in their hands. Due to the abundance of transport, traffic was very heavy. We were barely moving in this traffic jam, and next to us, on the next lane of the road, the rickshaw was pushing and pedaling with difficulty. The ladies were twittering cheerfully, not paying attention to their “donkey”, straining to carry them. From the side it seemed that if you gave them a whip, they would start lashing at him to speed up the movement along the road. For us, this was a shock. All three of us turned away in unison, only Anatoly Nikitovich didn't pay attention to it. He'd seen enough of such situations.

The next picture we saw from the window of our hotel. It was the summer rainy season. Every day around lunchtime there would be a 20–30 minute downpour, it was so heavy that water would stream along the road in the gut-

ters. After the rain, the sun would come out and it would become so stuffy that you did not want to go outside.

Our hotel building stood next to a wide street that was constantly jammed with traffic. There was a large park across the road. But there was a gutter lined with concrete slabs along the road. Dirty rainwater was noisily flowing along this gutter. In the park opposite the hotel there was a tent camp where large families lived. Half-naked children were happily running around in the rain. Closer to the road there was a film stretched on 4 posts. It was the “house” where the family lived. There was a fire burning under the film. A pot was hanging above the fire. Apparently, they were cooking some food. At this time, a woman washed something in the gutter. What kind of sanitation can we talk about there!



Cycle rickshaw is a common form of transport in Delhi

That was the contrast of a luxurious multi-story building where the rich lived in comfort, and a film stretched on poles as a shelter. It was not clear how these people lived in tents and under the film. Lukyanenko could not answer my question about this. At the same time, he added that they were not the poorest. In the street, he showed two men who had something like a tube hanging on their shoulders. That was their bed. Where night overtook them, they would unfold this bedding and go to sleep. Fortunately, the temperature at night did not drop below 20°C. There were poorer people who used newspapers as bedding at night. And, according to Lukyanenko, there were many such homeless people in the country.

We were surprised by the abundance of cows on the roads and squares of the city. As we were told, cows were considered sacred animals there, so they were protected in every possible way. And if suddenly this beast lied down to rest right on the street, then no one would disturb it. Drivers carefully drove around the lying animal.

Lukyanenko told us a joke that was common among Embassy employees. “During N. S. Khrushchev’s stay in Delhi, a motorcade of cars suddenly stopped in the middle of the city. Nikita Sergeyevich worriedly asked the Prime Minister of India, who was sitting next to him in the car:

— What happened? Why have we stopped?

He answered:

— The bull is lying on the road.

— Then let the guards drive him away.

— We can’t. The bull is a sacred animal in India. No one can disturb him.

They stood there for an hour, then two. Nikita Sergeyevich couldn’t stand it, got out of the car, went up to the bull and whispered something in his ear. The bull immediately jumped up and ran away roaring. Khrushchev returned to the car satisfied.

The Prime Minister could not resist asking:

— Dear Nikita Sergeyevich, what did you say to our bull that he ran away so quickly?

— I whispered to him: “If you, beast, do not clear the road, I will take you to the collective farm.”

In the evening at dinner, one of the Embassy employees asked Khrushchev:

— Nikita Sergeyevich, how did this bull understand your Russian speech?

— If one puts a burning cigarette in your ear, you will understand any speech.”

On the second day, we went to the National Academy where we were received by the Vice President. The reception was held at a high level. They talked about the benefits of developing bilateral relations between our countries in general and between rice scientists in particular.

After the reception, Lukyanenko explained to us that the Vice President has actually been holding the post of President of the Academy for three years. He was 44 years old, but the general meeting could not approve him as President. The reason was simple — he did not have gray hair on his head. Gray hair was a sign of wisdom for Indians. So he was waiting for gray hair to appear.

In the morning of the fourth day, we flew to the city of Hyderabad. It was about 1200 km strictly south of Delhi. The National Selection Center for Ag-

ricultural Crops (similar to our Krasnodar Research Institute of Agriculture or KNIISKh for short) was located there. A. N. Lukyanenko flew with us. He continued to accompany us throughout the trip.

At the Hyderabad airport, a car similar to our “RAF”, only with air conditioning, was waiting for the Russian delegation. We were immediately taken to the National Scientific Center. In front of the Institute building there was a line of 10–12 people. They were greeting the Soviet delegation. Among them was the breeder Prasad Rao, who had visited us at the All-Russian Rice Research Institute the year earlier. We greeted him very warmly. In the following days, Prasad Rao showed us experimental fields and told us about his work with rice.

It should be noted that according to N. I. Vavilov’s theory of the centers of origin of cultivated plants, India was the birthplace of rice. It was there that a huge diversity of cultivated rice plants and wild forms were observed.

It is no coincidence that when developing the classification of cultivated rice *Oryza sativa*, scientists called one of the subspecies *indica*. A distinctive feature of this rice is its long grain of excellent quality.

We spent 4 days in Hyderabad. The weather here was better than in Delhi. The rains were less intense and it was not so hot. As we were told, this was because the city was located on a hill, more than 500 meters above sea level.



Rice subspecies *indica*

We were introduced to the work of the Institute for the selection of rice and other agricultural crops. The research on assessing plant resistance to pests, of which there were many, was very interesting. To identify resistant forms,



plants grown in vessels were placed in special rooms covered with a very fine mesh. Inside there were small huts for insects to live. The degree of damage to the plants was used to determine their resistance or tolerance to damage.

Rice was not a priority crop at the National Center. Although we were shown more experiments with rice. We saw that in the fields of the Institute and on farms, all work on growing rice is done manually. In India, like other Asian countries, the seedling technology of growing rice is adopted. First, seedlings are grown in nurseries, and then they are transplanted into a flooded field. As a rule, this work is done by women. The peculiarity of local climatic conditions allows rice to be grown all year round. In some fields, rice is just being planted, while in others, harvesting is underway.



Planting rice and weeding the crops



Rice harvesting and threshing

Along the way, they showed us everything that grew around Hyderabad. Almost all grain and vegetable crops were grown in this region. There were banana groves along the road. Literally every 3–5 km there were roadside markets. There were mountains of bananas here.

A. N. Lukyanenko suggested making a stop at such a market. We got out of the car, and for the first time I saw bananas of such a huge size.



Anatoly Nikitovich bought two large bunches of bananas. Their price was miserable. He paid two rupees for all. A rupee was approximately equal to one ruble. At that time, 1 US dollar cost 27 rubles and 28 rupees were also equal to 1 dollar.

How many bananas of this size can a normal person eat? Probably 2–3, no more. I ate 5 with great pleasure. The taste was amazing. The fruits were fully ripe, freshly picked from the plant, juicy and very sweet. Unfortunately, bananas brought to our country are normally half-green, and the taste is not the same.

Not far from Hyderabad, we saw a funeral procession of a representative of a religious caste. They have a custom of burying the dead in a special way. First of all, we were struck by the appearance of the cemetery. Funeral platforms were built on very high pillars. The deceased was lifted and laid on this platform. This completed the funeral procedure. As soon as the mourners left the cemetery, huge birds began to swoop down from the sky. These were vultures-scavengers. Before this, a large number of them circled high in the sky. The birds pecked at the body of the deceased. The bones fell to the ground, where they were picked up by night predators. Members of the caste believed that the soul of the deceased would move to the one who ate his heart — to a bird or an animal.

On the evening of the 4th day, we were taken to the airport. We were supposed to fly to the city of Cuttack. It is a little over 1,000 km northeast of Hyderabad towards the Bay of Bengal. The National Rice Institute was located there. We had to fly a little over an hour on a Boeing plane for 120 people. As soon as the plane gained altitude, two stewardesses, very pretty Indian women in national costumes, began to hand out lunch. I sat on the left side of the aisle, next to an Indian. My colleagues were a little ahead on the right. We were served boxes with food. It contained a vegetable salad, a meat dish and several packets of spices. I saw my neighbor sprinkling the salad with pepper. I decided to abstain from the pepper and started eating the salad. It turned out to be so peppery that I choked in surprise. My mouth burned, tears gushed from my eyes. I could not resist and asked the stewardess to bring me some water. She poured me a glass. The water cooled the heat from the pepper a little. I ate the meat dish with difficulty and washed it down with tea. And my neighbor, an Indian, ate everything without any problems. Indians are used to such peppery dishes. Pepper saves them from many problems with parasites. By the way, my colleagues did it easier. On the advice of Lukyanenko, who had flown on domestic flights in India many times, they did not eat this salad.



We were picked up from the airport in Cuttack by a minibus and immediately taken to the hotel. It is a complex of two-story houses located next to the Institute. We were accommodated on the 2nd floor in neighboring rooms.

Next to the house there were huge trees rising above the roof. Monkeys were running around the treetops, squealing. When we checked in, we were warned to keep the windows and doors to the balcony closed and not to leave anything there. Monkeys stole everything with incredible speed.

On the evening of the second day, an incident occurred that was later recalled many times. I was sitting in the room, writing a travel diary. Mikhail Ivanovich was taking a shower. I could hear the noise of water through the wall. Suddenly an inhuman scream was heard. I jumped up and ran to the next room. Luckily, the door was not locked. Mikhail Ivanovich continued to scream in the shower and pointed to the floor. I saw a huge insect crawling across the floor, like a cockroach or a mole cricket, bigger than my finger. I grabbed the slipper from my foot and hit the insect with all my might. But, alas! It ran on, I followed it, and immediately stepped on it with my other foot in the slipper. No effect. Under my foot was an elastic living body. And only under the pressure of all my weight did it crack. Mikhail Ivanovich had already calmed down, got dressed and told me:

— I was standing in the shower. Suddenly, I felt as if a needle got into my side. Horrified I thought that it was a snake. That's why I screamed.

We were told about snakes, that they could crawl even into rooms. And here in the shower the ventilation grate was open. The insect just flew in. I picked up the crushed insect and went to Anatoly Nikitovich. He lived in a room at the end of the corridor, so he did not hear our noise. He just glanced at the insect and immediately said:

— Yes, this is a local cockroach. They fly here to the light. They are fried in oil and eaten. They say that it is very tasty. Indians make special light traps for these cockroaches. 5–6 pieces are enough for one person to have dinner.

The weather in Delhi and Hyderabad was much more comfortable for us. In Cuttack, it was like a bathhouse outside. The air temperature was over 30°C and the humidity was 100%. It was normal in the building and in the car, where the air conditioner was working. As soon as we left the room and went outside, our bodies were immediately covered with a sticky film. Total discomfort.

In Cuttack, India, we saw what a real tropical downpour was. Usually it was quiet in the morning, not a breath of wind. The sky was blue, the sun was bright and there were no signs of impending rain. Around 11 o'clock in the morning, cumulus clouds suddenly appeared. At first they were sparse and white. And



then they thickened and darkened. By 12 o'clock a light breeze began, and after half an hour it blew so hard that the trees bended to the ground. And suddenly, as if a damper opened, a stream of water fell from the sky to the ground. It was not even a downpour, but a real stream of water in a squally wind. It poured for about an hour. Then, like a flick of a switch, everything instantly stopped. The clouds disappeared, and the sun shone again. The temperature rose to 35–36°C. All the poured moisture began to evaporate. The stuffiness was unbearable. On average, about 1686 mm of precipitation falls in this region per year, and the average annual temperature is 26.8°C. We were surprised at how easily the locals tolerated such weather. It was as if they did not notice it. They went about their business. Only during the downpour did they leave the field and hide under a canopy of palm leaves.

In addition to the rains, we were amazed by how day and night changed there. Five minutes before 6 a.m., it was pitch-black outside. And at 6:05 a.m., it was as bright as day. There was no such thing as sunrise and sunset here. Instant change: the sun was shining — it was day, and at 6 p.m. when it went beyond the horizon, it was night.

Cuttack is located near the equator and there is a real 12-hour photoperiod there. N. I. Vavilov proved that the center of origin of rice is this region of India, so this plant is very responsive to changes in photoperiod.

In Cuttack, we visited the National Rice Institute. This was a huge research center with laboratories, greenhouses and experimental fields. There was a residential village nearby. Two-story cottages had been built for the research staff, and the technical staff and workers lived in simpler one-story houses. The entire territory of the Institute and the village were surrounded by a fence with barbed wire wound on top. Armed soldiers constantly patrolled along the fence. When we asked why there was security here, we were told that it was necessary. Valuable breeding material grew in the fields, and it could not be allowed to be stolen. Crowds of homeless and hungry people roamed around, ready to steal anything. The security was allowed to shoot in the event of any penetration of strangers into the territory.

At the Institute, we were greeted very kindly. It was obvious that they loved Russians in India. They told us in detail about their work and acquainted us with the results they had obtained.

First, the Director received us, and then the Heads of the laboratories. Air conditioners worked in the offices of the Heads of the laboratories, so it was very comfortable there. In the rooms of the employees there were fans, which to some extent eliminated the stuffiness. The Institute had a large collection



of varieties and forms of rice. The collection was studied in detail, and the results were published in special catalogs. I was shown a large book-catalog with descriptions of 8 thousand varieties of rice. I was very interested in those varieties that ripened here in 100 days or less. Seeing my interest, the Head of the collection laboratory suggested that I took this catalog with me to the hotel and worked with it in the evening. I gratefully agreed. I spent two evenings with this book. As a result of careful analysis, I selected 750 images of early-ripening rice samples and marked them with a pencil in the catalog.

Then, over the course of 3 years, the seeds of these samples were sent to us at the All-Russian Rice Research Institute for study in the conditions of Kuban.

I selected such early varieties because I knew about the reaction of rice to day length. Rice, as a tropical plant, is a short-day crop, and grows very quickly if the day and night last 12 hours.

Cuttack is located at a latitude of 20° north of the equator. And we saw that the day here was very close to 12 hours. In Krasnodar, at 45° north latitude, June 22 has the longest day, reaching 16 hours. With the lengthening of the day, rice dramatically increases the vegetation period. Therefore, rice samples that ripen in Cuttack in 100 days, in Krasnodar had a vegetation period of 140–160 days or more. And vice versa, our late varieties sown in India significantly accelerated vegetation. We were convinced of this ourselves. On the second day, we were shown the breeding fields. The peculiarity of the local climate was such that here they could simultaneously plant rice and in the neighboring field the ripening rice was collected. We were very surprised that mechanization was not used in the Institute fields. Soil cultivation was carried out with the help of animals — bulls or buffaloes. Rice was planted and harvested manually, as it was cheaper.

We were lucky. The rice collection was ready for harvesting. The check was without water, and the soil was wet after the rain the day before. We were given plastic bags to put on over our shoes. So we were able to go from the roller straight into the plots. One block had a label “Russia”. There were 50 rice samples growing there, received in exchange from VIR. I looked, there was a sample about 80 cm high, with a drooping small panicle and ripe seeds.

The manager says:

— And this is your famous variety Krasnodar 424. According to your description, it is 120 cm high and the vegetation period is 125 days. And here the plants, as you can see, are much lower, and the variety ripened in 85 days.

This was the reaction of the Krasnodar 424 variety to a short 12-hour day.



a



b

**Preparing the soil for planting rice in India using animals:
a — plowing; b — leveling the surface of the flooded field**



a



b

**Planting rice seedlings:
a — in India; b — in Russia: hybrid nursery**

While inspecting the Institute territory, we expressed surprise at why greenhouses were built in tropical conditions. It turned out that under the supervision of researchers, rice resistance to diseases was assessed during artificial infection. The most dangerous diseases there were blast, blight, and viral diseases. In addition, varieties were assessed for resistance to damage by leafhoppers, which were also carriers of viruses.

They did not take us into the greenhouses, explaining that this was a restricted area that was visited only by researchers working on this topic.

Breeding for resistance to diseases was very important for them. The weather conditions in India were very conducive to the development of various infections, not only among people and animals, but also plants.

On the third day of our stay, they organized a cultural program for us and took us on an excursion to the Bay of Bengal. We went there in a former military jeep — a car with very good cross-country ability, but without air conditioning.



By this time we had already adapted to this stuffiness and were tolerating the heat easier than in the first days. From the Institute we drove more than 30 km along a sandy dirt road. The road was well-profiled, so the water rolled down to the sides. Only then did we understand why we were given a jeep for this trip. In some places there were large potholes, but the jeep easily went over them. There was a bamboo grove 10 km before the ocean. We drove along a narrow clearing, like in a tunnel. The view of the road was stunningly beautiful.

We looked around the area near the ocean until it started raining. We waited out the downpour in the car, and then drove to the beach: a large sand spit, on which huge ocean waves rolled.

When Mikhail Ivanovich and I saw the ocean, we could not stand it, quickly undressed and threw ourselves into the water. But it was so warm that it did not refresh the body. We did not get any pleasure from this swimming. We checked in only to say later that we had swum in the Indian Ocean.

Then A. N. Lukyanenko took us to see the “Temple of the Sun”. On the way he told us about this temple so that we would not be surprised. Its walls are covered with sculptural compositions depicting scenes from the famous Kama Sutra. The guide would later tell us the story of the creation of such temples. Then he added:

— There will be a lot of traders selling all sorts of small stuff. Don’t pay attention to them. Otherwise, they will surround and you won’t be able to fight them off. I will demonstrate this to you.

And indeed, at the entrance to the temple complex a guide and a crowd of sellers with various souvenirs in their hands were waiting for us.

I don’t know when and how Anatoly Nikitovich agreed with the guide. But as soon as we got out of the car, an Indian guy of about 30 years old approached us and introduced himself in good Russian:

— Hello. My name is Minel, or just Misha. I will accompany you and tell you about this majestic temple. You will see unusual images on the walls of the temple. Take them calmly, as an artistic representation. And that is what they are. I will try to tell you about these carvings in detail and answer your questions.

While we were talking with the guide, Lukyanenko approached one seller with various beads in his hands. Anatoly Nikitovich took one string — beads made of red coral. He asked if the coral was natural. The seller immediately began to prove its naturalness by burning the beads with a lighter flame. The beads did not melt.

Anatoly Nikitovich asked the price.

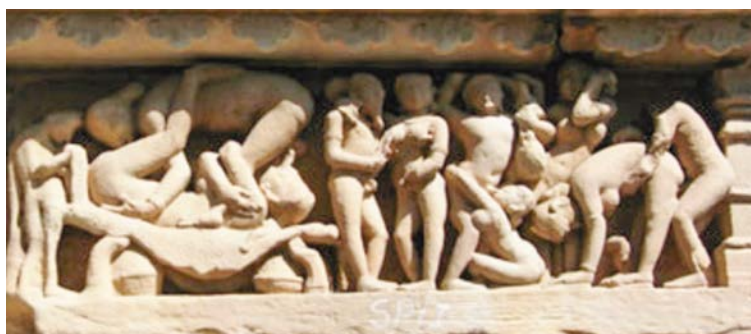
The answer immediately followed:

— 400 rupees.

— That's too expensive, — and Anatoly Nikitovich turned away from the seller.

But he did not leave us alone.

We approached the temple and were dumbfounded by the very first sculptures on the walls. The guide told us that during the Medieval period, more than 80 temples were built on the territory of India, the walls of which were decorated with bas-reliefs with piquant scenes from the Kama Sutra. About 20 such temples survived to that day. We were examining one of them.



“Temple of the Sun” with wall bas-reliefs

The construction of these temples lasted from 950 to 1050 during the reign of the Chandella dynasty. Why they did it remained a mystery. Despite

the unusual decoration, these temples are included in the list of UNESCO World Heritage Sites and are protected by law. Nowhere on the planet are there temples with such bas-reliefs. Millions of tourists from all continents come to India every year to visit these iconic temples. According to Hindu philosophy, sex has three goals — procreation, satisfaction and enlightenment. The ancient Indian treatise Kama Sutra covers not only 64 positions (calling them “arts”), but also a philosophical approach to spiritual love, the meaning of love in general in human life, teaches how to treat girls, and touches on issues of family life. The Hindu who accompanied us, when asked what the meaning of these erotic sculptures on the temples was, answered that the main goal is to educate ordinary people to create families and procreate. After all, it was the temples in ancient times that were the main and sometimes the only source of education and information.

While the tour guide was telling us about this temple, showing us the most striking pictures, explaining what they meant, Lukyanenko was still bargaining with the bead seller. I periodically heard: “300”, “150”... And this continued for an hour and a half, while the tour was going on. The seller kept following us. And having already returned to the car and got into the cabin, Lukyanenko lowered the window and said:

— Okay, go ahead, I’ll take it for 10 rupees.

The seller rushed to the window and handed over the beads.

— It’s okay, I’ll give it to my niece. She’s 12 years old, she’ll be happy with these beads. They’re clearly artificial.

And he added:

— That’s how they deceive tourists. Especially ours. First they name a high price, and then they reduce it to half. And the tourist is glad that he buys it for half the price, and it is originally 20 times less.

In the evening, the Head of the selection laboratory invited us to his home for a farewell dinner. The table was set in a gazebo built near the house. Ten employees of the Institute who had been working with us all these days came to dinner. The dinner lasted until late in the evening and was held in a warm and friendly atmosphere.

The next morning we were taken to the airport. We flew to Delhi. That same evening we said goodbye to India. A. N. Lukyanenko saw us off to the airport. We thanked him for the attention he had given us all these days and went home via Aeroflot Lines. India, with its contrasting pictures, was remembered for a long time afterwards.

4. France, October 1991

The year 1991 was especially rich in events and travels. After sowing rice at the Institute, we went by car to Kobuleti to sow rice in experimental plots in the infectious nursery (IN). In July, I visited India as part of a delegation with M. I. Chebotarev and E. R. Avakyan. In the first ten days of September, our breeding group again went by car to Georgia for selections in the IN. In early October, there was a second trip to France for a working meeting of breeders. In November, there was a business trip to Vietnam together with L. G. Kuryachiy.

And at the same time, in September 1991, our son Pavel was born into our family.

The trip to France had its own prehistory. In April 1991, the Rice Institute celebrated the 60th birthday of its Director, Academician E. P. Aleshin, and on May 2, he got into a serious car accident, which was followed by a long period of convalescence.

In June, when the Director was still in the hospital, the All-Russian Rice Institute received a personal invitation from France for G. L. Zelensky to a working meeting of breeders in October, with a paid air ticket from Krasnodar to Montpellier and back.

At first, they did not tell me anything about this. While the Director was ill, all current issues were resolved by deputies. One of them went to the hospital to see Evgeny Pavlovich for advice on what to do. And he categorically stated:

— Let Grigory go. Last year at the Congress, he showed that he could be entrusted with such trips.

According to the ticket, the flight from Moscow to Paris was supposed to be on Sunday at 8 a.m. I arrived in Moscow early, on Thursday. I was supposed to receive my passport and visa the day before my trip, on Friday, at the Ministry of Foreign Affairs. There was a huge crowd of people waiting for their passports and visas. At 5 p.m., a window opened and an official started calling out names and handing out passports.

While we were standing in line, I met a nuclear engineer. Their delegation of 7 people was going to France for an event organized by the IAEA. By the end of the handing out, neither he nor I heard our names. We were not given our passports. We rushed to the official to find out where our passports were.

— So you were not given a visa, — was the answer.

— Why?

— That's not my problem. My job is to pick up the passports at the Embassy and hand them out.



It was surprising that 3 people from the nuclear delegation, including the head of the delegation, an Academician, also did not receive a visa.

When the initial shock passed, we began to think: what to do? My ticket was for Sunday, but I did not have a passport. A fellow sufferer asked me:

— Have you been to France?

— Yes, last year, — I answered.

— Didn't do anything wrong there?

— I don't think so.

— Then you need to go to the French Embassy and find out why they didn't give you a visa.

— And how can I do that?

— Come to the Embassy tomorrow at 9 a.m. I have a French friend who works there. We worked together at the IAEA. Let's try to clarify the situation. We need to find out the reason for the refusal.

I had a letter from M. Jacquot with me, which outlined my entire route. On Sunday, I was supposed to fly to Paris. I was to be met at the airport and taken to a hotel. I would spend the night there; dinner, breakfast and taxi were paid for. In the morning, a taxi driver would pick me up and take me to the local airport. From there I would fly to Montpellier. I was to be met at the airport, taken to a hotel and then to the IRAT Institute. The hotel was booked. Now all was falling apart. What a pity!

I arrived at the French embassy early in the morning. Soon my fellow sufferer showed up. He called, and his friend came out to us right away. They discussed the problem for quite a long time. The Frenchman spoke Russian fluently. When he was free, I also turned to him. I showed him my papers and asked him to inform M. Jacquot that I had not received a visa, so I would not be able to fly. He took all the papers and left. He returned about 2 hours later and said to me:

— You were not given a visa because your documents were received at the embassy later than 30 days in advance. Your deadline is Monday. On Tuesday, you will receive your passport with a visa at your Ministry.

I said with great disappointment:

— We will have to cancel the trip.

And he told me:

— What are you talking about, such a chance may come your way once in a lifetime. Be sure to go, even if you get there 2 days later.

— And the tickets, they will be lost, won't they?



— No problem, everything can be fixed. Go to Aeroflot's central office and rebook the tickets there for Wednesday and back for Sunday, and from Moscow to Krasnodar for Monday.

He spoke so convincingly that I decided to fly. Of course, I understood that this decision was on the verge of an adventure, but I didn't want to back out. Although serious problems were foreseen. For example, when I arrived at the central airport of Paris, I would need to move to a local one. I did not even think about a hotel, I would wait at the airport. We did not change money in capitalist countries. They allowed us to take 10 rubles for an unforeseen event. But one could take alcohol — 2 bottles of vodka. I wondered if I could negotiate with some Frenchman to take me to the local airport for 2 bottles. I had to fly.

When the decision was formed and finally made, it became easier to implement it.

I went to Aeroflot. I went straight to the head of the department. A nice middle-aged woman was sitting in the office. I explained the essence of the problem to her. At first she refused, especially without a passport. I persuaded her:

— After all, the tickets have already been issued, I just need to change the flight dates. Last year, in France, a similar problem was solved for us in 2 hours over the phone.

— But we are not in France, — she reasonably objected.

Apparently, I looked so dejected that she took my papers, looked at them and said:

— In this situation, we should charge you a fine.

— What fine? Look at the cost of the ticket. The flight from Krasnodar to Moscow costs 28 rubles. And my ticket costs 99 dollars. How many times more is that?

— Okay, go to the operator, I will tell her over the phone.

I came to the ticket office, give the operator my papers and a box of chocolates to sweeten the additional worries. And then I was incredibly lucky. The girl operator turned out to be very friendly. Having understood the essence of the problem, she immediately became concerned about me. She went through a lot of options on the computer and found a very good one. Departure from Moscow on Wednesday at 6:30 and in 4 hours I would be in Paris at the Charles de Gaulle airport. In 2 hours from the same airport, a flight to Montpellier. And back the same way. Thus, moving from one airport to another in Paris was excluded. This was a great success for me. However, they would issue me a ticket only on Monday, when I could bring confirmation of receiving a visa.

I had to go to the Embassy again on Monday for a visa confirmation. Here I was lucky, they gave me a confirmation, and at 3 p.m. the tickets were in my hands.

In the evening I called my wife Olga at home, and she told me that the Rice Research Institute had received a fax letter from M. Jacquot, in which he said that he had been notified of my delay, so they would expect me on Tuesday according to the Sunday schedule. I mentally thanked Jacquot and lamented that I would not be able to take advantage of his kindness, because I would only be able to fly on Wednesday, if I get my passport. On Tuesday evening I received my passport with a visa, packed my things and went to Sheremetyevo-2 airport. I decided to wait there until departure.

Then everything went smoothly. I arrived in Paris. I asked the administrator about the flight to Montpellier. He looked at my papers and pointed to the TV monitor so that I should watch the announcements, they would appear soon. And sure enough, an hour later a message appeared telling me at what gate to go for the flight to Montpellier.

We boarded the plane and in an hour and a half the landing was announced at the Montpellier airport. I went out with all the passengers to the arrivals hall. However, no one was waiting for me here, because it was already Wednesday. The people quickly dispersed, and I was left wondering what to do.

I saw a man standing to the side with a label: "CIRAD". And I knew from last year that this was the head organization of the IRAT institute, where I needed to go. I went up to him, said hello, apologized and took out my papers. He spoke English well. He glanced at M. Jacquot's letter and added:

— Oh, Mr. Jacquot, I know him. He had an event that started yesterday. Call him that you have arrived.

I mumbled something indistinctly that I needed change for the phone. He immediately understood the problem, went to the pay phone, inserted the card and called.

— Mr. Jacquot's secretary told you to take a taxi and go to the institute, she will meet you.

Then he took me to the station square where the taxis were standing and explained to the driver where to go. We drove up to the institute, I looked at the meter and saw 100 francs. That was about 20 dollars. The secretary was indeed waiting at the gate, paid the driver and led me to the meeting room.

As soon as we entered the room, Michel Jacquot saw us and announced a break. A stormy meeting with colleagues began. Questions rained down:

— How did you get there, why was there such a delay, why didn't you get your visa right away? Oh, these officials...

There were representatives of 20 rice-growing countries in the room. I had known almost everyone since last year. The main objective of the meeting was to expand and cooperate in scientific ties in the sphere of selection, seed production, and rice cultivation technology. Scientists reported on the situation in their countries and on what issues joint research could be conducted. I repeated my proposal to conduct ecological testing of rice varieties in different countries. M. Jacquot suggested creating a working group of the most interested parties to work out the details of this issue. I was included in this group, and Guy Clément, a French breeder, headed it.

An hour later, the secretary came and brought me an envelope with money. There was 4 thousand francs inside, every participant of the meeting got it in addition to the cost of tickets covered by the receiving party. This included payment for the hotel, food, and per diem. I signed the receipt and thought:

— Well, now it will be easier to breathe.

A colleague from Egypt, Mahmoud Ballal, was staying in the next room at the hotel. In the evening, he suggested going to the store together to buy souvenirs. Seeing how he quickly filled the cart with various items, I slowed down. I had to take a closer look and choose a souvenir for everyone so as to stay within the allotted amount. The hotel took 2 thousand francs. Plus we had to eat. So there wasn't much left for souvenirs.

We worked hard until midday on Friday. We summed up the results, adopted a recommendatory resolution, which would then be sent to all the Institutes participating in the joint research project.

Six countries agreed to participate in the ecological test. It was decided to take 6 varieties and grow them in each of the six countries.

At the end of each day, a sightseeing tour of the city was organized, and we were told about the most interesting sights.

Montpellier is a city in the south of France in the Occitania region, located on the River Lez, 10 km from the Mediterranean Sea. It is one of the largest centers in the southern part of the country, and the capital of the Hérault department. The city is located 170 km from Marseille and 748 km south of Paris. Montpellier has a very warm Mediterranean climate. It has got interesting historical and cultural monuments and is located near the sights of Provence, the Camargue Nature Reserve and beautiful Mediterranean beaches. Just over 270 thousand people live in Montpellier.

The history of Montpellier begins at the end of the 10th century, when a local feudal lord united two villages. In 1141, the Count of Toulouse built a castle there and endowed the settlement with city privileges. By the end of



the 12th century, Montpellier became a major trading center with connections throughout the Mediterranean. In 1220, a University was founded in Montpellier. The city has preserved many historical monuments, thanks to the careful attitude of the population towards them. The following are distinguished by their architecture: the Cathedral, the Opera building, the Triumphal Arch, the 18th century Aqueduct.



Montpellier Cathedral



The Opera building

The Triumphal Arch is the entrance to the Peyrou embankment. It was built back in 1693, after a similar structure located in Paris.

The city of Montpellier is distinguished by the exceptional cleanliness and well-groomed territory. Obviously, the credit for this goes to both the administration and the residents of the city.



The Triumphal Arch



The 18th century aqueduct

It is worth noting one more fact from this trip. A woman of about 30 named Catherine was working with Michel Jacquot as a secretary-referent. I called her Katya. She was married to a Frenchman and had two daughters. From her story it followed that her grandmother was Russian and in 1929 she left Leningrad for France. In 1932 she gave birth to a son, the future Katya's father. He studied Russian since childhood. He graduated from the Russian cadet corps, and everyone in his family spoke Russian.

So, one morning I saw Katya arrive at work in a small passenger car. I could not resist asking her:

— Did your husband buy the car?

— No, I bought it myself.

I was tactless and asked what is usually not customary:

— I wonder what your salary is?

— 10 thousand francs, — Katya answered.

— And your boss's?

— 25 thousand francs (or 5 thousand dollars).

(On a billboard I saw that price of the Renault car was 52,000 francs there. — Author).

Katya and I communicated in a mixture of Russian and English. I did not know French, and she spoke a little Russian and English. It was interesting to watch how a person strived to say something when there was not enough vocabulary. But we still found compromises in the conversation, and we were able to convey the main ideas to each other.

On Thursday evening Katya invited me to visit her place. Her parents came from a neighboring town. Her father really wanted to talk to a Russian scientist.

After work, we went to Katya's. The family had been warned about the guest, so everyone: her husband, two daughters and mother greeted me very kindly. They looked at the guest with interest. Mom spoke Russian very poorly. She said that her husband, Katya's father, would be arriving soon.

And indeed, a few minutes later he came into the house. He was a tall, slender man with slightly gray hair, looking younger than his 60 years. His name was Sergey, and his wife called him Serge. He spoke Russian fluently, without any accent. He welcomed me to his daughter's house. He apologized for being late and for the fact that he would ask me many questions. He was worried about the situation that was developing in Russia in connection with perestroika. Every Friday he watched the program *Vremya*, which was broadcast in France. He subscribed to the *Pravda*, *Izvestia*, and *Literaturnaya Gazeta* newspapers and carefully read all the articles. Therefore, he knew almost all the news about the

country. I answered his questions as best I could, and, apparently, I tried very hard to soften some of the sharp edges. Because at the end of the conversation he couldn't resist and said with a smile:

— You would make a good diplomat.

Serge read in the newspaper that a law was being considered that would allow not only blood relatives, but also the second and even third generation to visit Russia. The whole family dreamt of going to their grandmother's homeland.

The evening passed very quickly over tea. Around 10 p.m. I was already at the hotel, watching TV and thinking about people's destinies.

I was supposed to fly home on Sunday, and Jacquot suggested that I spend Saturday at his place chatting and calmly discussing the prospects for cooperation. Especially since everything in the city was closed on Saturday, except for grocery stores. I agreed.

In the morning I woke up at about 6 a.m. from the noise outside the window. I looked out and saw that the street was being cleaned. The roads were paved with cobblestones. I saw a car into which two workers were collecting bags. Residents put bags of garbage outside the door. Bags were of different colors with sorted garbage and each was put into own container for subsequent recycling. A car followed and swept the street. After it, a pressure washer poured foam over the street, and the next vehicle washed it off with water.

At 10 a.m., Jacquot's wife, Maria, came to pick me up, since she had gone to the market in the morning. On the way, Maria told me that they had built the house themselves, after a 7-year contract in Africa. There they had worked at experimental stations, conducting scientific research on rice. Later, during our conversation, I asked Jacquot about his work abroad, and he told me that IRAT had organized a network of experimental stations in former French colonies. Researchers, coming to work at the IRAT institute, were sent to these stations for 3–5 years after a year's work at the Institute. Jacquot worked in three places for 7 years. At that time he was paid double salary, one at the Institute and the other at the station. After returning, he bought a plot of land and a Mercedes, built a house, and then for his current trips he took two Renault cars, a small one for his wife and a larger one with a diesel engine for himself. Jacquot's house was on the outskirts of the city, about 20 km from the center, near a forest on a hillside. The house was built of white brick, 2 floors, with a very original design in the form of a small castle. Jacquot was happy to show me his garden planted with decorative trees and bushes. He did all the work in the garden himself, usually on Saturday. But that day he had a day off because of the guest.



We went into the house. On the first floor there was a kitchen-dining room and Jacquot's office, and on the second floor there are three bedrooms. In the office there was a large table with computer equipment, chairs, a couple of armchairs, a sofa and a large bookcase.

— I work here after work, — the owner shared with a smile.

— Yes, it is very convenient, — I praised.

We sat down in the armchairs, Jacquot's wife sat on the sofa and we began to talk. They told me that they had two children, a daughter and a son, who lived separately. I briefly told him about my family, breeding work and my scientific hobbies. The wife was mostly listening and suddenly in not very good English asked me:

— Which part of the calf would you like me to cook for you?

I did not quite understand her question and, I wondered what did some part of the calf had to do with it? I turned to Michel:

— I probably don't speak everyday language very well, what does a part of a calf have to do with it?

He took a piece of paper, drew a carcass, then some lines around it and, showing it to me, asked:

— Which part would you like to get a tasty piece from?

— Oh, madam, are you really going to take a separate part for me! Cook for me from the same part as Michel, — I answered.

She laughed and went to the kitchen. Soon she returned and joined the conversation. About 20–25 minutes later I heard a ping in the kitchen, Maria got up and went there. She was preparing a dish like shashlik, but in a microwave oven. Before that, I had only heard about a microwave oven, but now I saw it in action. Therefore, when I returned home, without delay, I bought a "BOSH" oven, and it served us for many years.

About 5 minutes later, Maria called us:

— Guys, wash your hands and come to the table.

And then she asked a question that stumped me.

— What wine will you drink with meat?

I knew that white wine was a good companion for fish, and red one went well with meat. But what brand? They had 20 different types of wine on the shelf.

Here I again threw up my hands and said:

— Madam, well, I shall not open a separate bottle. Let's have the wine that the host chooses.

I managed to get out of this tricky situation too.

Jacquot opened a bottle of vintage wine. I don't remember the name of the wine, but it tasted very good. The conversation continued at the table. Then we went outside, walked around the garden. The weather was wonderful, birds were jumping in the trees and chirping merrily. A real Eden. The day passed unnoticed in this hospitable house. Jacquot drove me to the hotel when it was already dark.

When I was getting ready to leave France, Michel Jacquot and Guy Clément, seeing me off, handed me a package with a souvenir. It was canned meat. Of course, I was very surprised by this. But everything became clear when the following year, 1992, they both came to visit us in Krasnodar for a week. The program of their stay included dinner at my home. When I was told about this, I asked:

— Mr. Jacquot, we have a home dinner planned, what would you like to try from the Kuban dishes?

— You know, Grigory, I have traveled a lot around the world, I have been to Russia, and I have heard that you have a national dish called “borscht”, but I have never tried it. It would be interesting to taste it.

— Okay, we will take your wish into account.

The dinner was planned at my apartment. I asked Galina Stepanovna (Olga's mother) to help Olga cook borscht and other dishes. For this, I brought a duck and a chicken from the village, and Galina Stepanovna prepared the rest of the ingredients herself. The borscht was a great success.

When the guests sat down at the table, which was beautifully set, and tried cold appetizers, I suggested serving borscht and sour cream. The color, smell and, most importantly, the taste of the borscht were so rich that everyone ate it with great pleasure. Having finished the first plate, Jacquot quietly whispered to me:

— Can I have another helping?

— Of course.

Another plate was served. He ate borscht and refused the second course, saying that he was full.

— I haven't enjoyed food so much in a long time. Now I can tell everyone that Kuban borscht is the best dish.

— Your words are great praise for the cook, — I answered and pointed to Galina Stepanovna.

It was obvious that Galina Stepanovna was happy at that moment.

After dinner, before leaving, Jacquot took me by the sleeve and said:



— Sorry, Grigory, that last time in France I gave you canned food as a present. I really thought you were starving. Damned propaganda, and we believe it...

And then after a visit to the Krasnoarmeysky Rice Factory, a visit to the riding arena with a show of horses, a museum, an art gallery and a hearty dinner, Jacquot once again repeated his words of apology to me. He really thought that everything was bad for us and did not expect such a hospitable reception.

Looking ahead, I will say that in 1997 in Egypt, when there was a discussion about the plan for future conferences, it was M. Jacquot who first supported our idea to hold the 2000 International Rice Conference in Russia. He and J. Chagny in France found sponsors who provided financial support for this event.

5. Vietnam, November 1991

In August 1991, I came to the elite seed farm “Krasnoye” to look at the crops of my varieties. I went into the office of the Director of the farm, Leonid Georgievich Kuryachy. He had a guest — Albert Georgievich Lyakhovkin, a specialist in rice collection. He had worked at VIR for many years, and now for the third year he had been working in Vietnam at the Soviet-Vietnamese rice station. He came to Leonid Georgievich for a cup of tea while on vacation with his family in the village of Oktyabrsky, where his wife’s mother lived.

I greeted both of them and, having apologized, wanted to leave so as not to disturb their conversation. But Albert Georgievich stopped me and turned to Leonid, as if continuing their conversation:

— Maybe you and Grigory will fly over to combine business with pleasure? He will deal with the business issues, and you’ll enjoy.

— Well, we can go with Grigory, he is a good man.

And, turning to me, Leonid asked:

— Do you want to go to Vietnam? It’s not France, of course, but it’s still interesting.

Albert Georgievich immediately added:

— This trip is necessary. We need to bring here seedlings of a plant that we found in Vietnam. It’s called stevia. This plant does not grow in Russia. We want to try to propagate stevia here in a greenhouse. I discussed this with the Director of the All-Russian Rice Research Institute. He promised to allocate space in the greenhouse complex.



— And when should we go?

— The optimal time is November. By then you will have harvested your rice, and it will not be as hot in Vietnam as it is now.

— And will the Rice Institute let me go? After all, this involves certain expenses.

— There will be no problem with that. We will send an official invitation. Leonid Georgievich will buy the tickets, and we will pay for the hotel and food there.

— Well, if that's the case, then I agree.

— You see, Grigory, how important it is to be in the right place at the right time. If you hadn't shown up here now, we would have found another partner for Leonid, — said Lyakhovkin.

— Let's consider me lucky, — I answered.

Time passed. I managed to clean up my experiments and fly to France in October. The 10th of November approached, and I received L. G. Kuryachy's request to urgently come to him at "Krasnoye".

I arrived. Leonid told me the news right from the doorway:

— On the evening of November 18th, we fly to Moscow, and from there to Hanoi. I have already arranged everything, the Director of the All-Russian Rice Research Institute has given the go-ahead. No visa is required for Vietnam, and we can fly on our Russian passports.

The day of departure approached. On Monday, November 18th, at about 9 p.m., a Volga pulled up to my house. Leonid was sitting in the back seat. He greeted me warmly, invited me to sit next to him and told the driver to go to the airport. We took off at 0:55 and landed at Domodedovo Airport two hours later. It was a dark night, about 5–6°C outside with a strong wind. It was good that we had dressed warmly. The airport was packed with passengers, there was nowhere to sit. We found out from the dispatcher that a bus to the metro ran every half hour. Our travel belongings, three large bags, were very inconvenient. Therefore, having reached the Kazansky railway station, we handed over our luggage to the storage room, keeping only our briefcases with documents. We sat there in the waiting room until 8 a.m. Then we went to the All-Union Academy of Agricultural Sciences named after V. I. Lenin to get directions to a hotel. (*The time was such that it was practically impossible to get a room in Moscow hotels. Having arrived in the capital on business, a person went to his parent organization to get directions to a hotel.* — Author).

We were received very kindly at the Academy, given directions to the Ural Hotel, near VDNKh, where we settled. Our flight from Sheremetyevo-2

to Hanoi was scheduled for the next day at 4 p.m., so there was enough time to rest.

After lunch on November the 20th, we got into a taxi and went to the airport. There were three flights a week from Moscow to Hanoi: Monday, Wednesday and Friday. We were flying there on Wednesday and back a week later. We went through all the customs formalities without any problems and went to board. Surprisingly, the customs officers freely let several bottles of vodka that Leonid had in his hand luggage. In this bag, Leonid was carrying food gifts for our colleagues working in Vietnam: homemade sausage, boiled pork, lard, dried fish — stockfish and sturgeon. Our Il-86 plane, designed for 350 people, was full. The flight was comfortable, there was no feeling of vibration, noise or shaking. Only a slight hum was heard. We were seated in first class. And for the first time I enjoyed comfort provided for VIPs. A wonderful dinner with alcohol. Leonid suggested:

— Let's take cognac. We have our own vodka, and we'll drink wine at home.

After a hearty dinner, I fell asleep right away, and Leonid smoked and chatted with the flight attendants. (*At that time, smoking was allowed on international flights.* — Author). Unfortunately, I wasn't allowed to sleep properly. This flight to Hanoi had a stopover in Tashkent, and then in Karachi (Pakistan) and Calcutta (India). So every 2.5–3 hours we left the plane and waited for refueling. In Tashkent, we were let off the plane and taken to the airport building. The weather was calm and warm. After Moscow, where a damp cold wind was blowing, it was comfortable in Tashkent. An hour later, boarding was announced and we flew on. After landing in Karachi, the flight attendant announced that we would stay there for an hour, but nobody was aloud to get off the plane. The crowd began to make a disgruntled noise. The sun was shining brightly outside, but, alas, we had to endure it. Then another flight and landing in Calcutta, a 1.5-hour stop with a transfer to the airport. It was hot outside. The sun was shining brightly. The dry season had begun there. The plane covered the last section to Hanoi in 2 hours. In total, our journey took more than 16 hours. During the flight, we were fed 3 times and regularly given drinks. Overall, the flight went well, despite intermittent sleep.

At 1:30 p.m. local time, we set foot on Vietnamese soil. The time difference with Moscow was 5 hours. When we got off the plane, we felt that we had arrived in the tropics. It was humid and stuffy. The temperature was +28°C and the air humidity was about 100%. And although we undressed to our shirts, we immediately realized the difference in local conditions compared to Kuban. And this was the second half of November. And what was it like there in July-August?

The guys from Rostov-on-Don flew with us to Hanoi. Leonid met them when they were smoking in the tail of the plane. A group of 5 people: three men and two women, all under 40. They were “shuttle traders”. That was what they called people who went abroad, bought some goods there, brought them to Russia and handed them over to sellers at the market. This movement was just beginning, and we looked at these shuttle traders as something amazing. The plane allowed cargo of 20 kg per person. These guys bought, for example, white cotton sports T-shirts, weighing 20 kg. There was a demand for such T-shirts in Russia. In Hanoi, these guys were already known and the goods they needed were procured for them. They arrived on Monday or Wednesday, bought the goods the next day, and then flew back.

Albert Georgievich Lyakhovkin met us at the airport with a driver in a company car. Having welcomed us to Vietnamese soil, he immediately took us to the experimental station, which was located 60 km from Hanoi. An hour later we arrived at a hotel located on the territory of a military town about 2 km away from the station. Here we were accommodated in a large room on the 2nd floor with air conditioning, so we did not suffer from the heat in the building. We stayed there under 24-hour guard. In the evening we were invited to a gala dinner, where all the employees working at the station, our and Vietnamese colleagues, gathered. We immediately discussed the program of our stay. We were to get acquainted with the work of the station, visit the Rice Research Institute and a farm. Rice was grown here all year round. Therefore, we could see fields with different phases of rice development, planting seedlings and harvesting the ripened crop at the same time.

The next morning we were taken to the experimental station. While it was not so hot, we looked at the experimental fields of rice and other crops grown within the rice system. The field was divided into micro-checks, 150–200 m² in size, fenced with a low ridge to retain a layer of water. The soil was cultivated with a walk-behind tractor on a flooded field. This alone distinguished the level of local agricultural technology compared to what I saw in July at the Rice Institute in the Indian city of Cuttack. There, the soil was also worked when covered with water, but buffaloes were used there. However, the rice seedlings in Vietnam, as in India, were planted manually by women, moving barefoot across the field. Next to the checks where the seedlings were planted, rice was growing in the flowering phase. The layer of water on the check did not exceed 5 cm. In another field, the rice was ripening. Of course, it was very unusual for us to see rice at different stages of its development at the same time. But for local residents that was a common thing. And the work was distributed evenly throughout the year.

After lunch, we were shown the laboratories of the station, where all analytical studies were carried out. In one of the rooms, there were pots with a boiling brown solution on electric furnaces. A subtle floral aroma was in the air. Albert Georgievich explained that here they boiled stevia stems and analyzed the content of stevioside in the stems of its different forms. That was the plant that has been discussed in the summer in Leonid's office. Wild stevia grew in the surrounding areas. There were individual plants with a very high content of stevioside. This is the name of the extract, which is 250–300 times sweeter than sucrose.

The station staff were able to select the best plants and get seedlings from them. These seedlings had to be taken to Krasnodar.

— This is aim of this trip, — Albert Georgievich said in conclusion, — and the rest that you will see here is to broaden your horizons.

And indeed, in the following days we saw all the elements of rice cultivation technology in Vietnam: soil preparation, planting rice seedlings, mowing rice with sickles, threshing and drying in open areas.

Vietnam is a “rice” country, it is grown and eaten here in large quantities. Rice is grown by everyone and everywhere. The major part of Vietnam's agricultural rice lands is located in the deltas of the Mekong and the Red River. It also grows on the plateaus in the north of the country. There, terraced fields have been built by the thousands of years of labor of the inhabitants of these places. Rice production on such fields is a colossal manual labor. Most farms use buffaloes to prepare the soil, but some also use motor blocks. In Vietnam, three rice harvests are collected per year. This is facilitated by the hot and humid climate.



Preparing the soil for planting rice



Rice fields on terraces



Planting rice in the valley and on terraces

Saturday and Sunday were excursion days for us. We were taken to Hanoi. They showed us the main sights of the city and local markets. We visited the Ho Chi Minh Mausoleum and Museum, the city park and the Buddha Temple located there. On weekends, the park was very crowded, not only with tourists, but also locals with children. Both days of the excursion ended on the “path of Soviet specialists”. That was what the locals called the street of small shops where they sold consumer goods. Our numerous specialists working in Hanoi bought things there before leaving home. Indeed, the prices were low, if you convert them into our rubles and, especially, into dollars. At that time, \$1 cost 28 rubles and 14,000 Vietnamese dong. Upon arrival we were given travel allowances of \$17 per day, so we had money to buy souvenirs. The weather changed:

it rained for two nights in a row, and by morning the temperature dropped to 20°C. By midday, despite the sun, it was not as hot as on the day of our arrival.

At the experimental station in the agricultural technology laboratory, we met Alexey Alexeyevich Maistrenko, the son of the famous director of the “Krasnoarmeysky” rice state farm, A. I. Maistrenko. Alexey lived in Moscow, worked in the Ministry of Mechanization. At the invitation of the Vietnamese authorities, he worked there for the second year, lived in the neighboring building with his wife and daughter. On Saturday evening, they invited us to a home dinner. Alexey’s wife cooked real Kuban borscht, and we were very pleased to test it far from Kuban. Leonid had been acquainted with them for a long time, so the conversation was especially warm. As a gift, Lenya brought a large can of herring and a bunch of dried fish, which he prepared himself. The evening ended with watching the Moscow program “Vremya” on TV, which was regularly shown here at 10 p.m. local time.

On Monday, Albert Georgievich and I went to get acquainted with the work of the local Rice Research Institute. It took us almost two hours to cover the distance of 70 km to the Rice Institute. The traffic was heavy on the narrow road. Trucks were mixed with carts pulled by buffalo. Traffic was moving in both directions, so it was difficult to overtake.

At the Institute, we were received by the Deputy Director who told us about the directions of scientific research and showed us around the laboratories. The main research of the employees was aimed at creating hybrid rice. In the Biotechnology laboratory, pure lines were obtained from the anther culture, which were used to select heterotic hybrids. The problem of the emergence of albinos during cultivation existed there, as it did at the All-Russian Rice Research Institute. However, the specialists took this calmly. They selected such hybrid combinations that gave the maximum yield of green plants and then worked with them.

Then we were shown the experimental field and the selection crops. Here we had an amazing meeting. It turned out that two research fellows had studied at the Kuban Agricultural Institute and were graduate students of Professor E. P. Aleshin. Both spoke Russian very well. They were happy to talk to us and tell us about their work. They remembered the time spent in Krasnodar with great warmth. When I asked them what they remembered most about their studies, they answered in unison:

— Winter. In Kuban, we saw snow and frost for the first time.

We had lunch in a cafe near the institute. They served soup and roast meat. The rice soup with spices was very tasty, so I ate it with pleasure. But the meat

seemed suspicious to me. It had a sweetish taste. It seemed to me that the spices had an effect. But when the next day I finally asked Albert Georgievich about this meat, I heard a stunning answer:

— The meat tasted like that because it was dog meat.

— What? We ate dog meat! Why didn't you tell me right away?

— Calm down. This is a special breed of dog that is raised here for food. If I had told you at the table, you probably wouldn't have eaten it. But in life you have to try everything, at least a little. In all the countries I've been to, I've always tried national dishes. And as you can see, I'm alive and well.

— It's good that Leonid wasn't with us. He wouldn't have survived this.

— Yes, I know how picky he is about food. Don't tell him about it.

— Okay. We'll survive.

Indeed, I didn't tell Leonid about this incident in Vietnam. But at home, about six months later, I couldn't resist telling him about that lunch. Leonid jumped up.

— It's good that you didn't tell me that there. I would have eaten only rice and pasta for the rest of the trip.

On Tuesday morning, we visited a small cooperative farm. It employed 10–12 families. They grew rice, soybeans, and vegetables. Judging by the story of the head of the farm, they were happy with their life. They cultivated the soil with walk-behind tractors, and did all the other work manually. They cut the rice, tied it into sheaves, which they threshed with an electric thresher. That year, with the help of a government loan, they bought a small tractor. Next year, they planned to buy a Korean combine.



Threshing and drying rice grains

Leonid asked about the loan:

— How profitable is it?

- Very profitable. They give it for 5 years at a very low interest rate.
- The equipment is expensive, but you still take it. What are you guided by?
- Yes, it is expensive. But it is very difficult to keep the youth in the co-operative. Last year, three guys returned from the army, and we really counted on them. But they went to work in the city. And when we bought a tractor, one came back. He was a tank driver in the army, and he is interested in working on a tractor. If we buy a combine, maybe the rest will come back. Especially since their fiancées live here and work in the cooperative.

After lunch, we were taken to the market to buy souvenirs. The market spread out over a huge area, where they sold all sorts of household items and a lot of textile products. Here we bought gifts and souvenirs for our families.

On Wednesday morning, November 27, we said goodbye to the hospitable hosts and went to the airport. I had a box of stevia seedlings as hand luggage. It had to be delivered safe and sound. The frosts that had already begun in Moscow at night were especially dangerous. Looking ahead, I will say that we managed to deliver this valuable cargo to Krasnodar and hand it over to the All-Russian Rice Research Institute. There, these plants were planted in a greenhouse.

Arriving at the airport, we saw a picture that showed how difficult the work of “shuttle traders” was. A company we knew from Rostov-on-Don was sitting outside under an awning. Next to them, huge bags were piled up. Those were the goods for which they had flown there.

We got out of the car and one of the Rostovites rushed to us.

— Brothers, help us out. We have been sitting here since Friday. The plane did not arrive on Friday and Monday. Not knowing this, we spent every ruble. We arrived at the airport and got stuck. We have no money for a hotel and nothing to eat. We drink tap water. At least they let us use the toilet for free with a ticket.

It was very unpleasant for me to look at this unshaven man who had flown to Vietnam for “easy money”.

But Leonid reacted differently. He took this guy by the elbow and led him to the station buffet. A few minutes later they came out with two large bags in their hands. Leonid had simply bought them groceries. You should have seen how their whole company pounced on this food.

While we were talking to the “shuttle traders”, Albert Georgievich went to the airport control room and returned with disappointing news for us:

— The plane won’t arrive today. It was delayed either in Tashkent because of the fog, or in Karachi because of the dispatchers’ strike. It’s not entirely clear. Maybe it will arrive tomorrow.

Of course, we were shocked. We were already prepared to fly home, and then there was such a delay. We had to wait. Seeing how packed the airport was with passengers, Albert Georgievich suggested returning to the hotel and waiting there in comfortable conditions, checking on the plane's arrival by phone.

We arrived at the hotel in a very low mood. Soon Albert Georgievich arrived, he probably never lost his optimism.

— Considering that you were delayed for a good reason, you are entitled to a daily allowance. Please sign the form.

And he put the money on the table.

I thanked the hospitable host, and Leonid grumbled discontentedly:

— And where should I put these dongos? Stick them on the wall?

— Why on the wall? Now we'll have lunch and go to the market to buy more souvenirs. Our women invite us all to have a bite.

He told various stories from his foreign business trips. He recalled how they had once flown from Moscow to Hanoi and the plane had broken down on landing in Karachi. And they lived there for six days, though at Aeroflot's expense.

After lunch, we were taken to the market, where we spent the extra dong we had received. And in the evening, a farewell dinner was organized, to which almost everyone working at the experimental station came. As they say in such cases, the dinner was held in a warm and friendly atmosphere.

We went to bed late, hoping that in the morning there would be some clarity about the plane. And indeed, at 7:30 a.m. Alexey Maistrenko came and said that he had called the Ministry, and they assured him that our plane would arrive in Hanoi by 1:30 p.m.

Everything went smoothly at the airport. The plane arrived. At 5 p.m. we said goodbye to the hospitable Vietnamese land and headed along the route towards Moscow. Already in flight, we were told the reason for the delay: there was a heavy fog in Tashkent. Over 100 flights were delayed in three days. Fog was common in those parts at the end of November. Sixteen hours later, we were entering the airport building at Sheremetyevo-2. We rebooked our tickets to Krasnodar. And the same evening, we flew home.

The entire way, while we were flying to Moscow, Leonid did not say a word about the "shuttle traders" he fed at the Hanoi airport. And already in Moscow, while we were waiting for our flight to Krasnodar, Leonid spoke with all frankness about these "workers". And then, several years later, after this trip, Leonid remembered that incident. His assessment was unambiguous:

— You have to work, and not look for "easy" money.

In conclusion of this story I will describe several pictures from my Vietnamese observations. Almost until the end of this trip we still did not adjust to local time. We couldn't sleep until late at night. We went out onto the balcony, contemplated the night views and breathed in the cool air. There was a guard walking around the building. He was dressed in a cloak with a hood and flip-flops on his feet. At night the temperature dropped below 20°C. It was obvious that the guy was very cold. Leonid was standing on the balcony and smoking a cigarette. The guard, seeing this, began to make hand signals. Leonid realized that he wanted to smoke too.

— I'll help my "brother," let him warm up.

He immediately lit a new cigarette and threw it to the soldier from the second floor who caught the cigarette in mid-air and, hiding it under his cloak, began to smoke quietly.

Leonid lit a second cigarette and threw it to the guard. He deftly caught it and quickly walked around the corner of the house. We never saw him again.

Every morning we would see a large group of men and women on bicycles moving along the road near our hotel. They were all dressed in uniform — khaki trousers and shirts and round hats made of rice straw. We had seen hats like these at the market. Occasionally men would ride past on mopeds. The Vietnamese had almost no cars for personal use.

The general impression was that everyone worked here. We never saw drunk or idle locals on the street. Yes, the standard of living in Vietnam was much lower than in France, where I had been a month earlier. However, compared to the contrasts and terrible poverty that we had seen in summer in Delhi, people here lived well. The situation in the country was stable, there were no hungry or unemployed people. The population was busy working. The whole country was like a big anthill, in constant motion. This was a nation of workers and great patriots of their land.

Historical information confirms this.

For the sake of completeness, I will cite only a few fragments from the history of Vietnam.

The name of the country Vietnam consists of two words— "Việt" means the titular nation — the Viets, and "Nam"— the south, "southern Viets". In literature, Vietnam as a country began to be mentioned in the 16th century.

The Vietnamese people have come a long way in the struggle for their freedom. In the middle of the 19th century, Vietnam fell into colonial dependence on France, which lasted until the beginning of World War II. Then there was the Japanese occupation. After the defeat of Japan, in August 1945,

Vietnam

Socialist Republic of Vietnam	
Official Name: Socialist Republic of Vietnam	
Capital:	Hanoi
Area:	331,703 km ²
Population:	78,463,000



However, France, with the support of the United States, returned to Vietnam again to restore the colonial system. The people of Vietnam continued their struggle. In December 1946, a “people’s long war” of guerrilla nature began, which ended in the complete victory of the Vietnamese people.

A historic day is July 2, 1976, when the North and South of Vietnam merged into the Socialist Republic of Vietnam (SRV). In 1976, a new constitution of the SRV was adopted, Saigon was renamed Ho Chi Minh City.

Currently, the Socialist Republic of Vietnam is a one-party socialist republic, a secular state, with a population of over 97 million people (according to 2018 data), of which the urban population is 29.63%, the rural population is 70.37%.

Over the past three decades, Vietnam has made colossal achievements in the agricultural sector, especially in rice growing (Table 1).

Table 1. Dynamics of rice production in Vietnam

Indicators ^{su}	Years			
	1990	2000	2010	2018
Rice area, mln ha	6.04	7.66	7.48	7.57
Yield, t/ha	3.2	4.2	5.3	5.8
Grain harvest, mln t	19.2	32.5	40.0	44.1

If in the 1980s the majority of the population in Vietnam was starving, then after 20 years the country was able to fully provide itself with the necessary products. Over 10 years (2008–2018), the average food production per capita per year increased from 497 to 525 kg, and rice consumption — from 145 to 217 kg.

Currently, Vietnam is the world’s second largest rice exporter (after Thailand). About 10 million tons of Vietnamese rice are exported annually, mainly to countries such as the Philippines, Indonesia, Malaysia and Japan.

In Vietnam, they say: eat more rice, live long and be healthy, calm and balanced!



6. France, 1996

When I changed my place of work for the Kuban State Agrarian University in January 1996, I sent this information and my new work address to all my foreign colleagues.

At the beginning of June, I received a letter from France that another conference on rice would be held in Arles in October, and I was invited to take part in it. A copy of the letter was addressed to the Rector of the University.

A week later, the Rector I. T. Trubilin invited me. I went to see Ivan Timofeevich. He greeted me and said:

— Here I have a letter from France. You are invited to a conference on rice. You need to go. How much money should I allocate for the trip?

— None, the organizing committee will cover all the expenses.

— All the more reason to go.

I did not tell him that I had to buy a ticket myself in advance, and then they would reimburse the expenses. Before that, we had talked with Vasily Zakharovich Kuznetsov, and he said that he would give money for the ticket. It was a small reward for the rice variety Leader they grew on their farm without using herbicides and fungicides.

This trip turned out to be interesting in all respects. It made a breakthrough in my five-year isolation from foreign colleagues. After 1991, I did not travel anywhere, because all information about international events and all invitations stayed with the new management of the All-Russian Rice Research Institute. And I either knew nothing about them, or found out much later after the event.

I already knew the technology for obtaining a visa. I prepared the necessary documents in advance, and therefore received a visa for a trip to France without any problems. I wrote a letter to my French colleagues that it would be more convenient for me to fly to Marseille, which is located near Arles. Guy Clément said that he would meet me and take me to Arles in his car.

Arles is a city in the south of France in the Provence — Alpes-Côte d'Azur region. The city is located in the valley of the Rhone, on the border of its huge marshy delta and the Camargue Nature Reserve. It has a warm Mediterranean climate. Arles is one of the most beautiful cities in Provence with a magnificent historical and cultural heritage. The population is over 50 thousand people. There are many monuments left in Arles from the times of the Roman Empire. Among the ancient ruins, the amphitheater, theater, ancient forum and thermal baths stand out.

This region is home to almost all of France's rice growing: farms, rice processing plants and an experimental rice station. My colleague Guy Clément carried out breeding work here.

In Arles, all conference participants were housed in cottages near the sea. I was given a whole apartment in a separate house. The whole family could come. Many colleagues did just that. The houses were located in a green park area. Between the houses there were pools with sea water, green lawns all around. The weather was sunny, warm, simply bliss. There were sun loungers on the lawns where people were sunbathing. We walked past and admired all this.



Roman Theatre in Arles

The meetings were held in a conference hall equipped with everything necessary, with good air conditioning. We ate in a restaurant three times a day.



At the conference in Arles, 1996

Of course, we worked, gave speeches, listened to reports, and discussed. Breakfast and dinner were organized as a buffet, when everyone chose their own dishes. And lunch was set on round tables for 10 people. Wine was served, so everyone considered it necessary to make a toast. To simplify the procedure, I once said:

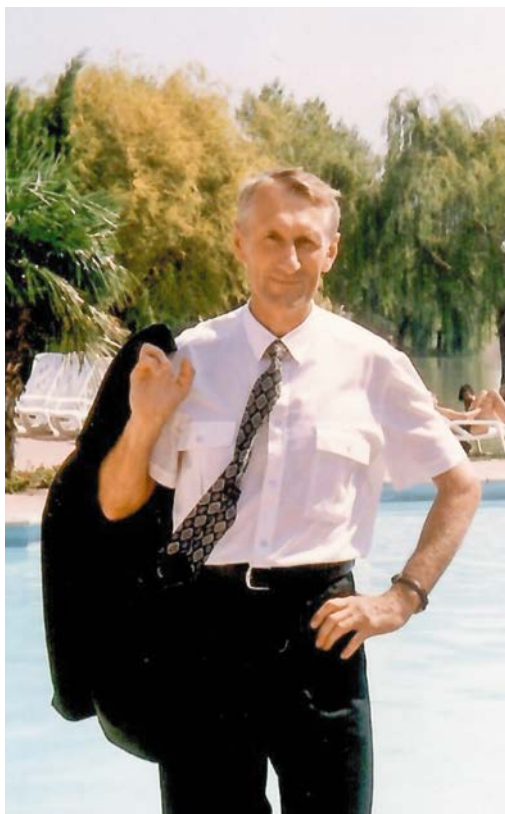
— Let's have a little bit.

Everyone liked this phrase so much that soon the whole hall could be heard:

— A little bit!

In such a relaxed atmosphere, everyone was having fun. And when after the meetings we went outside, we found ourselves in a resort paradise.

In addition to the indoor meetings, trips to rice fields, Camargue vineyards and wine cellars with tasting of local products were organized. By this time, the rice had already been harvested, but the stubble showed that the crops were thick, without bald spots. They said that the harvest was at the level of 6.5–6.8 t/ha.



During a break between conference sessions, with Guy Clément

The rice fields were not very interesting, but the vineyards surprised me. Here, for the first time, I saw unsupported grape formation. On the plantation there were trunks 1.20–1.40 m high and at least 10 cm thick. At the top there was a crown of branches that descended to the ground in a circle. Each branch had 2 bunches of grapes.



Support-free formation of grapes

These were specially prepared plantings. At first, a stake was driven in next to the seedling for support, and as it grew and the trunk thickened, the stakes were removed and the trunk stood on its own. The pruning was done in a circle for 2–3 buds, forming caps. Of course, in our climate, it is probably impossible to form like this, but the experience is very interesting for uncovered viticulture zones.

A great impression was left by the excursion to the wine cellars. In large halls cut out of the rock there were huge wooden barrels for several thousand liters. Wine of different varieties and years matured in them. During the tasting, we tried wine from 10 glasses. You did not have to be a great connoisseur to say that there were big differences between wine varieties. If I had not become interested in rice, I would have taken up grapes. A very interesting crop and very useful.

The organizers also took us on a tour of the Camargue Lakes. Here in the Rhone River valley there was a large floodplain area. The hills were covered with local vegetation, herds of semi-wild white horses and herds of black bulls used in bullfights grazed there. Flocks of pink flamingos and ducks roamed in the shallow lakes. What a beauty!



Camargue is 930 km² of salt marshes, reed swamps, sea lagoons and alluvial sand islands. The marshy area in the Rhone River delta, a kind of analogue of the Astrakhan Nature Reserve, is a real oasis for a huge number of birds.



White horses of Camargue



Camargue bulls bred for bullfighting

The pink flamingo population permanently inhabits this area. Comfortable conditions for their life have been created here. A good food supply, protection from predators, and a mild climate contribute to good reproduction of these rare birds. Flamingos are monogamous, although they live in colonies of several hundred or even thousands of individuals. In captivity, they can live more than 30 years.



Flamingos living in the Camargue are the only European species, the common flamingo. Their color is caused by the fact that they consume *Artemia salina*, small crustaceans that contain the pigment carotene.



Flamingo

The conference and cultural program were held at a high level, and I was very pleased that I could go there. Such trips leave pleasant memories for many years. They allow us not only to get acquainted with the work of colleagues in other countries, but also to determine the level of our research, as well as adjust the directions of our work.



7. Australia, March 1997

In July 1996, at a conference in Arles (France), I met two rice growers from Australia. John Christopher held the position of Deputy Minister of Agriculture, and Tony Blackenney was an Agricultural Scientist. During the conversation, it became clear that the rice growing zones of southeastern Australia and Krasnodar Territory were very similar. Moreover, both of these territories were populated at about the same time.

After a detailed conversation, we came to the conclusion that it would be good to exchange visits. We agreed that each side would buy round-trip tickets, and the host would provide accommodation and meals.

After returning home, I went to L. G. Kuryachy and told him about the possibility of going to Australia. I informed him about the conditions for exchanging delegations. Leonid replied that the issue of receiving guests was easily resolved and that we should agree. I wrote a letter to Tony Blackenney, in which I informed him about our proposals for mutual trips. After exchanging letters, we eventually agreed that our delegation would come to Australia in March 1997 for the rice harvest (Southern Hemisphere), and they would come in September, when our harvest would begin.

In January 1997, we received an invitation to travel to Australia. It was the basis for obtaining a visa. Leonid and I discussed it and decided to invite Vasily Porfiryevich Zayarsky, the Director of the Krasnodarrismash plant, to join the company on this trip. The “Kuban” rice harvesters were assembled at this plant. Vasily Porfiryevich had already traveled to Australia on the occasion of the delivery of our harvesters there.

The background to these deliveries is as follows. In 1992, Australian banker D. Eliot came to Moscow. In addition to a bank in Melbourne, he owned a rice farm in the state of Victoria in the south of the country. The weather conditions in this area are close to our Rostov region. In March-April, during the rice harvest, it often rains. In Australia they use wheeled or semi-tracked combines harvesting rice by direct combining, i.e. without mowing into swaths, unlike in Russia. In rainy weather, problems arise at harvest. This banker learned that Russia produced tracked combines. He came to Moscow, visited the Ministry of Agriculture to find out whether such combines really existed. The Ministry called the All-Russian Rice Research Institute so that the Director could organize a demonstration of tracked combines for the guest from Australia. The director of the All-Russian Rice Research Institute, E. P. Aleshin, first met with D. Eliot at the Institute, and then they visited the Krasnodarrismash plant.



There they were shown a combine in operation. The banker was delighted. He immediately declared:

— I will order 25 combines, keep 5 for myself, and sell the rest to my neighbors at a great profit. But first I have to test the combine in my conditions. I will test it against other brands.

We signed a contract. The plant prepared an export version of the SKD-7 “Kuban” combine, with an air conditioner installed in the cabin. Then the machine was sent to Australia by ferry from Novorossiysk. A group of plant specialists went with the combine to solve any problems that might arise on the spot.

We saw this combine on video in V. P. Zayarsky’s office when we were preparing for the trip. His specialists in Australia shot a detailed film, starting with the combine leaving the ferry.

The banker put 5 brands of combines in the competition: Russian “Kuban”, Italian “Laverda”, German “Case”, American “John Deere” and Finnish “Sampo”. The “Kuban” combine was on tracks, Sampo was on wheels, and the rest were on half-tracks. The competition term was the maximum threshing in five days from Tuesday through Saturday. And as luck would have it, the previous Sunday it had rained heavily. It continued all of Monday and half of Tuesday. The paddies were filled with water, the plants were wet. The combines could not work. But on Tuesday afternoon the sun came out and a breeze helped to dry the plants by Wednesday, although the water in the paddies had not gone away.

On Wednesday the “Kuban” combine went out into the field. The harvesting was done by direct combining, so the water under the tracks did not interfere with work. The combine easily moved along the paddies, practically without sinking into the soil. After lunch on Thursday the “John Deere” and “Case” entered the paddies, but moved with great difficulty on the damp soil. The “Laverda” was able to start working only on Friday, and the “Sampo” on wheels could not enter the paddies at all.

The result of the “Kuban” combine exceeded all expectations. It took the first place. D. Eliot placed an order with the Krasnodarrismash plant to manufacture 25 combines. The plant began to assemble combines for Australia. But the economic situation of the early 1990s intervened. The plant did not have enough funds to purchase metal, spare parts and components, and loans could not be obtained. They made a request to the customer to make an advance payment. But he put forward his demands: “I will pay upon the fact of manufacturing the combine. Put the finished combine on the ferry to Novorossiysk and fax the supporting documents, I will immediately send you the money”.

However, there was enough money to manufacture only 4 combines, and they went to Australia. The combine that was being tested remained there. In total, 5 “Kuban” combines worked in the state of Victoria. The plant’s engineer was with the combines. The owner signed a 5-year contract with him. The engineer monitored the condition of the combines, their operation, ordered the necessary spare parts from the plant, and in order not to get bored, he brought his family to live with him.

A year after sending 4 combines, the director of the Krasnodarrismash plant, V. P. Zayarsky, flew to Australia to assess the situation, get acquainted with the operating conditions of the machines and their state. Therefore, when we offered Vasily Porfiryevich this trip, he happily agreed and said that he would go on a business trip at the plant’s expense.

I quickly agreed on all the formalities with my Australian colleagues. We got visas, bought tickets and flew out of Krasnodar on March 19, 1997. The journey ahead was long. The time difference between Moscow and Sydney is 7 hours. First, we flew on an Aeroflot plane from Moscow to Bangkok with stops in Tashkent and Delhi. On this part of the journey, we sat in the first class cabin, so we did not feel any particular discomfort. The seats were comfortable, one could sit or sleep with the seat back reclined. In Bangkok, there was a transfer to a Boeing of the Thai Airlines. The plane had a huge cabin, with 12 rows of seats and two aisles. There our seats were in economy class. The conditions are less comfortable. We took three seats on the left side: me by the window, Leonid by the aisle, Vasily between us. We had to fly to Sydney non-stop for 9.5 hours. Vasily, knowing this route, told me:

— The flight is long, it will be boring to sit all the time. We should sleep for some time, and to make it easier to fall asleep, let’s order a glass of whiskey for lunch.

And so we did. We drank, had a snack and went to sleep. Leonid no longer drank strong drinks by this time, due to health problems he drank only beer, so he did not join us.

Vasily and I slept for about 5 hours. Leonid woke me up. He sat and cursed:

— You are sleeping, and I almost got arrested.

While we were sleeping, Leonid was suffering, he read, walked around the cabin, watched movies on CCTV. He was a heavy smoker, and smoking was prohibited on the plane. At that time one could smoke in the first class cabin and endlessly order drinks flying by Aeroflot because it had “all inclusive” terms. But when Leonid could bear it any longer during that flight he went to the toilet to smoke there. But as soon as he struck a lighter, the siren suddenly howled:

the flame sensor was activated. Leonid, of course, got scared and jumped out of the toilet. He saw a steward running down the aisle. Leonid moved sideways into another aisle, got to his seat and hid. So far, so good. Leonid, having caught his breath, decided to wake us up to keep him company. After the second meal, we all slept, and finally landing in Sydney was announced. Here at customs, a new adventure happened. It should be noted that on all trips (and this was not the first time) Leonid took food with him — meat and fish preparations: homemade sausage, boiled pork, lard, sturgeon balyk, and most importantly dried stockfish. He drank beer only with fish.

This time, since there were three of us flying, the volume of food was increased. In fact, we had a separate bag with food of about 20 kg. We arrived in Sydney. We went through customs. We got our suitcases quickly, but our bag was gone. Leonid was very worried about the disappearance of the bag and he made me go and check:

— Go look for the bag, find out, otherwise we'll die of hunger here.

Almost all the people left the hall, and I saw that our bag was standing on a separate table. Its zipper was locked. I had the key. As soon as I approached the bag, a customs officer appeared.

— Your bag?

— Yes, ours.

— Open it (conversation was in English).

I opened it. He looked into the bag and gasped:

— Food!

He turned to the wall and showed me a poster. There was a list of things that could not be imported into Australia. A huge list. It turned out that everything was prohibited, including food.

Then something happened that we did not expect. The customs officer took sausage out of the bag, cut it with a knife, sprinkles it with red powder and threw it into a large trash can. Then he took out lard, boiled pork — and everything went into the trash can. You should have heard Leonid's laments, untranslatable into English. At the bottom of the bag lay stockfish and sturgeon balyk. When the customs officer took out the fish, Lenya could not stand it and shouted:

— What is he doing, the bastard! Save the fish! I'll be lost without it.

I tried to explain to the customs officer that the fish was a present for our Australian colleagues. I showed him the business cards of the Australian specialists. I said that when we met them in Russia and treated them to such fish with beer, they asked me to bring it to them as a present. But the customs

officer, not listening to my explanations, was about to throw the fish away. Then another customs officer, a senior one, came up. I went to him. I explained to him the situation, that the fish was brought as a present, and showed the business card of the Deputy Minister of Agriculture of Australia. The customs officer looked into the bag, saw that there was only fish left, waved his hand and said:

— Ah, seafood, take your bag.

Imagine the joy of my comrades, especially Leonid, that at least the fish was saved. Below I will tell you how we used this present.

By the way, customs let other gifts (souvenir sets and several bottles of vodka) through without checking. Now I will briefly outline the moments that surprised me and my colleagues from the first minutes of our stay in Australia.

We arrived on Thursday, March 20, at about 10 a.m. local time. Tony Blackenney, with whom I had spoken in France in 1996, was supposed to meet us at the airport. But when we went out to the arrivals hall, I didn't see him. We stood there, waited, no one. The guys were already starting to get worried. I decided to call. As soon as I approached the phone, I heard a voice say:

— Professor Zelensky!

I turned around and saw a woman of about 40 holding a piece of paper. It was my photo. I came up to her, said hello, and she said:

— Sorry, my name is Maria. I came to meet you instead of Tony. I work with him. The Rector of the University called him, and he will come to the hotel.

I introduced my colleagues, and we went to the parking lot with our things.

Maria had a new Toyota with right-hand drive. We already knew that in Australia, like England, they drive on the left side of the road.

By the way, despite their independence, the Queen of England was highly revered in Australia as the Mother of the nation. And many residents dreamt of going on holiday to Great Britain.

We left the airport for the motorway. The motorway was full of cars driving at very high speed. I was sitting next to the driver and, seeing how busy the road was, I thought it would be very difficult for us to get onto the motorway. It turned out to be simple: there was an acceleration lane along the road from the intersection. As soon as our car entered this lane and began to accelerate, the cars driving in the next lane slowed down and let us into the flow of cars. This was surprising, because this almost never happened at home. You had to wait until there was a gap between the rushing cars.

Entering the city, we saw an intersection without a traffic light, but with a zebra crossing for pedestrians. Two women approached it, intending to cross the road. Before they had even stepped onto the zebra crossing, all the cars



stopped and let the pedestrians cross. For us, this was more than a surprise. I couldn't resist asking Maria why she had stopped. Maria explained that the country had passed a law: a driver was obliged to let a pedestrian cross. If you did not, there would be a fine. I was embarrassed to ask what the fine for this violation was. But I had to, in order to compare it with ours, which have now been introduced in Russia. Russians have a hard time getting used to the habit of letting pedestrians cross, regardless of the fine that will be imposed if a police officer is nearby.

I don't know how they instilled respect for pedestrians in drivers in Australia, but the police were not needed to collect a fine. There was a camera above every intersection that recorded all violations.

Here we should add an example to close the automobile theme. Once, we were driving with the breeder Laurie Lewin along a highway: three lanes. Trucks went along the left lane at a speed of up to 100 km/h, cars went along the middle lane at the speed up to 130 km/h, and the right lane was free, with no speed limit (almost like in France, the only difference is the direction of traffic). The road was fenced off with a net to protect against animals. We were driving along the middle lane at a speed of 130 km/h. We turned onto a side road. The driver turned on a device on the panel that looked like an electronic clock. He set the number 105.

— What is this?— I ask.

— This is a meter, I set the speed limit on this road to 100 km/h.

— Why 105?

— Oh, the device doesn't recognize 5% exceeding the limit.

— What will happen?

— Look.

He accelerates the car to 105 km/h, the meter beeped.

— He tells me that I am exceeding the speed limit on this road.

— So what?

— There will be a fine. If I exceed the speed limit by 10%, the fine is 200 Australian dollars, if by 20%— 800 dollars. And if the excess is 30%, then my license will be taken away for 3 years.

— Okay, but we have already driven so many kilometers and have not seen a single policeman.

— Police are not needed here, there is a camera on every pole that records everything. If I violate the traffic rules, when I get home, I will find a receipt for a fine in my mailbox. I must pay it within 3 days. If I come to the bank on the 4th day, the fine is automatically doubled. If I do not pay it within 7 days, then

it will be collected through the court, with all legal costs. Therefore, everyone strives to pay the fine immediately, and it is best not to break the traffic rules.

But let's go back to our arrival in Sydney. Maria took us to the Boulivard Hotel. It was a high-rise building with 25 floors above and 5 floors below the ground level. We were told that there was a car park there. Tony Blackenney was waiting for us in the hotel lobby. We hugged him, and he immediately apologized for not meeting us himself. I introduced my friends, and Tony repeated his apology. To which Leonid replied:

— But I was very pleased that such a nice woman drove us.

Maria, who was standing nearby, blushed and said:

— Thank you for the compliment.

When I was checking in, I heard that the cost of accommodation per day was \$220 per room. I was very surprised by such a high price. They checked us in separately. I could not stand it and said to Tony:

— Why are you putting us in such an expensive hotel?

And he answered me:

— I am receiving a professor, and my colleagues will not understand me if I put you up in a cheap hotel.

His documents listed a delegation consisting of Professor Zelensky G. L. and accompanying persons: Kuryachiy L. G. and Zayarsky V. P. After completing the paperwork, we were given electronic keys to the rooms: mine was on the 22nd floor, Leonid was placed on the 23rd, and Vasily on the 24th. The rooms were located one above the other.

We entered the elevator, turned it on, one breath, and we were on the 22nd floor. We had never seen such a speed of ascent in an elevator before. And here was what was surprising: there was no 13th floor in the hotel. After the 12th, there was the 14th. And as we later found out, there were no rooms number 13 on any of the floors. Apparently, the owners believed in omens.

I entered the room, its area was about 30 m². A huge bed, a table, chairs, armchairs, a large TV, a nightstand by the bed. There were telephones on the table and on the nightstand. Before I had time to unpack my suitcase and put my things away, the phone rang. It was Leonid (the room number served as the phone number).

— Have you been to the bathroom?

— Not yet.

— Go in, you'll be surprised.

I went into the bathroom, and was really surprised. There was a telephone hanging on the wall next to the toilet. This surprised Leonid and me too. I saw

something like this for the first time. There were 21 channels on the TV and 8 on video. There was a program for TV on the table. It stated that the video was a paid service— \$ 11 per day.

Having put away our things and taken a shower, we went downstairs. We were supposed to have lunch in the restaurant. Meals were included in the room price. Everything was organized as a “buffet”. Now this is nothing new to us, but back then in 1997 it was a novelty.

When you put food on a tray, you did not know what else to take with such a variety. It was March outside, and on the table there were vegetables and fruits, including watermelons, melons, grapes of all sorts. That was a real surprise. But we forgot that we had flown to the southern hemisphere, and here March was like our September.

We picked up and ate as much as a normal person could eat. And it was like this for the entire 9 days of our stay in Australia. When I returned home, I saw that I had gained 5 kg.



Program of the reception of our delegation, March 21, 1997

The next morning, after breakfast, Tony took us to the Grain Crops Research Institute. There, first, the Director of the Institute received us. Judging by the program given to us, they had specially prepared for our arrival.

The Director told us about the spheres of the Institute's research and its achievements. The Institute worked on breeding varieties of wheat, barley, corn, soybeans and millet. Elements of technology were developed for these crops and primary seed production was conducted. At the end of the conversation, we exchanged souvenirs. We were given packages with a booklet and badges of the Institute. We presented the Director with a bottle of Russian vodka and a set of Khokhloma toys.

Then we were shown the laboratories and introduced to the leading specialists of the Institute. One of them was a Czech who spoke Russian, but with a very strong accent. He was very happy to meet us. He had a chance to practise the Russian language. He had been working there for 20 years. And during this time he had never been to his homeland. He dreamt of going, but the flight fare was too expensive.



During reception at Grain Crops Research Institute, Sydney, 1997

That same evening, Tony invited us to a restaurant for a gala dinner.

Present at the dinner were: Tony with his wife, his parents, as well as the Director of the Research Institute with his wife and two more couples of employees of the University, where Tony read lectures to students. The atmosphere at dinner was warm and friendly.

Tony told us that his family lived in Sydney and Leeton, where he worked at the Research Institute. Tony traveled between these cities by car, but more often by plane. His parents and son, who was finishing University and recently got married, also lived in Sydney. His grandmother mainly looked after him.

His wife spent most of her time in Leeton, her homeland, but sometimes she would come to visit her son.

We spent 4 days in Sydney. The time was filled to the maximum. The hosts tried to make sure we didn't get bored. They showed us the city, gave us a sight-seeing tour of the National Park, took us to an exhibition, a fair, and a museum.

Sydney is located along the sea coast, which is cut by bays and coves. Large and small yachts are moored in them. The terrain and vegetation remind of our city of Sochi.

In the evening we left the hotel and went down to the bay. Here in the large bay there were yachts of all kinds: from miniature with one sail to large and luxuriously decorated. We looked at these yachts and were surprised at the ability of local residents to maintain such ships. Only new cars drove along the city roads, mainly Toyota, Honda and BMW. Though Australia does not produce its own cars, but imports them. They use them for no more than 4 years, and then sell them and buy new ones. The population is wealthy enough to change cars regularly.



Business center in the city of Sydney



**On a walk in Sydney: V. Zayarsky, L. Kuryachiy,
G. Zelensky**

In Sydney, I first noticed age-related changes in my vision. In the evening, we were sitting in Vasily's room and discussing the program of our stay. Vasily gave me an advertising brochure that he had been given at a newspaper stand. There was not enough light in the room, and I noticed that the letters on the sheet of paper were blurring. In order to see them better, I began to move the sheet of paper away from my eyes. Vasily noticed this and exclaimed:

— Professor, you should already put on glasses! Take mine, try them.



Theatre in Sydney

I saw the letters very well with the glasses, but my eyes immediately began to sting. I quickly took them off and muttered:

— They are no good.

— That's because I have +3.5, and you need less. Tomorrow we'll go to the Eye Center. It's next to the hotel.

In the morning after breakfast, we went to the Eye Center and, after an examination, they recommended glasses for age-related farsightedness (+0.75).

— Okay. How long will it take to make them?

— Come in an hour, they will be ready. Look at the frames in our display case.

Exactly an hour later we entered the Center. The glasses were ready. I could easily read even very small text. Vasily paid for the purchase, thus making me a gift.

In Sydney, colleagues told me about many social programs that were adopted in Australia. It immediately seemed that the country was created for a comfortable life of 17 million residents (at that time).

First of all, it was clear that this was a developed country of the European type. When I was going to Australia, I assumed that kangaroos would run in the streets and that there would be an aboriginal dark-skinned population everywhere. But it turned out that there were European faces around.

Judging by the houses in Sydney, wealthy people lived there. About 95% of the buildings were 2–3-story private houses. High-rise buildings of 25 floors were built only in the business center. And on the outskirts of the city there were multi-apartment 9-story buildings. There lived immigrants who were waiting for a residence permit. We asked about the price of private cottages. It turned out to be very high. A three-story house in Sydney was estimated at 350,000–400,000 dollars, and in small cities about 200,000.

Upon reaching retirement age all workers receive a pension of 85% of their salary. At the same time, if a specialist works as a Research Fellow at a Research Institute and lectures at a University (like Tony, for example), then he is paid full salary at both institutions. Therefore, thinking about their future pension, all residents strive to receive the maximum official salary.

The youth issue is also resolved in an interesting way. First, starting from kindergarten and school to university, everyone is supported by the state, i.e. education is free. Secondly, when a young couple is preparing to start a family, they submit two applications at once: one for marriage registration, and the other for housing. The city administration gives them the key to the apartment at the wedding. A youth belt of townhouses has been built 20 km from

the center of Sydney. An electric train runs from there to the city center. This housing is provided free of charge, residents only pay for utilities. But young people living in townhouses strive to have their own housing. They are given a loan at a very low interest rate for 25 years to buy or build their own house.

Tony took us to see an apartment where his son lived. It is a two-story building, in the basement there was a garage for 2 cars, the ground floor was a combined hall and kitchen-dining room, and on the 1st floor there were two bedrooms. All the amenities, live and enjoy.

We looked at this, listened and understood that in this country everything was done to make the locals feel comfortable. But we were wondering, what about the migrants? We saw them too: Chinese and other Asians trading at the market. In our hotel a young guy approached us, as it turned out, a Pole. He spoke Russian well. This was what this guy said. He came to Australia 6 years earlier on a student visa for an internship and stayed here. He lived in a rented room in a 9-story building in the outskirts of the city. He worked in two hotels, practically without days off. He was waiting for a residence permit. Then he could think about his own place to live and a family. In the meantime, he had to work very hard. In order to live successfully there, you should have the specialty needed in the country and be fluent in English. Looking at this Pole, we realized: it was not that simple and easy there.



With L. G. Kuryachiy in Australia

It should be noted that most Australians do not drink or smoke. We were convinced of this while talking to colleagues. Before the trip, we prepared several bottles of Russian vodka in souvenir packaging as gifts. We thought that this would please the hosts. It turned out we were wrong. Vasily Porfiryevich gave the bottle to an acquaintance with whom he had talked on the last trip. He said to him:

— Thank you, Vasily, my collection will be replenished. This bottle will stand next to the one you gave me three years ago. I show it to all my guests.

At the gala dinner in the restaurant, they served very good quality wine. But from a conversation with colleagues, we understood that the population preferred beer.

Regarding smoking, they explained that it was easier to quit smoking than withstand all the restrictions that were adopted in the country. Smoking was prohibited in public places. This was confirmed by an incident that happened in the restaurant during dinner. Leonid wanted to smoke, took out a cigarette. Before he could even click his lighter, the waiter jumped up and asked him not to smoke inside. But if he really wanted to, he could go outside, there was a special gazebo where he could smoke. After such an explanation, Leonid had no wish to smoke.

We were taken on an excursion to the National Park near Sydney. Various animals lived here in the natural forest-steppe environment. We were especially interested in seeing kangaroos. We had heard a lot about them, and we saw them though through a net. A herd of about 20 heads, one very large leader and the rest were females. Some had cubs in their pouches, whose heads were sticking out. Such a funny picture. We took photos and filmed them on a video camera.



Kangaroo and koala are symbols of Australia

Kangaroos are a disaster for local drivers. The animals often jump over the net and suddenly appear on the road in front of cars when a collision cannot be avoided. Therefore, many cars have a special fence installed in front of the radiator — protection from kangaroos.

Koala bears lived in the park behind a high mesh fence. It was funny to watch these cute animals, especially the young ones happily playing in a sunny clearing.

On Sunday morning we visited an agricultural exhibition, similar to our exhibition at VDNKh “Golden Autumn”. In Australia, this is an exhibition and a fair. For example, various farm animals were presented, they were shown for the first few days and then sold. We were very interested in beef cows. The animals are hornless and huge. A breeding bull, weighing about 1.5 tons, stood in the pen next to his 7-month-old heifers, and they were same height as our cows. So-called marbled meat for steaks is obtained from cattle of this breed.

Meat in Australia occupies one of the leading places in cooking and, in order to get a tasty beef steak, you need to take a cut only from a specially bred bull. That is why in Australia special attention is paid to the production of real beef bulls of the best elite breeds, mainly Aberdeen Angus and Hereford.



Beef bulls in Australia

Next to the trade fair rows, there was an entertainment area with attractions, including slides of various heights. Visitors slid down them, sitting on craft bags. There were a lot of people around, adults and children. The noise was like a strong sea surf. People participated in different attractions and at the same time ate all sorts of delicious things, which were cooked right there at many points.



At the Australian Agricultural Exhibition

For fun, we also slid down the slide, sitting on a bag. It was a fascinating sight, when healthy adults flew down holding the end of the bag between their legs. We had fun at this fair for half a day. Our visit was arranged for this time so that we could see all of Australia at once. All regions and residents of the country, including the Aborigines, were represented on this site.

After lunch, we were taken to the Chinese quarter. That was what they called the market where mainly Chinese traded. It was a huge covered market area, a whole city with marked streets and alleys. Everything was sold here: from large household appliances to all sorts of small items. Of course, we could only walk through part of the market, looking around. One of the shops sold briefcases, of various shapes, sizes and prices. Leonid suggested buying the Professor a briefcase so that he would look more respectable. We spent a long time choosing, bargaining, as is customary at the market. Finally, we chose a briefcase that looked like a small suitcase (later I traveled with it for a long time on business trips).

All the days of our stay in Sydney, the weather was wonderful. It was warm + 26–28°C, sunny and a light sea breeze was blowing. It seemed to us that we were in a paradise on Earth. It was especially comfortable when we were in the National Park. There, among the subtropical greenery, we did not feel the proximity of a big city at all.

On Monday morning, we flew on a small plane for 20 passengers to the city of Leeton. It is the centre of the rice belt, about 900 km west of Sydney in the state of New South Wales.



The central street of Leeton

By our standards, Leeton is a small, one-story green town with a population of just over 11,000 residents. Only along the central street there were 2- and 3-story buildings.

We read from the brochure at the hotel that the area was located at 127 m above sea level. The climate here was defined as semi-desert. Therefore, in the dry season, from October to April, agricultural crops were grown only with irrigation.

The Rice Research Center and the headquarters of the Australian Rice Growers Association are located in Leeton. Tony Blackenney and the breeder Laurie Lewin worked at this Center. We met Laurie through correspondence while our trip was being prepared and the program of stay in Australia was being discussed. By the way, before the meeting I thought that Laurie was a woman, because the name sounded like a female name for us. But no, that was a man, and also a leading rice breeder of Australia. In Leeton we were put up in a private hotel: a large two-storey log house built at the beginning of the 20th century. The owner, a friendly woman of about 50, cooked our food herself — very tasty dishes. She was especially good at beef steaks — huge fried pieces of meat. At first I was surprised how it was possible to eat such portions. But then I got into it, watching my colleagues gobble them up with great pleasure.

If in Sydney we were mostly accompanied by Tony, then in Leeton it was Laurie who drove us around the rice fields, showed us his selection crops and

production testing of varieties. It was easy for me to communicate with him, as with the colleague in rice selection. Laurie introduced us in detail to the technique of the selection process, told us about the rice cultivation technology adopted in Australia. The high level of Australian rice growing was evidenced by the rice harvest: on average, 9.5 t/ha was harvested in the country. My friends might not be interested in the intricacies of the selection process, but for me it was very useful and educational.



Rice growing area in Australia

We met Tony there occasionally. He showed us various agricultural experiments and the work of the agrochemical laboratory. We saw for the first time a device that automatically analyzed the soil, determining the content of the main elements: N, P, K, Ca, Fe, etc. A soil sample was poured into a funnel from above into a box similar to the quadrant laboratory scales for weighing substances in laboratory conditions, and after a few minutes, the information on the elements content appeared on the computer screen. Now, similar devices, and even more complex ones, are available in our Research Institutes, but back then this was a novelty. The climate in the Leeton area was more continental than in Sydney. From morning to evening, it was baking hot at 30–32°C and

the air was dry. Colleagues told us that there are two distinct seasons here: dry (October-April) and rainy (May-September). During the dry season, all crops were grown with irrigation. Row crops were watered in furrows, and rice was flooded with a 5–10 cm layer of water.

One day, Laurie Lewin took us out of town to a sponsored farm. There he showed us a production test of new rice varieties. The water had already been drained. The crops were being prepared for harvesting. More than 10 different varieties were growing in 1 ha plots. Among them, one variety stood out for its unusual morphotype. The air temperature was about 30°C, and the leaves of this variety were twisted into a spiral and stuck out like thin twigs.

Of course, I was surprised, because I had never seen such rice plants. Noticing my interest, Laurie explained that this was a new variety that was resistant to air drought. By curling the leaves in the heat, the plant “locked in” moisture, reducing evaporation. As a result, energy was not spent on cooling, but was directed at increasing productivity. When I asked about the yield, Laurie replied that the potential of this variety was up to 16 t/ha with a vegetation period of 162 days.

— Wow, this rice variety won’t even produce panicles at our place! In our conditions, a maximum of 125–130 days is acceptable, — I was disappointed.

— And can you produce hybrids?— asked Laurie.

— In the artificial climate chamber (ACC), of course, with any vegetation period.

Laurie stepped into the check, plucked three panicles, put them in an envelope and handed them to me.

— I’m giving you a new trait. Just keep them in your suit pocket when you take them through customs.

I followed his advice. When I brought it home, I provisionally named the sample Av-1 and sowed it in a quarantine nursery. As expected the plants did not produce panicles, they were too late-ripening. After checking in quarantine, the sample was sent for hybridization in the ACC with several early-ripening varieties. The crossing was successful. In the hybrid population Av-1 / Lotsman, plants with curling leaves and a vegetation period of up to 120 days appeared. This was not done in Krasnodar, but in the Rostov region, where I sent F3 for ecological testing. My colleague Pavel Ivanovich Kostylev selected the necessary plants and handed them over to me for further study. I brought the material to a variety, called it Avstral and handed it over for state testing. The variety passed it successfully. We received a patent in which P. I. Kostylev had 25% co-authorship.



**Russian rice variety Avstral is a scientific result
of ou visit to Australia**

But that was later. For now, let's get back to our trip to Australia.

On Wednesday, we were taken to the racetrack. Horse racing and carriage racing were held as part of the "Beginning of the Rice Harvest" holiday. It was a thrilling spectacle to see horses trotting at high speed, and the spectators cheering them on. There was a betting shop here. We were given chips so that we could also participate, and bet on the races. There were 5 carriages in the race. We bet on different horses (we didn't know who was who anyway). Leonid chose a dapple-gray one, and it came first. His joy was indescribable, not so much because of the win, but because he had guessed right.

Then we watched as the winner was celebrated. The owner of the horse turned out to be a farmer who was there with his whole family. The first prize was a gilded carriage. They presented the prize, decorated the horse and carriage with flowers. The owner himself took the reins and made a lap of honor to the enthusiastic roar of the stands. We watched with pleasure how the winner's family rejoiced. The youngest son, about 10 years old, was especially happy, this was evident from the way he hugged the jockey. So we also joined the local holiday. That evening, we were invited to dinner at Laurie's. He worked at a Research Institute and lived with his wife on a farm. She inherited the farm from

her father. Their house was 25 km from Leeton, where Laurie's assistant took us. A good asphalt road ran along the power line. Periodically, after 5–7 km, a cinder path branched off from the asphalt to a house that stood to the side at a distance of 1–2 km. These were the farmers' houses. Soon, we turned to the Lewins' house. We saw a fairly large one-story house made of panel blocks, covered with plastic. On the street side there was a glass door, and on the other side there was a similar one — an exit to the yard. Next to the house there was a shed for equipment and a gazebo with a gas stove, on which they cooked steaks for dinner. As it turned out, their house was without heating. There was no need for it here. In the coldest month of the year, July, the temperature drops only to + 10°C. For this period a fireplace was built in the largest room, and electric mattress heating was provided in the children's beds.

No fences around. I could not resist and asked:

— Listen, Laurie, your house is in the wilderness, away from the road, there are no fences, who guards it?

He was surprised by such a question and answered with a smile:

— The law.

And then he explained that there was a sign at the border of the farm. It stated who the farm belonged to, the owner's contact information, telephone, fax, etc. And at the bottom in large letters it says: "Private property, protected by law." No one had the right to enter the farm without the owner's consent. Otherwise, the intruder could be shot. Everyone knew this and strictly observed it, nobody wanted to catch a bullet. Laurie's wife was the owner of the farm, and all the work on the land was run by a manager whom she hired. The country adopted a law allowing work on the land only by people with agricultural education. If the owner did not have such education, then he was obliged to invite a specialist. The farm produced vegetables during the irrigation season, and in the second season they grew wheat.

— But you, Laurie, are an expert yourself, — I was surprised.

— Yes, but I have no time, I work at a Research Institute as a rice breeder and am very busy.

There were two sons in their family — schoolchildren. Both had cell phones. This was surprising to us. At that time, cellular communications were just beginning to develop in the Russian Federation, and in Australia they already had the same level as we have now. Everyone had phones, with the ability to call anywhere in the world, just pay. Laurie explained that he gave his sons cards for 100 units every month, and they had to fit in, save minutes, otherwise they would be left without communication.

About 20 people gathered for dinner — Laurie's friends and colleagues. The event took place, as they say, in a warm, friendly atmosphere.

The next day Laurie took us to the state of Victoria. This is the southernmost point where rice was sown in Australia (like our Rostov region). The distance from the city of Leeton was about 300 km to the south. There was a farm of banker D. Eliot, who bought the "Kuban" combines. Vasily Porfiryevich wanted to extend the contract for the supply of spare parts for these combines. In the afternoon we arrived in a small town and checked into a hotel. For dinner, Laurie took us to a local restaurant. We ate and then went to the beer hall. The local rule was that they drank beer only after eating. There was a huge canopy, under which there were bar counters on both sides. The hall had a large number of tables for 4, 6 and 8 persons. There were few free seats. With the help of the bartender, they found us a table for 4 people. At Laurie's order, they brought us 2 glasses of beer each. Vasily took out the finely chopped sturgeon balyk that he had prepared in advance and offered Laurie to try it instead of the nuts that he had ordered with the beer. Lori looked at the sturgeon with great mistrust. It seemed that he was afraid to even try these incomprehensible pieces of fish. But when he chewed and tasted it, his comments turned into enthusiastic exclamations.

Leonid was happy that he had surprised him, and even more so that the fish had been saved at customs. He immediately told Laurie in detail how it had happened. I barely had time to translate into English.

The neighbors began to react to Laurie's exclamations, some came up to us to see what was going on. Leonid kindly gave them a few pieces of sturgeon to try. About 10 minutes later, a crowd was standing around our table. Everyone was curious about how these Russians had surprised the local public. We stayed up late until we had finished the entire supply of balyk.

In the morning we went to the farm to look at the rice, combines and meet the manager. We were busy almost all day. We also had lunch there. At the end of the day, the manager of the farm took us to rice checks to show us Russian rice varieties. And indeed, we saw rice plants ready for harvesting on three large checks (about 5 hectares each). We looked and could not believe our eyes: Dubovsky 129, Kuban 3 and Krasnodarsky 424. We knew these varieties of ours. The plants had partially fallen over and looked clearly weaker against the background of the local variety standing nearby.

And then Laurie sarcastically noted that, judging by these varieties, the level of rice selection in Russia was very low. Therefore, interest in cooperation with Russian rice growers was waning.



L. G. Kuryachy and V. P. Zayarsky with Australian rice farmers

Of course, we were discouraged. We did not know how these varieties got here. We learned the details of this story only when we returned home. But we will talk about this later. And there at the checks we had to keep up the prestige of Russia. And so Leonid immediately said:

— But these are old varieties, and they have not been grown in Russia for a long time. Now we have completely different varieties, short-stemmed, non-lodging. When you come to us, you will see them for yourself.

The manager of the farm immediately perked up:

— What old varieties? They were presented to us as the latest breeding achievement in Russia.

— Who could have told you that! These are old varieties, — Leonid got excited.

I translated his speech into English and gave additional explanations. And I asked the manager directly:

— Who convinced you that these were new varieties?

— My boss, and Nikolai Aleshin (*son of the director of the All-Russian Rice Research Institute, academician E. P. Aleshin.* — Author) introduced them to him and convinced him.

— How and when was it?

— When my boss was in your Russian Rice Institute. There he signed an agreement to test these varieties for subsequent patenting in Australia.

There was no point in discussing this topic. The only thing we could say once again was that since 1980, Russia has been cultivating short-stemmed, non-lodging rice varieties with high yield potential. In our conditions, the rice variety Spalchik, for example, was capable of producing up to 10 t/ha of grain per hectare with a vegetation period of less than 120 days. By the way, in Australia, the average rice yield in the country was 9.5 tons/ha, with a vegetation period of 150–160 days. Rice was grown in that area only in the dry season from October to March-April. Therefore, rice plants avoided being affected by blast due to dry air and balanced nutrition. The crop was grown in crop rotation: rice (October — March), wheat (April-August), perennial cereal grasses (from September of the 1st year to October of the 2nd year), rice. Sheep grazed in the fields where grass was grown. The fields were divided into squares, and the sheep were driven in time so that the grass had time to grow.

After returning from Victoria, we were taken to see rice harvesting on a farm in New South Wales. The farmer had about 400 hectares of agricultural land, 120 hectares of which were occupied by rice. An American-made John Deere combine on a half-track chassis mowed rice using direct combining. There was a storage bin in the check, where the grain was poured. After it was filled, a tractor pulled the bin out onto an asphalt road, where a 20-ton truck was parked, and the grain was unloaded. After a full load, the truck went to the elevator. When I asked why they didn't weigh the trucks with grain, the farmer answered that there was no need. The combine is equipped with a computer that provides all the necessary information: how much it mowed, what the yield was, how much grain was unloaded from the bin, and made a printout. This printout was a document for transporting grain to the elevator.

The farmer showed us a video about rice cultivation technology. On the checks after harvesting the predecessor, the soil was prepared and the soil surface was leveled. Then fertilizers and granular herbicide were added, they were covered with disk tools and the check was filled with a minimum layer of water. A mini-plane arrived a day later to sow rice. The road served as its runway. Rice seeds were brought in bags from the elevator already prepared for sowing. They were encrusted in a shell of microelements and fungicides. During the growing season, a layer of water of 5–7 cm was maintained on the checks.

Rice varieties had green leaves by the time they were fully ripe. When harvesting, the combine cut off 1/3 of the plant with a panicle, and the rest of the mass remained in the field.

I asked the farmer:

— What do you do with the remaining straw?

“First I let the sheep into the field to eat the leaves,” he replied.

“Well, there’s a lot of silicon in the rice leaves, and the sheep will wear down their teeth!”

“Yes, but before they wear them down, I’ll slaughter them.”

It should be noted that all farmers in Australia keep sheep. According to Laurie, there were more than 173 million sheep for the country’s 17 million people.

“What do you do with the straw?” I asked.

“When it dries, I burn it,” the farmer explained.

“What about the environment?”

“We don’t have a ban on that. I pay taxes, and I do whatever I think is right on my land.”

The conversation with the farmer took place during the lunch break, sitting at a table under a canopy near the house. He arrived from the field in a combine harvester to receive us and have lunch. I saw that at that very moment a tanker truck pulled up to the combine harvester. A man in green overalls got out of the truck, climbed onto the combine harvester and started refueling and adding oil. I asked the owner:

— Who is this?

— A service specialist, he services my combine harvester and 10 more combine harvesters of my neighbors.

— So he did something and left, and you didn’t check.

— Why, I have a maintenance contract with him.

— Well, what if he doesn’t do something?

— He will do everything that is written in the contract.

— But still, if he doesn’t do something, I insisted. The owner paused, thinking, and then said:

— He must do everything that is written in the contract. And if he does not do something, I will break the contract with him, and he will go bankrupt, since no one will work with him tomorrow.

We were also interested in the procedure for delivering grain and settlements with farmers for the harvested crop. Having collected the grain from the combine, the driver of the truck arrived at the elevator, drove it onto the scales and removed the awning. A sampler was lowered from above — six tubes with an auger. The tubes went into rice and a sample of the grain was taken. This grain went into a special device that evaluated it according to 6 parameters, including moisture, purity, cereal yield, etc. That same evening, 50% of the cost of the delivered grain was transferred to the farmer’s bank account. The rest of



the money is transferred after processing and selling the cereal. The amount may vary depending on the cost of the product.

In the state of New South Wales, rice growers are united in an Association. It includes the Rice Institute, an elevator for storing and processing grain, and about 1,200 farms. To serve farmers, a single melioration unit with heavy equipment for leveling and reconstructing checks has been created, aircraft have been purchased for sowing rice and chemical treatments, as well as large-capacity vehicles for transporting grain. Farmers have the necessary minimum of equipment: a harvester with different headers, 2–3 tractors and a set of agricultural implements. The Institute breeds varieties, multiplies elite seeds, and provides technological support for growing rice. Thus, all rice growing is included in a single cycle: from creating varieties, growing them to processing and selling cereals. The Association is headed by a hired Director, a Council of farmers and a General Meeting. Everyone works for the end result — obtaining the maximum net income.

Later, visiting the FAO headquarters in Rome in 2006, my colleagues and I discussed the question of why Australian rice was more expensive in the Middle East in May and June than American rice. The answer was simple: in March and May, new rice from Australia was delivered there, which was processed and sold immediately after harvesting. American rice arrived after long storage, the grain was fumigated to kill granary pests, so its price was lower than freshly harvested Australian rice.

That same day, after lunch, we visited another farm, but it was a livestock farm. It should be noted that the farms of agricultural farmers and livestock breeders varied greatly in size. While the former had plots of 350–500 hectares, the latter had plots of up to 5,000 hectares. Livestock farmers are allocated land in rugged terrain covered with copses, where farming was impossible. Livestock breeders specialized in raising cattle, mainly meat breeds, or sheep, some combine the two. At the same time, the cattle lived on pastures all year round. There were no farm buildings or feed preparations. Therefore, the cost of meat here was very low compared to other countries.

We arrived at the farm where sheep were raised. The owner met us at the border of his territory. Apparently, he had already been warned about our visit. After greeting us, he immediately said that he only saw rice as cereal and did not know how to grow it. But he knew sheep well, which both his father and grandfather raised. Now his youngest son helped him. The eldest son left and lived in Sydney. He was afraid that the youngest would run away from home. Life was better in the city. The farmer made such an introductory speech and

called on his cell phone. A couple of minutes later, his son, a guy of about 20, rushed up on a dirt bike. The father skeptically noted:

– I drive the sheep on horseback, and he prefers a motorcycle.

Having received the task from his father, the boy quickly sped away and a few minutes later arrived in a Toyota with a body. In the body of the car sat three huge dogs, similar to Turkmen shepherds.

While the son was getting ready for the show, the father told us about his farm. His grandfather received the land and decided that the farm should be dealing with raising sheep. He divided the territory into squares like a chessboard. He fenced the squares with barbed wire with small gates for the animals, so that the flocks of sheep did not interfere with each other. In each square he planted a tree — eucalyptus, which provided shade for the sheep in the heat. In addition, wells were drilled to obtain water and pumps driven by a windmill were installed. If even a light breeze blew, the windmill set the pump in motion, and water was supplied to the trough. There was a huge stone next to the trough — a salt lick. The sheep lived in the open pasture all year round.

The farm had 10 flocks of sheep, 100–120 heads each. The flocks were scattered across the pasture. The main task was to drive the animals from one square to another in time, as they ate grass. At night, the flocks were guarded by specially trained dogs. Jackals posed the greatest danger to the sheep there. Farmers fought them mercilessly. But the terrain around was rugged, with copses, so there were a lot of wild animals.

The son demonstrated us how they drove the sheep. It turned out that they used dogs for this. Having driven up in a car with dogs in the back, he got out and walked slowly to the gate between the squares. It was obvious that he had performed this show many times. Having opened the gate between the adjacent squares, he whistled. The dogs perked up and jumped out of the car. Another whistle, and they raced toward the flock. A third whistle, and the dogs began to circle the sheep quickly, herding them together. Another whistle followed, and one of the dogs separated from the flock and raced toward the open gate. The sheep rushed after this dog as if it were the leader, and the other dogs began to drive the sheep from behind.

In a matter of minutes, the flock was on another square. A final whistle followed, and the dogs ran to the car, jumping into the back easily.

“The show is over,” said the farmer.

The owner of the farm told us that his son had seen one farmer use dogs to control sheep this way and decided to learn it. For almost two years, he trained



dogs and practiced with sheep so that he could show the audience. Now local tour guides often bring guests from the city.

Leonid and I were most interested in sheep. We had known about them since childhood. Looking at the flock of sheep, we noticed that the leader ram had a blue cape on his chest. When we asked why, the farmer explained that the cape was soaked in paint and its color was changed every week. He pointed to the painted backs of some of the females. The color showed when mating took place. Knowing the gestation period of the sheep, he separated them from the flock in time before the birth. If this was not done, the flock might accidentally trample the newborn lambs.

Leonid was interested in how the farmer controlled ticks and other sheep pests. Did he bathe the sheep in a creolin solution? At first, the farmer could not understand why he should do this. After my lengthy explanations, he figured it out and exclaimed:

— Ah, pests! No problem.

He immediately grabbed a ram standing nearby, parted the wool along the spine, took a felt-tip pen out of his pocket and lead it along the rams's back from head to tail. Protection against pests was done for the entire field season. This felt-tip pen was filled with a special pest control liquid.

— And how do you solve the problem of shearing sheep with so many of them?— asked Leonid.

— Oh, and that's not a problem. Sheep shearing time is like a holiday for us. At this time, a team of shearers comes to us. They have a special car with a power station, to which they connect electric shearing machines. And the shearers' competition begins. Whoever shears the most sheep gets a prize and a bonus.

Here we also learned that, despite such an abundance of sheep, their meat was practically not eaten in Australia. The population preferred beef, especially fried steaks made of marbled meat. Almost all the lamb was exported to the Middle East.

The visit to the farms impressed us greatly. In the evening, summing up the day, we had a long discussion, assessing the working and living conditions of the local residents. One day Tony was showing us his field experiments outside the city. On his way back to Leeton, he drove up to his house. The house looked the same as Laurie's. There was a two-car garage nearby. A low fence separated the yard from the street. There were flowers along the fence and a green lawn. Tony approached the house, opened the door, which was not locked, and called:

— Mary!

Silence.

— She must have gone somewhere.

He opened the garage door. The car was gone.

— Yes, she's gone. Come inside. Let's sit and have a drink of something cold.

We went in and looked around. Simple furnishings. No chic.

Tony took a bottle of drink from the refrigerator and poured it into glasses.

We asked in surprise:

— Why don't you lock the house? Yoy can be robbed.

— What would they take here? We keep our valuables in the bank, and as you can see, there's nothing expensive here. Books? Who needs them? By the way, we don't lock our cars either. It's not common here to steal them. Where would you take it in Australia? Besides, the cars have navigation systems. The police will find them at any moment.

As I have already noted, Tony worked at a Research Institute in Leeton and read lectures to students at the University in Sydney. I asked him:

— How do you manage to work at both the Research Institute and the University?

— Well, I manage. I have a flexible work schedule here and there. The Research Institute has a research program that I carry out. And no one asks when I do and what, even if I work on weekends. The result is important. And at the University, there are lectures two days in a row. I fly to Sydney by the evening flight. I have a house there. I give lectures and fly back. That's how I hustle and bustle. I need to prepare for retirement in advance.

Our visit to Australia was coming to an end. Early the next morning, we had to leave the city of Leeton. The owner of the hotel prepared a farewell dinner for us. She said that she had gotten used to us over these days. After dinner, we went outside to get some air. There was a beer bar in the next block, and Leonid suggested having a glass of beer. We went into the hall, but the draft beer was already gone. They brought fresh beer in every day, the amount they could sell in a day. So we decided to buy beer in bottles. The price of Bavaria beer in a 0.33 l bottle was \$3 per bottle. If you bought six bottles, each would cost \$2. And if you bought a pack of 24 bottles, the price per bottle would be \$1. Leonid decided to buy a pack: whatever we did not drink that day, we would take with us for the trip. We returned to the hotel and settled down on the balcony. Vasily cut up the remains of the dried stockfish, and we began. We sat and chatted. It was about 7 p.m. The second floor offered a view of the wonderful evening sunset. We were already in a nostalgic mood. We missed home. Vasily

slowly topped up our drinks so that our glasses wouldn't be empty. And after two hours of peaceful conversation, it turned out that only two bottles were left undrunk. After some bickering, we decided to finish them.

And now, describing this trip, recalling all its details, I only regret that neither Leonid nor Vasily are with us anymore. Those photos and videos that captured Australia remained in their archives, if they survived at all. Over the many years that passed, we never had time to process the footage...

The next morning, after breakfast, we went down with our things to the threshold of the hotel. Two cars drove up to the house. Tony was in the first, and Laurie in the second. Tony was supposed to drive us, and Laurie came to say goodbye. The owners of the hotel also came out onto the porch. We thanked everyone for the hospitality, the hostess for the delicious steaks. She even shed a tear. We put our things in Tony's car. Then we shook Laurie's hand, reminding him that we were expecting him in Kuban in September. We got into the car. Tony gave the farewell signal, and we went to the capital of the country — the city of Canberra. It is 263 km north-east from Leeton on an excellent motorway.



Canberra on the country map

As Tony told us on the way, for a long time the capital of the country was Sydney or Melbourne. It depended on where the president was elected from, and therefore these cities competed. And then in 1901 a smart ruler appeared

who put an end to this. He decided to build a new capital — Canberra. The city was located at an almost equal distance from Sydney and Melbourne.

The site was chosen around the mountain lake Burley Griffin and by 1928 a purely official city was built. On one side of the lake there were administrative buildings, and on the other — a residential area. The shores of the lake were connected by several bridges, along which fountains up to 100 m high gushed from the water, decorating the road.

Canberra in the language of the Australian Aborigines is a meeting place or a platform for meetings, for advice. This city is the center of government of the country. The Government House, the headquarters of state and political organizations, embassies and residences of other states are located here. All industrial companies, their main offices, large retail chains and much more are located in Melbourne, Perth and Sydney.

We arrived in Canberra for lunch, checked into a hotel, had lunch and went on an excursion to the city.

Canberra is a small city with about 400 thousand residents. These are mainly service personnel and administration officials. Deputies live there temporarily, during the election to parliament. When time is over everyone is heading home. When we entered the parliament building, we saw that in the corridor there were portraits of all the country leaders and outstanding people who had made a significant contribution to the development of Australia. In the parliament hall, on the balcony and in the gallery, there were places for guests. One could sit and watch the parliamentarians in action, their discussions and voting. The city left a very pleasant impression, we liked its clean and well-groomed territory.



Canberra is the capital of Australia

The next day we went to Sydney airport. When we said goodbye at the airport, Tony gave Leonid some crackers to prevent his urge for smoking. Before boarding the plane, Leonid chewed one cracker and flew to Bangkok without any problems, although he had not smoked for more than 9 hours. And in Bangkok, while we were waiting for our flight to Moscow, he did not smoke either. Indeed, the crackers did help.

I told him:

— Well, this is the case when you can easily quit smoking.

— I think that I will probably do so.

Finally, we were on the Aeroflot plane. It took us 9 hours to fly from Bangkok to Moscow without landing. Our seats are in 1st class — in the increased comfort zone (*Leonid categorically did not want to fly in economy class.* — Author). Here, meals were served with alcoholic drinks upon request. As soon as we took off, they immediately offered us lunch. We were served by two pretty stewardesses. We missed our family for 9 days, and then we got such attention! Leonid happily ordered cognac for everyone.

— But you don't drink!

— I'll treat the flight attendants to a little bit.

The girls refused the drink, though, because they were at work, but they made sure the service they provided us was good. About five minutes later, Leonid asked for a cigarette. They brought it. He lit it up with pleasure. When I exclaimed:

— But you wanted to quit smoking! — he just waved it off.

We were flying home and didn't know what surprises awaited us at home at the All-Russian Rice Research Institute. According to N. E. Aleshin, we had ruined an interstate deal — the patenting of Russian rice varieties in Australia. We had not yet returned from Australia, when an angry letter arrived at the All-Russian Research Institute of Rice, saying that they had been deceived, having been sold old varieties of rice under the guise of new ones...

In September of the same year, an Australian delegation of two people arrived to visit us for 9 days: Laurie Lewin, a Breeder, and Michael Kruger, Director of the Rice Growers Association. The third, Tony Blackenney, an Agrochemist and Technologist, could not come due to family circumstances.

The reception of the guests was organized by L. G. Kuryachiy and V. P. Zaryasky. The Australian guests were shown our rice farms with new varieties. Laurie was able to see for himself the high level of Russian rice breeding. The guests also visited the Angelinsky elevator, the Krasnodarrismash plant, Sad-Gigant, and the Kuban State Agrarian University. Everywhere they were

given maximum attention, and were introduced to all the achievements of each enterprise (*the All-Russian Research Institute of Rice refused to receive the Australian delegation.* — Author).

The cultural program for the guests included fishing in the ponds in the village of Maryanskaya and eating fish soup afterwards; there was also a visit to the Krasny Les nature reserve. I shall not speak about food, it was excellent.

The guests were very pleased. One thing marred their stay — the weather: on the third day, September 5, the temperature dropped to + 7°C. We had to provide some warm clothes for the guests urgently, because they arrived lightly dressed. But this did not prevent our Australian colleagues from having a very good time in Kuban.

Then we shared impressions of our mutual trips while corresponding with our Australian colleagues for a long time.

Unfortunately, today my friends and companions on this trip are no longer alive. They have completed their life journey, leaving a bright mark on Earth and in the hearts of loved ones.

8. England, November 1997

In the summer of 1997, I received an invitation to the International Rice Conference, which was to be held in Nottingham (England). I didn't want to ask the Kuban State Agricultural University to pay for the trip, so I decided to try to implement the advice given by my old friend Ivan Grigorievich Malysheenko. He was a gardener and regularly traveled abroad, without spending any of his own money. Ivan told me that there were many people who wanted to go abroad, including farm directors, but no one knew them and therefore did not invite them. And to get a visa to most countries, you need an invitation. You need to find such a person (*at that time, traveling abroad was only possible in the case of a business trip.* — Author). I mentally went through the list of farm directors I knew and settled on Leonid Georgievich Kuryachiy, my classmate from the Slavyansk Agricultural College. He was the Head of the "Krasnoye" Agricultural Farm. My rice varieties were sown on his farm to obtain the elite seeds. Leonid was a sociable person, and we had already traveled abroad together several times (in 1991 — to Vietnam, and in March 1997 — to Australia).

I came to Leonid and asked him:

— Do you want to go to England?

— Of course I want to, I have never been there, and what do I need for that?

I explained the situation that there would be a conference on rice in the city of Nottingham. It was possible to combine business with pleasure: participate in the conference and see the country. I would take care of organizing the trip, invitations, visa and tickets, and he would handle the financial issues.

— Agreed, and to make it easier for me to resolve the issue of payment, we will conclude an agreement for the author's support of your rice varieties that are grown on our farm. The agreement will have a clause allowing for payment for business trips, including foreign ones, and everything will be legal, — suggested Leonid.

— Okay, let's conclude such an agreement, — I agreed.

— What kind of city is Nottingham?

And I told what I had already read about the history of this city.

Nottingham is often called the cultural capital of England, and for its numerous shopping centers and stores — the capital of shopping. In the very center of the city is the beautiful palace and park complex of Wollaton Hall. This Renaissance palace was one of the most luxurious residences of the then Queen Elizabeth, now it is open to public.



Robin Hood Monument

Nottingham is surrounded by the thickets of the rich Sherwood Forest, which is associated with the name of the world-famous robber — Robin Hood. And the main attraction of the city, known far beyond its borders, is, of course, Nottingham Castle. In front of its gates there is a monument to the famous literary hero.

However, the hero-robber is far from the only notable feature of the city. No less important is its symbol — beer, which the locals call their national drink, and pubs and bars in the city are located literally at every step. In honor of the foamy drink, an annual festival is also held — Nottingham Beer. For several days, open cafes operate on the streets of the city, where guests are offered to try the best varieties of local beer. The city maintains exemplary cleanliness and there is a ban on smoking in public places.

So, the decision was taken and I sent a letter to the Organizing Committee and asked them to send an invitation for both of us to apply for a visa. Having received the invitations, I flew to Moscow and at about 10 a.m. was already standing in line to apply for a visa at the British Embassy. I waited for my turn and received application forms to fill them out. The form turned out to have many questions that had to be answered according to the documents. In this case, it was necessary to enter not only personal data, but information about relatives — the wife, children, parents, as well as grandparents, indicate if they died, when and where they were buried. In front of me in the queue was a guy from Krasnoyarsk, and he did not know some information about his relatives, so he left some lines blank. They returned the form to him, and did not accept any explanations. Having heard this, I turned to another neighbor for an explanation. He was going to England for the fifth time, so he knew all the details. He explained that it was necessary to fill in all the fields of the form, to enter at least approximate data, otherwise they would not issue a visa. The only consolation for us was that we submitted the documents at 10 a.m., and our passports with a visa were supposed to be issued at 2 p.m. Thus all the blanks had to be filled.

I knew everything about my relatives, then questions arose about the Leonid's. I had to write approximate dates and hand over the form. The official quickly looked through all my papers and said:

— OK!

At about 4 p.m. I received the passports and visas and immediately went to the airline ticket office on Koroviy Val Street and bought round-trip tickets from Moscow to London.

Returning to Krasnodar, I informed Leonid that we could go the UK and we began to prepare for the trip. I decided to give a report on a new type of rice plant with erectoid leaves that had grown in my plots that summer. I prudently took color photographs and slides. The slides were printed on special film to show on a screen through a diaphanoscope. It is hard to believe now how primitive the technology for showing demonstration material was in 1997. How far computer technology has advanced literally before our eyes!

The time for the trip approached. On November 22, Leonid and I flew to Moscow and then to London. An interesting incident occurred in Moscow, which continued in England. We were waiting at the airport terminal for departure to Sheremetyevo-2 airport. There was plenty of time, I was sitting with our things, and Leonid was studying the surrounding retail outlets. Suddenly he ran up and called me:

— We need to look at the video camera.

He had a Hitachi camera with him, very small. We went to a kiosk. They had the same brand, but the latest generation and much larger in size. The price was 600 dollars. Leonid showed me this camera and quietly said:

— Negotiate to reduce the the price to 500, we'll take two, the second one is for you.

I did not waste time and started bargaining, finally I became the owner of a wonderful video camera. I used it for a long time, until digital cameras replaced film cameras. That camera is still lying in my closet, as are the films it shot, which should have been digitized a long time ago, but I never got around to it.

Later we saw exactly the same camera in a London store. Its price stunned us — £2300. And a pound was worth 1.7 dollar at the time. That was how the prices differed. When Leonid saw the price of cigarettes, his desire to smoke immediately evaporated. Life in England was expensive, but more on that later. Having arrived in London, we took a taxi from the airport to the train station and went to Nottingham by train. The organizers planned the route so that there were no complications along the way. At the hotel, we had to share a room, because it would have been too expensive to stay separately.

The conference was held in the hotel building, in a well-equipped hall. The organization of the event was excellent. We were met by a representative of the Conference Organizing Committee from the University of Nottingham, Dr. E. Cooking.

Representatives of 22 rice-growing countries of Europe, Asia, America and Australia arrived for the conference. The Australian delegation was the largest — more than 20 people. There were scientists and farmers who came

with their wives. They were practically not present at the lectures, but they participated in all the excursions and behaved actively and very noisily. They asked many questions and vigorously commented on the answers to them. Their women were also active. They behaved freely, and sometimes even defiantly. When the guide made a comment on their behavior, one of them replied that they could afford doing there on the continent what they could not do at home in Australia. They worked hard all year round, saved money in order to come there for a month and break away from routine. Among the Australians was Tony Blackenney and his wife, who had received us in Sydney in March. But then in September he was unable to come to visit us in Kuban. We had a very warm conversation with this couple. Leonid invited Tony and his wife to come visit him. Tony introduced his wife to us here, because we had not seen her in Australia, although we knew that her name was Mary. A very nice woman, pleasant to talk to. Her behavior was completely different from that of her fellow countrywomen. By the way, Mary told us that Australians greatly revered the English Queen and spoke warmly of her.



Mary and Tony Blackenney, Nottingham , 1997

Also here were French scientists Jean Chatagny, Guy Clément, Michel Jacquot, whom I had met and talked in 1990 and 1991 in France, and then Jacquot and Clément came to us in Kuban in 1992. Therefore, here we talked with them as friends. We had a lot to discuss.

The conference was very productive and lasted four days. Its materials were published in advance and the book was given out upon registration.

I gave a report, and Leonid filmed everything on video. I was asked several questions, which I answered successfully. Among those who asked questions was Gurdev S. Khush, a leading breeder from the International Rice Institute (IRRI). He was interested in the new type of rice plants that I showed in my report. He asked three questions and suggested a meeting to discuss my results. That same evening we met in the hall for a cup of coffee and talked for more than two hours. It was very interesting for me. Especially since Khush not only asked questions, but also talked about his work in this area. He asked me:

— Are these individual plants that you show on the slides, or are already samples in plots?

— For now these are individual plants, but when you come to us, you will already see plots.

And indeed, when G. Khush came to the All-Russian Rice Research Institute for an anniversary conference in 2001, I was glad to show him these plots. But more about that later.

I was happy to discuss the problem of increasing the productivity of rice plants with the famous breeder, the man who created the “Green Revolution” for rice, like N. Borlaug did for wheat. Several years later, I wrote an article for the magazine “Rice Growing” about this interesting man Gurdev Khush. At that moment we agreed that we should exchange visits. He would invite us to IRRI in the Philippines, and we would invite him to Kuban.



With foreign colleagues, Nottingham

After the meetings, we went out into the city to see the sights and buy souvenirs. Leonid bought a lot of different things for his ladies: first for his wife, then for his daughter and daughter-in-law. By the way, he bought them similar gifts, for example, dresses. He only chose different colors and styles. Apparently, as a token of gratitude for this trip, Leonid decided to give me a gift too. First, he bought a car radio, and then he wanted to buy shoes for me. We came to a large shoe store, made an order. The saleswoman first measured the length of my foot on a special machine and, clicking her tongue, ran off somewhere. As it turned out later — to the warehouse. The length of my foot was 30 cm. There were no suitable shoes in the store. They were brought from the warehouse. I tried them on, some were too small. The others were tight. Leonid laughed and told them to bring everything they had, but the right size. They brought some shoes, I tried them, and Leonid filmed the process. A crowd of sellers and buyers gathered around us. There were remarks, shouts, and comments. Finally, one pair fitted my feet. A general sigh of relief. Leonid did not even look at the price, but asked to wrap them up. We left the store, I was wet as if I had just come from a bathhouse, and Leonid was laughing.



In the conference hall



In the shopping centre of Nottingham

But next day we were no longer laughing. We were getting ready to check out. And when we saw what was written in the bill, we were dumbfounded. The amount was much higher than what had been stated when we checked into the hotel. We found out that we had additional expenses. Plugged the razor into the socket — pay, air conditioner to heat the room — pay, switched the TV from two free channels to the third and then — pay, etc.

— But we didn't know that!— we were indignant.

— Ignorance does not exempt from liability. There is a memo on your desk, read it, it's all written there, — was the answer.

But we didn't pay any attention to this brochure. I leafed through it, and, indeed, everything was written there.

There was nothing to do, we had to pay. We counted our cash and scratched our heads. There was just enough money left. And we also planned a two-day stay in London. We decided to return some of the things we had bought at the store. I had two of them — a radio and shoes. Leonid did not even want to hear about the shoes, they had been so hard to get. We decided to return the radio and two dresses that Leonid had bought for his daughter and daughter-in-law.

They accepted the radio without any problems. After we explained that it did not fit in the car, they immediately took it back and returned the money, about 90 pounds. We sighed with relief and went to the store to return the

dresses. We paid about 140 pounds for them. The saleswoman, hearing our request, was not very surprised and immediately offered several models for exchange. When I tried to explain to her that we just wanted to return it and get our money back, she became stubborn.

— This is not customary here. If it doesn't fit, take another dress.

We argued for a long time until she couldn't take it anymore and called the owner of the shop. She listened to me attentively and then asked:

— Why do you want to return the dresses? Are they poorly made?

I had to tell her the reason directly, that we did not have enough to pay for the hotel. Having heard our argument, she took the dresses and gave us the entire amount, without even taking the required discount for the return.

We silently went out into the street, as if spat upon. But then, we cheered up a little, cursing the English stinginess, and rushed to the hotel. Having paid, we took our things and went to the train station, which was within walking distance. A colleague from Romania, Georges Alionte, joined us. He had been to London before and knew where we could stay inexpensively for two nights.

We arrived in London at about 6 p.m. Leaving Leonid with our things at the station, Georges and I went to the taxi rank. There he quickly made arrangements with the driver, and he took us to the hotel. It was very close, in the next block there was a whole row of mini-hotels. We went into one. A young, pretty, black-haired girl was sitting at the reception. We quickly came to an agreement with her. A double room for 35 pounds with breakfast and dinner suited us just fine. Georges ordered a single room for himself. Having left 5 pounds as a deposit, we headed for the exit. And suddenly I heard a "juicy" Russian curse from behind. It was so unexpected that I involuntarily looked back. The girl with whom we had just spoken was cursing at a large man. He was carrying a bag of cement, dropped it and spilled it on the carpet. This man was Polish, doing some repairs in the hotel. And Russian curses were probably understood by everyone.

I could not resist and, turning to her, asked in English:

— Where did you get such knowledge? And she answered me in Russian:

— I'm from Odessa.

— Well, okay, we'll talk in the evening, — I added in Russian.

And we walked to the station. Leonid was already tired of waiting for us. Considering that the hotel was about 500 meters away, we didn't take a taxi. On the way, I told Leonid about the incident with the Russian swearing.

At the hotel, they greeted us as if we were their own. After settling into a room, Leonid went down to the reception and talked for a long time with this

girl, who was the same age as his daughter. And in the evening he told me her story.

She and her husband lived in Odessa in a three-room apartment. She worked as a teacher of the Russian language and literature, and her husband, a Jew, a lawyer by education, worked as a notary. Three years earlier, under the Jewish resettlement program, they decided to move to London. They had sold their apartment and then lived in London for almost two years with that money. They got jobs with a guest certificate, she worked in one hotel, and her husband worked in another. One salary went to pay for housing, and they lived very modestly on the other. He called his mother in Odessa once every three months, it was too expensive to call frequently. Six months earlier, they had a daughter and that brought more worries. They could not hire a nanny, they could not afford paying her. They made do on their own. Two weeks after the birth, the owner demanded that the girl returned to work or else he would fire her. Her husband transferred to this hotel as a night shift worker so that he could look after their daughter during the day. Her work schedule was from 7 a.m. to 7 p.m. Her husband started work at 10 p.m. and until 7 a.m. They had three hours a day to spend at home together. At lunchtime, her husband brought their daughter to feed. And they had been living like that for almost six months. In the future, they hoped to get a residence permit and then find a decent job. They lived with this hope.

When Leonid asked her where the wax museum was, he heard the answer that she had never been further than one block from these places. She only had time to run to the supermarket the next block, buy cheap groceries, baby supplies and that was all. There was no talk of any entertainment.

Leonid took this story so close to heart that he later recalled this couple more than once and compared everything with the lives of his children, who had already grown up and were living without any special worries.

The next day after breakfast we went out into the city. We took a double-decker tour bus and saw London in a couple of hours.

We asked the guide where the wax museum was and visited it. Nowadays all the exhibits of this museum can be seen on the Internet, but seeing them in person is a completely different experience. Madame Tussauds is the most famous wax museum in the world, founded by the sculptor Maria Tussaud and located in Marylebone, a prestigious area of London. The museum has branches in 14 of the largest cities in the world (New York, Amsterdam, Shanghai, Vienna, Berlin, etc.). The branches' exhibits contain over a thousand wax sculptures of outstanding politicians, movie and pop stars, and historical figures. But the

most famous and interesting is the Madame Tussauds museum in London. More than 2.5 million people visit it every year, and that says a lot.



In the heart of London

There is a lot to say about this museum. The quality of the wax figures is amazing. You can take photos with any of them. Leonid took photos with heads of state, and I took a photo with Princess Diana, who stood as if alive.



Madame Tussauds in London



With Princess Diana

Walking around the city, we once again noticed the modesty of the English people's lives. This was evident in their cars. They had very small cars for private use, and luxury Mercedes were parked mainly near the ministry buildings. I asked the tour guide about this on the bus, and she answered that the price of cars and especially petrol was very high here. Therefore, few could afford to buy and maintain a large car.

Against this background, we often remembered the Australians, how much more luxuriously they lived in their country compared to the people of England.

The next morning we went to the airport and flew home strictly on schedule. There were many impressions from this trip. However, there was no desire to go to England again.

9. Egypt, 1998

In the summer of 1998, I received information from the Committee of European Rice Growers about the International Rice Congress, which would be held in Cairo (Egypt) in the first ten days of September. There was only one condition — to buy a round-trip ticket, and then the other expenses would be covered by the organizing committee. The topic of the congress was “Improving the Efficiency of Rice Cultivation on Saline Soils.”

The problem of growing rice on saline lands in Russia had been developed for a long time. I had material for a report: only a earlier year our salt-tolerant rice variety Kurchanka was zoned.

The rector of the Agrarian University, Ivan Timofeevich Trubilin, whom I informed about the invitation to the Congress, said unequivocally:

— We must go. Write a presentation, we will allocate money for the ticket.

I began preparations and discovered that I had a problem with my foreign passport. It must be valid for the period of at least six months before the trip, and I had only two months left. I needed to change it urgently. I contacted the authorities and understood that it would take too long to get a new passport; I would not have time to get a visa.

The matter reached a dead end, and I turned for advice to my senior friend from the time of our joint studies at the Slavyansk Agricultural Institute, Valentin Aleksandrovich Burlachenko (at that time he was the Deputy Head of the regional Department of Internal Affairs). On Friday evening I went to see

him at work. We had not seen each other for a long time (each of us had no time to meet often). He received me very warmly, we talked about work and family matters. I briefly outlined the essence of the problem.

Valentin called someone, clarified something, and then said to me:

— Here's a note for you. Tomorrow at 9 a.m. you must come to the head of the Department of Internal Affairs of the Western District (where I was registered).

— But tomorrow is Saturday.

— No problem, he will be waiting for you.

I thanked my old friend for his help.

The next day at 9 a.m. sharp I arrived at the district Department of the Ministry of Internal Affairs. There was a guard at the door. He asked my name. I gave it to him.

— Come in, they are waiting for you.

I walked down the corridor and saw an open door at the end. That was the office of the Head of the department. I went in, said hello. A nice, strong man in a civilian suit got up from behind the table and offered me his hand. I introduced myself to him.

— I was asked to help you, so what's the problem?

I briefly told him about the invitation to the International Rice Congress and that my passport was expiring.

— We will solve this problem quickly.

And then he started calling the Head of the passport office. He explained the task to a subordinate who began explaining that the passport officer was currently on vacation, the issue could not be resolved quickly.

— We need to solve it! And maximum in three days.

And turning to me, he said:

— Go to the passport office, straight to the Head, he will solve everything.

I thanked him for the warm welcome and left, quite inspired. After fruitful communication with the Head of the passport office, I began to hope that I would have time to get a passport and arrive at the Congress on time.

On Tuesday, the Dissertation Council met in the assembly hall of the All-Russian Rice Research Institute. The director's secretary, Emma Teuchezhva, came in and handed me a note with a phone number:

— You were asked to call urgently.

I looked and saw that it was Burlachenko's office phone. I went with her to the reception area, dialed the phone number and heard Valentin's voice:

— Where are you now?

— I am at the Council meeting at the Rice Institute.

— Come urgently, I have your passport on my desk, and I am getting ready to leave.

Having asked the Chairman of the Council for permission to leave, I rushed to Valentin Aleksandrovich. He solemnly handed me my passport. And when I expressed my gratitude that everything was done so quickly, he chuckled:

— And all you can do is criticize us, how badly we work...

Soon I left for Moscow to get a visa to go to Egypt. I arrived at 10 a.m. at 12, Kropotkinskaya Street, to the Embassy, and again there was a problem — the visa issuance period was much longer than I thought. The Consul's assistant, having looked at my papers, said:

— Everything is in order with your documents, hand them in and come back in two weeks for your passport with a visa.

— Is there no way to do it faster?

— In principle, you can, but you need to get personal permission from the Consul.

There was nothing to do, I asked the secretary about an appointment with the Consul. Luckily for me, the Consul was not busy and immediately received me. I went into his office and greeted him.

A large man with a rather grim look was sitting at a large table, apparently he was disturbed at the wrong time. He didn't respond to the greeting and reluctantly took my papers. Leafing through the documents, he asked in Russian, but with a very strong accent:

— Where are you from and what do you do?

— At the Kuban State Agrarian University, Head of the Department of Genetics, Selection and Seed Production.

— What is this, the former Agricultural Institute?

— Yes, it is.

And then you should have seen how the man's mood changed. He somehow perked up, pulled himself together and said:

— My brother graduated from your Institute. He spoke very warmly of it.

— Yes, the Institute is good, — I answered.

— My brother is currently working as a Deputy Minister of Agriculture in Cairo and is getting ready to go to Krasnodar. He misses it.

And then he turned to the wall, banged his fist and said loudly:

— Tanechka, the Professor needs a visa today, by 2 p.m.

And he added to me:

— Good luck to you, go to Tanya, she will do everything.

I thanked the Consul and went out to the assistant. She met me with great surprise.

— He gave permission, really. Yesterday he refused three. What did you tell him that he became so kind?

I shrugged my shoulders and did not explain.

— Come at 2 p.m., the passport will be ready.

As a result, I got my visa, bought a ticket and flew out on time — September 7. Aeroflot planes flew to Egypt on Mondays on the route: Moscow—Cairo—Hurghada. On Monday, the Congress participants arrived. We were met at the airport and taken to the hotel. It was a luxurious 5-star hotel on the banks of the Nile River. There was also a conference room here. So there was no need to leave the cool building. It was almost 40°C outside, a dry wind was blowing from the Sahara Desert. In the hotel temperature was not higher than 25°C round the clock, very comfortable. Each of us was given a separate room with all the amenities: a luxurious carpet on the floor, a large plasma TV on the wall, a wide comfortable bed. And on top of all this comfort, three meals a day in the restaurant, buffet style. True, the cost of the room was decent— \$270 per day, which was paid for by the organizing committee for the duration of the congress: Monday through Friday. And my return flight was the following Monday. The organizers told me that I could live there as long as I wanted, but I would have to pay for the following days myself. I thought that would be too expensive. I asked them to find a modest hotel. They offered a hotel on the other side of the river with a room \$35 per night. When I later moved there, I saw a small room, but with amenities. On the floor there was a thin carpet, a small TV, a single bed and in the window an air conditioner, our BC, humming like a tractor, but cooling air very well.

However, let's return to the Congress on the problem of salt tolerance of rice. Many familiar colleagues came, with whom we had met before. We were happy to communicate with the Romanian Georges Alionte, the Hungarian Ibolya Simon-Kiss, the French Michel Jacquot and Jean Chatagny, the Vietnamese Ngu Yen and others. We developed especially warm relations with Jean Chatagny thanks to the mediation of M. Jacquot. We happily recalled with him how the French delegation in 1992, consisting of M. Jacquot and G. Clément, came to the All-Russian Rice Research Institute. M. Jacquot reminded us of the day when we treated him to Kuban borscht...

At the Congress, most of the reports dealt with the problems of water and soil salinity and the salt tolerance of rice. But there were also overview reports



on other challenges to rice growing. The program included excursions to rice fields and the pyramids in Giza.

It was interesting to hear that most Egyptian rice growers were united in cooperatives and worked as a team. At the same time, the labor was divided: tractor drivers, combine operators, irrigators, drivers, but the income was common and divided according to labor contribution and the number of shares. All cooperative workers were interested in increasing the rice harvest. They were all united by water, rice systems, roads, expensive equipment. One farmer could not even afford to buy a combine. Therefore, rice growers united in cooperatives, similar to our collective farms.



At the conference in Egypt, 1998

Egyptian scientists provided interesting data on rice growing in the country. In the late 1980s (10 years earlier), the rice yield there was slightly higher 6 t/ha. FAO proposed a program for the development of rice growing with an increase in the yield up to 9 t/ha. Money was allocated for this program and the condition of the loan was that the money would be repaid in kind (rice) at a fixed price. FAO specialists sent this rice to starving countries in Africa, as well as to Europe. In doing so, they used so-called dumping prices. They were much lower than the cost of rice produced in these countries. Thus, rice

growing in Bulgaria, Hungary, Romania, etc. was ruined. Later we will return to this topic using Romania as an example. In Egypt, thanks to the adopted program, rice growing actively developed. New varieties were created, the required amount of fertilizers were used, chemical protection from diseases and pests was provided, and new high-performance combines were used. As a result, over 10 years, the rice yield in the country increased by 3 t/ha and reached 9 t/ha. The climatic conditions made it possible to grow varieties with a vegetation period of 160–180 days and a yield potential of more than 10 t/ha. We observed such rice crops when visiting the fields of several cooperatives.

During one of the bus rides, I found myself next to Ngu Yen, a Vietnamese, who worked at the FAO headquarters in Rome as the Second Secretary of the Rice Department. During the conversation, I learned that he was originally from Northern Vietnam, from the places we had visited in 1991. His mother lived there, and he visited his homeland every year. I shared my impressions of the trip to Vietnam, and he revealed his secret desire to visit Russia, about which he already knew a lot. Later, this acquaintance would greatly help us organize the International Conference of Rice Growers in Krasnodar in 2006 for the 75th anniversary of the All-Russian Rice Research Institute. Ngu Yen was a participant in this conference and gave a very interesting presentation.



During a break between sessions in Cairo

In the meantime, we discussed rice growing issues and talked with colleagues. In one of the conversations with J. Chatagny, I proposed the idea of holding a conference on rice in Russia in 2000. At first, he expressed doubts about it. Russia was not a member of FAO, and our colleagues might object. Then, at dinner, we were sitting next to each other, and I touched on this topic again. I told him about the work of the All-Russian Rice Research Institute. Next to us sat the Romanian G. Alionte. He heard the conversation and unceremoniously interrupted our conversation.

— I have been to Krasnodar several times, I know this Institute. They conduct excellent research there, the rice yield in the Institute's farms is at the level of the best European ones. There is something to see there.

I was not very comfortable with Alionte's intervention, but J. Chatagny immediately turned to him:

— That's good, when I propose this idea at the final meeting, you will support me.

Chatagny kept his word. Summing up the work of the Congress, he proposed to gather in Krasnodar in 2000, where the main rice zone of Russia was located.

— I foresee your objections, dear colleagues, you will say that Russia is not a member of FAO, and it will be difficult to allocate money for this event. But I think all problems can be solved if we want it. We discussed this proposal with professors Zelensky and Alionte, they spoke in favor of this idea. Two years to prepare the Conference will be enough.

Here Alionte, without an invitation, jumped up and began to quickly tell his colleagues in English that he had been to Russia several times, to the Rice Institute, visited rice farms and that the rice community would only benefit if it organized such a Conference in Krasnodar. And, taking advantage of the opportunity, he thanked the Organizing Committee for the successful the event in Egypt. And in conclusion, he added that he was waiting for everyone to visit Romania, where an International Field Seminar on Rice was planned for 1999. And so, in the final document — the Congress resolution — they stated: "In 2000, prepare a Conference on rice in Russia, and in 1999, hold a Field Seminar in Romania." I was very glad that such a decision was made. It was recognition of the work of Russian rice growers, who had been presented at various conferences and working meetings on rice since 1990. The Egyptian Congress ended on Thursday evening with a farewell dinner given by the Organizing Committee. On Friday morning, I took a taxi across the Nile River to the eastern side and checked into another hotel, where I stayed till Monday. It should be said that taxis in Cairo were cheap, but I had no desire to ride. Only

when I needed to go to the airport did I take a taxi. Local drivers were like kamikazes: they drove as if there were no rules. It seemed that they were about to hit someone, but at the last moment they managed to dodge. Everyone was constantly honking, so the streets were filled with the loud sounds of horns.

The hotel I moved to had poor soundproofing and all loud sounds could be heard. So, early in the morning I heard the mullah's voice coming from the nearest minaret. He was announcing the start of the morning prayer to the faithful. The voice was amplified by powerful speakers and could be heard far around.

I spent two days exploring Cairo, looked around the city center, visited the market and the museum. And I spent one day on an excursion to Giza to the pyramids. We went there with Congress delegates, but we were only given a sightseeing tour without visiting the pyramids. But I wanted to learn more about Cairo, one of the oldest cities in the world, and about the pyramids, to touch this antiquity. I learned general information from the Russian-language booklet.



In the city of Cairo and its environs

Cairo is the largest city on the African continent, the city of “a thousand minarets”, “Gateway to the East”. It is the concentration of cultural achievements of all six thousand years of Egyptian civilization. Cairo is high-rise buildings and villas, minarets and bell towers, palm trees and neon lights, noisy bazaars and numerous souvenir shops for tourists. A huge city where life is in full swing and at the same time flows slowly, where the majestic Nile rolls its eternal waters (*as it says in the brochure.* — Author). The population of the city is constantly increasing. According to the census in 1800, 200 thousand people lived in Cairo, in 1927 it exceeded a million — 1,059.800. In 1996, on the eve

of our arrival, the number of residents was over 6,789,000, and in 2017— more than 9,500,000 people. The crowding is especially noticeable in the old, eastern part of the city.



Views of Cairo

Since the city is located near the Sahara Desert, precipitation is very rare (the climate is arid), but if it does rain, it is intense, sometimes causing floods. In general, 24 mm of precipitation falls in the form of rain per year, which makes Cairo one of the “driest” large cities in the world. Air temperature in summer is + 40°C is quite common. However, this heat is easily tolerated thanks to the dry air.

A visit to the Egyptian National Museum left a great impression. This is the world’s largest repository of ancient Egyptian art, located in Cairo on Tahrir Square. The collection contains about 160 thousand exhibits from all historical periods of ancient Egypt. It was founded in 1858 as the Bulaq Museum, then it was renamed. The opening of the Egyptian Museum in a new building took place in 1902.

There is no point in listing what I saw in this museum. It is a pity that it was impossible to take photos.

No less interesting was the trip to the pyramids in Giza. These pyramids have long been recognized as one of the Seven Wonders of the World. Colossal structures keep centuries-old secrets under the giant stone massif, which are still incomprehensible to our consciousness...

The angle of the walls in relation to the horizon is 53°, and the edges are perfectly aligned with the cardinal directions. The Pyramid of Cheops is the largest. Its base is a square with a side of 227.5 m, and the height reaches 138 m.

There is still no consensus on how and who built these pyramids. Now it is a Mecca for tourists. Buses bring new groups one after another. Near the pyramids there are a lot of kiosks with various souvenirs. Photographers also work here.



Pyramids of Giza

The camel scene was of great interest to the spectators. Many wanted to take a photo on the camel. The camel driver laid the camel on the ground to make it easier to get into the saddle. Tourists paid one dollar for this. The camel got up on command. The man sitting on it was photographed, and he wanted to get off, but he sat too high. He shouted in English to the driver:

— Lay the camel down!

And the driver, with a strong accent, answers him:

— 20 dollars.

— What? I gave you a dollar.

— So that's for getting on, and there's a different price for getting off.

— I won't pay!

— Then sit there.

A crowd gathered around, people were indignant at the driver's behavior. They turned to the policeman on duty. He waved them off:

— I see this show every day, it's his business. There's no point in interfering in their affairs.

It was over 40°C outside. About ten minutes later the tourist could not stand it any longer, threw a 20 dollar bill down, and the camel immediately went on his knees.

Having joined an English-language tour, I visited the inner labyrinths of the Cheops pyramid. There is no point in telling about my impressions, one should see it all... That was the end of my journey.

Returning home to the University, I reported to the Rector Ivan Timofeevich Trubilin on the results of the trip to Egypt, and he did not object to organizing an International Conference. And the Director of the All-Russian Rice Research Institute, E. M. Kharitonov, happily supported this idea. But after meeting with the President of the Russian Academy of Agricultural Sciences, Academician G. A. Romanenko, Evgeny Mikhailovich Kharitonov told me that this Conference should be held in 2001, timed to coincide with the 70th anniversary of the All-Russian Rice Research Institute. Then we would be able to get financial support from the Academy and the regional authorities. I of course agreed with this logical decision and wrote a letter to J. Chatagny, as the Chairman of the Committee of European Rice Growers, in which I set out all our arguments. Ultimately, the Committee made the following decision: to hold a conference on rice in 2001 in Russia. In this case, two parties acted as organizers: from Russian it was the All-Russian Rice Research Institute, from FAO — the French Center for Agrotropical Research on Rice (CIRAD). And in 2000, it was proposed to hold a Field Seminar on rice in Türkiye. From that moment, preparations for the future conference began.

10. The Philippines, January 1999

At the Conference in Nottingham in 1997, L. G. Kuryachiy and I met Gurdev Khush, a leading breeder at the International Rice Institute (IRRI), located in the Philippines.

It all started with G. Khush asking a few questions after my report. He was interested in the new forms of rice that I showed in my report. He also worked on creating new highly productive rice varieties. Then we continued talking during breaks between conference sessions.

G. Khush had been to the USSR back in 1975, and had visited the All-Russian Rice Research Institute. He knew our leading scientists E. P. Aleshin, A. P. Smetanin, V. A. Dzyuba, who had previously visited IRRI and then met him in Krasnodar. Therefore, Khush showed great interest in my presentation and asked about the work of the All-Russian Rice Research Institute, the

achievements of breeding, and about senior colleagues. Leonid and I tried to answer his numerous questions.

During the conversations with G. Kush, a proposal was made to exchange visits on the same terms on which Leonid Georgievich, Vasily Porfiryevich and I went to Australia: each visitor would buy tickets, and the host provided accommodation and food. Khush promised to invite us to visit the Philippines.

Considering that my trip to Egypt was already planned for 1998, we decided that we would go to IRRI at the beginning of 1999, and in August-September their delegation would come to us.



The Philippines on the map

As always, before foreign trips, I began to collect information about the country. The Philippines is an island state, which is located on 7,100 islands of volcanic origin. The total territory of the country is over 300 thousand km². At the same time, internal waters occupy almost 1.8 thousand km². A significant part of the land there is occupied by mountains. The climate in the region is tropical, but frosts can occur in the mountains. The average annual temperature in the country is 26.6°C, with fluctuations from 21°C in January to 32°C in May. From May to October is the rainy season, tropical downpours. Almost 5,000 mm of precipitation falls per year. Typhoons and tsunamis are common in the Philippine islands.

The country's population is constantly growing. If in 1999 there were just over 89 million people, then by 2017 there were over 104 million.

The main food crop for the Filipinos is rice. It has been grown on these islands for several millennia. It is here in the Cordillera mountain range, located in the north of the island of Luzon, that rice systems were built on mountain terraces, which were called the eighth wonder of the world. It is probably no coincidence that the Philippines were chosen as the location where the International Rice Institute (IRRI) was established in 1960. It is located near the city of Los Banos, 45 km southeast of the country's capital, Manila. We were supposed to go to this institute.

From the second half of 1998, I began corresponding with G. Khush about preparing our visit to IRRI. Leonid Georgievich and I agreed to fly together, just as we visited England in 1997.

By the end of the year, G. Khush sent us invitations, and I began the process of obtaining visas and purchasing tickets. We got the visas without any problems, since the trip was a business trip at the invitation of the IRRI General Director. But we had to tinker with the plane tickets. The time of the trip from January 11 coincided with the New Year holidays, and advance booking did not guarantee us the ticket price. When I went to the Aeroflot ticket office in Moscow to book tickets, it turned out that the ticket price there went up by almost 30% during the holidays. I became indignant that nothing was said about this during the first visit.

— We didn't know ourselves, but yesterday the order came. Seeing my upset face, the cashier told me:

— Go to the French airline ticket office, they are actually reducing the price for this period.

And indeed, at the French ticket office, to my question about the price, they answered:

— Yes, we are reducing the price by almost 30%. But there is one condition. We book tickets only for one day.

I counted the money I had and it turned out that I was almost 15 thousand rubles short for 2 tickets. What should I do? It is not very reasonable to fly home for money. But where in Moscow can I borrow such a sum? And then I remembered a former employee of the All-Russian Rice Research Institute, Petr Nikolaevich Kharchenko, who at that time worked there as the Director of the Institute of Biotechnology. But would he be able to help me out? I found his phone number, called him and explained the situation to him. Petr immediately told me:

— Come to the Academy at 9 a.m. tomorrow, I will bring the required amount.

And indeed, in the morning at the appointed hour we met in the reception room of the President of the Russian Academy of Agricultural Sciences. Petr handed me the money. I thanked him, promised to return the debt when I would be again in Moscow, shook his hand and rushed to the airline ticket office on Korovy Val. I bought tickets from Moscow to Manila and back and was surprised to see the route: Moscow–Paris–Singapore–Manila (the capital of the Philippines). And back the same way. In spite of the longer route, the ticket price was much lower than in Aeroflot.

There was nothing else to do in Moscow, and I returned home with the tickets. And 10 days later, L. G. Kuryachiy and I flew to the Philippines. The trip was long, but we endured. First we admired the Paris airport, since there were more than 3 hours between flights and then in Singapore we had about the same time.

If the Paris airport was already familiar to me from my previous trips, then the one in Singapore surprised me very much. A huge building 3 km long. Probably more than a hundred points of reception of aircraft. We were received at one end of the airport, and were supposed to fly out from the other. We got off the plane and had to go to the other end. Leonid hurried me so as not to be late, although we had plenty of time. It was good we did not have to drag our luggage along, it was sent in transit from Moscow to Manila.

As soon as we got to the central aisle, we looked and saw a belt-track. People got on the belt and traveled. Moreover, the track consisted of 3 lanes: the first one went slowly, the second one was faster, and the third one was really fast. First you got on the slow one, if you wanted to go faster, you moved to the next ones. Very convenient.

The last leg of the flight was over the ocean, and we were in Manila. At the airport, we were met by an employee of the IRRI Selection Department,

headed by Gurdev Khush. On behalf of Khush, the guy welcomed us to the Philippine soil, conveyed Gurdev's apologies for not meeting us himself. Khush was away, but next day there would be a reception at the Institute. We got into the car and drove along a good highway to Los Banos, where IRRI was located. An hour later we were there.

The IRRI territory included a complex of buildings and structures of the Institute and a residential town located on a hill 2 km away. Rice fields for experimental crops were located next to the Institute.

The residential village had one street, with 1–2-story cottages standing on both sides. The Institute employees lived there. One of the houses was occupied by the family of G. Khush. Various tropical trees grew around the houses. Having entered the village, we found ourselves in a green oasis. In the center of the village there was a 3-story building — a hotel. Here we were accommodated, in separate rooms on the first floor. On the ground floor there was a dining room, where we ate buffet style.

In the morning, the employee who met us at the airport came to us, and we went to the Institute. He was assigned to us with a Toyota car for the entire period of our stay

A few minutes later we came to the main office. There were several people standing in front of the entrance to the Institute, including Gurdev Khush. We greeted each other, and Gurdev Khush gave a welcoming speech, ending with a wish for a fruitful time on the Philippine soil and on the territory of the International Rice Institute.

Then G. Khush invited us to his office and spent more than an hour talking about the work of IRRI and his breeding achievements. There were booklets about the Institute and the varieties created here on the table. Khush gave them to us as a souvenir.

After returning home from this trip, I wrote an article about the breeding of rice varieties at the IRRI, which was published in the journal "Rice Growing" in 2010. Here are some excerpts from this article.

The International Rice Research Institute (IRRI) is a true scientific center for world rice cultivation. It was organized in 1960. It contains the world genetic collection of rice, including almost the complete varietal and species diversity of the crop. Over 50 years, the Institute has bred more than 60 varieties, which are grown in the vast majority of Asian countries and many countries on other continents. In addition, more than 280 varieties have been created based on IRRI breeding material in national programs in Asia, Africa, North and South America.

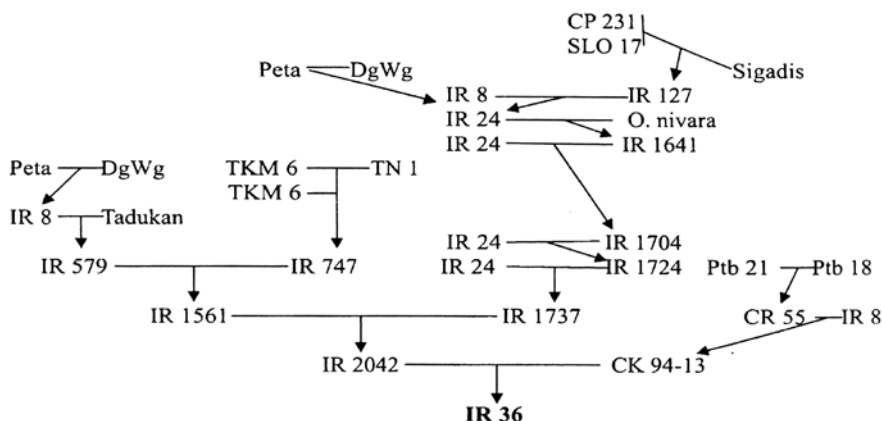


The Building of the International Rice Institute Office

The geographical location of the Philippines and the average level of economic development of the country predetermined the choice of location for the International Rice Research Institute. The task of the breeders of the Institute is to provide primarily Asian countries, as well as other continents, with a range of rice varieties for various environmental conditions.

Despite the fact that in European countries, Australia and the USA, seed rice is used, and in Asia, seedlings, there are many similarities in the methods of creating the source material and the directions of selection. The analysis showed that the common features of rice breeding work in the world are the creation of short, high-yielding varieties with excellent grain quality, resistant to lodging and shattering, immune and tolerant to pests and diseases.

The IRRI creates varieties for irrigated and dryland cultivation. Among the former, varieties for growing in irrigation systems and in fields flooded by rain stand out. Considering the very favorable conditions of the tropical zone for the development of rice diseases and pests, the immunity of varieties to various pathogens is of particular importance, along with high yield and cereal quality. The most harmful to rice in Asian countries is blast, as well as viral, bacterial and nematode diseases. Rice crops are damaged there by a significant number of pests — from leafhoppers to mouse-like rodents and rats. Traditionally, the peoples of Asia give preference to long-grain varieties that produce high-quality cereals. All this was reflected in the IRRI breeding programs. In his story, G. Khush focused on the IR-36 rice variety, which was widely distributed in Asia and was popular with farmers, just like the Bezostaya 1 wheat created by Academician P. P. Lukyanenko. These two breeding achievements are comparable in popularity and significance. The IR-36 variety is created by complex stepwise hybridization with targeted selection on infectious backgrounds.

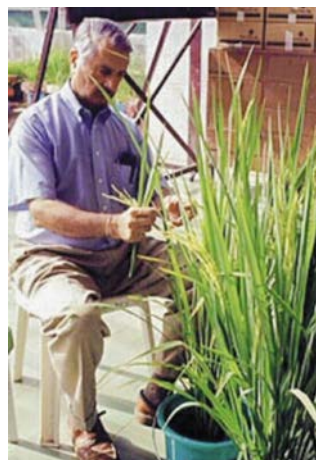


Pedigree of the rice variety IR-36

After the introductory talk, Khush took us around the laboratories, telling us about their work.



**Dr. Gurdev S. Khush on a plot
of the rice variety IR-36**



Gurdev S. Khush

Gurdev Khush headed the Department of Genetics and Selection. A group of biotechnologists was part of his department.

In the laboratory where the biotechnologists worked, research was carried out on obtaining rice plants from the anthers of hybrids after crossing different varieties. Khush led a large selection program to create varieties resistant to diseases, pests and viruses. He used plants of the wild species *Oryza nivara*, which did not cross well with cultivated rice *O. sativa* as a donor of resistance.

The hybrids were sterile. Scientists solved this problem using biotechnology methods. An international team worked in the department headed by G. Kush.

The IRRI invited specialists from different countries for a period of 5 years. Some had their contracts extended for another five years. In a conversation, one employee said that despite a very decent salary, specialists from European countries almost never come there. The tropical climate is to blame. It is impossible to work in the field because of the heat and high humidity, although it is quite comfortable in the laboratory. Air conditioners are constantly running here. But employees have to leave the laboratories for the field and the vegetation site, and it is very difficult there.

However, local residents tolerate this climate without problems. I just remembered the story of Valery Lavrichenko, an employee of the All-Russian Rice Research Institute, who went to work in Vietnam under a contract in the late 1980s. After the first summer field season, he broke the contract and went home. He could not stand the tropical climate. He began to have health problems caused by the water-salt imbalance. The same thing happened to colleagues who worked in Cuba. Everyone returned with poor health.



In the office of G. Khush at the IRRI

We arrived at the IRRI during a period when the weather was kind to us. Yes, it was steamy outside like a sauna, but the temperature was not as high as it was in summer. After getting acquainted with the laboratories, we were taken to the Genetic Resources Bank. This was a special building known as a “Rice Storage”. It was equipped with sophisticated equipment that allowed creating

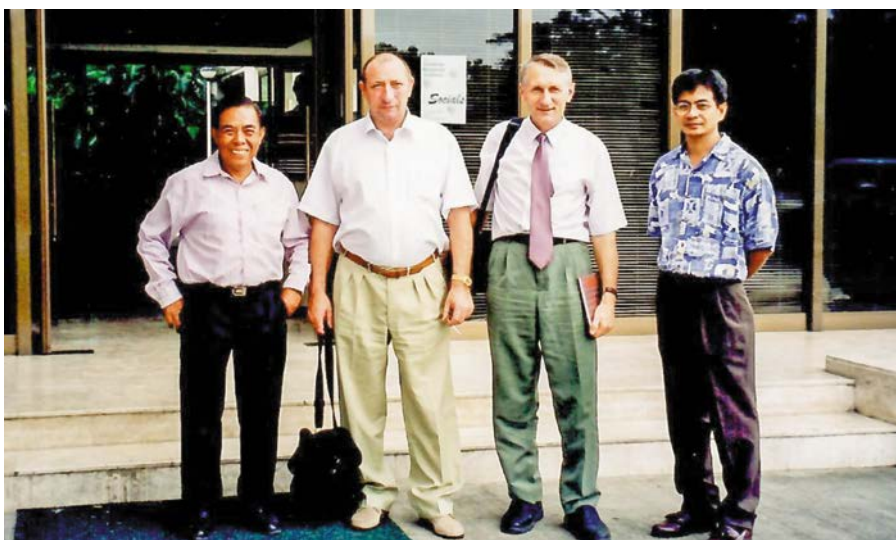
conditions for long-term preservation of seed germination. The service was automated, so there were very few personnel.

The collection of the rice gene pool began in the first year of the Institute's work. Currently, the collection includes more than 100,000 samples. In addition, the collection maintains thousands of breeding lines with one or more necessary traits in a living form.

We entered a space similar to a control room, in which there were several computers. G. Khush immediately showed on the screen lists of rice samples received from different countries of the world. He opened the file "Russia", and we saw a list of several hundred samples. I saw "Spalchik" and showed it to Khush. He said that we would receive it at once. He said a few words to the operator, a middle-aged woman. She highlighted the name on the screen with the cursor and pressed a key. A couple of minutes later, a metal jar with a label on the side "Spalchik" popped out of the window. To get a rice sample from the storage, it was not necessary to go into the chamber where it was stored. The program was set in such a way that the sample was issued automatically at the computer command.

Rice storage conditions provided for different periods — up to 20 years, 50 and even up to 100 years.

At the IRRI, the gene bank was originally built with this sample release system in mind. Therefore, any variety of 100,000 stored in the chambers could be received almost instantly.



With thre IRRI staff members

In order to identify varieties-donors of resistance to stress factors, combining various economically valuable qualities, the gene pool is annually assessed in specially created international nurseries. The work is carried out within the framework of the International Rice Research Program (IRTP). The study of a set of rice varieties and samples is carried out according to a single scheme by more than 600 specialists from 75 countries.

A real revolution in rice breeding was made by the dwarf sample Dee-geo-woo-gen (DGWG), isolated in China, which became a reliable donor of short stems. Most IRRI varieties were created on its basis. One of the first was IR-8, zoned in 1966. This high-yielding semi-dwarf played a significant role in the “Green Revolution”. Despite the relatively low quality of grain and weak resistance to diseases and pests compared to local varieties, IR-8 was distributed over a large area in many Asian countries.

By the time we arrived at the IRRI, a whole series of different rice varieties had been created. The principle of the IRRI breeders is to consistently improve the varieties created by introducing genes that are missing in the original variety. The main focus is on creating high-yielding varieties with complex resistance to diseases and pests. These requirements were best met by the varieties introduced into production after IR-8. Considering that IR-8 was weakly tolerant to pests and diseases, the IRRI breeders put a lot of effort into creating a variety without these shortcomings. Due to its high yield combined with a complex of valuable traits, IR-36 became the most popular among the IRRI varieties. The Institute created IR-43 and IR-45 varieties for cultivation in dryland conditions, and IR-46 and IR-52 for cultivation under conditions of rain irrigation. A number of varieties have been selected for irrigation system conditions, including very late-ripening IR-48 and IR-74, early-ripening IR-28, IR-30, IR-50 and IR-60, as well as mid-ripening IR-62, IR-64, IR-65, IR-66, IR-68, IR-70 and IR-72.

Particularly noteworthy is IR-58— the earliest ripening, high-yielding variety with complex resistance, and superior to IR-36 in grain quality. It is suitable for technologies with two to three harvests per year.

Thus, the Institute’s varieties have a wide range of vegetation periods, and differ significantly in plant height. This predetermines their suitability for cultivation in various conditions from dry land to deep-water flooding. And at the same time, the constant requirements for varieties are high grain quality and resistance to pests and diseases.

The rice varieties created at the IRRI are a valuable source material for breeding in other countries, including Russia.



We spent the second day in the field and on the vegetation site, examining the breeding crops. The huge number of plots and the morphological diversity of plants in the nurseries were impressive. There were tall and short plants, with different panicles and grain types. However, in appearance, these plants had average productivity. Although Khush said that he had started the “Super rice” program, he did not show us the new type of plants.

The next day, until 3 p.m., we got acquainted with the Philippine Institute of Biology and Biotechnology, which was located not far from the IRRI. The same employee who drove us there accompanied us. The Director was a woman who told us about the work of the Institute and conducted most of the tour herself. We came to the laboratory where the research fellow introduced us to his studies, the Director joined in and commented on his story in detail.



The Director of the Research Institute of Biology and Biotechnology talks about the work of the Institute

This Institute worked with a large range of agricultural crops from rice to tomatoes. When demonstrating experiments with tomatoes, the Director told us that Gurdev Khush began his scientific career working on tomato genetics. Based on the results of his research, he wrote a monograph that was very popular among specialists and students.

In the evening, G. Khush invited us to his home. He showed us his garden, where he often worked in the evenings. All the trees there were planted by the family members for various occasions: for the daughters' birthdays, for the father's anniversary, etc.

In the gazebo, we drank tea and talked. I asked Gurdev about his monograph on tomatoes. And he enthusiastically told us about this period of his scientific work, what difficulties he had to overcome at that time. And then he remembered his childhood and how he had met his future wife.

I later wrote an article for the anniversary of this interesting person and remarkable scientist, and here are some fragments.

Gurdev Singh Khush was born on August 22, 1935, in a small Indian village of Roorkee in the state of Punjab. He was the first child in the family, and during his school years he had to help the family in the field: plough with oxen, sow and harvest. After school, he had to take care of the animals and bring them food from the field. He walked 6 miles a day to school in another village. And yet, according to his academic results, he was the best in his class. Gurdev wanted to devote himself to medicine, but his father convinced his son to enroll in an Agricultural college (now the Punjab Agricultural University). There, he was among the best students in the class. In 1955, Khush graduated and was recognized as the best student of the year. The talented young man wanted to continue his education, and this was only possible abroad, but he did not have the funds to travel. Fortunately, at that time, the UK accepted workers from India. But his father did not have money for a ticket to Great Britain. Then Gurdev borrowed money from several relatives and went there. He worked at a canning factory and saved money. A year and a half later, when the necessary amount was collected, he flew to the USA. While still living in England, G. Khush sent documents for admission to American universities, including the University of Davis. But Khush did not have the funds to pay for his studies. However, the Head of the Department of Genetics at the University of California, Professor Stebbins, taking into account Gurdev's academic success, invited him to work as an assistant. "It was the first "love" letter I received," Khush later said. He came to the city of Davis in 1957 with a firm desire to get a Master's degree in Genetics. But during the first two semesters, his

successes were so significant that the Professor suggested that he immediately get a Doctorate (PhD), bypassing the Master's degree. Gurdev Singh Khush was awarded this degree at the age of 25.

Despite his busy schedule, he found time to go to India to meet and then in 1961 marry a girl, Harvan Grewal, who lived near his native village.

After receiving his Doctorate degree, G. Khush worked as an assistant in the Department of Genetics at the University of California in Davis until 1967. All these years he was engaged in tomatoes. In collaboration with Professor Rick, he developed the scientific basis for tomato Cytogenetics. The results of these studies were published in 15 international scientific journals. At the same time, G. Khush began writing the work "Cytogenetics of Aneuploids" (New York, 1973), which is still widely used as a textbook. In 1966, an incident occurred that changed the entire future scientific career of G. Khush. The Dean of the faculty, Dr. J. Knott, during a visit to the city of Los Banos (Philippines), met with Dr. R. Chandler, Director of the International Rice Institute. Chandler asked Knott if he knew a promising young geneticist who would be interested in working as a breeder at the IRRI. Knott recommended Dr. Gurdev Khush.

At the International Rice Institute, Khush was assigned the work of creating rice varieties with genetic resistance to diseases and pests. By this time, the Institute's scientists had assembled a large collection of rice varieties from around the world. Phytopathologists and entomologists assessed this collection and identified donors with genetic resistance to individual pests and diseases, but the varieties were low-yielding and had unsatisfactory characteristics. G. Khush's work consisted of transferring resistance genes from low-yielding varieties to high-yielding ones. His success was the creation of the IR-26 variety in 1973. It was the first variety resistant to the brown leafhopper, and farmers in the Philippines, Indonesia, and Vietnam quickly began to introduce it into production. The variety was also resistant to bacterial blight, tungro virus, and green leafhopper, which carried tungro disease. However, IR-26 turned out to be unstable to viral grass dwarfism. After screening 700 rice varieties, G. Khush's colleagues managed to find one resistant sample of wild rice *Oryza nivara*. The resistance gene from this wild species was transferred to widely cultivated high-yielding varieties. After the introduction of resistant varieties, the disease became rare in farmers' fields. The virus is now maintained only in the laboratory.

Gurdev Kush's true masterpiece of selection was IR-36, an early-maturing, high-yielding, disease- and pest-resistant rice variety created in 1976. Its popularity around the world exceeded all expectations.

In the 1980s, IR-36 was grown on 11 million hectares of rice land in Asia alone. The variety's multiple resistance allowed farmers to save up to \$500 million annually by reducing insecticide costs. Other advantages of the variety included excellent grain quality and a short growing season. The maturity period was 110 days, compared to 130 days for IR-8 and IR-26 with the same productivity. The shorter growing season allowed farmers to grow two crops where they used to have one, and three crops in some areas where they used to have two. Experts calculated that Asian farmers harvested an additional 5 million tons of rice annually, earning a profit of more than \$1 million.

In the 1960s–80s, 34 different varieties bred by the IRRI were registered in the Philippines and other Asian countries. If before 1980, the varieties created here increased yields mainly by improving the yield index, then in subsequent years — by increasing the total biomass of plants. The widely known varieties IR-8 and IR-36, which made the main contribution to the “Green Revolution” in Asian rice growing, had a drooping panicle, long grain and an upright flag leaf. A similar appearance was shown by plants of IR-72 variety, which was approved for use in production since 1988. In terms of morphotype, IR-72 differed significantly from IR-5, the first variety created at the Institute, and significantly surpassed it in grain yield.

Gurdev Khush devoted much attention to research in the field of rice genetics. Along with classical breeding methods, he made extensive use of Biotechnology and Genetic Engineering, especially in solving the problem of transferring disease and pest resistance genes from wild rice species to cultivated varieties.



Rice varieties developed at the IRRI: IR-5 and IR-72

Through the efforts of the scientist, the first International Rice Genetics Congress was organized in 1985, where the International Committee for the Coordination of Rice Genetic Research was created. Rice was chosen as a model crop in the genome sequencing project. This work was successfully completed by 2004.

The first “Green Revolution” occurred after the creation and introduction into production of high-yielding, short-stemmed (up to 100 cm) rice varieties with a vegetation period of up to 110 days. This made it possible to grow two crops where previously one was obtained. However, the population growth in Asian countries exceeded the rate of increase in rice production. The problem was aggravated by the fact that in the process of urbanization, the areas suitable for rice cultivation were decreasing, so the gross grain harvest could only be increased by increasing the crop yield.

To solve this problem, in 1989, Dr. Khush initiated a new breeding project. He began work on creating a new type of rice plant, “New Plant Type”, capable of increasing the yield by 20–25%. According to the scientist’s plan, these plants were to have the following main features: a short strong stem with a small number of lateral shoots; a powerful root system; dark green thick and vertically arranged leaves; a large panicle bearing 200–300 grains. “Super rice” plants should have 60% grain and 40% straw, while the best short-stem varieties have this figure of 50/50. Along with selection for increasing the potential of rice yield, Gurdev Khush paid great attention to improving the quality of the grain. Thus, since the mid-1970s, he worked with “Basmati” rice. This long-grain type of rice with a specific grain aroma is very popular in India and Pakistan. Over 30 years, G. Khush succeeded in creating semi-dwarf, highly productive varieties with Basmati-type grain. G. Khush made a great contribution to the development of rice cultivation, especially in the tropical zone. It is no coincidence that he, together with N. Borlaug, was called the creator of the “Green Revolution”.

G. Khush worked very intensively, 12 hours a day. He arrived at the office at 8 a.m. and stayed there until 5 p.m., usually using the shift bus. He spent the evenings in his garden. The Khush family also had one of the most beautiful and well-kept vegetable gardens in the IRRI scientific town. They grew vegetables and fruits for their family themselves. After lunch, the scientist returned to the office and worked until the evening. Every day, he did gymnastics for an hour, which helped him maintain good physical shape.



Different morphotypes of rice plants

1. Traditional tall plant; 2. Semi-dwarf plant;
3. New plant type proposed by the IRRI



**Dr. Norman E. Borlaug and Dr. Gurdev S. Khush —
creators of the “Green Revolution”**

G. Khush has written 7 books and over 150 articles in scientific periodicals. He has been a member of the editorial boards of a number of journals.

G. Khush's scientific achievements have received wide international recognition. He was elected a member of several Academies and Societies in India, England, Australia, China, the USA, the Philippines, and Russia. Among Dr. Khush's numerous awards, one is of particular value — the World Food Prize, which is considered the equivalent of the Nobel Prize in Agriculture in the scientific community. This award was presented to G. Khush in 1996 for the creation of a new type of rice plant, "Super rice".

Khush is convinced that a woman is always behind a man's success. Without the support of his family, he would not have been able to do so much. His wife took on all the responsibilities of the home and children. In fact, she sacrificed her career, having a Degree in Education Management, so that her husband could work productively. The Khushes are a happy family. They have four children. Their son Rajiv is a Molecular Biologist, the eldest daughter Majiv and the youngest Kiran are doctors, the third daughter Sonia works as an economist at the Save the Children Foundation in the USA.

In 2000, Dr. Khush left his position as the Head of the IRRI Department and became an adviser on selection. He decided to write more and work for the benefit of people, especially for his compatriots in India. By the way, the surname Khush in the scientist's homeland, Punjab, means "happy". (*In 2002, G. Kush returned to the University of California in Davis as an adjunct professor.* — Author).

It was a nice evening in Khush's garden, but the time passed too quickly. We parted when it was completely dark. We said goodbye right away, because we had to leave early the next morning. According to the program of our visit, we were moving from the IRRI to the National Rice Institute "Philrice".

Having left early in the morning, we spent the whole day on the road. We were met at the Institute building by the Deputy Director for research. On his command, the guests were quickly accommodated in the Institute hotel. Before it got dark, we were given a sightseeing tour of the Institute complex.

Starting next morning, we got to know the work of the Institute in detail. We visited the laboratories, the vegetation site, and the breeding fields. From the stories of the employees, we understood that Philrice, being a National Institute, cooperated with the IRRI only by exchanging rice germplasm and some information. They created their own varieties, propagated them, and cooperated very closely with local farmers. We worked together till late in

the evening and the day ended with a gala dinner, which was organized by the Deputy Director in a local restaurant. The heads of the laboratories with their wives came to the dinner. Therefore, the company turned out to be very warm. An orchestra played on the stage, artists performed, and sang songs. At the end of the evening, an elderly man came to the microphone and sang a song in Russian, “Moscow Nights.” Of course, we were dumbfounded. It turned out that he was a descendant of some Russian emigrants. Having learned that there were Russian scientists in the hall, he asked permission to sing this song in our honor. He moved us to tears. The hall applauded for a long time, but he did not sing an encore, but only bowed in our direction. The next two days, Saturday and Sunday, were days off for us.



Walking around Manila, January 1999

When I asked about the possibility of seeing rice terrace systems, the hosts replied that such a trip was not included in the program. But to satisfy our curiosity, they gave us several booklets about the country. One of them had a description in English and several photographs of this “eighth wonder of the world.” I am providing excerpts from this booklet.

“Not far from the town of Banaue, in the north of the Philippine island of Luzon, there are rice fields in the form of terraces. Wide steps on steep mountain slopes resemble a giant staircase rising into the sky. These terraces at an altitude of 1200–1400 meters above sea level repeat the outlines of the mountains and have an area of about 22 km². Surprisingly, the terraces were made more than two thousand years ago by the local Ifugao tribe using primitive tools: they hammered the rocks with a hammer and chisel.



Rice fields on mountain terraces, the Philippines

Fertile soil was collected from river floodplains, manually lifted into the mountains and filled into the terraces. The irrigation system is designed so that fresh water flows to the terraces directly from the tropical forests located higher in the mountains. At the same time, irrigation of fields using rainwater is used to this day. Rice is planted in December-January, and the harvest is collected in June-July. The rest of the time, vegetables are grown on some terraces, and small fish are bred on others.

In 1995, these unique man-made landscapes were taken under the protection of UNESCO. Today, these rice fields are considered a cultural landmark of the Philippines, their image adorns local banknotes and every tourist brochure. They are rightfully called one of the wonders of the world, no less beautiful than the Egyptian pyramids.”

I am very sorry that we could not visit this region of the Philippines and did not see such unusual rice systems. Looking at the photo of such a landscape, it is impossible to even imagine how much human labor was invested here to create these unique fields.

On Saturday morning we were taken to Manila and settled in a hotel, right in the center of the city. They gave us a city guide and told us to rest and

enjoy the sights of the capital of the Philippines. After midnight, at 3 o'clock on Monday, we had a taxi booked to take us to the airport.

Manila is a huge city with many interesting places. We walked around the hotel for several blocks and were convinced of the beauty of the city. Right here, in the center, ancient temples have been preserved, which are now used as museums.



Manila, the capital of the Philippines



The temple complex is now a museum

The weather was so hot that day that after an hour we had to hide in a supermarket. This huge 6-story building occupied the entire block. They sold everything a person might need and might not there. Many food outlets — restaurants, cafes and buffets — served those who wanted a snack. We walked around the sales areas, chose souvenirs, but mostly stared at this abundance.

It was time for lunch, and Leonid wanted to try some fish. On the third floor, in the corner, there was a huge aquarium. Various sea creatures were swimming there. Right next to it, in the kitchen, they were cooking — boiling, frying and baking on coals. You just need to choose and place an order.

Leonid stood in front of the aquarium for a long time and chose a swimming inhabitant. Finally, he liked a large sea bass. He immediately showed this bass to the waiter. He quickly and very deftly caught the fish with a net and handed it over to the cook. I am not such a great connoisseur of fish, so I ordered the same.

Some 40 minutes later, we were sitting at a table and eating fish. I must give credit to the cook, it was an excellent meal. Leonid could not resist expressing his admiration for the culinary art. And he was picky about food, especially about fish dishes. Of course, Leonid grew up near the Azov estuaries, where fish was always the first course.

Many years later, recalling this trip, I asked Leonid what he remembered most about the Philippines. He immediately answered:

— The unbearable heat and the sea bass that we enjoyed in Manila.

And for me, this trip was important because for several years in a row, Gurdev Khush and his colleagues sent us their rice samples in exchange for our collection. And although most of the IRRI samples did not even emerge in the conditions of Kuban, some still turned out to be very valuable material as sources of resistance to diseases. We included these samples in the crossing system as parental forms when creating new varieties. Artificial climate chambers allow hybridization of rice samples and forms with almost any vegetation period.

And Gurdev Khush came to us at the All-Russian Rice Research Institute, but later than we agreed. Due to his busy schedule, he was able to visit us only in 2001. We held an International Symposium, timed to coincide with the 70th anniversary of the Institute. Khush took part in the Symposium and gave an interesting scientific report. At the same time, he got acquainted with the work of the Institute, and looked at my selection crops. I was happy to show this famous scientist the results of my selection: varieties and selection lines with a new morphotype of plants.

11. Romania, September 1999

Another year flew by in current concerns. In early 1999, a message came from Romania about a Conference on rice, which would be held in September. I informed the director of the All-Russian Rice Research Institute, E. M. Khari-tonov, about this and said that he should go to Romania too. At first, he tried to dissuade himself from this trip, saying that there was nothing to see in Romania. According to FAO, rice crops there had fallen from 50 thousand hectares to 1,500 ha, and the yield was low. This meant that rice growing in the country had completely degraded.

Then we really saw this degradation, Evgeny Mikhailovich was right. But we had to go, because the Organizing Committee was holding the Conference on behalf of FAO, and we had to see the entire technology for organizing events of this level.

I presented these arguments in a conversation with Evgeny Mikhailovich, and he agreed. In a short time, I prepared joint theses of the report, translated it into English and sent it to the organizers.

September came, the Director and I flew to Bucharest and, as it turned out, it was worth the trip. We saw, heard and learned a lot of useful things. It was especially good that Evgeny Mikhailovich himself was convinced of the importance of this trip. As the Director of the Institute, he immediately figured out what and how best to do in preparing for our conference. In addition to the scientific program, Georges Alionte, as the host, tried to make a good cultural program. And at our request, they organized a trip for us to a farm where rice crops were still remaining.

The conference itself was held in a traditional manner. Almost all familiar colleagues from the Mediterranean rice-growing countries gathered. They made presentations, showed the results of their research, and outlined prospects for further action. It should be noted that the Romanian colleagues, led by G. Alionte, prepared their event very well. The money allocated by FAO were used in a good way. The field was made demonstrative, the approaches to it, the plots of rice varieties, and agrotechnical experiments looked like a picture.

At the final meeting, the Chairman of the Committee of European Rice Growers J. Chatagny repeated to all participants last year's decision, made in Egypt, to hold the next conference in Russia. At the same time, he specified the date — 2001, in order to coincide it with the anniversary of the All-Russian Rice Research Institute. And in 2000, a meeting was planned in Türkiye. Our Turkish colleagues kindly agreed to hold a Field Seminar on rice in Ankara.

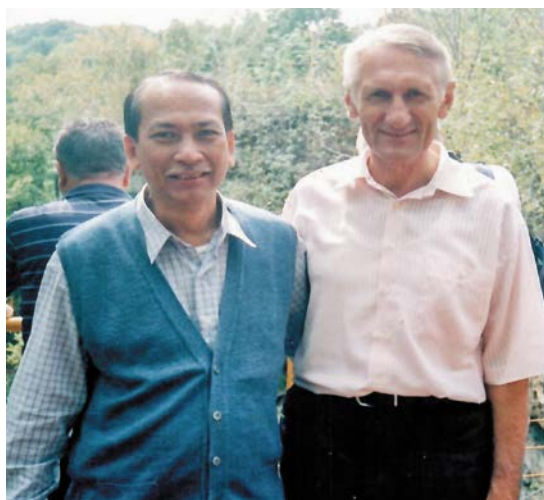


During the conference, we were introduced to the chairman of the FAO rice commission, Dat Tran, on whom depended the financial support of rice scientists from Mediterranean countries for their trip to the conference in Krasnodar.



**E. Kharitonov, G. Alionte, G. Zelensky
in Romania, 1999**

Dat Tran promised such support and intended to come to the All-Russian Rice Research Institute himself. As it turned out later, he kept his promise and gave a long report at our Conference.



With Dat Tran in Romania

To clarify the details of the Russian conference, the Organizing Committee gathered for a special meeting. E. M. Kharitonov informed the colleagues about the measures that had already been taken and what would be done to ensure that the Conference was a success and that the participants were satisfied with their trip to Russia. He said that the conference would be held in the year of the 70th anniversary of the All-Russian Rice Research Institute. This event had received support, including financial, at the regional and federal levels. He added in English:

— Welcome to Russia!

And this caused a storm of applause. I was pleased that Evgeny Mikhailovich was imbued with the importance of the upcoming event.

The conference materials were published in a special collection, which was distributed to the participants.

There at the Conference, I met Stefano Bocchi, a Professor from the Milan Agricultural University. He was a member of the FAO Committee that organized all the major International Conferences on Rice. In the following years, this acquaintance was very helpful to us.



On an excursion in Bucharest and its surroundings

Here is what we learned about Romanian rice growing from our conversations with the hosts. Before perestroika, the country's population needed 85,000 tons of rice. Local rice growers produced this amount annually, fully meeting this need. In the late 1980s, the country's economy was transferred to market relations. Market democrats opened the border for imports, including

rice. The cost of Romanian rice was about \$700 per ton. But Egyptian rice was brought to the market at \$400 per ton. In three years, rice crops in Romania were reduced to 1,500 hectares. Only two farms remained in operation, where the directors stubbornly resisted collapse. We visited one of them, Oltenita. The Director, an experienced rice grower, spoke good Russian. In his youth, he visited Kuban and did an internship at the Krasnoarmeysky rice state farm. The Director recalled that time with great pleasure and, especially, meetings with the Director A. I. Maistrenko. He showed us his farm, rice fields. Previously, he sowed more than 5,000 ha, then there were about 1,000 ha left. And the neighboring farm had about 500 ha of rice crop. There was no price for rice. The work was at a loss. He grew rice in order to give it to his workers in the form of payment in kind. So he told us the whole sad story of the mechanism of the collapse of rice cultivation in Romania.

The country built rice systems of the Kuban type. The canals were lined with concrete slabs to save water. The selected varieties and cultivation technologies allowed for a stable harvest. They sowed two varieties of local selection and the Russian variety Krasnodarsky 424. The state guaranteed buying the produced rice. Rice growers prospered.

Cheap imported rice ruined all rice farms and processing plants. Abandoned rice systems were ruined by local residents. Metal structures were cut out and sold for scrap metal in Türkiye. Even concrete slabs from the canals were stolen.



In the field of the Romanian rice variety

Three years later, imported rice was brought to the country for \$750 per ton. And when customers tried to object, they were told that the market dictated the price. But in fact, everything was planned in advance. And this plan was strictly followed. Indeed, having ruined its rice growing, Romania freed up its market for the imported rice.

Evgeny Mikhailovich, as a Sociologist by profession, was very interested in all the details of this process, its internal mechanisms. I saw only the external effect and the final result. Domestic rice production in Romania practically ceased. Rice systems were ruined, overgrown with weeds. Jobs were lost. In stores, the price of imported rice became higher than it was previously for domestic rice. The population ultimately lost, and businessmen won. A very instructive story!

12. France, July 2000

In preparation for the International Conference at the All-Russian Rice Research Institute, it became necessary to travel to France. It was necessary to meet with the leadership of the Committee of European Rice Growers and resolve emerging issues. We wrote a letter to Mr. Jean Chatagny, Chairman of the Committee, and he sent an invitation to France for July 2000 for E. M. Kharitonov and me .

Having sent documents for visas to the French embassy in advance, we were ready for the trip by July 15. We bought plane tickets from Krasnodar to Moscow in advance for the morning of July 17, the flight to Nice was at 11 p.m. And our return tickets were from Paris to Moscow. We decided to travel to Paris from Montpellier, where the working meeting was to be held, by train.

Strictly on schedule, we flew out of Moscow. Four hours of sleep, and we landed at the Nice airport. The time difference with Moscow was 2 hours. It was still night. However, at the exit, after going through customs formalities, we saw a man with a label “VNIIRICE”. I could not believe my eyes, it was Guy Clément, an old friend of mine. It turns out that he volunteered to meet us himself, because he had known me by sight since 1990 and, according to him, he wanted to please me. Of course, in the middle of the night in faraway Nice, such a meeting! We greeted him warmly. I introduced him to my boss — Evgeny Mikhailovich Kharitonov. Guy introduced us to the plan of further action.



We got into the car and went to Montpellier. It was about 2 hours away. We checked into a hotel, rooms had been reserved for us. In the morning at about 10 a.m. Guy would pick us up.

On the way to Montpellier, Evgeny Mikhailovich dozed in the back seat, and I sat next to the driver, and we quietly talked. Guy told me about his work. A year earlier he had been appointed responsible for the “Rice of France” Program. This corresponded to the status of Deputy Minister of Agriculture. It seemed honorable, but it burdened him with many current affairs, obligations and paperwork. He was the main organizer of the “Rice Growers’ Day”, which was to be held in mid-September, before the rice harvest. Therefore, at that time he could not leave France. And he already told me in advance that he would not come to our conference, although he really wanted to visit Kuban, all those places that he had seen in 1992. I, in turn, told him about my affairs and the changes that occurred over the past period.

Time passed unnoticed during the conversation, and we arrived in Montpellier. In the city center, we stopped near a luxurious hotel. I was worried that it would be too expensive. However, Guy reassured me by saying that our stay here was paid for by CIRAD.

In the morning at 9 a.m. G. Clément came to pick us up. Guy made a small circle around the city, showing the sights of Montpellier. The city was built in the 11th century by the Romans. The historic part of the city had buildings made of large stone blocks. Guy said that the facades of these buildings were preserved for history in their original form, and inside everything was rebuilt in a modern way.



**The Triumphal Arch in Montpellier,
modeled on the Porte Saint-Denis in Paris**

Montpellier is the capital of the Languedoc-Roussillon region in southwestern France. The city is located on the hills 10 km from the Mediterranean Sea. According to the “New York Times” rating conducted in 2012, Montpellier was among the 45 best places on planet Earth that were worth visiting. And this is no coincidence, because there are wonderful museums, art galleries and ancient monuments, excellent local cuisine, many amazing corners of nature and sandy beaches with a warm sea. Among the ancient monuments, the Roman Catholic Church of St. Peter occupies a special place. This cathedral is the residence of the Archbishops of Montpellier. The cathedral, built in the Gothic style, is a national monument.



Cathedral

Along with ancient buildings, Montpellier also has many ultra-modern buildings that stand out for their completely unusual architectural forms.

The French Center for Agricultural Research for International Development (CIRAD) is an agricultural research and international cooperation organization working on sustainable development in tropical and Mediterranean regions.

The Center has research stations in French overseas regions. Through its twelve regional offices on all continents, CIRAD works with more than 100 countries. More than 800 researchers and technical specialists are trained at the center every year. (*Looking ahead, I will say that specialists from the All-Russian Rice Research Institute also completed an internship in Biotechnology here in subsequent years.* — Author).



Administrative building Pierre Vives

Arriving at the CIRAD territory, we saw that the flags of France and Russia were flying on the flagpoles. This was done in honor of the Russian guests who had arrived. The Director of the Center was on business trip and his Deputy received us. There were already 10 people sitting in the office, and among them were our friends — Jean Chatagny, Henri Feyt and Jacques Chantereau. H. Feit and J. Chantereau flew to Krasnodar in April that year as experts to assess our readiness to hold the International Conference. We showed them the All-Russian Rice Research Institute, the Kuban State Agrarian University, and our rice farms. The experts were satisfied with the progress of our preparations and wrote a positive conclusion.

G. Clément introduced us to his colleagues and named everyone present. We greeted everyone warmly and sat down at a large table. The conversation began. The Deputy Director told us about the work of the CIRAD Center. They provided scientific support for rice growing not only in France, but also in Africa and Latin America. There were rice experimental stations organized there, where researchers from France supervised research conducted by local scientists. In France, rice was studied at the rice experimental station located in the city of Arles. Near the city, in the Rhone River valley, rice systems have been built, occupying about 25,000 ha. G. Clément headed the rice breeding program and worked at the experimental station. In 1990, E. P. Aleshin and me visited the experimental crops of this station and got acquainted with the breeding work. Now we were told that our trip to the rice growing zone

was also planned. After a detailed conversation, we were shown around the Institute and the laboratories where biotechnology research was conducted. CIRAD was located in several two-story buildings scattered in some disorder around the territory. The order of their placement was that they fitted into the hilly terrain. A few blocks of greenhouses stood a little to the side. They were not shown to us.



J. Chantereau and H. Feyt, experts

Then there was lunch in the Institute canteen, and then meetings with potential sponsors, each one separately. Jean Chatagny conducted difficult negotiations to obtain money to hold a conference in Russia. The matter was complicated by the fact that the Russian Federation was not a member of the FAO. Now communication with the French was significantly facilitated by the fact that our fathers fought together against fascism in World War II. The name of the Normandie-Niemen squadron was heard at almost all meetings.

For two days we met with representatives of 6 companies that were on Chatagny's list. After each meeting, in order to somehow smooth over the bitterness of difficult negotiations, he told us that this was preliminary communication. The information had to be digested, and a decision would be made later. And it would definitely be positive. Representatives of commercial firms had to see us, make sure that the money would not be wasted. In general, we

played the role of “wedding generals” quite well. This was approximately the summary we heard from Jean Chatagny.



With French breeder Guy Clément

I was quite pleased with myself, because my English was enough to conduct all these conversations. All the French people we spoke with spoke English quite well. At the same time, they spoke slowly, clearly pronouncing each phrase. Therefore, it was not difficult to understand them. Chatagny once mentioned that the French did not like to speak English, although they learnt this language from early childhood. During lunch, Jacques Chantereau invited us to dinner on the occasion of his wife’s birthday and added that he would pick us up at 7 p.m. We accepted the invitation and began to rack our brains over what to take with us as a gift. Evgeny Mikhailovich wisely declared that the best gift

for a woman was a good bouquet of flowers. And it should be made to order. Fortunately, there was a flower kiosk next to the hotel with a huge selection of various flowers. The seller was a pretty girl who, unfortunately, spoke only French. We spent a long time trying to explain to her that a bouquet was needed for a woman's birthday. It ended with her running out of the store and calling her neighbor who was selling newspapers and magazines nearby. She was an elderly woman who spoke English well. Together they began to prepare a bouquet, asking us about our friend's age, the color of her eyes, her tastes, her passions, and other details. We had one common answer to all the questions: that she was a very sincere woman, because, as Jacques said, she worked as a teacher at a primary school. In the end, a charming bouquet was assembled. This was evident from the reaction of Jacques' wife, Catherine. She could not resist saying in English that she had not been given such a bouquet for a long time. I translated her words, and Evgeny Mikhailovich was happy with his choice of the present.

On the third day, we were taken on an excursion to the rice zone. There was nothing special to see in the crops. The rice was finishing tillering, and we saw beautiful, thick green crops. We stopped near a fallow field. They did laser planning bringing the level to ± 2 cm. Now it became clear why the rice fields had such dense, even crops and a water layer was of about 5–7 cm. After the fields, we were taken to a rice processing plant. It was not a very large plant. One thing was striking there — perfect cleanliness. No dust. The machines were hermetically sealed and the ventilation worked well. On the concrete platform near the plant there were pallets with something black packed in film. We became interested, and we were told that this was compressed ash from burning the husk obtained during the husk removal. The Director of the plant showed us a furnace for burning the husks. A very simple device: a large cube made of fireproof brick. There was a cone on top and the husks were fed by a conveyor into it. Through this cone the husks were poured into the furnace and burned there. To enhance combustion, a fan blew air into the furnace.

As the plant Director explained, the income from black ash was equal to the income from white rice. Each ton of rice produced about 200 kg of husk. Its ash contains 23% silicon, which was necessary for metallurgy to produce armor steel, as well as for enterprises that manufactured solar batteries. (*And we have thousands of tons of husk at rice factories, they don't know what to do with it, so they send it to waste heaps.* — Author).

After visiting this plant, Yevgeny Mikhailovich, rubbing his hands with satisfaction, said:

— I will make every effort to establish the production of rice husk ash. It is an inexhaustible source of money from waste. (*Unfortunately, he was never able to implement this idea.* — Author).

This concluded the work program of our visit.

The next morning we took a train to Paris. It was a high-speed train. On some sections, the indicator in the carriage showed up that it reached 300 km/h. At the same time, the carriage went so smoothly, and the cabin was so quiet, as if we were flying in an airplane. Only fields and copses flashed by. The entire journey took us less than 5 hours.

Having arrived in Paris, we checked into a hotel near the railway station. Our flight to Moscow was scheduled for the next day at 5 p.m. We had a day to enjoy the beauty of the capital of France. First, we had lunch at the hotel restaurant and ordered a taxi for the next day so that we could go to the airport without any worries. Then we walked around the area, breathing in the city air. We returned to the hotel as the sun went down. We agreed to get up early in the morning to visit the Louvre Museum. Evgeny Mikhailovich said that he absolutely had to talk to the Mona Lisa. It was almost a ritual visit for him. He had been to Paris three times before and always went to the Louvre to stand in front of the famous painting. I didn't object.

At 6 a.m., we left the hotel. We walked along a deserted street to the metro station. We rode a few stops towards the Louvre. We waited a bit, and at 7 a.m. we were allowed into the halls. There were very few people there yet. First, we headed to the Mona Lisa, and then we walked through the halls. We didn't notice how three hours had flown by. I started to hurry the boss. But he was in no hurry, thinking that we still had plenty of time. But when we went outside, we realized that we had to hurry. There were crowds of people all around, it was impossible to push through. We didn't take the metro, it was too far and inconvenient. It seemed that we would get there faster on foot along the Seine River. But walking along the embankment was difficult. The path was covered with very fine gravel, and our shoes had thin soles. After a kilometer, our feet "burned". But there was nowhere to go — we had to move forward. When we were two blocks away from the hotel, a fence made of bars blocked our way across the road. At that time, the city stage of the Tour de France cycling race was passing through the city center. Along the entire route, on both sides of the road, a fence was erected to protect the racers from random pedestrians. There were police officers every 20 meters near the fence, and behind them — crowds of fans.

We stood by the fence for a few minutes, watching the racers in their colorful uniforms rush past. The spectators cheered them on. I would have loved to watch this beautiful picture. After all, I used to race myself.



Tour de France cycling race, stage in Paris

But time was running out. We had to rush to the hotel. A taxi would arrive in half an hour. I couldn't stand it any longer and went up to the policeman. I tried to explain to him that we needed to get to the other side of the road. He didn't even want to listen, pointing at the racers rushing past. At that moment, a second policeman came up to us, and I explained to him in English that we urgently needed to get to the hotel. Then I took out my plane ticket and showed him the departure time.

He asked me:

"Germans?"

"No, Russians."

"Oh, Russians. Normandy-Niemen!"

And he added something in French to his colleague.

He, seizing the moment when there was a pause between the groups of riders, opened the fence, grabbed us both by the hands and dragged us across the road at a run. As soon as we ran across, a new group of cyclists rushed.

We didn't even have time to thank him and ran to the hotel. At the threshold stood a taxi car, which had arrived at our request.

We ran into the rooms, threw our things into suitcases and ran to the exit. And only when the car took us towards the airport, we sighed with relief.

Then everything went according to plan, we safely reached the airport and flew to Moscow on schedule. Surprisingly, later, having communicated with Evgeny Mikhailovich many times, for some reason we never mentioned that episode of how we were helped across the road in Paris.

13. Türkiye, September 2000

The Committee of European Rice Growers decided to hold a Field Seminar on rice in Türkiye in September 2000. Theoretical classes were planned in the city of Edirne with practical classes in the rice fields. I suggested to the Director of the All-Russian Rice Research Institute that we should go to Türkiye with a bigger group. After discussion, a delegation of seven people was formed: Kharitonov E. M.— Director; Kovalev V. S.— Deputy for Research; Zelensky G. L.— Breeder; Zinnik A. N.— Seed Grower; Anoshenkov V. V.— Director of the Krasnoye Agricultural Farm; Pogorelov M. I.— Head of the Agricultural Department of the Slavyansky District; Akinshina I. L.— interpreter. The members of the delegation were not chosen by chance. We went to Türkiye as a rehearsal for the International Conference in Krasnodar next year. The hosts received our delegation very warmly.

The scientific part of the conference was held according to the approved scenario. Scientists presented reports, and in the breaks between sessions, during coffee breaks, they communicated with each other. And this part was, perhaps, more important than scientific reports. They were published in collections, one could read them. And live communication gave much more. In addition to the scientific program, trips were organized to rice-growing farms and processing plants. At this time, rice was being harvested on the farms. We saw the structure of rice systems, rice varieties in production and the work of combines. The main sowing areas were occupied by large-grain rice varieties: local Osmanchik-97 and Italian variety Baldo.





Conference participants, 2000

When talking to experts, we learned an interesting fact: in order to stimulate the production of these varieties, the state set a purchase price for grain of the variety Osmancik-97— 20 rubles in Russian currency. If the market price was below 20 rubles, then the farmer was paid the difference. This stabilized rice production in the country. And a 20% premium was set for the variety Baldo compared to Osmancik-97. Baldo had a large, elongated grain and produced high-quality cereals. But it was maturing later than Osmancik-97, so farmers sow it no more than 10–12% due to the fact that Baldo did not ripen in cold years. In the rice fields, we noted some peculiarities in harvesting. They harvested by direct combining. Laverda combines were half-tracked, so they crawled with great difficulty on damp checks, leaving deep ruts, especially in some checks where the rice collapsed. We were not told why the lodging occurred. Maybe because of overfeeding with nitrogen or a violation of the water regime, or maybe because of the wind and rain. In these checks, the combines moved on one side and even diagonally across the field. To unload the grain, the combines went out onto the road where the trucks were parked.

The second peculiarity of rice harvesting was that the grain came out of the combine raw and was dried immediately. Each farmer had a concrete platform built on the edge of the field, on which a dryer was installed. Each farm had

dryers of different volumes and with different heat sources — electricity, gas, diesel fuel. In one place we saw that the dryer functioned on wood.



Conversation with J. Chatagny about the upcoming rice conference in Russia

The grain from the field was dried to a moisture content of 14% and only then sent to the warehouse for cleaning. Then there may be options: the grain is immediately taken to the cereal mill, or stored in the warehouse, waiting to be accepted. The local plant accepted rice in the volume of processing during the day. Therefore, farms brought grain here under a contract according to the reception schedule. Rice grain had to be dried and cleaned of debris to reduce refraction.

When visiting the processing plant, we were surprised by the cleanliness of its workshops and absence of dust. The equipment was hermetically sealed and the labour culture of the plant was high. The small number of service personnel also surprised us. We were explained that everything is automated. At the exit the products were placed in bags of different capacities — 1–5 kg. The name of the variety and the recipe for preparation were always printed on

the bags. Khalil Surek, a leading rice breeder in Türkiye and the author of the Osmancik-97 variety, well-known to Russian rice growers, showed us the selection crops at the experimental station. We met Khalil back in 1996 in France at the International Conference. So we had a very warm conversation there.



Direct combine rice harvesting in Türkiye



Rice drying units



The plot of the variety Osmancik-97

And then, in his presence, a comical incident occurred in the field. A young research fellow was telling us about a new rice variety and V. V. Anoshenkov asked him his signature question, which he used to test the rice growers' level of knowledge. Stopping at the plot, Volodya asked:

— Tell me, please, how many leaves does this variety have?

The interpreter translated the question into English, and the local assistant translated it into Turkish. The employee asked to repeat the question, pretending not to understand. But it was obvious from his state that he did not know the answer. Vladimir happily repeated his question. You should have seen this picture. The employee was clearly confused. He did not know how to answer. After a pause, he said:

— Our physiologist can answer this question. He studies plants better, and I am engaged in varietal agricultural technology and cannot answer your question correctly.

At this, he became very embarrassed. Well, at least he admitted that he did not know. That was the result of their narrow specialization. And it was surprising that Kh. Surek, who observed this whole situation, pretended that nothing had happened.

In this regard, I recalled the story of Professor G. E. Gonik, Head of the Department of Agriculture at the Kuban State Agrarian University, after visiting the United States in the 1990s. There they were shown soybean fields.

Georgy Yevseyevich Gonik saw some weed unknown to him, and so he asked the research assistant demonstrating the experiments. He looked at the plant and said:

— This is not soybean.

— Yes, I can see for myself that it is not soybean, but what is it?

— Why are you asking me such questions? I am a soybean specialist, and another person deals with weeds, so you should ask him.

That was reality. And our specialists should know everything. That was why Russian scientists were highly valued in the West.



G. Zelensky, A. Ferrero, Kh. Surek, 2000

In Türkiye, we met an Italian scientist, Professor Aldo Ferrero of the University of Turin. He gave a report and showed the material on slides. I was interested in the technology of making slides. Aldo was happy to tell me how he took pictures, what kind of film he used and how he processed it. In short, all the details of the technology of making slides. Aldo Ferrero held the position of Professor at the University of Turin in the Agronomy Department and simultaneously worked at the Rice Research Institute, where he studied weeds of the rice fields of Italy. By the way, my wife, Olga Vsevolodovna, also worked

on this topic. So their scientific interests intersected, and this later contributed to further cooperation. The University of Turin is highly rated in Europe, so the diploma of a Professor of this University shows the high scientific status of A. Ferrero. He himself turned out to be a very modest, intelligent person, deeply knowledgeable about the subject of his scientific interests. And it was no coincidence that when the following year, during the International Conference at the All-Russian Rice Research Institute, there were re-elections to the Committee of European Rice Growers, Professor Aldo Ferrero was recommended and elected for the post of Chairman.

In the following years, we communicated with Aldo many times and developed friendly relations between us. In my memoirs, I will return to this interesting person more than once. He provided us with great assistance in organizing various scientific events many times.

Visiting a Field Seminar on rice in Türkiye greatly contributed to improving the quality of the Russian conference. All members of our delegation saw for themselves the entire technology of holding such an event. Therefore, upon returning home, we all actively joined in the implementation of the program for preparing the International Conference dedicated to the 70th anniversary of the All-Russian Rice Research Institute.

14. France, 2001, 2010

During the preparation of the International Rice Conference, dedicated to the 70th anniversary of the All-Russian Rice Research Institute, there came a time when we had to meet our French colleagues again. The Committee of European Rice Growers headed by Jean Chatagny was a co-organizer of our conference, since Russia was not a member of the FAO. Because of this, our foreign colleagues had problems traveling to Krasnodar. The main reason for their problems was the financing of the trip. It is customary for scientists invited to scientific events to have their trip paid for by the organizing committee, either partially (tickets) or fully. We were interested in the arrival of our foreign colleagues, so we had to solve the problem of financing. To agree on the date of the trip, we wrote a letter to J. Chatagny. He said that he was expecting our delegation at the beginning of July 2001, and sent us an invitation. Having received visas, on July 3, E. M. Kharitonov and me flew to Montpellier, France.

On this trip, Evgeny Mikhailovich invited his wife Svetlana Andreyevna. And, as it turned out later, it helped us a lot. We flew from Moscow to Paris, and then to Montpellier. I knew the route well from previous trips. Arrival and departure were from the central Paris International Airport named after Charles de Gaulle. We had just moved by bus from sector B to sector D, and there we learned from the informant that the departure to Montpellier would be from gate No. 63. While we were waiting for the flight, Evgeny Mikhailovich showed every attention to Svetlana Andreyevna. When she wanted to drink plain water, he immediately bought a 0.33 l bottle and paid 37 francs for it. Svetlana Andreyevna recalculated the cost in rubles (about 140 rubles) and gasped. The price of such a bottle at home was 20 times less. She didn't even feel like drinking anymore. I tried to convince Svetlana Andreevna not to convert prices into rubles. Otherwise, as V. P. Zayarsky said when we were in Australia, "we might be having a greed attack".

We arrived in Montpellier after dark. Jacques Chantereau was waiting for us at the airport in his car. He warmly greeted the guests and drove us to the hotel.

Next day Jacques arrived at 8:30 in the morning, Evgeny Mikhailovich and I were ready to leave. Svetlana Andreevna stayed at the hotel. On the way to the Institute, Jacques told us about the program of our stay here. It was quite eventful. We should communicate with all the people interested in holding the conference, as well as with potential sponsors.

Arriving at CIRAT, we were again pleasantly surprised. As last year, the flags of France and Russia were on the flagpoles at the institute. The hosts emphasized the importance of our visit. They greeted the Russian delegation very warmly. On the very first day, we were received by the Director of the Institute, then his Deputy and several Heads of Departments. At these meetings, we discussed the scientific program of the Conference, the areas of work of the All-Russian Rice Research Institute, the problems of rice growing in the world, France and Russia. The hosts emphasized the importance of meetings of scientists and spoke in favor of most of those who wished to go to Krasnodar for the Conference. We asked to include in the delegations not only leading scientists, but also young ones. On the second day, in the morning, J. Chatagny held a meeting of the Committee of European Rice Growers. He invited colleagues from Italy, Spain and Portugal. J. Chatagny, H. Feyt, J. Chantereau and J. Clément participated from France, and E. M. Kharitonov and G. L. Zelensky from Russia. The work was fruitful. We discussed the scientific program of the Conference in Krasnodar, approved the organizational and scientific committees. Evgeny Mikhailovich informed his colleagues about the preparatory work

done and explained what other issues needed to be resolved. He emphasized that the main thing for us was that our foreign colleagues could come to the Conference. We would be able to provide everyone with a decent reception.

No one had any doubts that the Conference being prepared in Krasnodar would take place. Chatagny reported on a preliminary agreement with business representatives, those who would provide money for the Conference. At the same time, he especially emphasized that we had definitely to communicate with them. We, of course, agreed.

In the evening, J. Chatagny organized a meeting with businessmen who agreed to sponsor European scientists for a trip to Russia. The meeting took place in a country restaurant. A large table for about 30 people was set on the open veranda. Everyone came with their wives. Only I and another young guy were single. First, there was a long procedure of introducing people to each other. We spoke French, English and Russian, or rather a mixture of them. Among the French women, two ladies spoke Russian very well. And this made our communication easier. Svetlana Andreevna had met one of these women before, they had been together on some trip. Therefore, they communicated like old friends. So, this acquaintance turned out to be very useful for our business. At first, the businessmen were not very willing to spend money on scientists, especially on a trip. However, Svetlana Andreevna, in a conversation with her friend, told her why this conference was being held and why rice scientists were being invited to come to Krasnodar. And when this friend asked if she and her husband could come to Krasnodar and then visit Moscow and St. Petersburg, the answer was that, of course, they could. We will send an invitation. This lady immediately talked to her husband, and he also talked to two colleagues, and they unanimously supported the idea of helping scientists go to Russia for the Rice Conference.

Ultimately, it was decided to fully pay for the trip for all speakers at the conference, and for the rest of the participants to pay for tickets to Krasnodar and back. Moreover, this concerned not only for the scientists from France, but also from all other countries-members of the Association of Mediterranean Rice Growers.

Over the course of four days, we talked with all interested parties and at the same time got acquainted with the work of CIRAD, visited its laboratories. At the end of each day, we were shown the sights of Montpellier. For me, these were familiar places I had seen in 1990–1991 during the Congress of Rice Growers and a working meeting of breeders.

We returned to Paris by high-speed train, and then flew to Moscow. The journey to Paris took less than 5 hours. There were only two stops on the entire journey from Montpellier to Paris.



High speed train in France

In our country, back in the 1980s, they also planned to build a similar high-speed line from Moscow to the south. But everything remained in the plans.



In Paris, 2001

In Paris, we stayed for two days to see the city iconic places. We stayed in the same hotel as last year, next to the train station. The Tour de France was taking place just those days. So I was happy to watch fragments of this race on the TV. During the next day, we walked around the city, visited the Louvre again, stood by the portrait of Mona Lisa, and walked around the main halls of the museum. We were more tired during the day at the museum than during the previous week. The next morning, we left for the airport and went home.

Having returned from this trip, we immediately plunged into the atmosphere of preparation for the Conference. The main thing had been done, the problem of financing this event had been solved. And the rest, as Evgeny Mikhailovich once said, was all in our hands.

Cooperation with the Union of European Rice Growers allowed me to travel to France many times. First of all, this was connected with working meetings and preparation of various events. However, even in those cases when other scientists came with their wives, my wife and I could not go together for various reasons. And only in 2010 I decided that we should not wait for another conference, but just go, in August during vacation.

Olga took several guidebooks to Paris, a map of the city and compiled a complete program for our stay. She had good experience in such trip preparation, using Rome, Milan, Venice and other cities in Italy as an example. Knowing this, I completely trusted her.

On the appointed day, we flew first to Moscow, and from there to Paris. I must give credit to Olga Vsevolodovna, she prepared for this trip in the most thorough way. She thought through and clarified all the details from transfer from the airport in Paris, check-in at the hotel and city tours to the return trip to the airport, so I did not have to worry about anything. She, as a good guide, conducted all our tours of Paris. I was surprised, as if it was not me, but she who had been there several times. With great inspiration she told me about the sights of Paris. The Russian edition of the guide to this city and its environs was taken as a basis. It showed 13 routes with a detailed plan and description of the most significant places, such as the Louvre, the Champs Elysees, the Eiffel Tower, the Palace of Invalids, the Latin Quarter, Montmartre, Versailles, etc. In the evening, Olga showed me the plan for the next day. I did not object and only briefly wrote down what we visited and saw during the day. All 10 days of our stay in the city were scheduled down to the minute. We got up early, had breakfast and went to see the next sight. Day after day we visited the main museums and iconic places.



In the Louvre

We spent the whole day in the Louvre, but were able to see only a small part of its exhibits. This grandiose complex, built on the banks of the River Seine, dates back to the end of the 12th century. Initially, it was a fortress that protected against Saxon raids. The fortress housed the royal treasury and archives. In the 14th century, King Charles V turned the fortress into his residence, adding a library nearby. In 1546, King Francis I ordered the demolition of the old fortress, and a Renaissance palace was built on its foundations. Under subsequent rulers, construction continued on the buildings that became part of the Louvre complex. In 1682, the royal court moved to Versailles, all work was stopped, and the Louvre gradually fell into disrepair. Only after the revolution, on the orders of Napoleon I, construction was resumed, and by 1871 the Louvre acquired its modern appearance. Throughout its history, the Louvre housed collections of works of art. We were very lucky with the weather: it was warm and sunny. We walked a lot, and had a lot of impressions. Therefore, from time to time we stopped in the shade, sat on a bench and took a break to recharge. We rested, looked at the map, read the guidebook and then moved on.

The Louvre ensemble is decorated with the triumphal arch “Carousel”, which was built in 1805 in honor of the victories of Napoleon I. Having passed

the square and the Carousel garden, we came to the Place de la Concorde with its magnificent fountain. Once upon a time, there was an equestrian statue of King Louis XV. During the revolution, the statue was destroyed and a guillotine was erected in its place, which was used to cut off the heads of the royal couple — Louis XVI and Marie Antoinette, and then Marat, Robespierre and many other revolutionaries.

The Tuileries Garden adjoins the Place de la Concorde through a wrought-iron fence. Its length is about 1 km. It is a good walking area for pedestrians. There are beautiful flower beds against the background of an emerald lawn with very simple flowers, but in such a harmonious combination that they look simply gorgeous! And everywhere there are benches and garden furniture for the convenience of strolling citizens.

Nearby, on the banks of the Seine, there is a building of the former railway station, where the collection of the Orsay Museum is located. It exhibits more than 4 thousand works of art dating back to the second half of the 19th — first decade of the 20th century. Mainly, the works of impressionists and post-impressionists are presented here, as well as a collection of decorative art in the Art Nouveau style. Since Olga is a big fan of these trends, she went there on the very first days, and I got involved in art with her.



In the Tuileries Garden

The attitude of the French to their historical landmarks is surprising. Rulers changed: kings, emperors, presidents, but everything historical is preserved, multiplied and demonstrated to the whole world. And tourists from all over the world come here to see and experience the cultural values.

On one of the following days we took a walk along the Seine embankment. There are many bridges across the river, among which the oldest one stands out, marked by a statue of King Henry IV. Also of interest is the Alexander III bridge, which was built in 1900 in honor of the French-Russian agreement and was a symbol of the friendly alliance between the two countries. We crossed this bridge to the palace complex, consisting of the Grand and Petit Palais, built, like the Eiffel Tower, for the 1900 World Exhibition. Museums and exhibition complexes are still located there. After examining them, we came to the famous Champs Elysees. Once there was a large swampy area here. It was drained and turned into a wide avenue. It received its current name in 1709. A large promenade park stretches on both sides of the avenue. From here there is a view of Avenue Churchill with the Alexander III bridge and the Palace of Invalides.



The Eiffel Tower is a symbol of Paris

At the top part of the Champs Elysees is the Place de l'Etoile, which was renamed Place Charles de Gaulle. It is shaped like a circle with a diameter of

120 m. From this square, 12 streets radiate. In the center of the square stands the majestic Arc de Triomphe, 50 m high and 45 m wide. It depicts Napoleon's main victories in the form of bas-reliefs and sculptural groups. Walking along the streets radiating from the arch, we found a number of perfume shops and could not help but pay tribute to them by buying perfume as a gift. The modern symbol of Paris is the Eiffel Tower — an openwork structure 320 m high. The tower was built as a temporary structure for the World Exhibition, but after its completion, Parisians spoke out against dismantling the tower.

The secret desire of many Russians is to climb to the top of the Eiffel Tower and repeat the action mentioned in the song by V. Vysotsky "About Paris". We did not climb up, but simply walked along the neighboring streets, climbed to the observation deck on the hill on the Place du Trocadero with a view of the fountain, and then went to the Museum of Modern Art in the Tokyo Palace. Some of the exhibits displayed there made an impression, but they were not very clear to me. Perhaps, I am not a fan of this kind of modern art. Nevertheless, it was interesting to broaden my horizons.

We went to look at the Eiffel Tower again from the Place de la Concorde the next day closer to night, to see it in all its glory of evening illumination.

During a walk along the Seine embankment, we noticed the river trams that scurried in both directions, stopping at the piers. It turned out that you could buy tickets for them and ride the whole day, getting off at any of the stops located near the main attractions of Paris. So the next day was spent by the river.

Many people got off at the pier near the Ile de la Cité, and we got off with them. The square on the island is dominated by the most majestic cathedral in Paris — the famous Notre Dame de Paris (Notre Dame Cathedral). The information about the time of construction of this temple is surprising: from 1136 to 1345. The construction by several generations of builders lasted for 182 years. There is no point in describing this cathedral. You have to see it. It should only be noted that the Treasury of the temple preserves precious church relics, including a fragment of the cross on which Jesus Christ was crucified, the crown of thorns and the sacred nail.

Another stop is the Botanical Garden of the city of Paris. This garden was created in 1626 as the "Royal Garden of Medicinal Herbs". Today, more than 10 thousand species of plants grow in the garden. The Winter Garden with tropical plants and the Alpine Garden with plants from the Arctic, the Himalayan Mountains and the Alps are among the places in the city that we marked for visiting. Of course, we included the Latin Quarter, where the Sorbonne University has been located since the middle of the 13th century. As

lecturers, we were interested in seeing this legendary educational institution, the library, the adjacent streets and buildings. We went on an excursion to the Pantheon, where Foucault's pendulum is located. Previously, this was the Church of Sainte-Geneviève. The ashes of many great people are kept here: Jean-Jacques Rousseau, Victor Hugo, Emile Zola, Voltaire and others. Having overcome 425 steps, we went out onto the roof of the cathedral, from where a wonderful view of Paris opened up.



By the river Seine

Next to the Latin Quarter is the Luxembourg Palace, the residence of Marie de Medici. In front of it there is a large park and an original building, the Petit Luxembourg. Today the Senate sits in this building. At that time, one of the pavilions in the park was exhibiting funny caricatures by French artists, and we laughed heartily.

The park pleased the eye with its Mediterranean coloring, it was filled with midday sun and bright flowers. Children launched boats in the fountain near the palace. In terms of its atmosphere, this place in Paris was our favorite, although it was not a landmark of the first magnitude. The hotel where we stayed was located on one of the Parisian boulevards not far from Montmartre. The center of the bohemian world, literary and artistic life of the city was formed here.



**On the roof of the Pantheon (Cathedral of Saint Genevieve)
in the Latin Quarter**



At the Luxembourg Palace

This is one of the most famous and picturesque quarters of Paris. It is located on a hill 130 m high. At the top of the hill stands the snow-white majestic Basilica of Sacre-Coeur, built in 1876. Its bell tower has one of the largest

bells in the world weighing 19 tons. A huge staircase leads to the facade of the church, and in front of the facade there is a high platform, which is always very lively with many tourists, souvenir shops, virtuosos showing tricks with balls and gathering fans and just curious people. The square on the hill was filled with artists, their paintings, drawings, friendly caricatures, various crafts and souvenirs that tourists usually buy. A walk through this quarter turned out to be tiring due to the constant ups and downs of narrow and crooked streets.

While sightseeing in Paris, we certainly did not miss the Rodin Museum, which is the largest collection of works by the French sculptor Auguste Rodin. The exhibition is located in the luxurious 17th-century Biron mansion near the Invalides.



Boulevard Montmartre

On the territory of the museum complex, visitors are presented with over three hundred sculptural works by Rodin himself, located in 16 rooms and in the park, as well as his collections of paintings and examples of art from

Antiquity. A separate room is occupied by the works of the master's beloved Camille Claudel.

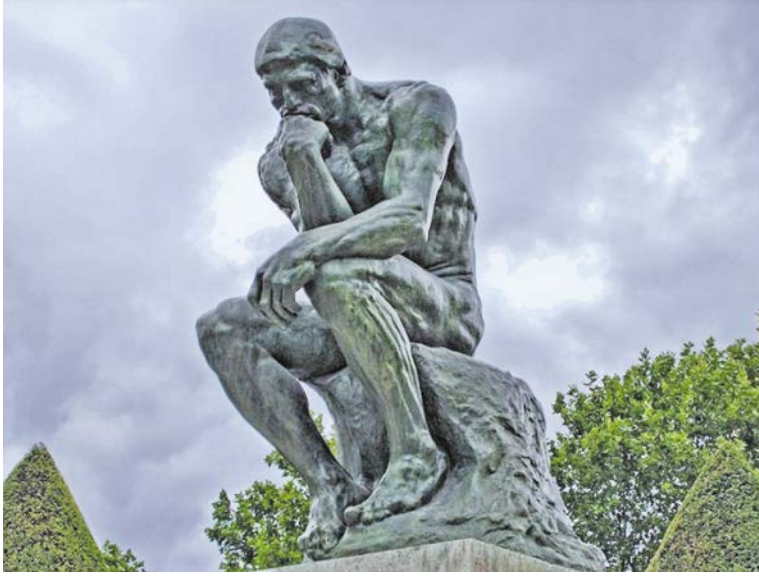
In the park of the mansion are the best works of Rodin — the sculptures “The Thinker” and “British Men of Calais”, as well as “The Gates of Hell”, “Beethoven”, “Ugolino”.

In total, the museum collection has more than 8,000 photographs, about 6,600 sculptures and 7,000 other works of art. However, the most famous sculptural work of Auguste Rodin is “The Thinker”.

We went outside Paris only once, to Versailles, located 20 km southwest of the city. We decided to get there ourselves, without a tour group. We succeeded, although there was a funny incident on the way back. We did not take into account that in the small villages around Versailles people do not speak English, and we did not know a word of French. As a result, with great difficulty and not immediately, we reached the railway station and were very tired. But we were still happy that we saw the Versailles Castle, the Grand and Petit Trianon palaces and, especially, the park.



The Sacre Coeur Church in Paris



“The Thinker” by Rodin



In Versailles

The history of Versailles began in 1624, when King Louis XIII ordered a hunting lodge to be built there. Versailles acquired its modern appearance under Louis XIV. Next to the palace, on an area of 100 hectares, a regular park with rich artistic decoration was laid out. This monument of architecture and landscape art is famous for its luxurious interiors, sculptures, gardens and fountains. The terrace of the palace offered a panoramic view of a whole complex of fountains surrounded by bronze statues. Our Peterhof immediately comes to mind. We really liked the intricate green labyrinths, hedges, masterpieces of topiary art based on fancifully trimmed yews, fountains that unexpectedly

opened up to the eye and secluded grottoes. Leaving home, we said to Paris: “Goodbye.” We hoped for new meetings with this amazing city. Already on the plane, oversaturated with information about everything we had seen in the past days, we came to the following conclusion about this trip: Paris with its sights must be seen slowly and preferably more than once.

15. Italy, June 2002

After the anniversary celebration of the All-Russian Rice Research Institute, time flew by quickly. Before the New Year, Aldo Ferrero sent information that the International Conference on the Application of Biotechnology and Molecular Markers in Rice Breeding would be held in Turin in June 2002. I informed E. M. Kharitonov about this, and he gave the order to prepare for participation in this conference. The following scientists were supposed to go from the All-Russian Rice Research Institute: Director E. M. Kharitonov, Head of the Biotechnology Laboratory Zh. M. Mukhina, and a young research fellow I. I. Suprun. I was going from the Kuban State Agrarian University, and I invited my wife, Olga Vsevolodovna, as an accompanying person. At that time, she was already conducting scientific work on the study of rice weeds, associated with the research of A. Ferrero and his students. The main delegation was going to Turin via Rome, and Ivan Suprun was supposed to fly via Vienna directly to Turin. In addition to participating in the conference, our delegation's task was to present the Diploma of Academician of the Russian Academy of Agricultural Sciences to Gurdev Khush, a leading breeder at the International Rice Institute. He was accepted as a full foreign member of the Russian Agricultural Academy in early 2002.

Preparing for the trip, Olga contacted a relative of our friends, Maria, who had been living in Rome for 17 years. Maria happily responded and said that she would meet us at the airport.

Arriving in Rome, we saw a woman at the airport with a large poster with the words “Zelensky” written in large letters. It was Maria. The meeting was very warm. Maria brought us to the hotel that Aldo Ferrero had booked at our request. It was an inexpensive hotel located on the territory of an ancient Catholic monastery. Pilgrims arriving in the Vatican usually stay here. We were accommodated in small cell-like rooms, very clean and cozy, with antique iron

beds and massive stone washbasins. The small courtyard of the hotel with a fountain and a statue of the Blessed Virgin looked like a green oasis. The service staff consisted of nuns. The rules prescribed good behavior and silence.

After checking in, Maria took us to the Termini train station and helped us buy tickets for the high-speed train to Turin. Without her, it would have been difficult for us. Tickets were sold in a machine. On the touch screen there was a menu in Italian, which we did not know.

Next to the station was the Great Papal Basilica of Santa Maria Maggiore, where Maria took us on an excursion. She helped us get our bearings in this beautiful city at first, explained how to get tickets for the metro, told us about the rules that every traveler in Rome should know, walked with us through the pedestrian zone, telling us about everything that we encountered along the way. In the evening, Olga and I went for a walk along the Via del Corso in the center of Rome, to the right and left of which, in narrow alleys, were located such attractions of this ancient city as the Pantheon and the Trevi Fountain. According to tradition, people throw a coin over their shoulder into the fountain to return here again. We threw it too. Then we sat on the famous Spanish Steps and ate ice cream. We drank water straight from the fountain, like everyone else, since all the fountains in the city have clean drinking water.



Remains of the Colosseum and the Roman Forum

Since we lived near the Vatican, the next day we all went on a tour of the Vatican Museums with a visit to the famous Sistine Chapel and looked at the grandiose St. Peter's Basilica. Having taken the elevator to the bell tower of the Basilica, we saw the Vatican gardens and green labyrinths from above. And, of course, we took photos of the picturesque Swiss Guards at gates of the city-state, who are considered the oldest army in the world.

The next day, in the morning, before leaving for Turin, we visited the museum on the Capitol Hill, the Roman Forum and the Colosseum. There was so little time and there were so many amazing impressions.



On Capitol Hill

On the way from Rome to Turin, we looked at the country through the windows of the high-speed train. We also saw the famous leaning tower in the city of Pisa. Indeed, it stood at an angle. It looked as if it was about to collapse. But it had been standing for several centuries and had not fallen. In fact, the tower was almost lost against the backdrop of the enormous Pisa Cathedral. Having crossed half the country in half a day, we arrived in the northern mainland of Italy at the foot of the Alps.

In Turin, we were met at the station by A. Ferrero's colleagues and taken by car to the congress center at Villa Gualino. This complex of buildings was located on a mountain near the city. Our entire event took place in this complex. Several special halls were equipped for holding conferences. All conditions for the accommodation and work of participants in such events were provided here. Upon registration, we were given conference materials, where my report was also published. Our conference lasted three days. The sessions usually began at 9 a.m. and lasted until 4 p.m. The main reports were on the development of Biotechnology. And only two reports concerned the use of biotechnological methods in accelerating the selection process in grain crops.



Leaning Tower of Pisa



At La Scala Square in Milan

After the meeting, many participants went to the city. The distance to the city center was small, less than 5 km. However, it had to be covered by bus or taxi. It was tiring to walk. A long spiral road went to the top of this complex. Only the well-trained people could go up the mountain. We managed to overcome this climb only once, but the effort spent was not lost in vain, since the path lay past beautiful villas, and the platforms opened up views of snow-capped mountain peaks. During the conference, two important events took place. E. M. Kharitonov and me presented the Diploma of Academician of the Russian Academy of Agricultural Sciences to Gurdev Khush who was, of course, happy.



G. S. Khush, G. L. Zelensky, E. M. Kharitonov, Italy, 2002

The second event affected me personally. At a meeting of the Committee of European Rice Growers, a re-election of the Head of the breeding section was held. The previous year, at a meeting at the All-Russian Rice Research Institute, the section was headed by an Italian, Massimo Biloni. However, he left the Rice Research Institute, where he had been in charge of the Breeding Department, to work for a commercial company. According to his status, he could no longer head the Committee section. Ibolya Simon-Kiss, a breeder

from Hungary, made a proposal to elect Professor G. L. Zelensky from Russia to the vacant position, who could also act as a Coordinator for rice growing in Eastern European countries. The members of the Committee agreed with this proposal and voted in my favour. The election took place. Since then, my responsibilities for international cooperation have expanded significantly. The Conference program included a trip to a rice farm and a rice processing plant for those who wished. Our delegation, of course, went on an excursion. We saw nothing new in the field. The rice was in the tillering phase. Clean green fields. But the machinery interested us. The machines had special narrow wheels so that they could work on a flooded rice field. Such machines were not used in Russia.



Equipment for working in rice fields

We were impressed by the visit to the rice grain processing plant. It used a new rice grain production technology called “steam boiling” (parboiling). It was a special workshop where the grain was steamed in sealed boilers at high temperature and under pressure. After which it acquired new properties. Before entering this workshop, all visitors were dressed in special white suits, thus emphasizing the cleanliness of the premises. The leading specialist of the plant, who spoke English, told us in detail about the work of the enterprise and its products, and also answered our questions.



Visit to the Italian rice processing factory

In our free time, we visited the city of Turin and there we encountered a serious problem: no one spoke English. In Rome, where tourism is developed, even street vendors spoke English. But in Turin, the most important thing for us was communication with colleagues, most of whom spoke three or four European languages. We knew many scientists from different countries. So there was a lot to talk about. The organizers prepared a wonderful final evening. There was a gala farewell dinner, where we were treated to traditional Italian dishes. Local dancers in national costumes were invited for this evening. The funniest dance was a dance with a change of partners, during which village boys got to know girls. Only the dancers invited conference participants from different countries of the world to join the circle of conference participants. They learned the dance figures as they went along, no one knew what would happen in a minute. Everyone had a great time, and if they had not managed to get to know each other during the conference, then everyone had definitely become friends during this event. I recorded the entire evening on a video camera. It should have been a beautiful and interesting film. But, when I got home, I put the tape in a box and hid it in a closet, hoping to edit the film in my free time. However, subsequent matters quickly whirled me around and my hands never

got around to this film. New events were layered, and there was a catastrophic lack of time. And then electronics and video equipment were updated. Digital technologies arrived. Everything on tape was outdated. Now I need to digitize and record on new media, but still there is no time. And time flies.

16. Uruguay, 2003

In June 2002, I received an invitation to the International Conference on Temperate Rice, which was to be held in Uruguay in March 2003. This conference is held once every 4 years. Its status is very high, so almost all leading scientists from rice-growing countries participate in it.

The previous similar conference was held in the USA, in the state of California. We did not go there, although we sent an application and the abstract of the report in advance. The reason for refusing this trip was the bombing of Yugoslavia, which was organized by the USA. By the way, in protest against this barbaric act, scientists from all European countries did not go to California. The following group of people were to go to Uruguay: V. S. Kovalev and A. Kh. Sheudzhn from the All-Russian Rice Research Institute, and L. G. Kuryachiy and me from Kuban State Agrarian University according to the agreement between the University and the Angelinsky elevator, whose director at that time was Leonid Georgievich Kuryachiy.

I took on the processing of visas and the purchase of air tickets. Fortunately, I had already accumulated experience in preparing such trips.

The time came, and in March we flew first to Moscow, and from there to Paris. There we had a transfer, and a flight to the capital of Argentina, Buenos Aires. Another transfer, and then we flew to the city of Montevideo in Uruguay. The journey was long. In total, we spent more than 20 hours in the air.

We stayed at the Buenos Aires airport for about 4 hours. During this time, we took turns looking at all the sights of the airport. And then a funny incident happened. I was sitting by my things when Leonid came and said to me:

— Take your old briefcase, and let's go, I've found a new one for you here.

This already aged briefcase was a memory of a trip to Australia, where Leonid and Vasily Zayarsky bought it for me as a gift. The briefcase was good because it could hold 10 bottles of vodka or cognac. I took it on long trips because of its capacity, despite its venerable age.

We came to the store. I saw the briefcase of the same model, but slightly larger in size. Leonid carefully examined it and made a verdict:

— It's good, 10 bottles will easily fit. Let's take it.

And then he paid for it himself. As a result, I received a new travel bag as a gift. I transferred my things from the old briefcase into the new one, and left the old bag on the bench. While Leonid was getting cigarettes for himself, my old briefcase disappeared. Someone had already taken it. Well, let it serve someone else. We flew to the capital of Uruguay, Montevideo, on a local airline. A bus was waiting for us at the airport, the conference participants were taken to a resort town on the Atlantic coast.



Russian delegation in Uruguay, 2003.

Our hotel windows overlooked the beach. It was March (early autumn in the southern hemisphere), but the holiday season was still going on. There were many vacationers lying on the dunes of the sandy beach. By the way, we also took a couple of dips in the waters of the Atlantic Ocean. It was still warm, but a cool wind was already blowing from the ocean. Quite large waves were rolling onto the shore. The area around the beach was shallow, 50 m from the shore the water barely reached the waist. But high waves sometimes covered us completely. The water was warm, +25°C. And the air in the morning was fresh, about 20 degrees, but by lunchtime the temperature reached 25–26°C. Experts from almost all rice-growing countries came to the conference. One of

the organizers, the Uruguayan breeder Gonzalo Zorillo, greeted us warmly. We met in France in 1996. That was why we communicated here like old comrades.

The plenary sessions of the conference were held in a large hall, and the sectional sessions were held in several small halls.

My report, co-authored with E. M. Kharitonov and L. G. Kuryachiy, was presented at a sectional meeting. I sent the materials for the report to the organizing committee in advance. We were pleasantly surprised that a ready-made collection of reports was distributed to conference participants upon registration.

The conference program included visits to rice fields and a rice processing plant. Rice was being harvested in the fields using direct combining. We were surprised by the unusual configuration of the rice checks. The ridges were winding. As we were explained, they were made along the contours of the terrain. The ridges were low — 15–20 cm, just enough to hold a layer of water up to 10 cm. Combines easily passed through these ridges from one check to another. During irrigation, water was transferred from the upper check to the lower one. In our opinion, the rice fields there, compared to ours, were simpler. Combines easily threshed rice directly, because in Uruguay they specially created easy-to-thresh varieties.



**G. Kuryachiy , G. L. Zelensky,A. Kh. Sheudzhen
at the International Conference in Uruguay, 2003**

In one of the fields we were shown a demonstration sowing of a set of rice varieties. Among them was one variety — genetically modified, resistant to the glyphosate, herbicide of continuous action. When treating the crop of such a variety with this herbicide, all weeds were destroyed, including red-grain forms of rice. The herbicide did not affect plants of this variety. The variety was created specifically so that when it was sown and the plots were treated with this herbicide, the fields were clear of all weeds.

The specialist who showed the experiments spoke so enthusiastically about the prospects of this type of rice varieties that I could not resist asking a question:

— Have you thought about what will happen when cross-pollination occurs between plants of this variety and red-grain rice?

He was dumbfounded by this question. He was silent for a long time, and then said:

— I hope that this will not happen.

A discussion ensued between colleagues: if this could happen or not. Less than 10 years after this conversation, Olga Vsevolodovna told me that she came across information on the Internet that in the state of California (USA) red grain weed forms resistant to glyphosate had been discovered. There was a horizontal transfer of genes for resistance to the herbicide as it had been discussed in 2003 in Uruguay. Interfering with nature is fraught with consequences, and very serious ones...



The tour is led by Gonzalo Zorillo (far left)

On the last day before leaving home, on Sunday, we were given a tour of Montevideo. We were brought to the city early in the morning and shown its main sights. We stopped at the stadium, which was famous for hosting the World Cup. Incidentally, the Uruguayan national football team won the championship. For this occasion, there was a monument to a footballer installed in front of the stadium. As the guide told us, it was the only monument of its kind in the world.



Montevideo is the capital of Uruguay

One of the excursions was to the city park. This was a place of rest for the city residents. Various artistic groups performed concert numbers on the platforms here. The spectators stood nearby and, dancing, supported the artists with applause. Several men were sitting on the grass and playing accordions. We stopped near them. Leonid could not resist and asked one of them for an accordion, and he played so passionately that we gasped in surprise. I did not know that my friend Leonid was such a master of the accordion.

A little to the side, there was a horse riding event. Those who wanted to ride a horse could mount and take a few circles along a special path. Cossack blood started playing in me. I remembered how I used to ride collective farm horses as a child. I approached this group and asked the leader for permission to ride a horse. They brought me a nice gray horse. I immediately jumped into the saddle. But before I could pull on the reins, something unexpected happened. The horse suddenly reared up and then quickly fell on its left side. Of course, I did not expect such an action. It was good that my reaction did not fail me.

At the moment when the horse touched the ground with its side, I managed to jump off it onto the ground. Another moment, and my left leg would have been pressed to the ground. It would have all ended in an injury. And here I was standing next to the fallen horse, holding the reins in my hands. Unable to resist, I kicked it in the side with my foot, and it immediately jumped to its feet.



**From right to left: L. G. Kuryachiy, V. S. Kovalev,
A. Kh. Sheudzhen**

It was so quick that no one understood what happened. My colleagues ran up to me, asking if I was okay.

And I felt very uncomfortable about it, so I could not say anything. I silently handed the reins of this ill-fated horse to the presenter and left the site. It was good that my friends had no time to take a photo of all this, although they were going to take a picture of a Kuban Cossack on a Uruguayan horse.

Later, Askhad scolded me for such a thoughtless act. I didn't say anything to justify myself. However, the thought of why the horse behaved like that tormented me for a long time. After all, before me, it had carried even small children without any problems. Maybe I scared the animal with my abrupt movements. Indeed, it was good that everything ended well.

After the excursion, we were given several hours of free time. We went to the local market. The sight there was amazing. Huge piles of various vegetables and fruits attracted customers. I was interested in sweet peppers, as we call them — Bulgarian. I had never seen such huge fruits. They were dark red, more than 20 cm long and at least 10 cm wide. Now that was the result of selection! I could not resist and bought one fruit. Its price was 1 peso (about 1 ruble). Returning to the hotel, we ate the pulp of this fruit, and I kept the seeds. Arriving home, I decided to grow this pepper. It was March, the time to sow seeds for seedlings. Having received good sprouts, I transplanted about 20 plants to the garden bed in May. At first, all the plants grew normally and were the same appearance. Then discord began: some plants sharply accelerated growth, while others, on the contrary, slowed down. Time passed, and the fruits began to set. The picture was depressing. Not a single normal fruit, much less a large one, was formed. All the fruits were of different types: from round to elongated, but very small. At first I thought that our climate did not suit them. Then I realized that those had been fruits of heterotic hybrids of the first generation. And I got the second generation, in which such a split was observed.

How I scolded myself that a knowledgeable specialist in Genetics and breeder had made such a fool of himself. Then I told my students about this incident at a lecture so that they would not repeat such a mistake.

During conversations with Uruguayan colleagues, we received quite a lot of information about the country. For example, we learned that Uruguay had practically no forests of its own. Therefore, a lot of wood was imported. In the 1960s, a wise Prime Minister came to power. At his insistence, the country adopted the State Program “Plant a Forest”. Eucalyptus seedlings were brought from Australia. This tree was not chosen by chance. The region receives quite a lot of precipitation: more than 1400 mm per year. Eucalyptus loves moisture, grows quickly and produces very strong wood. But the main thing is that this plant is able to grow back after cutting the trunk and form a new tree. By the way, in Kuban a similar tree is white acacia (*Robinia pseudoacacia*), which the Cossacks planted in large quantities when developing this territory. Acacia is also able to grow back after cutting the trunk. It has very strong wood and tolerates the local drought well.

The Uruguayans planted a huge number of eucalyptus seedlings in a short period of time. They occupied all the wastelands, hillsides and ravine slopes. And in the end, they solved the forest problem. When we were there, they were already cutting the eucalyptus trees for the third time. They provided themselves with wood and even began to export it.



Our delegation with a guide in Montevideo

We were convinced of the benefits of solving the forest problem when we were brought to get acquainted with the work of a rice processing plant. Near the plant, a large concrete platform was made, on which woodpiles up to 1.5 m high were stacked. Logs about 1 m long were left to get dry. This wood was used for the stove to dry the harvested rice grain. Natural gas was in great shortage in Uruguay. Using wood for heating was several times cheaper than gas.

While we were looking around the plant, taking photos and listening to the story about its work, it was time for lunch. A 1.5 hour break was announced. Everyone settled down in the shade to rest. David Galai, a colleague from the USA, took a laptop out of his briefcase and put a camera next to it. I asked him:

— What do you want to do?

— Well, I'll send some photos to my wife at home.

— How?

— I'm making a wireless connection between the camera and the PC. I'll transfer the photos to the PC, and then I'll send them to her by e-mail, so she can be happy for me, how I'm having fun here.

A few minutes passed, and I heard David exclaim:

— Ok, my wife has received the photo and she informs me about it.

I watched and thought: “What technology has come to!” The phrase from the cartoon about Prostokvashino cartoon was appropriate. And now this is common practice for us too.

The trip to Uruguay turned out to be useful for a number of reasons. Firstly, we visited the rice zone in South America, where the weather was almost summery at that time. We got acquainted with the rice growing of this region. Secondly, we talked to leading rice scientists from different countries. Thirdly, we saw another country and everyday life of the locals.

An interesting, almost funny incident happened on the way back, when we were returning home. The trip by Air France plane from Buenos Aires to Paris usually took more than 17 hours. In Paris, there was a transfer to an Aeroflot plane to fly to Moscow. The connection of flights was planned so that we should easily make it from one flight to another. But for some reason our plane arrived in Paris late. There was no time left for the transfer, and we, naturally, were worried about what we would do now. But something unexpected happened. As soon as the plane landed, a man in uniform entered the cabin with a paper in his hands and began shouting out our names. We responded. The command followed:

— Urgently to the exit.

We grabbed our carry-on luggage and headed for the exit. This man escorted us to a minibus that was parked near the plane. We got into the car. It sped to the plane to Moscow, where boarding had already been finished. We boarded the plane and sat down at the designated seats.

– Where is our luggage?

– Don’t worry, you’ll get it in Moscow.

And indeed, we got our suitcases as if nothing had happened. We were surprised and delighted:

– What a service!

In the following conversations, we often recalled the trip to Uruguay, especially its final part.



17. Italy, 2004

This was probably my shortest trip abroad. The fact is that the conference held in Turin in 2004 was planned as a working meeting of members of the Committee of European Rice Growers. But then it turned out that Aldo Ferrero was able to attract good sponsors, including the German company BASF, which produced plant protection products for rice. Therefore, the format of the meeting was expanded to a conference on the problems of sustainable development of rice growing. It was held on September 13–15, 2004. Representatives of European rice-growing countries, including Russia and Ukraine, came to Turin. There were two representatives in the Ukrainian delegation — V. V. Dudchenko and R. Yu. Vozhegova, and I was the only one from Russia. The organizers paid for my trip because I was a member of the Committee of European Rice Growers. The Ukrainians bought the tickets themselves, but their stay there was also paid for. On the first two days we listened to scientific reports, and on the third day an excursion to the rice fields in the Vercelli area was organized.



At the poster session of the conference in Italy

I presented three reports, mine on the first day — on the selection of highly productive forms of rice in Russia. On the second day — on rice production in Russia, co-authored with M. I. Chebotarev and E. I. Trubilin, as well as the report by O. V. Zelenskaya on the dynamics of rice weeds in the rice fields of

Kuban. Unfortunately, the circumstances did not allow my colleagues to go to Italy. All three reports in the form of abstracts of articles were included in a collection published by the end of 2004.



A. Ferrero, Ngu Yen, G. Zelensky, Italy, 2004

During the trip to the rice fields, we learned how rice was harvested in Italy. Our team visited the experimental field of the Rice Institute, three farms and a rice factory. The plots at the institute were ready for harvesting. Beautiful, diverse selection samples appeared before our eyes. Everyone admired them and took photos.



With colleagues from Bulgaria, Hungary and Ukraine

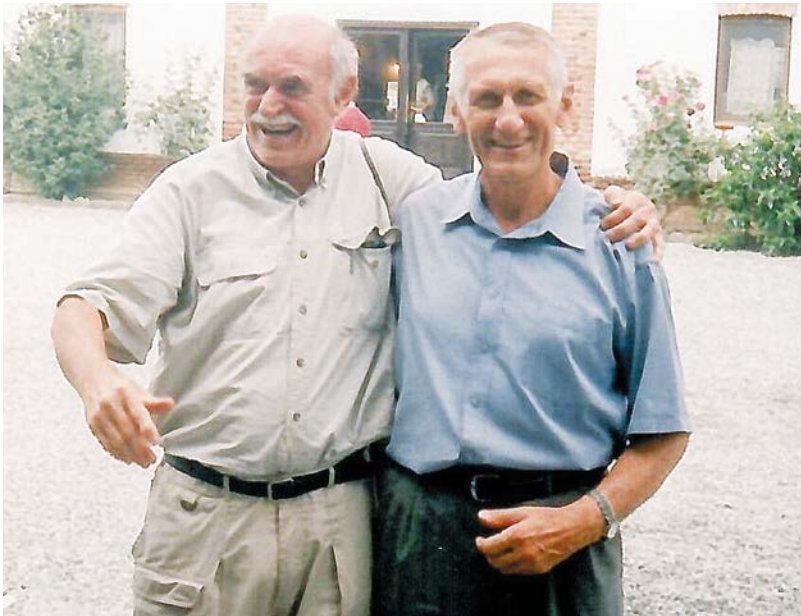
The farms there were small, from 100 to 500 ha. Each had 2–3 Laverda combines of Italian assembly. They harvested rice using direct combining. The combines were on a half-track chassis. They cut the rice stalks, capturing about 1/3 of the plant with a panicle.

I observed similar harvesting in Australia in 1997. Here, too, part of the green stalks with leaves remained in the field. In Australia, sheep were released into such checks so that they would eat the leaves. And what did Italian rice growers do with the remains of rice? I was interested to know. I could not resist asking the farmer about it. He looked at me strangely, apparently thinking: “What a stupid question?”, but still answered:

— After drying, I burn everything.

I did not ask any more questions, although my tongue was itching to ask about air pollution with smoke. But, remembering the conversation with the Australian farmer on this topic, I realized that everything was the same here. Private owners managed the land themselves.

Grain from under the combine was taken away by trucks to the plant. They belonged to a transport company, and the farmer rented them.



With French professor Jean Chatagny

At the plant, we saw what they did with the grain coming from farmers. It was cleaned, dried and stored in special storage tanks strictly by grade. Pro-



cessing was carried out as needed. The plant had separate workshops for the production of short, medium and long rice. We were shown an innovation of the plant — a workshop for rice steam boiling. This system of rice processing was just begun to be mastered here. It turned out that not all varieties of rice could be processed this way. Only special long-grain varieties with a high amylose content were suitable for steam boiling.

The processed rice was packed in beautifully designed bags on which the recipe for preparing this cereal was printed.

We were all amazed by the cleanliness of the plant. Before visiting the workshops, we were given white coats. All service personnel wore such coats. Very few people worked at the plant. Almost all processes were automated. We left this modern plant very impressed



G. Zelensky, R. Vozhegova, A. Ferrero, 2004

All the conference participants lived in the same hotel. We also ate in the restaurant there during the day. But on the last evening, my Ukrainian friends invited me and five other colleagues to a farewell dinner, which they arranged in their room. The Ukrainians had brought a decent supply of food with them, including traditional lard and red chili pepper vodka. These were 0.7-liter bottles with a floating chili pepper fruit inside. Among the guests was

Hans, a man of about 40 from the German company BASF. When talking to V. V. Dudchenko, this guy said that his uncle had fought in Ukraine. He had been seriously wounded there near Kharkov, had fallen behind his unit, and Ukrainian peasants had saved him from certain death. The uncle was very grateful to these people. Until his death, he dreamed of going there, finding his saviors and thanking them. And now a representative of this family, Hans, was in our company. They poured him a full glass of pepper vodka and offered him a toast to friendship between peoples. Hans bravely emptied the glass. They poured him another. He drank it and 15 minutes later fell off the chair unconscious. They carried him to his room and laid him on the bed.

The next morning I left for Milan, and then flew to Moscow. How the story with this German ended, I never found out then. My Ukrainian colleagues stayed for another day in Turin. They probably helped him. And only in 2006, at the anniversary of the All-Russian Rice Research Institute, V. V. Dudchenko told me about the continuation of this story. They spent another day with the German finishing the remaining pepper vodka and snacking on Ukrainian lard. In addition, Volodya Dudchenko gave Hans a bottle of pepper vodka and a piece of lard as a friendly gift.

Before my departure from Turin, Aldo Ferrero asked me to prepare an article about the rice variety Leader in English. He was very interested that this variety was created specifically for herbicide-free technology. A month later I sent him this article: "Morphobiological Bases of Growing Rice Variety Leader without Application of Antigrass Weed Herbicides". Aldo presented it at a conference in Bulgaria the following year. I could not go to this conference, but I received a collection of its papers. The collection included the full text of my article on 4 pages.

18. Italy, January 2006

In September 2006, the All-Russian Rice Research Institute was to celebrate its 75th anniversary. As part of this celebration, it was planned to hold an International Conference on Rice. Preparations for the event began in advance. If in 2001 the French helped us organize a conference dedicated to the 70th anniversary of the institute, now everything was more difficult. At that time, the Committee of European Rice Growers was headed by the French scientist

Jean Chatagny, a very authoritative person. And, thanks to his efforts, we were able to organize and hold the conference at a high level.

And now the Head of the Committee was an Italian, Professor of the University of Turin Aldo Ferrero, so the center of mutual cooperation moved to Italy. In addition, there, in Rome, was the head office of the International Food Organization (FAO).

By that time, the FAO Rice Commission was headed by Ngu Yen, who replaced Dat Tran in this post. They were both from Vietnam. In 2001, Dat Tran was the head of the Commission, and Ngu Yen was his deputy. Over the five years, there had been significant changes. Dat Tran turned 60 and was sent into retirement (they were strict about it there). As I was later told, he received a very decent pension, allowing him to live comfortably. His deputy rose to the next level and headed the Rice Commission. I met Ngu Yen in 1997 in Egypt at an International Conference. The conference program included an excursion to rice fields, and we sat next to each other on the bus. While we were driving, we got to talking, and it turned out that in 1991, while in Vietnam, I was near his hometown. Ngu Yen's parents lived there, and every vacation he visited his small homeland. Then we periodically exchanged letters and holiday greetings. And so, when the need arose for assistance in preparing the International Conference for the Anniversary of the All-Russian Rice Research Institute, I wrote a letter to Ngu Yen, in which I explained the situation. He sent a reply quite quickly, promising to organize all possible support. Having received this letter, I went to the Director of the Institute, E. M. Kharitonov, with a proposal to go to Rome. He agreed. We began preparing for the trip to Italy. We wrote a detailed letter to A. Ferrero and asked for help in preparing the necessary documents. Considering that in Italy we had to work a lot with papers, I suggested that Evgeny Mikhailovich take a professional English translator on this trip — Irina Lvovna Akinshina, who would be able to professionally prepare the documents. In mid-January 2006, we went to Italy. We flew to Milan via Moscow, and then took a bus to Turin. There, in two days, with the help of Aldo, we prepared the necessary documents, and he sent them by e-mail to Ngu Yen for review. Then Aldo booked a hotel for us in the center of Rome, helped us buy train tickets, and we went to Rome. We admired the sights of Italy from the train window and were in Rome by evening. We took a taxi to the hotel, checked in, and went out to breathe in the city air. We walked around the city within two or three blocks around the hotel, discussing the work plan for the following days. The weather in Rome was warm for winter: + 6–8°C, and the

heating in the hotel was turned on at night, and turned off during the day to save money. The next day, by 9 a.m., we arrived at the FAO office.



FAO Headquarters in Rome

Ngu Yen greeted us very kindly in the lobby at the entrance to the building. We went up to his office. We thought that we would only communicate with him. However, he explained that to achieve success with our enterprise, we had to meet with the heads of different departments. Before our arrival, Ngu Yen had agreed that we would be received by all specialists who were somehow connected with rice. As a result, we had 20 working meetings that day and the next.

First, we were received by the Head who was responsible for plant growing. He told us that the peculiarity of the FAO structure was that department heads had great independence, including financial. They had the right to dispose of a certain amount of money, within which they organized the work of employees. For example, they could send specialists on a business trip, finance individual projects, increase salaries, etc. In short, department heads could allocate money to their employees for a trip to a conference anywhere in the world, including Krasnodar. We had to meet with the heads of departments and convince them to send their employees to our conference. It should be

noted that foreign colleagues did not travel to scientific conferences at their own expense in principle.

Most of the meetings went without any problems. We were received very kindly, the conversations were interesting and they promised to send 1–3 specialists to our conference. The problem occurred during the meeting with the head of the department for European countries. She was a tall, thin, strict woman from Germany. Her assistant who participated in the negotiations, did not interfere in the conversation, but wrote everything down. When we entered the office, she met us at the threshold, said hello, invited us to the table and offered coffee. The assistant immediately put the prepared cups for each of us.

Evgeny Mikhailovich told the host about the purpose of our arrival at FAO and the visit to her. The lady listened with a polite smile and immediately announced that she was instructed to talk to us for half an hour. She was ready to tolerate us for this time. She was not going to decide anything. Russia was not a member of FAO, so they would not give money for the conference. Evgeny Mikhailovich tried to explain to her that we did not need their money. The money should be given to European scientists for their trip to the conference in Krasnodar.

— No, Russia is not a member of FAO, and we will not give money.

(By the way, in February 2006, Russia was accepted into FAO, and it would be interesting what she would have said if this had happened before our meeting.— Author).

Seeing that the matter had reached a dead end, I nudged Kharitonov with my foot and quietly said to him:

— We need to approach this from a different angle.

Evgeny Mikhailovich smiled and said:

— Madam, we have been talking for almost half an hour now, and I have enjoyed every minute of the conversation with you.

Irina translated his words exquisitely. The hostess's eyebrows rose, she perked up:

— Really?

I exclaimed:

— Madam, of course!

She apparently understood the comic nature of the situation, laughed and said:

— Colleagues, I understand the complexity of your position. But please understand me, I cannot say “Yes.”

Evgeny Mikhailovich asked:

— When you have your final meeting after our departure (Ngu Yen told us about this), do not say the word “No” at the round table.

— Okay, I promise you.

Looking ahead, I will say that more than 50 scientists from 26 countries, including European, came to our conference for the anniversary of the All-Russian Rice Research Institute. So she kept her word.

We were very exhausted by two days of intense work. There was still a day left before the flight. So we arranged a day of cultural program for ourselves.



Vatikan

We walked around Rome, visited the Vatican — a state within a state — and, with a sense of accomplishment, happily, flew home.

19. China, July-August 2006

The visit to China was planned for August 2005. A delegation of three people was formed at the All-Russian Rice Research Institute: V. S. Kovalev, G. L. Zelensky, and S. S. Kostina. However, the preparation of documents by the department of external relations dragged on. I did not pay much attention to this matter. Time passed. September arrived. In the end, we received a letter

from China that the optimal time for receiving our delegation had been missed, and therefore they suggested that we came at the beginning of August 2006.

To ensure that this matter did not fall through again, I personally took on the correspondence, preparation of the necessary documents, and the purchase of tickets. The entire trip was to take place from July 25 to August 4, 2006.

According to the tickets we purchased, early in the morning of July 25, the three of us flew from Krasnodar first to Moscow, and then to Beijing. Despite the rather long journey, we easily endured the flight. In Beijing, we transferred to a local airline and flew to the southwest of China to the province of Sichuan, to the city of Chengdu. At this stage of the trip, an event occurred that was remembered for a long time. As a gift to our Chinese colleagues, we took 8 bottles of Russian vodka. We put them in my briefcase, bought at the airport in Argentina on the way to Uruguay. While we were flying from Krasnodar to Moscow and then to Beijing on an Aeroflot plane, I kept the briefcase with me in the cabin (at that time, they still allowed such transportation).

In Beijing, when boarding a local airline, I was asked to open the briefcase. They looked at the contents and said that this briefcase cannot be taken into the cabin.

— But this is a gift to our Chinese colleagues, we must definitely bring it.

— No problem, we will bring it. But separately.

They hung a red label on the handle of the briefcase and took it away.

I was afraid it would be like in India in 1991, when we arrived in Delhi, and a man had some bottles of champagne broken in his bag. These thoughts did not leave my head as we flew to the city of Chengdu. However, when we got off the plane, in the arrivals hall we received our luggage and then an airport employee brought my briefcase. Everything was safe and sound. It turned out that the red label required special care in handling. We were delighted — what a service!

Chengdu is the capital of Sichuan Province, located in the southwestern part of China, in the Minjiang River valley. It is a major economic center of China and at the same time one of the oldest cities in the country. Chengdu is not only a transport hub, but also an important machine-building center, with a population of 4 million people, and with the suburbs it is more than 11 million. Modern and historical aspects are intricately intertwined here, creating a unique flavor of the city. The city and its environs have preserved many monuments of bygone eras, including temples of various religions, Buddhist sculptures and the house of the great poet Du Fu, who composed more than two hundred of his masterpieces.

At the Chengdu airport, colleagues from the Rice Institute met us and drove us by car first to the office center. There, above the entrance, a red banner with a greeting to the Russian delegation in English and Chinese was hung. We took a group photo, then went to a cafe to have a snack after the journey. And then we had serious problems — we did not know how to use chopsticks. Everything was taken with humor. They showed us and told us the intricacies of using chopsticks. The atmosphere was most friendly. This should be noted right away. The hosts paid us much attention. This was the case throughout the entire trip. We were constantly looked after from early morning until late evening when visiting institutes, rice fields, farms and walking around the city.



At the entrance to the Rice Institute, Chengdu, 2006.

Over the course of a week, we learned about the research being conducted at the Rice Research Institute, which was located near the city of Chengdu. We visited the Institute laboratories and breeding crops. At that time, rice hybridization was underway in the field, and we saw the technique used by our Chinese colleagues. Then we were taken to a farm. The Deputy Director for research, breeder Dr. Dzu, accompanied us. He spoke good English, so it was easy for us to communicate. On the way, Dzu told us many interesting facts about the life of the country and scientists working with rice. For example, while working at the Research Institute, he lectured at the University. He was paid a full salary in both places. It was interesting that there were no limitation

on scientists' accommodation. He had an apartment of more than 200 m², where he lived with his wife and mother.

Three programs important for the population were adopted in the country in the late 1980s: "Roads", "Cars" and "One woman - one child". Here is some information about these programs.

1) "Roads". Over the past 20 years, a network of concrete roads (2–3 lanes in each direction) and multi-level interchanges at the entrance to cities have been built in the country. For example, a ring road was built around the city of Chengdu and 4-story interchanges from the adjoining roads. A colossal structure!

In one place, we had the chance to see how a road was being built. A minimum of working equipment, most operations were performed manually. A wheelbarrow and a shovel were the main tools. People moved like ants in an anthill: a huge number in constant motion.

Driving past a police station, Dr. Dzu uttered the phrase:

— Our policemen do not take bribes. They were weaned off this shameful phenomenon by a cruel law: execution is a punishment for a bribe. There were several show trials. But in order to avoid slandering a police officer, it is necessary to have two witnesses...



At the Chinese table

2) "Cars". For some time China did not have its own modern car. The problem was solved simply — they bought licenses for the production of 8 brand

cars from world manufacturers: Germany, the USA, Japan and Korea. The most purchased car in China in 2007 was the Audi 8, with a price of 40 thousand US dollars. The price was very high by our standards. But, as Dr. Dzu said, 140 million Chinese were able to buy this car.

The second stage of the development of the automobile industry in the country was the development of domestic models.



Chengdu

3) The law “One woman — one child” was adopted in China to limit population growth. As Dr. Dzu explained, the country strictly controlled compliance with the law. If a family had one child, they had the right to have another child only for medical reasons. If a man married a woman with a child, they did not have the right to have a second child. In case of violation of this law, the family was subject to strict sanctions, but he did not specify their type. And it was not very convenient to ask. Too delicate a topic...

One day we arrived in the area where the rice hybrids created by Dr. Dzu were grown. We were very surprised that the terrain in this area was rugged and hilly. A river flowed in the valley. Rice paddies were built along the slopes of the hills. Water was pumped to the top of the hill. There was a small reservoir there, from which water flowed down the steps from paddy to paddy where the rice was planted.

Along the way in the fields, we saw rice in different stages of development: in one place the plants were blooming, and in another, rice seedlings were being planted to obtain a second harvest of the year. Seed production of breeding lines was carried out at the Research Institute. Then they were transferred to a seed company, under whose control the lines were planted in farmers' fields to obtain F1 hybrid seeds. Maternal lines created on the basis of cytoplasmic male sterility, and paternal lines — pollinators were planted in strips. Plants of paternal lines are taller than maternal ones. During the flowering period, additional pollination work was carried out. For this, two people stretched a rope that hit the panicles of paternal forms so that they “dusted” better. Hybrid F1 seeds formed on maternal plants were harvested separately and taken to the company's warehouse. There they were cleaned, dried and stored until the next sowing. At the same time, those farmers who had hybridization fields were given F1 seeds for commercial sowing free of charge. The seeding rate of hybrid rice seeds per 1 ha through seedlings was about 7 kg.

Doctor Dzu was the author of several rice hybrids, and for their introduction he received a decent (according to him) author's reward.

While inspecting the fields of a farmer, we noticed a square pit with water, approximately 5×5 m. It turned out that this was a pond where they grew fish. Doctor Dzu explained that previously, the population of China, especially in the interior regions of the country, raised large quantities of Vietnamese pigs. These were small omnivorous animals, growing very quickly, so they were convenient for the population. But for some time, pigs had been replaced by pond fish. Fish, compared to pigs, grew faster, it was cleaner and, most importantly, could be used all year round. Therefore, in each yard they arranged a pond, filled it with water from the check and released the fish. They mainly grew carp, fed them with all the plant remains from the fields, weeds from the rollers, etc. I could not resist looking at the pond and asked:

— Are there any fish here?

The owner took a bunch of grass and threw it into the water. Immediately on its surface, a carcass about 1 m long went up, and lips the size of a cow's grabbed the grass. A farmer caught one fish once a week, plus rice groats, plus soybeans — and the problem of feeding a family of three is solved.

While inspecting the fields, we stopped at a farm where rice was being planted. There were 6 women working in the field, and two men on mopeds were delivering seedlings. When we went there before lunch, rice planting had just begun. We stood there and watched the work. For some reason, we were advised not to take photos. Apparently, the population did not like this. The

women were planting rice with incredible speed. When we returned 3 hours later, the field was already completely planted. And then we remembered an incident when, for the anniversary of the All-Russian Rice Research Institute, we had to trim the plots during the demonstration sowing of varieties, and plant rice seedlings on their edges. This work took us a very long time and was very stressful. In China, such planting is done playfully.



Rice fields in Sichuan Province, China



Dr. Dzu shows selection rice crops



We noticed houses in the rice growing area that stood along the road on each plot of land. They looked like our 2-story garages, with a flat roof, 5×4 m in size. On the first floor there was something like a workshop, and on the second floor there were two rooms. Maybe these were their little houses, like our summer houses. We didn't think to ask right away, and now we are rack-ing our brains. There were villages outside the rice system. Normal 3–5-story houses were built there.



Discussion with Chinese colleagues

As part of the cultural program, we were taken to museums, shops and the local zoo, where giant panda bears lived.

These animals are interesting because panda's daily diet consists almost entirely of the leaves, stems and shoots of various bamboo species. The zoo was a huge territory, you could not walk around it even in a few days. Therefore, we looked at only a small part of this park.

While visiting a regional museum, an interesting encounter took place near a souvenir shop. A Chinese girl approached us and addressed us in very good Russian:

- If you need help, I am ready to provide it.
- Oh, where did you come from that you speak Russian so well?

— I am studying at the University in Krasnoyarsk, Russia. I will be a teacher of the Russian language and literature.

Sveta began asking about the details of her studies and other things. The girl answered willingly. This was the third time we met Russian-speaking Chinese. The first happened at the Beijing airport, when a young guy approached us and offered his help. He spoke Russian very clearly. We then thought that he was a representative of the special services.

The second meeting took place in a rural area, when we visited a farm. A very old man, a neighbor of the farmer, approached us, greeted us in Russian and said that he heard Russian speech and decided to come up. As it turned out, he studied in the USSR, at the Timiryazev Agricultural Academy, then worked in his homeland as a teacher at the University. During the years of the Cultural Revolution, he was sent to the village to reform, and he stayed there. But he did not forget the Russian language. We talked to him a little. He was happy.



At the farm by the pond with Dr. Dzu

There was another meeting with a Russian-speaking Chinese person, which finally confirmed our idea that Russian is actively studied in China. This happened on the plane when we were returning to Moscow. Sveta was sitting

in the center of the plane and talking to her Chinese neighbor. It was audible that they were speaking Russian. After landing in Moscow, Sveta explained to us that she had spoken with the leader of a group of students (25 people) who were flying to St. Petersburg for a month-long internship in Russian. There was such a state program for the exchange of student delegations.

Getting to know China, we saw how rapidly the country was developing. Construction was actively underway in the cities. Old houses were torn down and high-rise buildings were erected.

Visiting stores, we saw not only an abundance of goods, but also noted interesting facts. For example, in a grocery store it seemed to us that there were too many sellers. There were 7 of them in a small room. Girls in uniform approached each customer. There were five of us, so five salespeople approached us at once to help each customer choose and buy a product. As Dr. Dzu explained later, store owners deliberately recruit large staffs. The more workers they have, the less tax they pay.



At the entrance to the local museum, Chengdu

Another interesting incident happened in an electronics store. The huge store was filled with various equipment and all was made in China. Lenovo built an automatic factory in China and produced notebooks of the highest quality.

And then a small detail came to light. A system unit with a menu in Chinese was sold for \$500, and in English— \$1,500. Viktor Savelyevich and I assessed the situation, weighed the possibility of bringing the notebook home, and decided to buy it. I bought one for \$500 with a Chinese menu and also took a monitor with a 19-inch screen. When I brought the PC home, our departmental computer specialist, was delighted. He installed the necessary programs, and the device worked for me for many years. At that time, its operating speed exceeded our PCs' by six times.

And the last thing from the information and facts that Dr. Dzu cited: national discipline. In China, the population exceeded 1.3 billion people (according to some estimates, much more). About 300 million people lived in cities. They enjoyed almost all the benefits of Europe: comfortable housing, work, wages, cultural leisure. The prosperity of the people, especially in recent years, was visible on the roads — a lot of transport: from motor rickshaws and mopeds to Mercedes. During the day, the city was half empty, the population was busy with business. And in the evening, after 7 p.m., everyone living in the city moved out into the street. All the cafes were packed with customers, in the courtyards and on the side of the streets they set up barbecues, fried, steamed and ate. The smoke was thick, and the aromas were so thick that one could not breathe...



Sveta on a bike test with Chinese colleagues

The other part of the population — more than 1 billion people — lived in rural areas. The state gave each family 4 hundred square meters of land, took away passports (or did not issue them) — and they could live as they wished. The country adopted a law that children had to look after their parents, who did not get a pension. Young men could only escape from the village through the army, and they were recruited under a contract. After 4 years of conscientious service, a guy could get a referral to study at a university. And then the road to a new life was open to him. Girls could escape from the village only through marriage, if they married a city guy. Another way for young people to the top of society was sports. Sports specialists traveled around all the schools in the country and selected gifted children for special sports schools. And then everything depended on the children's athletic achievements.



In Chengdu before leaving home

Having stayed at China 9 days, we concluded that the country was moving forward dynamically. And now, 15 years later, we see that this conclusion was very correct.

20. Italy, December 2006

During the celebration of the 75th anniversary of the All-Russian Rice Research Institute in Krasnodar, on September 9, 2006, at the end of the working day, Professor Aldo Ferrero approached me with a question:

— Do you have a computer center or an Internet classroom in Krasnodar?

— Probably, yes. But what for?

— I need to send a letter to my colleagues at the University of Turin so that they can send additional information for the report. The time difference between Krasnodar and Turin is two hours, the guys are still at work, they will have time to send it.

— Why should we look for an Internet classroom when I have notebook at home. Let's go to my place, you will send your request and while we are drinking tea, they will send you an answer.

I called Olga Vsevolodovna so that she would prepare to receive the guest. We arrived. Aldo sent the letter. We sat down at the table, helped ourselves, and chatted. My fifteen-year-old son Pavel also sat next to his mother and prompted her with words (in English) as the conversation progressed. Pavel studied in a specialized class with enhanced English. But when Aldo asked him a question, he blushed and could not immediately answer in English.

Half an hour later, we checked our mail. The answer with the information Aldo needed had arrived. Saying goodbye, before leaving home, Aldo turned to Pavel and said:

— I see you are learning English. That's good, study. Your father often comes to Italy, I can invite you to visit us.

Three days later, Olga Vsevolodovna told me that Pavel had taken the initiative and went to special English courses where they taught conversational English. Two months passed, Pavel began speaking English more fluently.

— That's good, we will wait for an opportunity.

And such an opportunity soon presented itself. The Kuban State Agrarian University won a grant from the President of the Russian Federation, the implementation of which required the presence of agreements with foreign Universities. At the end of November, the Vice-Rector for academic affairs invited me, gave me this information and asked:

— Could you sign such an agreement? And if so, with whom?

I thought about it and said:

— Yes, in Italy, with the University of Turin. My colleague, Professor Aldo Ferrero, works there as the Dean of the Agricultural faculty.

— Okay, let's prepare a draft agreement.

That same evening, I sent a letter to Aldo, in which I outlined the essence of the problem. The next day, I received a reply. In it, Aldo said that in principle the agreement could be signed, but it should first be reviewed.

A few days later, I sent the prepared draft agreement in English to Aldo. Fortunately, e-mail allows you to do this quickly. A couple of days later, he said that they were satisfied with the agreement, made some minor adjustments and were ready to sign it in this form. We looked at these clarifications, and they also satisfied us. We prepared a final version of the agreement and signed it with our Rector. Now we could go to Turin. But to travel to Italy, you need a visa, which could be obtained at the invitation of the host party. I informed Aldo about this and asked him to send an invitation for me and Pavel. Aldo quickly sent the invitations, and Pavel and I flew to Moscow on Tuesday, December 15. The next day I found the Italian embassy and learned the conditions for obtaining a visa. If you applied for a visa privately, it was issued within two months, and if through an organization, it was much faster.



With Pavel in Moscow before the trip to Italy, 2006

I went to my native Russian Academy of Agricultural Sciences (RASKhN), went to the external relations department with a small gift, conveyed greetings from warm Kuban land and explained the situation. Thanks to the department employees, the women turned out to be very friendly. Within a day and a half, they prepared all the necessary papers. They decided to sign Pavel up as a translator for a professor. This was often done, not all professors spoke the language so well that they did not need a translator.

On Friday, early in the morning, I went to the Italian embassy. I walked past the church where A. S. Pushkin married N. N. Goncharova, looked at the gilded domes and said:

— Help us, please, we need it so much! Tickets to Milan for Tuesday are booked...

I approached the Embassy, and there was a huge crowd standing in front of the checkpoint. People had been queuing to get in since the night. Well, I thought, things were not good, I would not be able to get in here until nightfall. I stood there, sad. I felt sorry for Pavel, he had been sitting alone in the hotel for three days already. Suddenly I saw two guys pushing their way through the crowd, showing their ID to the guard, who nodded and opened the passage. After a while, three more people got there in the same way. I asked the guy standing next to me:

— Why are they being let through without queuing?

This guy had been here before and explained to me that they were representatives of organizations. They were letting them through without queuing.

— Oh, that's a chance, I thought, the professor's ID (a little red book) was in my pocket, that would do.

And indeed, when I walked up to the guard with a determined step, casually thrusting the open ID at him, he only glanced at the little red book, nodded and opened the gate. Without looking back, I walked into the Embassy building. They say rightly that impudence is the second happiness.

I went up to the second floor to the reception hall. People were crowding around the windows. Above the far left window there was a sign: "Reception of organizations." And there was only one man standing there. About 10 minutes later he left, I went to the window. A middle-aged woman of pleasant appearance was sitting at the reception. I explained to her that on behalf of the Rector of the University I was going to the city of Turin to sign the Agreement on Cooperation between the Universities.

— Give me your papers.

She looked through them and said that the visa will not be issued before Monday.

— Okay, I have a ticket for Tuesday.

And I was bursting with joy. It worked!

— On Monday, by 16–00, be on the 1st floor in the document issuance hall.

By the appointed time, Pavel and I arrived at the Embassy. Within an hour, we received our passports with a visa. The next day, early in the morning, we went to Sheremetyevo-2 airport. Strictly on schedule, we flew to Milan. Pavel looked around with wide-open eyes.

From Milan we went by bus to Turin. We checked into the same hotel where I stayed before. (Aldo Ferrero booked a room for us in advance). At the end of the day, Aldo came to visit us. We discussed the program of our stay from December 22 to 27. The result should be a signed agreement. Aldo took our papers, looked over the text and said that the agreement would be signed by December 26.

The next morning, Aldo came to pick us up, and we went to the University. There, in his office, the staff of the Agronomy department gathered. The conversation was about cooperation, the possibilities of mutual internships for students, postgraduates and lecturers. We communicated, and Pasha was silent.

— Pavel, what's the matter? You studied English and spoke it well at home.

They asked him something, and he blushed and remained silent. I even felt awkward in front of Aldo. I wrote to him when I asked for an invitation that Pasha had already started speaking English.



In Aldo's office at the University of Turin

Two days passed like this. I was very concerned about Pavel's psychological state. In the evening we went to a cafeteria to have dinner. There was a football match on TV. The local team, Juventus, was playing, and Pavel knew the players well. He watched the game with pleasure while we were having dinner. The bartender spoke English, so I sent Pasha to get some more Pepsi-Cola. At that moment, a Juventus player scored a goal. Pavel said the player's name, and the bartender was surprised that he knew it. Then he said a few phrases to Pasha in English, and he responded. After that, Pasha approached the bartender several times, and they talked about something while watching the football.



At dinner in a cafe in Turin

Looking at this scene, I realized: at that moment Pavel overcame the psychological barrier and started speaking English. The next day at the Institute, he was already freely conversing with Aldo's assistant.

And December 25, Friday, was Catholic Christmas. Everything was closed in the city. Aldo's wife passed on an invitation to us to spend the day at their place. In addition, their sons had arrived, and a festive dinner was planned. We accepted their invitation.

The next morning, around 10:00, Aldo picked us up and took us to his place. He lived on the outskirts of the city in a 4-story building in a large 4-room apartment. His wife, Maria-Pia, welcomed us very warmly and introduced us to her sons. The eldest, Francesco, worked in Ireland in the banking sector,

spoke excellent English. The youngest, Pietro, learned Russian and worked in Moscow in an Italian-Russian company.



Visiting Aldo Ferrero, December 25, 2006

I thought that Pavel would communicate with Pietro in Russian. But it turned out that he was more interested in talking to Francesco in English. They spent the whole day together, talking, playing chess, discussing something again, laughing. I just admired them at a distance.

Looking ahead, I will note that the signed agreement made it possible to expand the cooperation program between the Universities and exchange interns. In October 2010, two graduates of the Faculty of Agriculture of the University of Turin, sent by Aldo Ferrero, arrived at our department for a three-week internship: Marco Lafero and Marco Belforti. Their goal was to complete an internship, but they set different tasks for themselves. Marco Lafero studied Russian at home and wanted to improve it in a language environment.

In our first conversation, Marco Lafero said that he had set himself three promising tasks: 1. Learn Russian; 2. Work in a Russian-Italian company in Russia; 3. Marry a Russian girl. I smiled secretly at his intentions, but out loud I supported his plans:

— If you want, you can do anything.

As it turned out later, Marco really did fulfill his plan. For the New Year 2015, he sent me a greeting card and said that since 2013 he had been working

in a Russian-Italian company, whose head office is located in Krasnodar, during the year he met a local girl and married her. A year later, she gave birth to a daughter and told him:

— I didn't marry a foreigner to live in Krasnodar.

And they left for Italy, his homeland, to his parents, who lived near the city of Genoa.

But Marco Belforti set a goal to get 30 points and a certificate thanks to this internship. This allowed him to enter full-time graduate school. Upon completion of his Master's degree, he scored 240 points, and he needed to have 270 points to enter postgraduate studies.

In 2012, when we were in Turin, Marco Belforti came to meet us. He was a full-time postgraduate student, involved in research of trout feeding, working on a business contract, he received a scholarship of 4 thousand euros and was very happy.

But let's get back to our trip. The next day, Saturday, was a general day off, and Aldo advised Pavel and me to go to the mountains to the town of Bardonecchia, where the ski competitions were held during the Turin Olympics. He told us how to buy tickets for the train. Early in the morning we were at the train station, which was located within a block from our hotel. The train went for about an hour, climbing higher and higher into the mountains. We enjoyed a wonderful panorama outside, but the fog prevented us from taking pictures. At the Bardonecchia station we got off with a large group of young people. Everyone was heading in the same direction, towards the ski lifts, which were visible from the station.



Mountain resort of Bardonecchia, Italy

At the foot of the mountain there were several small buildings, among which we saw an equipment rental point. We needed to rent boots and alpine skis. By the way, the price was very reasonable. First, we picked out shoes. No problem for Pavel, his shoe size was 43. But I had to try on several pairs, they had a hard time finding one for my size 46. Our clothes were clearly not sportswear, but we did not pay attention to this. Then we got our skis and headed to the ski area. There were three tracks there: a small one for children and beginners, a medium one, and a giant one for high-speed descent. We chose the medium one, watching the skiers rush along the high-speed track. We bought badges for entering the ski lift for the whole day. We watched the whole skiing procedure from the side, and went to the start. The lift was a cable that rotated endlessly. A plate was attached to it on cables at a distance of about every 5 meters. You sat on this plate, holding the rope with your feet, and went up the mountain.

At the top there was a platform where everyone was met by instructors. They checked the equipment and explained the basics of descent technique. They showed everyone how to fall correctly. To do this, you need to squat and fall on your side.

There were many parents with children on the slope, starting, probably, from about five years old. Everyone was dressed in special uniforms. They skied so recklessly that we envied their training.



First time on alpine skis

We did not immediately rush to the descent, we carefully watched the lessons that the instructors gave to all beginners. We did the first descents quietly, halfway, then further and finally — to the end of the descent.

While we were going down slowly, braking, there were no problems. And when it seemed to us that we had already got the hang of it, we began to pick up the speed a little. We were lucky up to a certain point, and then the problems started. I almost ran into a lady who for some reason decided to unexpectedly turn in my direction, and in order not to knock her down, I had to fall quickly. Then for some reason the ski twisted, and again a sideways fall saved me. And so many times. The same thing happened to Pavel. It was good that the falls did not cause any injuries. However, gradually we got used to the skis, and the lift, and the high-speed descent. In our excitement, we rushed down, up and down again and did not notice how the day had passed. At 17–00 we stopped at the upper platform before the last descent. We stood there looking at the darkening mountains, the sun setting behind the mountain and immediately it began to get dark. As a farewell, we decided to go straight to the rental point along the Giant route, which passed next to our upper platform. We chose a moment when there was a pause between the racers. We raced down, braking sharply right in front of the entrance to the rental shop. The attendant expressed admiration for how well we had skied down. But when I told him that this was our first time skiing, he didn't believe me at all.



Pavel on the mountainside in Bardanecchia

Having handed over the equipment, we went outside and 5 minutes later felt how exhausted we were. Our mouths were so dry that it was hard to speak. Not a crumb or a sip of water in our mouths the whole day. We took a 1.5-liter bottle of water from the buffet, drank it in two gulps and went to the train, barely moving our legs. Arriving at the hotel, we took a shower, had a light snack and fell asleep like logs.

In the morning we barely got up, all our muscles ached from the strain. Luckily it was Sunday and there was no need to rush anywhere. Closer to lunchtime, Aldo arrived and brought the signed contract. The purpose of the trip was accomplished. We said goodbye to Aldo, thanked him for the warm welcome and the time spent productively. We spent the rest of the day in the city. We went to the station, bought tickets for the train to Milan for the next morning. In Milan, I had a meeting planned with Stefano Bocchi, a Professor at the local University. We had to discuss the terms of the next conference on rice as the members of the Organizing Committee. Aldo had called him in advance and told him the time of our arrival in Milan.

When the train arrived at the Milan railway station, Stefano was waiting for us on the platform. We greeted each other warmly, and I dragged my suitcase to the storage room. That same evening, at 11 p.m., we were flying to Moscow. So we had a whole day to spare.



With Professor Stefano Bocchi in Milan at La Scala

While I was standing in line and checking in my suitcase, Pavel and Stefano waited aside for about 20 minutes. Returning to them, I started telling Stefano in English about our trip to Turin and Bardanecchia. Pavel nudged me in the side and said:

— I've already told him all of this.

I asked Stefano:

— Have you understood everything?

— Absolutely everything.

— And how is his language?

— Excellent.

I just thought:

— Well, Pavel, it was worth bringing you to Italy. You've accomplished the task, you are speaking English now.

Stefano was with us almost the whole day. He showed us the sights of Milan, treated us to national pizza. It was lunchtime, and Stefano invited us to a cafe-pizzeria. He ordered it himself: traditional pizza and the necessary toppings. The waiter brought a huge plate of pizza and put it on the table in front of me. A thought flashed through my mind: "How are we going to eat it, it's so big?" But a minute later the waiter came with two similar plates and put them in front of Pasha and Stefano. I couldn't help but exclaim:

— Stefano, how are we going to eat such a huge dish?

— No problem, we have enough time, we'll talk and eat it.

And sure enough, after 2 hours we got up and the plates were empty. We discussed all the details of the upcoming conference during the meal. Then we walked around Milan and by the end of the day we went to the airport. There we waited for our flight and flew home strictly on schedule.

The signed Agreement between Kuban State Agrarian University and the University of Turin played an important role in further cooperation. In 2010, two Italians, with Masters degree of the University of Turin, came to our University for an internship, and in 2012 Olga Vsevolodovna and I went to Italy for an internship.

21. Italy, July 2007

In July 2007, a large International Conference on Rice was held in the Italian city of Novara. We were also invited to take part in this conference. Aldo Ferrero was one of the organizers, so we were notified in advance, received the invitation on time and sent abstracts of our reports. Our delegation turned out to be very representative. E. M. Kharitonov with translator Maryana, V. S. Kovalev and N. N. Malysheva were from the All-Russian Rice Research Institute; O. V. Zelenskaya and I were from Kuban State Agrarian University (this time Olga Vsevolodovna went not as an accompanying person, but as a full participant presenting a report); two farm directors, S. V. Kizinek and L. F. Maksimenko, represented the rice producers.



Our delegation at Sheremetyevo-2 airport, 2007

When we arrived in Moscow, we received our luggage and, to our surprise, some liquid was leaking from the suitcase of Sergey Vladimirovich Kizinek, and it was so fragrant that those around us noticed. We opened the suitcase and discovered two broken bottles of cognac which he took as a souvenir for his Italian colleagues. Apparently, the suitcase was thrown roughly during

unloading. Sergey unpacked his things, everything was wet. Both disaster and laughter. But there was nothing to do. He had to hang his shirts, suit and other things on chairs in the waiting room to dry. The air was filled with such a cognac aroma that strangers came up to ask what had happened. We fought off their persistent questions and felt sorry not so much for the lost cognac, but for Sergey, who looked very upset because of his ruined clothes. Fortunately, there was enough time between flights, so the things had time to dry. Later, everyone recalled this with a smile, but at that moment, none of us were in the mood for laughter, especially Sergey.

We arrived in Milan without incident. There, at the airport, a bus was waiting, which took the conference participants to the city of Novara. After driving 45 km, we were there. Having settled into the hotel, we immediately went outside. It was warm summer weather, so we went for a walk around the city, breathing in its air. This was what our French colleagues said when they first arrived in Krasnodar.



View of the city of Novara, Italy

Novara is a small town by our standards, which was founded in 89 BC as a Latin colony. Novara is located between the Agogna and Terdoppio rivers in the northeastern region of Piedmont, 50 km from Milan and 95 km from Turin.

Today it is home to over 100 thousand people. Traces of ancient history are visible in every corner of the historic center of Novara — the remains of ancient Roman walls dating back to the 1st century BC, the times when the city flourished under the reign of Julius Caesar. The walls were built by the Romans from river pebbles, held together with a special fixing solution. But most of the buildings in the urban landscape date back to the 19th century. Now the center is built up with multi-story buildings, and the outskirts — with single-story buildings. In general, it is a clean, green, cozy town, with frequent squares, parks and large walking areas. The city has many small shops and cafes.

Novara is the center of the rice growing area of Italy. Rice fields are immediately outside the city surrounding it. In the very center of the city, on the square, there was an exhibition dedicated to our conference. In the tent pavilions, there were expositions of various companies (fertilizers, plant protection products, equipment, etc.), which were the sponsors of this event.



Russian delegation in Novara



At the city notice board

Rice Research Institute was located at the outskirts of Novara. The conference participants visited it as part of the introductory program. The Institute occupied a small 3-story building. There were experimental fields — rice checks, small in area, well-groomed around the Institute. The Director of the Institute gave us a report, showed on slides the history of rice cultivation in Italy, told about the research at the Institute. After the lecture, she invited everyone to see the rice museum, and then the experiments in the field. Neat, even plots. Everything looked very beautiful, but the rice was only in the tillering phase, so the differences between the varieties and variants were practically not visible.

The museum of the history of rice cultivation in Italy was organized by the employees of the Rice Institute. We enjoyed looking at the numerous exhibits displayed in three rooms. Commenting on what he saw, E. M. Kharitonov said that we definitely need to have such a large-scale museum.

In one room there were two antique chairs. It turned out that the President of the local rice growers and his Deputy sat on them. Sergey couldn't resist the temptation asking permission to sit in the chair. And I immediately took a photo.

The main organizer of the conference was Professor Aldo Ferrero, as the Chairman of the Committee of European Rice Growers and the host of the receiving country. He arrived in Novara with his wife. On the very first day,

Olga and I met the Ferrero couple. Olga expressed her gratitude to Maria Pia and Aldo for their warm welcome to Pavel and me in December. Right there by their car, I took a photo as a souvenir of the meeting in Novara.

The conference was held in a large hall in the city center. Everything followed the usual scenario: reports, questions, coffee breaks, communication with colleagues.



S. V. Kizinek in the chair of the President of Italian rice growers



Olga and the Ferrero couple

Almost all leading scientists from many rice-growing countries came to the conference. I had met most of them before, so we all communicated with particular pleasure.

My report was about glutinous rice varieties intended for baby and therapeutic nutrition. On the slides, I showed the varieties Viola and Violetta, described how they had been created and how they were used. Several questions were asked, which I answered successfully. Everything went well.

After the report, during a break in the meeting, a colleague from Holland approached me and said that he was very interested in my message. His company produced baby food products from waxy rice. They bought rice for this in Thailand. He said that Russia was much closer to Holland. Could we supply them with glutinous rice? I told him that I am a breeder, not a businessman. He would be better off talking about delivery of this rice with the Director of our Institute, who was also present at the conference.



S. Kizinek, G. Zelensky, I. Kiss (Hungary), G. Alionte (Romania)

— Oh, I want to see him!— he exclaimed.

— We'll arrange a meeting for you.

I found Evgeny Mikhailovich with the translator Maryana among the scientists talking and introduced the Dutchman.

Evgeny Mikhailovich immediately understood the essence of the problem and said that some documents were needed for action.

— Write us a letter and indicate in it everything you want. And we'll consider it and make a decision.



Threesome with Aldo Ferrero

Looking ahead, I'll say that in August a letter arrived at the All-Russian Research Institute of Rice from Holland. It contained a request to send 3 kg of rice variety Viola for testing in the company's laboratory. The Director instructed the specialists of the quality laboratory to prepare Viola and send it to Holland. With incredible difficulty, all the obstacles at customs were resolved and the parcel was sent.

A couple of months later, a letter arrived. In it, the Dutch specialist reported that Viola waxy rice met all the requirements for raw materials for the production of baby food. That was why they would like to know the addresses of Russian factories where they can buy waxy rice. They were ready to buy it in unlimited quantities. And at our Institute, the variety Viola grew in one check on an area of 0.3 hectares. What kind of wagon deliveries could we talk about? Due to the lack of demand, we simply kept the variety "live", just in case. And then this case came. The Institute answered that if the Dutch company was so interested, then an agreement should be signed. We would increase the

production of Viola grain in three years and supply it to Holland. There was no answer after that...

A monument to a rice grower was erected in the center of Novara. The bronze figure depicted manual work in a rice field. This is perhaps the only monument in the world dedicated to the hard work of growing rice.

The conference organizers did a lot of preparatory work. Before the opening of the first session, all participants were given the book of reports and abstracts sent in advance by conference participants. Having leafed through this voluminous book, I also found my article: "Breeding of Glutinous Rice in Russia for the Production of Baby and Dietary Food".

The collection was published in English under the editorship of professors S. Bocchi, A. Ferrero and A. Porro, with whom I was well acquainted from previous meetings. Here in Novara I not only communicated with them, but also listened with pleasure to their scientific reports.

The conference program, in addition to reports and discussions in the hall, included visits to the experimental fields of the Rice Institute, the Center for rice hybridization, fields of seed crops and farms. We studied everything in detail. The rice plants were at tillering or tube emergence phase. Therefore, we saw only green fields, albeit well-groomed, and listened to the comments of specialists.



Monument to a rice grower in Novara

The rice systems of the Rice Institute differed significantly from the Russian fields we were used to with large canals, wide banks, 5–6 hectare checks. Here everything was miniature in size. Narrow concrete canals with narrow banks, along which only one person can pass. However, asphalt roads for equipment were laid along the field.

After the conference, all participants were taken on an excursion to the picturesque Lake Orta, located north of Novara. There, in a restaurant on the lake, a final gala dinner was held.



Elements of the Italian rice system



On the Lake Orta

We had two more days before departure, and we decided to spend one of them in Venice. This is, of course, a special city, different from all those we had seen before. We were there for the first time. A city on the water, where instead of roads there are canals. The main transport is boats, motorboats and gondolas.

The impression of this city was unusual. The question constantly arose:
— How do they live here? Probably, a habit.

It is known that Venice was founded in the 4th century. The city is located on 118 islands in the Adriatic Sea.

There are about 150 canals in the city, over which 399 bridges are thrown. Venice flourished in the 9th–14th centuries, when, thanks to its geographical location, as well as the policy of the Crusades of medieval Europe, the state acquired strategic importance.

Venice can rightfully be called the pearl of world culture and art. The streets are crossed by canals that connect all parts of the city. Over the centuries, thanks to the huge donations of Venetian merchants, the city acquired a unique architectural appearance. In its center is St. Mark's Square, named after the evangelist Mark, the patron saint of Venice. Here is also St. Mark's Cathedral, famous for its rich frescoes, statues, mosaics, magnificent interior and exterior decoration. Nearby is the tower (famous for the fact that Galileo Galilei first installed a telescope there), the Doge's Palace, a monument depicting a winged lion the symbol of Venice. An interesting landmark of the city is the Grand Canal (Canalazzo), dividing the city into two parts. It is framed by ancient palaces and houses of amazing architecture. The central artery of the city connects with the St. Mark's Canal. Venice attracts a huge number of tourists from all over the world every day. In February, the world-famous Venetian Carnival is held there, but in the summer, shop windows with an abundance of masquerade masks and costumes still remind us of it.



Venice, a city on the water

We arrived at the Venice train station by train from Novara. And then we used the Vaporetto — a river tram, which is the main public transport in the island part of the city. Along the way we could see the houses and palaces of the Venetians built on piles right in the water along the Grand Canal. We were lucky: San Marco Square was dry, although there occasionally happened floods, the so-called “high water”, and then one could only walk on the footbridges. The square was full of pigeons, which tourists fed and photographed. After standing in line, we visited St. Mark’s Cathedral, admired its interior decoration. And then we happily took a photo with a stone lion.



In St. Mark’s Square

Then our paths diverged. Some went for a gondola ride along the canals and looked at the city from the water, others enjoyed the local cuisine in Italian restaurants. In the end, everyone returned to Novara separately.

Our small group (me, Olga and Maryana) decided to walk to the famous Rialto Bridge, fortunately there were signs everywhere. Otherwise, we would immediately get lost on the narrow and winding Venetian streets. Many of them

were no more than two meters wide. It seemed that neighbors living across the street could shake hands. Having looked at all the sights known to us from guidebooks, having breathed in enough of the musty smell of this amazing city, we walked through the souvenir shops with Venetian glass. And only the time limit before the train's departure allowed me to tear my companions away from the fascinating activity of choosing jewelry.



In a souvenir shop in Venice

We spent only one day in Venice, but the impressions remained for many years. And so, looking through numerous photographs with views of Venice, the thought arose more than once that we should go there again. The books we read with stories about Venice only strengthened the desire to visit those places again.

There was one free day left before leaving home, and our delegation decided to take another excursion. The suggestions for where to go were divided. Novara is approximately the same distance from Turin and Milan. Our colleagues wanted to go to Turin. The city impressed them more than Venice. And Olga and me decided to see Milan. Olga had previously developed a route for seeing the sights of Milan, which we had not had a chance to see before.

We began our tour of Milan from the center of attraction for all tourists the square in front of the grand Duomo Cathedral. It is called the Cathedral

of the Nativity of the Virgin Mary. It is built of white marble in the flamboyant Gothic style. The construction of the cathedral began in 1386 and was completed only by the beginning of the 19th century. The building is decorated with many spires and sculptures, marble pointed towers and columns. The Milan Cathedral is one of the largest in Europe.

Olga and me walked from the cathedral along the gallery to Leonardo da Vinci Square, where the famous La Scala opera house is located.

Having paid tribute to the generally recognized tourist attractions, we, guided by the city map, went to the Pinacoteca di Brera. This is a museum that contains masterpieces of Italian art, and one of the largest art galleries in Milan.

Among the many paintings in the museum, the creation of the Flemish artist Peter Paul Rubens, “The Last Supper”, stands out. He reproduced it in 1631, making an etching based on the painting of the greatest Leonardo da Vinci, which is also called “The Last Supper”.

Walking past the city square, I noticed an interesting element of park art: a border of dwarf apple trees, the branches of which were stretched along the road at a height of 60–80 cm.

I was eager to create something similar near my house. And I must say that I succeeded. My friend, the famous gardener Alexander Anatolyevich Klad, supplied me with apple and pear seedlings. I formed a structure similar to the Milanese one and now an apple-pear border grows in front of our house. Hung with fruits, it surprises my guests.



On the street of Milan

Next we headed to the Santa Maria delle Grazie church, which is famous for the fact that its refectory contains one of the most famous wall paintings in the world — Leonardo da Vinci’s “The Last Supper”. Unfortunately, restoration works were underway in the church, access to visitors was limited, and we were unable to see this fresco.

The next day we said goodbye to the hospitable town of Novara and spent half a day before flying to Moscow in Milan. First, the whole company visited the Duomo Cathedral, looked at the interior decoration and climbed up to its roof. From here, a beautiful view of the surrounding city opened up.



On the roof of the Duomo Cathedral

Then we parted ways, agreeing to meet at the Milan airport 3 hours before departure.

Olga wanted to see the Castello Sforzesco castle — the residence of the Milanese dukes of the Sforza dynasty. This is one of the main attractions of Milan. I had been there before, so I was happy to act as a tour guide.

In the evening, our delegation gathered at the airport. While waiting for the plane, my colleagues shared their impressions of the past days, filled with

numerous events. Flying home from Italy, we mentally thanked the conference organizers not only for the interesting scientific part, but also for the opportunity to get to know this hospitable country better.

22. Türkiye, October 2007

In October 2007, the International Conference on Rice for the Countries of Central Asia and the Middle East was held in Istanbul.

The Conference was preceded by my conversation with Turkish colleagues at a working meeting of breeders from countries that were members of the Committee of European Rice Growers. The Turkish government had created a fund to support the development of rice growing in its country and in the countries of the so-called “green belt”. They included the countries of the former Soviet Union: Azerbaijan, Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, as well as Afghanistan, Iraq, Iran. A brochure with a map was published, in which all these countries were highlighted in green. Turkish colleagues told about their plans to work in these countries, hoping to introduce their rice varieties and cultivation technologies.

When discussing the plan for holding the conference in Türkiye, it became known that the organizers would invite only the “green belt” countries and, perhaps, Italy, where the leadership of the Committee is located. In addition, Italian rice varieties were grown in Turkey on fairly large areas.

As the head of the breeding section of the Committee of European Rice Growers, but first of all as a Russian, I was very unpleasantly offended by these plans. I asked my Turkish colleagues:

— It is not clear how you are going to work with the republics of the former USSR without the participation of Russian scientists. All rice growers there are Russian-speaking, and they grow mainly Russian rice varieties. And your conference without our participation will be very limited.

Ultimately, scientists from all rice-growing countries of Europe, Egypt and Russia were also invited to the conference. Therefore, the event turned out to be quite representative.

The Russian delegation included 8 rice scientists: four persons from the All-Russian Rice Research Institute (Kharitonov E. M., Kovalev V. S., Malysheva N. N., Vetrova N. F.); four from Kuban State Agrarian University (Zelensky

G. L., Chebotarev M. I., Trubilin E. I. and Maslivets V. A.) and two interpreters from the All-Russian Research Institute of Rice. But before leaving, we learnt that Evgeny Ivanovich Trubilin and Viktor Andrianovich Maslivets could not go, so Mikhail Ivanovich Chebotarev and me would present their reports at the conference.

During the preparation for the conference, we communicated with M. I. Chebotarev. Once I told him:

— The working language at the conference in Istanbul is English, so you definitely need to take a translator with you. Otherwise, your trip loses its meaning. I was included in the Organizing Committee, and I simply will not have time to work with you. Think about it.

A day later, he called me:

— What do you think, can I take your son Pavel as a translator? It will be easier for me, and it will be a good language practice for him.

— In principle, it is possible. I'll even buy him a roundtrip ticket, and you'll support him there.

That's what they decided. Pavel was in the 11th grade, so he had to go to the School Principal to let him go to Türkiye for the conference. The School Principal gave Pavel the go-ahead for the trip.



Participants at the rice conference in Türkiye, 2007

The Conference was very well organized. More than 50 specialists came, representatives of all the above-mentioned countries. Aldo Ferrero and me were on the presidium, and Mikhail Ivanovich and Pavel were sitting at a table with the other participants. The tables were arranged in such a way that all the speakers sat in a semicircle in the first row. The other participants were behind them. The presidium table was in the center. A screen for demonstrating reports was placed on the side.



Russian delegation at the conference

The reports and their discussions lasted three days. Our delegation presented three reports on Russian rice growing: E. M. Kharitonov, M. I. Chebotarev and G. L. Zelensky. Almost all the conference participants took photos and videos. I also took photos as many as possible. Aldo Ferrero was the Conference Chairman and I was offered the role of Secretary. So we were constantly busy. During the breaks between sessions, when everyone went for a coffee break, Aldo, my Turkish colleagues and I did paperwork.

As a cultural program, the organizers offered a city tour and shopping. Meals were organized as a buffet in the morning and at lunch, and in the evening we had a group dinner at a restaurant.



E. M. Kharitonov is giving his report.



As Secretary of the Istanbul Conference

Pavel diligently served as an interpreter for M. I. Chebotarev not only at the meetings in the conference hall, but also in the city, including visiting shops. Mikhail Ivanovich was so pleased that he convinced the Chairman of the Organizing Committee to include Pavel among the conference participants. He was given a badge, and at the end of the conference, a Participant Certificate. In addition, they paid for his accommodation and meals. By the way, the Certificate served as an excuse for missing classes at school during this period, and later, when Pavel entered Kuban Agrarian University it turned out to be an additional bonus.



Pavel is a participant of the conference in Istanbul

In addition to the scientific part of the conference, which was very interesting and informative, there was a tour of Istanbul. This city stands out from the many cities we visited earlier. Istanbul is the largest city in Türkiye, majestically spreads out on the shores of the Bosphorus. This metropolis is the only one in the country, and indeed in the world, located simultaneously in Europe and Asia. It is through Istanbul with a population of more than 14 million people that the geographical border between the two continents passes. In the city, one can see the treasures of two cultures at once — Byzantine and Ottoman. The incomparable Hagia Sophia competes in beauty with the Blue Mosque.

The old center is the former Byzantium, the symbol of which is the Hagia Sophia, formerly Christian temple, and then rebuilt as a Muslim mosque. This temple is a grandiose structure with stunning acoustics inside. The walls are decorated with frescoes.

Hagia Sophia is a unique historical monument — a masterpiece of Byzantine architecture, a symbol of the heyday of Christianity and a witness to the fall of the Byzantine Empire. The cathedral was founded during the reign of Emperor Justinian in the 6th century AD. Over the 14 centuries of its existence, it was destroyed and devastated several times. After the conquest of Constantinople, the Ottomans converted the temple into a mosque, destroying many Christian values. At the beginning of the 20th century, the Turkish authorities decided to assign the status of a museum to Hagia Sophia.



Next to Ngu Yen (Chairman of the FAO Rice Commission)

We enjoyed visiting the historical complexes, touched the walls of these monumental structures, admired the interior decoration carefully preserved for centuries. At the entrance to these mosques, from early morning until late evening, there were endless queues of tourists. We were taken into the buildings with a special pass, avoiding these queues.



Hagia Sophia

Another majestic building is the Blue Mosque, a Muslim temple built during the reign of Sultan Ahmed I in the early 17th century. Rare and precious types of marble were used in its construction. The architecture of the Blue Mosque is a harmonious combination of Ottoman and Byzantine styles. The building is decorated with a large number of Iznik ceramic tiles of a sky-blue color, which is why it was named the “Blue Mosque”.



The Blue Mosque

The Suleymaniye Mosque became a symbol of power of the Ottoman Empire. When the construction was completed, the master predicted that the temple would stand forever. So far, his prophecy has been true: over four centuries the building has survived several dozen serious earthquakes and remained standing. The Suleymaniye Mosque is the largest temple in Istanbul. It is a complex consisting of madrasahs, baths, a library, an observatory, and prayer rooms.

There is a huge market in the city, which one can not walk around even in a week. We practically ran along the edge of the market to have at least a general idea of what it was. It is not for nothing that they say, if you want to know how a country lives, go to the market. The Istanbul market is endless, with such an abundance of goods that it is hard to imagine.



The Süleymaniye Mosque

In the booklet about Istanbul, given to the conference participants, it is written that the “Grand Bazaar” is the largest indoor market in the world, occupying an area of 3.700 m². It is a whole “city within a city” with its own way of life, rhythm and laws. The bazaar consists of 66 streets and 4 thousand shops and stores. There are mosques, a school, a bathhouse, cafes, currency exchange offices and numerous warehouses. Every day, several dozens of thousands of people visit the bazaar. Everything is sold here: from vegetables and fruits, various sweets to manufactured goods and souvenirs. After 2–3 hours of walking around the market, we were so tired of all this abundance that we could no longer perceive anything...

The benefit of this trip to Türkiye was, of course, first of all, in communication with colleagues. It was a good opportunity to discuss problems of rice growing, current issues and prospects for future work.

Pavel got acquainted with young scientists from Türkiye and other countries who were at the conference. They took him for a postgraduate student. He looked very respectable with his good English, decent behavior and dignity. Mikhail Ivanovich was very pleased with his assistant, which he later told me more than once.



**E. M. Kharitonov, N. F. Vetrova, G. L. Zelensky, M. I. Chebotarev
in Istanbul**

A funny incident happened to Mikhail Ivanovich Chebotarev during this trip. He lived in a separate room in the hotel (Pavel stayed with me next door). Each room had a refrigerator with various drinks. I had considerable experience traveling abroad and knew that these drinks had to be paid for separately. This is a common practice in all European hotels. But, unfortunately, I did not think that Mikhail Ivanovich did not know about this. Every day he drank juice, beer, and mineral water from the refrigerator. On the day of departure, they brought him an additional bill for drinks. And before leaving home, he had already spent almost all the cash in liras on souvenirs and gifts. I always had some insurance money left over when I traveled abroad, so I had to bail out Mikhail Ivanovich. However, after returning home, he gratefully returned the debt.

Overall, we were all very pleased with the results of this trip.

23. Kazakhstan, September 2010

In early August 2010, an invitation to a Conference timed to coincide with the AgroBusiness Forum “Golden Autumn” came from the Kazakh Research Institute of Rice Growing named after Ibrai Zhakhaev (city of Kyzylorda). I was asked to give a report on the rice variety Leader, included in the State Register of varieties approved for use in the Republic of Kazakhstan.

The seeds of the variety Leader were brought to Kazakhstan several years earlier in the form of commercial grain purchased at the Angelinsky elevator in the amount of about 400 tons. At the same time, the grain contained about 20% red grain impurities. However, as I was later told, rice specialist Lee Pak, who saw Leader during sowing, convinced his colleagues to accept and sow this grain. Before harvesting, the plants were kept in the field till over-maturity in November (the weather is usually dry and warm in autumn), the grain of red grain forms shed, and less than 4% of it remained in the harvest. The rice variety Leader was created by us for herbicide-free technology. Its plants easily overcome a layer of water up to 20 cm, under which millet weeds decay. And in Kazakhstan they are forced to get rice shoots from under a layer of water due to soil salinization. The salty sands of the Aral Sea, after it dried up, were carried away by the wind and salinized the surrounding lands. Leader turned out to be a very suitable variety for such conditions.

Kyzylorda was memorable place for me because during my military service in the Kazakh SSR (near the city of Aralsk), I twice came to the regional center of the city of Kzyl-Orda for track and field competitions. This was in October 1969 and 1970. At that time, the regional sports competitions (Spartakiad) was held there and I, as the champion of the Aral region, was a member of the regional team.

I think it makes sense to give brief information about this region, taken from open sources. Kyzylorda Region is located to the east of the Aral Sea in the lower reaches of the river Syr Darya, mainly within the Turan Lowland (elevation 50–200 m). Along the left bank of the Syr Darya lie vast expanses of hilly-ridged sands of the Kyzylkum, cut by the dry riverbeds of the Zhanadarya and Kuandarya. Along the right bank there are elevations (Egizkara, 288 m), sand areas, shallow basins occupied by takyr-like salt marshes. In the north of the region, massifs of hilly sands have been formed (Malye Barsuki and Priaralsky Karakum). In the extreme southeast, the northwestern spurs of the Karatau Range (elevation up to 1419 m) are part of the Kyzylorda Region. The climate in the region is sharply continental and extremely arid with long, hot

and dry summers and comparatively warm, short winters with scarce snow. The average July temperature in the northwest is 25.9°C, in the southeast 28.2°C, in January respectively — 9.8°C and 3.5°C. The amount of precipitation in the northwest near the coast of the Aral Sea is about 100 mm (the least in Kazakhstan), in the southeast in the foothills of Karatau up to 175 mm. The northeastern half of the Aral Sea is within the boundaries of the Kyzylorda region. The only large river is the Syr Darya, flowing through the central part of the region from the southeast to the northwest for about 1,000 km, with a strongly winding riverbed, many channels and branches and an extensive swampy delta. To protect against floods, dams have been built along the banks of the river; In 1956, the Kyzyl-Orda Dam was built on the Syr Darya River; in 1958, the waters of the river were directed through the Zhanadarya riverbed to irrigate fields and pastures.

There are many animals in the desert: predators (corsac fox, wolf, jackal, etc.) and ungulates (saiga antelope, goitered gazelle), as well as rodents and birds.

There are 7 districts in the Kyzylorda region:

1. Aralsky district, its center is the city of Aralsk
2. Kazalinsky district, with center Aiteke-Bi (Novokazalinsk), the urban-type settlement
3. Karmakshinsky district, center — the village of Zhosaly (Dzhusaly)
4. Zhalagashsky district, center — the village of Zhalagash (Dzhalagash)
5. Syrdarya district, center — the village of Terenozek
6. Shieliysky district, center — the village of Shieli (Chili)
7. Zhanakorgansky district, center — the village of Zhanakorgan (Yanykurgan)
8. The city of Kyzylorda — the regional center
9. The city of Baikonur — a city of republican subordination

(The territory of Baikonur is on a long-term lease by the Russian Federation. Russian legislation is in effect on the territory of the city, the Russian currency is used. — Author).

Kazakhstan is a multinational republic. Representatives of almost 20 nationalities live in the Kyzylorda region. However, the overwhelming majority (more than 95%) are Kazakhs.

Communicating with various representatives of Kyzylorda — scientists, heads of companies and ordinary rice growers, I met hard-working, friendly and hospitable people.

Forty years have passed and, of course, I wanted to visit the places of my youth, to see what changed over time. Then there had been one country — the USSR, and in 2010 it was another, albeit friendly, state. I was interested in the

events taking place in the Republic of Kazakhstan. I knew about the problems that arose in connection with the drying up of the Aral Sea. Back in 2007, I received a letter from Urazbay Abylayev from Karakalpakstan (a classmate in graduate school), in which he bitterly reported that they had problems with rice growing that year. In July, when the rice plants were in the tillering phase, the water level in the Amu Darya River fell below the canal pool, and the rice plants simply got dry on an area of more than 50 thousand hectares. The water of the Amu Darya was intercepted in the upper reaches, and it did not get to the Aral Sea. In Kazakhstan, they decided to build a dam and fence off that part of the Aral Sea where the river Syr Darya flowed into it. This structure did not allow the river water to spread, created a water backup and ultimately saved Kazakhstan's rice growing.

Another large project was carried out in the Republic — they moved the capital from Almaty to a new place, to the former city of Tselinograd and called it Astana. I was interested in seeing the new capital and the new country in general, talking with fellow rice growers who had visited us many times.

In September, the time came for the trip, I bought a round trip air ticket Krasnodar — Moscow — Astana — Kyzylorda. The flight time was such that I arrived in Astana on Sunday at about 5 a.m. local time, and the flight to Kyzylorda was at 4 p.m. I had to wait for my flight almost all day. So I decided not to sit at the airport, but to go to the city and visit Astana. I left my things in the storage room, and as soon as the first bus arrived at the airport, I went to the city. I took only my documents and a camera with me.

Astana is a city in the northeast of Kazakhstan, its name translated from Kazakh means “the capital city”. In 1997, Astana received the status of the capital of the state instead of Almaty. The former center remained the cultural and educational dominant of the country, but Astana, which recently became a city with a population of one million, is rapidly catching up with the unofficial “southern capital”. Over the past 20 years, so much public and private money has been invested in Astana that the unremarkable provincial city of Tselinograd in the bare steppe has turned into a modern metropolis.

For many millennia, the territory of modern Astana and its environs was covered by bleak, endless steppes that came to life only during the spring flowering season. There were no large settlements there in ancient times due to its harsh continental climate, but trade caravans constantly stopped there, leaving evidence of their presence to archaeologists. The modern history of the city begins around 1830, when the Cossack fortification of Akmolinsk was founded to protect against the raids of the nomadic peoples of Central Asia. People of

non-military class immediately began to settle around it. In 1862, the expanded fortress was given the status of a city. Under Soviet rule, Akmolinsk remained an ordinary provincial town. The turning point occurred under N. S. Khrushchev, when the development of the fertile virgin lands of the Kazakh steppes began. Having found itself in the spotlight due to its favorable geographical location, the city of Akmola was renamed Tselinograd.

In Soviet times, about 60% of Russians lived in this city, now the number is less than 20%. This happened not due to a decrease in the number of Russians, but because the number of Kazakhs who came to work from other regions of the country increased sharply. Now up to 70% of internal migrants live in the city, and the government only welcomes the growth of the capital and the attraction of new active citizens.

In 1992, the city returned to the name Akmola, but in 1998 it was changed again in favor of Astana. The decision to move the state center from Almaty was taken in 1994, and in 1998 the city was presented to the international community as the new center of the state.

In honor of the transfer of the capital, the Astana-Baiterek tower was erected in Astana.

According to the authors, the object embodies the folklore Tree of Life, the branches of which support the Sun — the egg of the Samruk bird. The tower symbolizes the support of the young Kazakh state, based on folk traditions, but not shying away from progress.



Astana, Baiterek Tower

It should be noted that the construction of the capital was planned on a grand scale. The airport — a modern structure was built in the steppe 14 km from the central part of the city. It was assumed that the city would grow.

A wide asphalt highway lead from the airport to the city. Along the way, in some places, separate complexes of buildings arose, to which asphalt roads branched off from the highway. There was steppe all around, the bus stopped at an intersection near unfinished buildings, and the conductor announced the stop “University”. These were the educational buildings and dormitories of the National University. It was located about 10 km from the city center. Probably, in the future, the city would absorb the free space. The closer to the center, the more grandiose the buildings, super-modern, glass and steel appeared. The bus reached the railway station, and the conductor announced the final stop. Everyone got off. Ahead was the old station square, next to the market. Lots of people, bustle.

At that time I realized that Astana consisted of two parts, divided by a river. On one side was the old city (former Tselinograd): typical five-story buildings, gray Khrushchev-era houses. And on the other side of the river, a new city was being built — Astana. There were wide avenues and modern high-rise buildings.

To get fully acquainted with Astana, I got on a city bus that took me round the city.



Astana — the capital of Kazakhstan: the old and the new city

As we drove, I became convinced that Astana was the city of the future. I definitely need to go there in 10–15 years and everything will probably be different. There will be green spaces, parks and walking areas. Judging by the individual buildings, the plan for the construction of Astana is grandiose.

The bus went along the street of foreign embassies. Along the wide avenue, cottage buildings were built, surrounded by green lawns and planted alleys of young trees. You can imagine what kind of park area there will be when the trees grow up.

During those few hours, I saw and learned more about this city than I had read about it. Returning to the airport, I waited for my flight and flew to Kyzylorda on a small plane of local airlines.

In 1 hour and 20 minutes, we landed at the Kyzylorda airport. The thermometer on the airport building showed 52°C, and a dry wind was blowing. It was hot, but it was easy to breathe. And I remembered the time when I served there near Aralsk. This kind of weather was common throughout the summer.

In the arrivals hall, I was met by colleagues from the Kazakh Research Institute of Rice Growing. The Toyota had air conditioning, so the ride was comfortable. From the car window, I saw a landscape familiar from my army days — the same sand dunes and rare camel thorn bushes. We got to the city very quickly on a good asphalt road. There was a triumphal arch at the entrance of the city.



Entry to Kyzylorda

The city of Kyzylorda has clearly changed over the past 40 years, it has expanded greatly. Even the name was a little different then — Kzyl-Orda. Closer to the center there are multi-story buildings, and on the outskirts there is a

whole area of new houses at various stages of construction. They explained to me that these were adobe houses built from unbaked adobe bricks, and then plastered. They say it is technologically advanced and inexpensive. The houses are warm in winter and cool in summer because they do not heat up like the ones of stone and concrete.

We arrived at the hotel, a modern 3-story building. Everything inside was very nicely decorated, there was air conditioning round the clock, so the rooms were cool and comfortable. We had dinner in the restaurant right there.

In the morning, a car with an employee of the Kazakh Research Institute of Rice Growing arrived. I was greeted very warmly at the Institute. In the Director's office, we discussed the program of my stay for the week. I was asked to speak at a meeting of the Institute's Academic Council with a report on rice growing in Kuban. It was also planned to visit an agricultural exhibition as part of the Golden Autumn Agroforum and speak at a conference with a report on the rice variety Leader. In addition, a visit to the local University and the city's attractions was planned.

I shared my impressions of the city with my colleagues, comparing it with what it had been like 40 years earlier. I said that I had served in the army near Aralsk and had come there twice for track and field competitions. I remembered that in 1970, a large stadium was being built here. The owners promised to show the modern look of the stadium, especially since mass competitions were being held there as part of the holiday week.

In general, all the days of the week were scheduled in detail. I also wanted to talk to my colleague from the postgraduate program at the All-Russian Rice Research Institute, Umirzak Aimukhabetov. He worked there at the institute, but not with rice, he was breeding melons. We saw him when I came to the Institute in the morning. We exchanged a few words, and he made me promise to visit his house. We decided to do this on Saturday.

In addition, the Director of the Institute, Serikbay Idrisovich Umirzakov, suggested a trip to his homeland as an excursion, which is about 200 km from here. I had to agree. I had to fly out on Sunday evening, so I answered that I was at their disposal all week.

I must give credit to the hosts, everything that we discussed when coordinating the program of my stay was implemented.

On the very first day after lunch, the Academic Council of the Institute met in an expanded format with all the scientists of the Institute invited. At the council, I gave an almost 2-hour report. They listened very attentively and asked many questions. Everyone was interested in the further development

of relations between rice scientists of both countries. I replied that we were in favor of such cooperation, and my presence there confirmed this. Sowing Russian rice varieties in the Kyzylorda region would help develop local rice growing. At the end of the Council meeting, Director Serikbay Idrisovich spoke.

In his rather long speech, he recalled the time when rice growers worked together, and now it was time to strengthen our cooperation. And at the end of his speech, he reminded those gathered:

— Our guest has an anniversary year and he should be congratulated! (*That year I turned 60 on May 1*). Everyone clapped in unison, and to this applause they presented me with a gift — a national robe and a hat. I was surprised!



After congratulating on the anniversary

The next day was spent participating in the Conference and visiting the exhibition of the AgroBusiness Forum “Golden Autumn”. At the conference, I gave a report on the rice variety Leader, specifying its features to be taken into account when growing. There were many producers in the hall, including from rice farms. More than a dozen questions were asked. The director of one farm stood up and said that they grew Leader on an area of more than 1 thousand hectares. They would like more, but there were not enough seeds. He asked me a question:

— Where can I buy the elite Leader without red grains?

I told him to send an application to us with guarantee to buy it. To avoid what happened at the Krasnoarmeysky Rice Farm when they produced the

seeds of the variety Leader by the order from Kazakhstan partners, who did not keep their promise to come and pick the seeds and finally refused to buy them. By that time, our sowing season was over and we were forced to sell the seeds for processing.

During the break in the conference, I met with one of the participants. A short, thin man, obviously of age, approached me. He introduced himself. It turned out that he was an Academician from Almaty. An interesting dialogue took place.

— Do you know that we are brothers?

— Okay, of course, but how?

— Well, when your breeder V. S. Pustovoit was with us (*in Karlag 1930–1935* — Author), he created several varieties of millet. Two of them, salt-resistant and heat-resistant, are still grown by my fellow countrymen in the Semipalatinsk region...

— Truly, the world is small, — I thought.



AgroBusiness Forum “Golden Autumn”, 2010

After the Conference, all the participants went to the central square of the city, where a grand exhibition was set up. There was everything: from yurts with imitation of the life of local residents to modern types of equipment (cars, tractors, combines and other agricultural machinery). I was invited to join a

group of managers, and in this company we walked through the entire territory of the exhibition.

Field kitchens were working right there on the square — they prepared national dishes and treated everyone who wanted to. We also tasted several dishes. We went into a yurt, looked at the traditional setting, sat at the dastarkhan.

People who have never been to Kazakhstan and Central Asia do not know the local Eastern hospitality. But any self-respecting Kazakh not only considers it his duty to tell a visiting traveler what dastarkha is, but also to show it to him.

In European culture, dastarkhan is also the name for not only the table itself, but also the entire Central Asian dining ritual. Dastarkhan in Central Asia, as well as among some other peoples of the East is a tablecloth used during meals; a set table (usually rectangular or square, less often round, 30–35 cm high). Light quilted mattresses, 0.7–0.8 m wide, are spread around the dastarkhan. All participants of the meal sit on them along the perimeter of the dastarkhan.



Dastarkhan

Why did this tablecloth get such a name? It is believed that it is by analogy with the Russian “magic tablecloth”. After all, the dastarkhan never has one or two dishes on it. Usually, 4–5 changing dishes are put on the table. The dastarkhan, according to Kazakh traditions, should be white. This colour of the tablecloth symbolizes the pure intentions of the owner of the house.

We devoted the next day to getting to know the city and were received by the Rector of the University, visited the Archaeological and Historical Museums.

We saw a lot of exhibits obtained by archaeologists in the vicinity of Kyzylorda. During the trip around the city, I was once again convinced how rapidly the city was developing. Along with new buildings, large green areas, parks were organized and boulevards were decorated. All the trees and flowers here grew only with constant watering. The local climate was continental: dry and hot in the summer, with little snow and very cold in the winter.

While exploring the city, we arrived at the stadium — a large modern structure. The stands were so full of spectators that we could barely find a few empty seats on the central stand. At the moment when we entered the stand, right in front of us on a special carpet, a national wrestling competition was being held among men. The first prize was a Zhiguli (LADA) car, which was standing right there, entwined with ribbons. The fights were very fierce. The losers dropped out, and the winners fought in a new round.

I watched the competition with pleasure, admired the stadium, and remembered how in 1969 I won the 4 km cross-country race there and became the regional champion, and in 1970 I was the third prize winner in the 8 km cross-country race.



In the square of the city of Kyzylorda

On Thursday we went to the homeland of the Director of the Research Institute of Rice Growing. We left early in the morning in two all-terrain vehicles,

Russian UAZ. This alone should have warned me that our journey would not be very smooth. And indeed, the journey took more than 3 hours. At first we drove about 80 km on asphalt, then turned onto gravel, and then onto a dirt road that wound between the dunes. It was smoother than on gravel, but very dusty. We passed several settlements and turned into the steppe. A few more kilometers of the road, and suddenly the water surface of the lake sparkled from around the bend. We stopped at the shore, overgrown with tall reeds. A few meters from the water edge there was a tent and five cars, the same all-terrain vehicles. A fire was burning near the tent. A large cauldron was hanging over the fire. The guys were cooking fish soup in it. Serikbay's brother and his friends organized a meeting for us in the open air. Hanging from the cars were bunches of dead pheasant roosters, the result of the evening and morning hunt. A few kilometers from the lake were rice fields. Local men went there to hunt in the morning and evening. Behind the tent was a dastarkhan, with a mountain of snacks on it. Mattresses with pillows for reclining during meals were laid out around the tablecloth.



At a friendly table in the Kazakh steppe

Until the end of the day, everyone enjoyed food, relaxing on mattresses, and those who wanted — in a tent. Then they gave me hunting clothes and a

gun so that I would look like a hunter. To complete the picture, they served several pheasants and opened the photo session. I portrayed a hunter returning with game in his hands.

For complete satisfaction, I wandered around the steppe with a gun, climbed the dunes, looked around for a bird. However, I did not meet any, except for gophers standing on the hills and diving into holes with a squeak when I approached them. In the lowlands, some bushes grew, the northern slopes were covered with grassy plants. Steppe, silence. I wandered with pleasure, remembering the stories of the writer I. S. Turgenev about hunting. It's a pity that at home, in the endless routine of affairs, I do not find the time for such trips. In the evening, when the sun was setting, we went to the rice system to see the pheasants. They really were flying. Dividing into two groups, we moved along the harvested rice paddies. The pheasants took off so unexpectedly and hid so quickly in the reeds that only very experienced shooters managed to make a successful shot. I also fired a couple of times, but, alas, missed. The pheasant rose too far, it was useless to shoot, but I could not resist. The excitement was captivating...

A couple of hours later it began to get dark, and we came together and summed up the results: another 5–6 pheasants were shot. And I noticed: only roosters were shot, the hens were not touched on principle, even if they took off nearby. Well done, they cared about the continuation of the offspring.



Hunting trophies

It was already late in the evening, when it was completely dark, we said goodbye to the hospitable hosts and went to the city. I got to the hotel after midnight. I slept like a baby... The next morning they came for me later than usual, so that I could rest after yesterday trip. The plan was to inspect the rice fields of the Institute, breeding rice plots and other crops.



Inspection of rice breeding crops

The main problem of these places is the salinization of the soil, which is aggravated by the heat and rare rains. Strong evaporation drags salts to the surface of the soil. And then there are the salty sands from the drying Aral Sea, which add problems. Rice grows there due to a layer of water, and of the dryland crops, various forms of millet feel better than others crops. Several dozen different types of millet grew in the breeding field. An ecological test was conducted here. Some plots looked very decent, withstanding this salt load.

In rice fields without a layer of water, salts rise to the surface very quickly and burn the plants, so they keep a constant layer of water. The rice variety Leader is grown here because it emerges from under a layer of water. During the season, the water in the checks is changed 2–3 times, and therefore the rice forms an acceptable harvest.

I spent Saturday visiting my old friend Umirzak Aimukhambetov. In the morning, his nephew, a third-year university student, picked me up in a VAZ-2109. On the way, he told me about himself, about his studies, about the new rules on the roads and in the city. The requirements for driver discipline have been increased. And what surprised me very much was that he spoke Russian with a strong accent, I simply did not understand some words and asked him to repeat them.

We were used to the fact that everyone there spoke Russian well. And this is true, only typical of the older generation that grew up in the USSR. Now, it turns out, young people are learning Russian as a foreign language along with English, French and other languages. Umirzak's nephew believed that he spoke Russian well because Russian was spoken in the families of his parents and grandparents.

Umirzak and his family lived 20 km outside the city, in the village of the elite seed farm of the Rice Institute. As he later told me, in the 1990s, when there was a general crisis, the Institute did not pay salaries, three children had to be educated, there was no money. He sold his three-room apartment in the city and moved to the village. There he was given a small abandoned house. At that time, he switched from rice to melon breeding. The fields were next to the village. This was convenient for two reasons: he quickly got to the field, and he brought the collected melons home for biometric analysis. Here, the whole family helped him to make the necessary measurements, and then they used the pulp for food. Plus a vegetable garden near the house, and he also bred poultry and animals: lamb and young bulls. That was how they survived. Everyone had to work. Gradually, the situation improved. The children grew up, after school they graduated from the institute. Each worked in his specialty, they were practically independent of their parents.

Umirzak built a new spacious house using the same adobe technology replacing the old small house. By the time I arrived, two rooms were ready. They lived in them, and two large halls were being finished. They were preparing the house for the wedding of the third son, who was born during Umirzak's post-graduate studies in Krasnodar. He was jokingly called Kubanets in the family. Anya, Umirzak's wife, was already retired, and took care of the house and her grandchildren when they came to visit.

Anya laid a luxurious table. We sat together, recalling those already distant times when they had been in graduate school at the All-Russian Rice Research Institute. They asked me about all their acquaintances, told me their family history. Now they were happy, everything was settled. It was possible to live.

After dinner, they showed me their farm, garden and vegetable garden. For me, of course, this was surprising. The entire plot was a network of ditches, through which water flowed almost constantly during the summer. It came from a ditch laid along the road, and a branch was made in each yard. All the vegetables and fruit trees grew on high ridges. Without water, there would be no life here. I was convinced of this once again in Umirzak's yard.



With fellow graduate student Umirzak Aimukhambetov

The day passed very quickly in warm conversation. In the evening, Umirzak's nephew arrived to take me to the hotel. I left this hospitable house thinking if we would meet again ...

The next day was free, because I was flying home in the evening. In the morning I walked around the city, bought local souvenirs to remember my visit to this interesting city.

The return flight was the same difficult route: Kyzylorda – Astana – Moscow – Krasnodar. The eventful trip to Kazakhstan ended successfully.

And a month later I received a parcel by mail. It contained a book with materials from the Conference I attended in Kyzylorda. An article with my report was published here: "Ways to Increase Rice Productivity on Saline Soils."



Proceedings of the conference in Kyzylorda, 2010

24. Italy, July 2012

In May 2012, I received a letter from Aldo Ferrero, in which he wrote that according to the Cooperation Agreement between Kuban State Agrarian University and the University of Turin, an exchange of interns should take place. Interns from the University of Turin were at Kuban University in 2010, but ours did not go to there. Funds had been allocated for this program in Italy. They had to be spent. Therefore, during the summer, two interns from Kuban University should go to Turin.

With this letter, I went to the Vice-Rector for research, Professor Yu. P. Fedulov. I showed him the letter and explained the essence of the problem.

— What are the requirements for an intern? — asked Yuri Petrovich.

— Simple. It can be a Master's student, a postgraduate student, or a lecturer. There is only one condition — knowledge of Italian or English.



- Leave the letter, I will talk to the Rector.
- Two days later he called me.
- We've discussed it and decided to send you to Turin.
- The Agreement requires two interns.
- Well, pick a pair.
- She's already here.
- Who is she?
- Associate Professor Olga Vsevolodovna Zelenskaya.
- Does she know the language?
- English. Better than me.
- Then we'll settle on that option. Complete the paperwork.

I wrote a letter to Aldo that Olga Vsevolodovna and I were ready to come for an internship at the University of Turin. He sent an invitation to apply for a visa. We were lucky because an Italian consulate was opened in Krasnodar that issued visas. So there was no need to go to Moscow, everything was successfully resolved on the spot.

The trip was agreed upon for the first ten days of July. We bought tickets. At the appointed time, on the morning of Tuesday, July 3, we flew from Krasnodar to Moscow, and from there to Milan.

At the airport we went through customs, got our luggage and went to the bus stand. We bought tickets to Turin at the ticket office right there. Two hours later a luxury bus arrived. The road ran along rice fields. Rice plants were in the 6–7 leaf stage. The crops were clean and even. In some places we could see traces of machinery wheels. That was due to herbicides and fertilizer application. There were many fields with corn. Very dense crops. Corn plants with erect leaves, in the flowering stage. Occasionally we saw wheat crops. Harvesting was underway using direct combining. We were surprised by the high quality of the road. The motorway had three lanes in both directions, separated by a barrier and fenced on both sides. Every 2–3 km there were double-level interchange bridges built to prevent intersections. We saw only one drawback: there was a fairly wide right-of-way along the road, and weeds were growing on it en masse. It is not clear why they had not been removed. A railway for electric trains went parallel to the highway. It was built on supports and raised above the ground so that agricultural machinery could easily pass under it. In this case, arable land was used to the fullest.

The bus brought us almost to the place, stopped 2 blocks from the hotel. Aldo booked a room for us at the Bologna Hotel, where we had stayed with Pavel. A narrow 5-story building with cozy rooms with all the amenities and

a telephone. The location of the hotel was very convenient, right in the city center, across the street from the train station. Our stay at the hotel had already been paid for by the University of Turin.

We had just unpacked our things when Aldo arrived. We exchanged greetings and decided to walk around the city discussing our plans.



**Remains of the fortress wall of the 1st century AD and
the central square of Turin**

It was a warm summer evening. We walked slowly to the historical center of Turin. I asked Aldo about paying for the hotel.

— Yes, we paid for it. In addition, you will receive a daily allowance of 85 euros per day at the university cash desk. This is stipulated by the Agreement between our Universities. Our university has many interns from different countries, especially from Africa and the Middle East. Most of them come to the medical and veterinary faculties. And all interns stay here under the same conditions.

I did not specify the details of this program. I will note that the next day we really did receive a daily allowance of 1020 euros at the University cash desk. This was a gift that we did not expect.

We continued our conversation in a Sicilian restaurant, where we tried pasta and fish cooked according to original recipes. We agreed that Aldo would pick us the next morning.

While we were driving to the University, Aldo told us how to get there by metro. The metro was built for the 2006 Winter Olympics, but it had not been completed yet. Only the main line was working, and the rest were being under construction. In the following days, we went to the University by metro on our own. When we met with colleagues, we clarified the program of our

stay. We distributed our time quite rationally, so we managed to complete all the points of the internship program. Everything worked out thanks to the help and support of Aldo. He looked after us as best as he could. We studied the University academic and scientific programs and plans, attended classes, made presentations on our scientific work to Master's and postgraduate students. And at the same time, we completed a large cultural program, which was also part of the internship plan.



In the hall of the University of Turin

The next day we continued working at the University: we got acquainted with the educational process, attended a lecture that Aldo gave to Master's students. He spoke Italian, but showed slides in English, so we understood what he was talking about.

In Italy, they have been teaching at three levels for a long time: Bachelors, Masters and postgraduates. The University of Turin is a comprehensive educational institution with more than a dozen faculties from Agronomy to medicine. It was founded in 1404. Moreover, all the faculties are located in different buildings scattered around the city. We were in the buildings where the Agronomy, Forestry and Veterinary faculties are located. This is a complex of two-story buildings and greenhouses, compactly located on the outskirts of the city.

Scientific research is carried out mainly under grants and business contracts, carrying out custom projects. For example, graduate student Marco Belforti, who had been in Krasnodar for an internship in 2010, carried out special contract work ordered by a company engaged in trout breeding. He was paid a stipend from this contract 4,000 euros per month. This allowed the graduate student to live comfortably and conduct scientific work.



Studying the university curriculum

Together with Marco, we visited a Research and Experimental Station located 20 km from the city. Here he studied protein feed additives for trout. The fish were kept in concrete tanks like lysimeters measuring 3×2×2 meters. Cold artesian water was constantly pumped into the tanks, since trout lived only in running cool water. The fish were fed a special compound feedstuff, into which protein additives were mixed, according to the experimental scheme. In one of the experimental variants, the source of protein was the larvae of a beetle imported from China. These larvae were similar to wireworms (click beetle larvae), but they were 10–12 times larger. An adult larva was the size of a man's little finger. The beetle was thermophilic and could not live in the natural conditions of Italy. It was reproduced at the temperature of 28–30°C in special heating cabinets. The larvae were fed wheat flour mixed with crushed potatoes. When the larvae reached their maximum size, they were fried in a muffle fur-

nace and ground in a coffee grinder. The resulting raw material was added to the feed. The fish were weighed weekly, and the best option was determined. They said the effect was very good. There was one problem — the beetle's love of heat. It added cost. Therefore, they planned to search for other beetles that were less heat dependant. There were many species of similar beetles in China. In the future, they planned to conduct a special study of them in order to select the best beetles for the conditions of Italy. In addition to Marco's experiments, at the station we also got acquainted with the work of other graduate students. They developed diets with feed additives for rabbits, chickens and ducks so that these animals would grow and develop quickly.



**At the University Experimental Station
with graduate student Marco Belforti**

Wheat, barley and corn were grown in the fields of this Experimental Station. By that time, the barley had been harvested. They had just started harvesting the wheat, so we looked at all the trial plots. Here, the staff and

graduate students studied elements of agricultural technology: sowing times and methods, different applied fertilizer rates .

A very interesting experiment was with corn, which had been grown in a monoculture for the 10th year in a row. Hybrids grew with regular watering and different fertilizer rates. Judging by the development of the plants, the monoculture did not have any negative impact. The plants were strong, well developed, and bore two large ears. Their height was 1.5–2 times taller than me (180 cm). We took a photo against the background of corn plants.

Grateful for the warm welcome in Krasnodar, Marco drove us around in his car. As a result, we saw not only the Experimental Station and production crops, but also a number of attractions in the vicinity of Turin. We visited the Catholic Basilica of Superga on top of the hill of the same name, which offers a magnificent view of the city. Beautiful places...



Below and behind us is the city of Turin

On Aldo's insistent advice, we expanded our cultural program and visited the cities of Florence and Genoa. Aldo helped us organize a trip to Florence for Saturday and Sunday. He booked a hotel in Florence and instructed Marco to help us buy train tickets, since the ticket vending machines had information in Italian.

We left early in the morning. The train speed reached 300 km/h. From the window, cultivated fields, gardens and pastures were visible. Everything was clean and well-kept, like in a picture.

The road passed through the city of Milan. There was a short stop, and then the way lay towards the mountains. The train dived into a tunnel and rushed for some time in the darkness. But this would not have been visible in the carriage, if not for the flashing lights outside the window. We jumped out of the tunnel, and a panorama of the city of Florence opened up outside the window.

Arriving in Florence, we immediately went to the hotel, which was located nearby within two blocks. At the hotel, we checked in quickly and having left our things in the room, we went to explore the city.

Florence is a huge cultural center, the former capital of the principality. It has a very interesting history. It is the birthplace of the Medici family. Of course, to see everything, you need to be there for ten days. In a day and a half, we visited only the historical part of the city, with its numerous cathedrals and palaces. We were able to go around only the most interesting places, including the famous Uffizi art gallery. Having plucked up our courage, we climbed Giotto's campanile (bell tower) of the famous Cathedral of Santa Maria del Fiore, from which the city was visible as if on the palm of the hand. We visited several museums and bought local souvenirs.



Cathedral of Santa Maria del Fiore, Florence

The next morning we walked around the streets and squares of Florence again and after lunch we went back to Turin.

On Monday we continued working at the University. Despite being busy, Aldo did not leave us without attention. This time he showed us the book “IL RISO”— “RICE”, he was its scientific editor. A gorgeous book in Italian with many color illustrations. One would not find such a book on sale. Aldo gave it to us as a present.

After having lunch with us, Aldo went to administer an exam to the Master's students, and we visited the Botanical Garden of the University of Turin. At the entrance we were met by two girls, both studying for a Master's degree in Botany, and in their free time they conducted excursions around the garden. Unfortunately, neither of them spoke English. We were accompanied by a student from Mexico who knew Spanish and Italian. Olga, preparing for this internship and having previously visited Turin, knew about the language problems that lay ahead for us and had learned a little Italian. In addition, all the botanical names are in Latin, so they quickly found a common language, and the excursion went wonderfully.

The Botanical Garden had a collection both in the open air and in greenhouses. Many of the plants were similar to those in the collections of the Botanical Garden of the Kuban State Agrarian University and the Sochi Arboretum. In the greenhouse, the most lively conversation began around the cacti, which were the subject of scientific interest of our tour guide.



In the greenhouse of the Turin Botanical Garden

The next day was dedicated to a trip to the center of Italian rice growing — the city of Vercelli. Here we were supposed to visit an Experimental Station and a farm. Aldo took us by car to the center of this town. Our old friend, rice breeder Massimo Biloni, was waiting there. Aldo went about his business, and Massimo took us under his wing.

First, Massimo showed us the historical center of Vercelli, took us to an old church built in the 13th century and perfectly preserved. Then we drank coffee in a cafeteria and went to the office of the association SARDO PIEMONTESE SEMENTI ("SA. PI. SE."), where he was the General Director.

The office was located in the center of Vercelli. Massimo told us that the association included two Experimental Stations and a farm. That was one of the largest private companies in Italy. They conducted the selection of new varieties of rice, their seed production, the development of technology elements and control the introduction of varieties in farms. We visited one of the Experimental Stations. It was located near the city on the territory of a farm from which the station rented land. Several buildings and a machine yard had been built here. The farmer and his workers did all the field work: preparing the soil, sowing, applying fertilizers and herbicides, regulating the water regime.

The station employed 2 specialists — a breeder and a seed grower, as well as 4 technicians. Additional workers were hired for seasonal work. Hybridization was carried out annually for 200 combinations, obtaining at least 50 grains for each combination. The well-known pedigree method was used for selection. At the same time, competitive testing was scheduled for two periods: in early April and mid-May.



In the center of Vercelli



Near the office of “SA. PI. SE.”»

Selection work was carried out in two directions: varieties were created for conventional technologies and the Clearfield technology. Such varieties were resistant to a special continuous-action herbicide supplied to farmers along with the seeds of the varieties.

M. Biloni was a co-author of 10 conventional varieties and 4 for the Clearfield technology. The varieties were of different types in grain: from short-grain to long-grain. Among them there were 2 varieties with black grain.

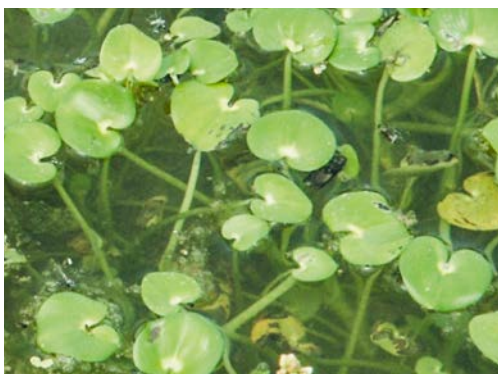
While we were talking with Massimo, a young woman came into the office. Massimo introduced her. Her name was Alice, 29 years old. She was a farmer. After graduating from the University of Turin with a degree in Economics, she decided to start growing rice. She completed a two-year internship in the USA with a rice farmer, so she knew English well. She had a family farm. Our trip there was planned for the afternoon.

While inspecting the breeding crops, our attention was drawn to the experiment using the Clearfield technology, where a control nursery was laid out. The plots of the variety that was not resistant to the herbicide, which was used as a control, stood out sharply. Here the plants were “burned”. The herbicide treatment was carried out at the 5-leaf phase. Dry stems remained on the control plots. The plants of the herbicide-resistant rice samples were well developed and were in the 7–8-leaf phase.



Selection experiments using Clearfield technology

We noticed a weed new for us — *Heteranthera*. The plants were similar to *Monochoria Korsakovii* belonging to the same *Pontederiaceae* family, but had white flowers and rounded leaves. *Heteranthera* is a disaster for the rice fields of Italy.



***Heteranthera reniformis* Ruiz et Pavon**

Heteranthera plants emerge late, after all herbicide treatments. They feel good with a layer of water being hydrophytes. They fill all the free spaces in the rice field. In addition to competing with rice during the growing season, *Heteranthera* creates big problems during harvesting. Its thick wet stems and green leaves dry very poorly and, getting into the combine, worsen the separation of grain. As a result, losses of rice grain increase during harvesting. It is good that such a weed is not yet in the rice fields of Russia.

After lunch at the restaurant, Massimo took us to see rice at the family farm “Alice Cheruti”. It is about 15 km from the city of Vercelli. The owner met us at the entrance to the farm like old friends. We parted with her 2 hours earlier. Alice told us the history of the farm and then showed all her fields.

Her father bought the farm in 1960. The area of the rice system was 100 hectares. Rice was grown as a monoculture since 1960. On the territory of the rice system, a complex of buildings was built in the form of a closed square with one entrance and a large courtyard. The entrance was closed with powerful gates. The resulting space was like a fortress. In the center was a residential building, and then along the perimeter there was a dormitory for workers who previously lived on the farm, storage facilities and sheds for equipment. The courtyard was like an oasis. The flower beds were laid out and gazebos for relaxing in the fresh air were built there. For a long time, all work in the rice field was done manually. Rice was planted as seedlings. Therefore, the farmer (Alice’s father) employed 10–15 hired workers. They also lived here. During the field season, their number increased to 25–30 people. With the introduction of mechanization and the transition to direct sowing of rice, the number of workers was reduced. Only 5–6 machine operators performed all field work, replacing manual labor.



With breeder M. Biloni and farmer Alice

After returning from an internship, Alice persuaded her father to hand over management of all farm affairs to her. The transfer lasted almost a year. When the father was convinced that Alice was ready to grow rice on her own, he re-registered the farm in her name. The new owner radically rebuilt the entire farm. To begin with, she updated the equipment: she bought 2 tractors, a set of agricultural machinery and a combine. She was given the equipment on lease for 5 years. Therefore, the initial expenses were not very high. She handed over all the old equipment for scrap metal. She kept one of the best specialists among the machine operators, increasing his salary almost three-fold, and parted with the rest. When necessary, she got behind the wheel of the tractor herself. If before the rollers were mowed manually, now it was done with a motor scythe. It turned out to be faster and better.

Alice told and showed us all this with great inspiration and knowledge of the matter. Here in the field, I asked Alice to briefly tell about the rice growing technology she used.

Here is a summary of her story. Immediately after threshing the rice and removing the straw in October, the field is processed with a disc harrow to a depth of 20 cm. They go along and across the check to cover up the plant res-



idues. Then in November, the soil is worked with a deep cultivator so that all the water is absorbed in the winter.

At the end of March, the temperature here rises so weeds and volunteer rice begin to sprout. In mid-April, this green carpet is removed with a continuous-action herbicide. After that, the already “ripe” soil is loosened with a disc harrow and leveled with a “Mara” planer. Phosphorus and potassium fertilizers are applied in full rate plus 30% of the nitrogen rate. Fertilizers are embedded in the soil to the depth of 8–10 cm with a disc harrow. The engine with a roller is started and sowing begins. Rice is sown from May 1 to 5 using a broadcast method with a special rotary seeder. It is also used to apply fertilizers before sowing and as a top dressing. After sowing, the checks are filled with a minimum layer of water 3–5 cm, which is kept until shoots appear. In the phase of 3 rice leaves, an anti-cereal herbicide is applied by the ground method. The tractor and trailed sprayer are equipped with special narrow wheels. Five days after herbicide treatment, nitrogen top dressing is applied at 40% of the total rate. In the rice 5-leaf phase, herbicide treatment is carried out against marsh weeds and a second nitrogen top dressing is applied, the remaining 30%. The general fertilizer rate is adjusted for each variety, according to the recommendations of scientists.

When the rice reaches the flag leaf phase, the crops are treated with a fungicide against blast. If, according to the forecast of phytopathologists, the disease appears earlier, then the fungicide treatment is carried out immediately, and then repeated before the rice is heading or immediately after flowering.

The water layer during the growing season is kept no more than 12–15 cm. I could not resist and asked:

— How do you and the machine operator manage such a volume of work on 100 hectares? Alice smiled and replied:

— I’m an economist, so I calculate every action. My daily work is scheduled down to the minute. The computer and cell phone help. I make a plan for the year, the growing season, the month, the week and every day. This plan includes not only the work in the rice field, but also in the office. After all, I do all the accounting, control all my contracts. In addition, I attend rice growers’ meetings, exhibitions, seminars and refresher courses. I communicate a lot with specialists from different companies and scientists, like Massimo, for example.

— With such a workload, you probably have very little time for your personal life.

— For now, my whole life revolves around these 100 hectares. But sometimes I snatch an evening to go to the theater, a museum or a party. But this happens more often in the winter.



— And then we take up your time with our visit.

— No, you don't. The meeting with you is written down in my plan. Massimo told us about your arrival, and we agreed on a time. As you say: "Welcome!" The last was said in Russian, and everyone laughed.

While examining the equipment and the rice field, we continued our conversation. We were really interested. Massimo occasionally broke into the conversation, commenting on what he had seen.



Rice field equipment

That year, Alice planted 8 varieties, 2 of which were grown using Clear-field technology. The author of one of them was Massimo Biloni. He wanted to compare his variety with another one from a competing company. Another exotic variety, the aromatic long-grain variety Apollo, was grown by order of a businessman. And for a local restaurant, Alice planted an ancient variety used for risotto.

She concluded contracts for the rice production for a period of 3 years, which stipulated the volume, price and delivery time. Similar contracts with companies were concluded for the supply of fertilizers, herbicides, fungicides and equipment maintenance.

The seeds of rice varieties for sowing were supplied by the Experimental Station headed by Biloni. He also provided advice on which varieties to use and consulted on their agricultural technology.

To my question:

— How do you guess the volume of rice production? After all, the harvest can change from year to year.

Alice replied:

— I use a rice growing technology that provides a yield of 6.2–6.4 t/ha. This yield level is the most economically advantageous for me in terms of costs and income. If the weather conditions are very favorable, like last year, then I put the surplus grain up for auction. The grain sold under contracts is picked up immediately from under the combine by the customer's vehicles. And I hand over the surplus for temporary storage in a warehouse where I rent space. In addition to grain, I also sell straw. I have a machine that rolls the straw. A plant for the production of biogas from residues, including rice straw, has been built in our area. The plant takes the rolls away using its own transport.

An important economic bonus for rice growers is the subsidies that the state provides. The amount is considerable — 4,000 euro for each hectare of sown rice. After the sowing is completed, the farmer reports it to the Commission, which checks the fact of sowing and issues a confirmation document. It is presented to the bank, and it transfers the money to the farmer's account. The farmer uses it to buy all the materials needed to grow rice.

After inspecting the crops, Alice invited us to have a cup of coffee. A table was set in the yard. Alice's mother and older sister with her husband, who came to visit with their children (a boy and a girl aged 9–10), joined us.

Mom said that they had an apartment in the city of Vercelli. Alice's father lived there. He came to the farm very rarely. Alice added that her mother lived with her from April to November and helped mainly in the kitchen. And she spent the winter in the city...

We spent at the table about 1.5 hours, then we thanked Alice and her mother for the warm welcome. We invited them to visit us in Kuban. And we wished the hospitable hosts economic prosperity and family well-being. It was already dark when Massimo drove us to Turin to our hotel.



Alice's farmhouse



At the table

The next day we worked at the University again. We attended two lectures given to Masters. The first was read by Francesco Vidotto, a colleague and student of Aldo. His lecture was devoted to weeds, including those growing in rice fields. This material was of particular interest to Olga, who was doing similar work. And the second lecture was on grape growing technology. It was given by a woman, a Professor of the Department of Horticulture and Viticulture. This material was of interest to me. Grapes were a crop that I would be happy to work on if it were not for rice breeding. Despite the fact that the lecturers spoke Italian, everything was clearly presented on the color slides. We listened to both lectures with pleasure. Then we were interested in seeing the manner and technique of lecturing. The auditoriums were equipped with multimedia equipment with two screens. The benches in the lecture hall were in an amphitheater form, so students could see and hear well from any seat. The benefits of attending the lectures were undeniable. We thanked Aldo for this. He had two exams scheduled for the following day. One at 9 a.m., the other at 3 p.m. So that we could spend the day usefully, Aldo suggested that we went to Genoa the following day. We agreed. Aldo immediately called Marco at the Experimental Station and asked him to come to the hotel at 6 p.m. to help us buy tickets.

In the evening, Marco and I went to the train station and, having looked at the commuter train schedule, bought tickets for 6 a.m. to Genoa and for 6 p.m. back to Turin. The distance from Turin was short. It took just over an hour by high-speed train. Therefore, there was enough time to see the city.

At the hotel, we asked for an early breakfast and in the morning we went to Genoa. During the day, we visited the main landmarks. Genoa is a port city. One of the largest Oceanariums in Europe was created here, in the port. We started our acquaintance with the city from there. The Oceanarium presents fragments of near-water natural zones with plants and animals. For example, mangrove thickets. And, of course, many inhabitants of the World Ocean.

From the port we walked along the central street of the city, where palaces and beautiful old houses of rich Genoese merchants were located. Having decided to shorten the route, we went through the old port area. There were narrow streets, no wider than 2–2.5 m, with houses and courtyards reminiscent of a real den. The inhabitants and the aroma in the air were appropriate. We walked literally two blocks and could not stand it, we decided to go back to the avenue where we started our journey. It was not safe to go further along this area.





In the Oceanarium of Genoa



In Genoa

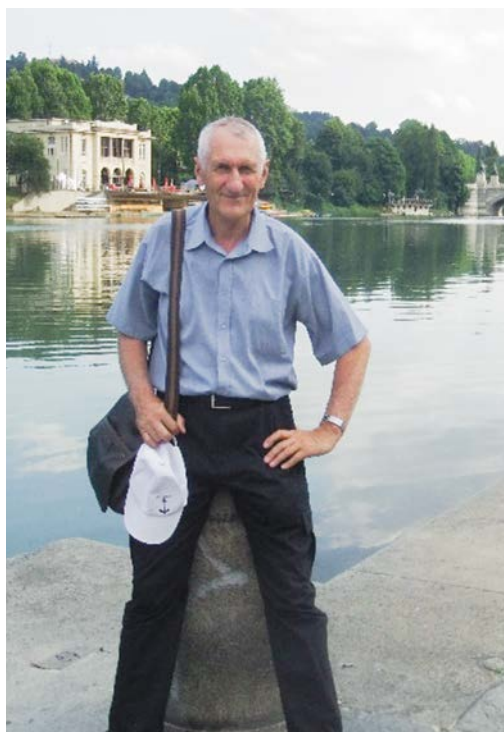
When we climbed up the hill to the central square, we followed the example of many tourists and sat right on the steps near the monument to catch our breath. People were sitting around, talking loudly and not being shy, many were snacking on sandwiches and drinks from a nearby cafeteria. Having rested, we moved on, turned into a side street and saw the entrance to another Catholic church. From the outside, the building seemed very modest. But when we went inside, we were so amazed by the magnificence we saw that we simply stopped and stared around. A service was going on. It turned out that this

was the Church of the Jesuit Order of Saints Ambrogio and Andrew. We had never seen such rich decoration in churches, although we had been to different countries. In the altar of the church there were canvases by the great Flemish artist Rubens. Everywhere there were gilded stucco, sculptures and paintings by Italian masters. We stood silently for a long time, looking at the luxurious interior decoration of the temple. Then we slowly walked around and went outside. We recalled that temple more than once afterwards. Its decoration was richer than anything we had seen in most of the large temples in Europe... In the evening we left for Turin.

Friday, June 13, was our last working day at the University of Turin. Aldo gathered all the lecturers who were free from classes. In a general conversation, we summed up the results of our internship, expressed heartfelt gratitude for the very warm welcome. We talked about further joint work on training scientific personnel.

We were truly satisfied with this trip. It was very eventful and educational.

We spent Saturday preparing for our departure and walking around Turin, which we had come to love so much.



By the Po River in Turin

We visited an art gallery where paintings by famous Renaissance artists were exhibited, and a museum of modern art. We were in the Cathedral of St. John the Baptist, where the Turin Shroud of Christ was kept, in which he had been wrapped after being taken down from the cross. The relic itself was not accessible to visitors, but a copy was exhibited there. A very atmospheric temple. We listened to the story of the appearance of the Shroud in Turin, as well as about the mystical places in this city. With great pleasure we walked through the most famous and oldest park in the city, Valentino, on the banks of the River Po, where Turin residents relaxed in their free time. On the territory of the park there was the Valentino Castle (the former residence of the Savoy dynasty) with magnificent flower beds and a reconstruction of a medieval Italian village.



In the City park

Over the past two weeks, we had already missed home even though we had no time to be bored here. The program of our stay was very intense.

On Sunday morning, Aldo took us to the bus station. From there, the bus went straight to Milan airport. Then everything went as planned, we flew from Milan to Moscow, and then took an evening flight to Krasnodar.

Our internship marathon was successfully completed. We spent a long time “digesting” the abundant information we received. Our internship was very fruitful. We were very grateful to the Rector’s office of our University and the Dean of the Agricultural faculty of the University of Turin, Professor Aldo Ferrero, for making this trip happen.

25. Türkiye, September 2012

In March 2012, the Temperate Rice Committee (TRRC) informed that the next meeting would be held in September at the Agricultural Research Institute in Edirne, Türkiye. The Director of the Institute, Nezhmi Beshar, proposed combining the meeting of the Committee with the International Conference on Sustainable Agricultural Development.

The preliminary plan for this event was as follows: 10.09.2012 — arrival of conference participants, 11–13.09 — the conference and the Rice Consortium, 14.09 — visit to rice farms and a rice processing plant, 15.09 (Saturday) — cultural program, excursion to Istanbul.

I reported this information to Professor M. I. Chebotarev and invited him to go to Türkiye. He initially agreed, but later refused because of his busy schedule. The same information was received by the All-Russian Rice Research Institute. Director E. M. Kharitonov gave the order to prepare for participation in the meeting of the Consortium.

The time passed quickly in the hustle and bustle. In mid-August, the secretary of the All-Russian Rice Research Institute reported that the Director was holding a meeting on the upcoming trip to Türkiye. The delegation had already been formed, and at the meeting they discussed the details of the scientific report that the Director would present at the meeting of the Committee. The delegation for the trip to Türkiye included: E. M. Kharitonov (Director), V. S. Kovalev (Deputy Director and breeder), N. N. Malysheva (Scientific Secretary), Yu. K. Goncharova (Head of the Genetics Laboratory), N. F. Vetrova (Head of the External Relations Department) and G. L. Zelensky (breeder).

The flight to Istanbul was scheduled for September 10. The preparation of all documents related to the trip was assigned to N. F. Vetrova, and all scientific materials to N. N. Malysheva. Yu. K. Goncharova was entrusted with being the Director’s personal interpreter from Russian to English and vice versa.

V. S. Kovalev and I were to actively participate in discussions on the reports. This was the general plan for this trip.

But 5 days before departure a major meeting was to be held in the region and E. M. Kharitonov had to be present there. Considering that he was supposed to give a report at the Consortium, V. S. Kovalev was asked to replace E. M. Kharitonov at that meeting.

I decided to take my son Pavel to Turkey so that he could practise his English. At that time Pavel was a 5th-year student at the Kuban State Agricultural University, majoring in “Economics and Management at Agricultural Enterprises.” It would be useful for him to listen to reports at the International Conference on Agriculture. Fortunately, there was no need obtaining a visa to Türkiye, and the price of the air ticket was not high.

So, on September 10, our delegation arrived in Istanbul. It was 7 a.m. We were met at the airport and escorted to the bus. It was already half full. About 15 minutes later, another delegation arrived. Those were Italians. I saw Aldo Ferrero among them. We greeted each other very warmly and sat down on the free seats. The attendant came in and announced that the bus was leaving straight for the city of Edirne. The journey would take about 3 hours.

Pavel took out his tablet with the Internet, opened a map of Türkiye and commented on our journey the whole way. I was just amazed at how far modern computer technology had come. Talking with Aldo, we didn't even notice how time had passed, and we arrived in Edirne.

All those who arrived by this bus were accommodated in a hotel almost in the city center. We agreed with Aldo that in an hour we would go for a walk to see the surroundings. But before Pavel and I could unpack our things, there was a knock at the door. It was a guy from the Organizing Committee who invited us to have breakfast. It turned out that we would be eating in a cafeteria next to the hotel at the expense of the Organizing Committee. The hosts showed such kindness to everyone who came to the conference. By the way, we did not have to pay for the hotel either. All our expenses were just the cost of the flight from Krasnodar to Istanbul and back.

When I was planning this trip, I looked up historical information about the city on the Internet to have an idea of where we were going.

Edirne is a city in the extreme northwest of Türkiye. It is located in Eastern Thrace on the River Evros near the border with Greece, 20 km from the border with Bulgaria and 235 km from Istanbul. About 130,000 people live here. Edirne is the former capital of the Ottoman Empire, an ancient city with huge Ottoman palaces and more modern neoclassical architecture, mosques, bazaars, bridg-

es, historical houses. It is Türkiye's gateway to Europe, a meeting place of two cultures and religions. Edirne was founded by the Roman emperor Hadrian in the 2nd century AD on the site of an older Thracian settlement. The city was named Adrianople. After the collapse of the Roman Empire, Adrianople was part of the Byzantine Empire.



Edirne on the map of Türkiye

In 1362, the city was captured by the Ottoman Turks. From 1365 to 1453, the city, which received the name Edrenebol, was the capital of the Ottoman state. During the wars of the Ottoman Empire with Austria, the Polish-Lithuanian Commonwealth, and Russia in the 16th — 18th centuries, the city was the main gathering place for the Ottoman army.

When the Turks captured Constantinople (1453), renaming it Istanbul, they moved the capital there. After these events, Edirne lost its former significance, although it remained an administrative center for a long time. A strong earthquake in 1751 negatively impacted the city's economy and development, destroying most of the buildings.

During the Russian-Turkish wars, the city was occupied by Russian troops twice: in 1829 and in 1878. In 1829, the Peace of Adrianople was concluded in the city. During the First Balkan War in 1913, after a long siege, Adrianople was captured by Bulgarian troops and, according to the London Treaty, passed to Bulgaria. As a result of the Second Balkan War, it was returned to the Ottoman Empire.

After the First World War and according to the provisions of the Treaty of Sevres, the city, like almost all of Eastern Thrace, was part of the Kingdom of Greece in 1920–1922. But according to the Lausanne Agreement, the Greeks were forced to hand it over to the Turkish Republic in 1923. Therefore, the majority of the population are Turks and Greeks. This is the difficult history of Edirne.

After breakfast, we went to see the sights of the city, periodically stopping and taking photos to remember the new places.

The symbol of Edirne is the Selimiye Mosque, one of the best mosques in Türkiye. It was built in 1569 by order of Sultan Selim II by the imperial architect Mimar Sinan. It has the most beautiful ablution fountain in the city, and its four 71 m high minarets are the tallest in the world after the famous minarets of Mecca.



Selimiye Mosque



Interior of the mosque

The interiors of the mosque are the most striking, especially its dome, 44 m high and 31.5 m in diameter, covered with calligraphic inscriptions praising Allah. The dome is supported by huge twelve-sided columns, which surprisingly do not interfere with the overall perception of space.

By the way, the main mosque of Sultanahmet (Blue) in Istanbul is an exact copy of Selimiye. In 2011, the Selimiye Mosque complex was included in the list of UNESCO protected sites.

The city is famous for its markets, the main one being the Ali Pasha Market. Every tourist visiting the city comes to this market. Here you can choose a souvenir for every taste.

For three hours, we walked around the entire central part of the city. We contemplated the surroundings and inhaled the air of the city. It was clear that here the old buildings were successfully combined with modern edifices. We

visited the Selimiye Mosque. This was a truly grandiose structure with magnificent interior decoration. We also went to Ali Pasha's market for educational purposes. The selection of goods was so wide that it made our eyes run wild. But we put off buying souvenirs for later.

On one of the streets, near the fountain with a mermaid, Pavel took a photo of Aldo and me.



In the city of Edirne with Aldo Ferrero

A Conference on the issues of global agriculture was held for three days from September 11. The reports were devoted to various issues, including the economics of agricultural production. Pavel listened to these reports with particular interest, photographed the slides. That was why I brought him there.

On the second day, a meeting of the Consortium was held in parallel with the Conference. We participated in its work. And again, like the previous time, I heard about the need for widespread use of the Pi-40 gene in rice hybridization in breeding for resistance to blast. I could not keep myself from speaking and in my speech expressed concern that the use of only one gene, even a very effective one, could negatively affect the obtained results. It was impossible to exclude the possibility of a mutation of the fungus, and then all the material created on the basis of the Pi-40 gene would be affected. In the end, my colleagues agreed with my arguments and wrote in the decision: "Expand the spectrum of blast resistance genes in the breeding of new rice varieties."

This phrase alone justified my participation in the Consortium. At the evening meeting of the Russian delegation, E. M. Kharitonov expressed satisfaction with our active position at the Consortium.

It should be noted that the hosts tried very hard to ensure that the guests received maximum pleasure from their visit to Türkiye. Every evening they arranged a gala dinner with the invitation of various artistic groups, who demonstrated their skills in songs and dances. The oriental dances of the women's ensembles caused great delight. In particular, the belly dance performed by a professional dancer left an unforgettable impression on all the guests.

On September 14, in the morning, the participants of the conference were invited to buses and taken to the rice growing area.



In the rice fields in Türkiye

The rice harvesting was going on. Half-track combines moved slowly along the raw checks, harvesting rice directly. Right at the edge of each field there was a shaft dryer, where the harvested grain was dried. Therefore, per day they threshed as much grain as they could dry until the next morning.

After drying, the grain was transported to a warehouse for cleaning and storage. The grain was delivered to the plant that produced rice groats accord-

ing to a strict schedule. The plant did not have its own warehouses; rice was received directly from trucks. Rhythmic delivery was carried out according to the signed agreement between the rice grain suppliers and the plant director. The main rice variety in this region is Osmancik-97. Therefore, it was not difficult for the plant to work with one variety.

The next day, Saturday, September 15, an excursion to Istanbul was organized. We signed up for the excursion in advance. There were enough people willing to go to fill two buses. Early in the morning, after breakfast, we left for Istanbul. Considering that our delegation had to fly home late on Sunday evening, we asked the hosts to organize an overnight stay for us in an Istanbul hotel so as not to return to Edirne. The Italians also joined this request. So we got on the same bus with them.

Arriving in Istanbul, we first checked into a hotel. We left our things there, and then went to explore the city. Our entire large company was divided into several groups of 25–30 people, and led by tour guides, we moved around the city. Our tour guide spoke decent English and Russian. He gave a general story of Istanbul, its history and attractions in English, and repeated certain details for the Russians in Russian. Therefore, our delegation tried to be closer to the tour guide.

There were endless lines at the main sights of the excursion — the Blue Mosque and Hagia Sophia. However, the tour guide led our group without any delay. These grandiose structures had some unusual aura, so you could go there many times and see something new each time. Especially if the excursion was accompanied by a detailed professional story.

It was lunchtime, and we were invited to the cafeteria, where a specially ordered lunch of several dishes was prepared.

We were given 2 hours free time, having arranged a meeting at the pier of the excursion ships. The excursion program included a three-hour boat ride along the Bosphorus.

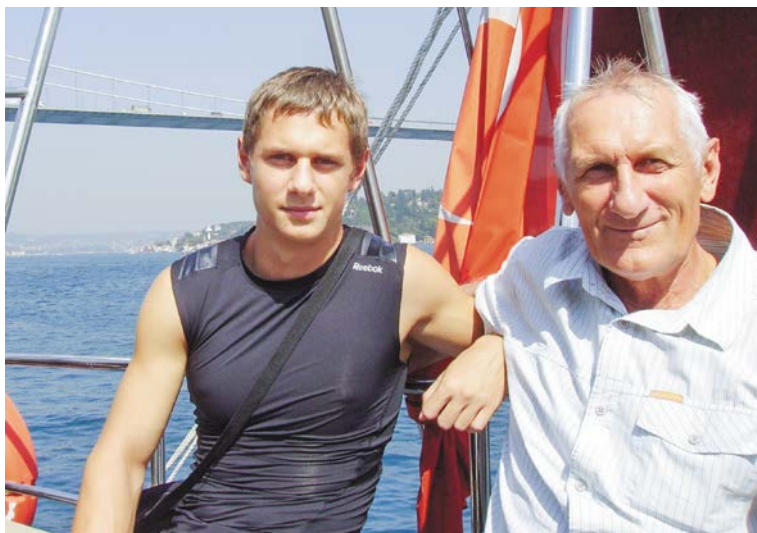
The people arrived at the meeting point without delay, and exactly at 3 p.m. our boat set off towards the Sea of Marmara. The whole group was evenly distributed along the deck. Pavel, Aldo and I sat at the stern. Everyone started taking pictures of the surroundings, and so did we.

It was wonderfully warm weather. A light breeze was blowing. Immediately after departure, the waiters began to offer soft drinks and sweets. Half an hour into the voyage, we suddenly heard the voice of the boat captain over the loudspeaker. First in English, then in good Russian, he announced:

— Today, September 15, 2012, our guest from Russia turns 21, he has come of age. Our guest's name is Pavel Zelensky. Let's congratulate him.

The waiter immediately brought a cake and a box with some kind of present.

This was so unexpected, especially for Pavel. How did they know that he was born on this day? Then we figured out that it became known from his passport during registration. But to organize everything like that...



Pavel and me on a tour of the Bosphorus, September 15, 2012

Almost all the passengers immediately started coming to the stern where we were sitting and chanting in English:

— Happy birthday, happy birthday, happy birthday to you!!!

Pavel stood with a crimson face and only mumbled:

— Thank you very much! Thank you very much!

He was surprised and delighted by such unexpected attention. We remembered this boat trip along the Bosphorus for a long time and such an unusually organized birthday greeting.

We had a free Sunday. In the morning we walked around Istanbul with the Italians. After lunch they went to the airport, and we continued to explore the city. We went into shops and stalls, choosing various souvenirs.

In the evening a minibus arrived to take us to the airport. Our journey was coming to a successful end. Early the next morning we were home.

26. Thailand, November 2014

In December 2013, I received information from my foreign colleagues that the International Rice Congress would be held in November 2014 in Bangkok, Thailand. I decided to take part in it. Later, I received an invitation and a preliminary program of the Congress. Judging by it, almost all leading rice scientists from most rice-growing countries were planning to participate. It was a convenient opportunity to communicate with many colleagues. I prepared and sent to the Organizing Committee the abstract of the report: "Rice Bast Control by Creating Resistant Varieties". Considering the importance of the problem, and that the report would be short or even a poster, and abstracts should not be longer than 1 page, I decided to write a brochure on the topic of the report in Russian and English to distribute it to my colleagues there.

I prepared the material quite quickly, it turned out to be about 50 pages. At my request, Zinaida Vladimirovna Krivorotova made a professional translation into English. I thought that this brochure would be more useful if the Russian and English versions were published in one book. The result was a nice 98-page book with color photographs. It turned out to be a good manual for those who studied the problems of rice growing and also study English.

Four people went to Thailand from the All-Russian Rice Research Institute: E. M. Kharitonov, V. S. Kovalev, Yu. K. Goncharova and V. P. Naumenko. They presented reports at the Rice Breeding and Agricultural Technology section.

I went from Kuban State Agrarian University, so I decided on my own how to finance my trip. I received a blessing from the University Vice-Rector to participate in the Congress, but on the condition that I would travel at the expense of my business contract.

At the request of the Organizing Committee, it was necessary to pay the registration fee and the hotel in advance. The difficulty was that I did not have an account in foreign currency. But then I found out that one could pay with a Visa card in ruble equivalent. Having received confirmation from the Organizing Committee that the payment had been made, I ordered and bought round-trip ticket to Bangkok. I decided not to stick with the company of colleagues from the All-Russian Rice Research Institute, but to fly myself so that I could be there on Sunday. The thing is that the opening of the Congress is scheduled for Monday afternoon. And my colleagues were only planning to fly out of Krasnodar on Monday.

Spring was spent preparing and sowing selection experiments, summer flew by quickly, in autumn I was busy with harvesting experiments, and then

November was there. It was time to go. I flew to Moscow, got a visa at the Thai embassy without any problems using a simplified procedure and went to Bangkok.

In preparation for the trip, I read about the history of the country. In preparation for the trip, I read about the history of the country. Thailand is located in Southeast Asia, situated on the Indochinese Peninsula. Its southern part extends onto the Malay Peninsula, which has a long coastline on both the Andaman Sea and the Gulf of Thailand. Most of the country is on the mainland of the Indochinese Peninsula and the country's southern region is part of the Malay Peninsula. There is a deep meaning in its name: "Thailand" means free land. The clever rulers, the king and queen, were able to build relations in foreign policy in such a way that not a single foreign soldier entered the country. Although all the countries around were occupied by foreigners: Vietnam, Laos, Cambodia, India fought for their liberation for a long time. But Thailand avoided such a fate. Historians are still trying to explain this phenomenon.



Wat Arun Temple



Royal Palace in Bangkok

Now Thailand is a country with a large production and export of rice and one of the best seaside resorts in Southeast Asia. There are numerous national parks, waterfalls, caves, undisturbed jungle.

The main attraction of Thailand is its capital, Bangkok, which is called Krungthep in Thai. In the city, monuments of the past successfully coexist with the modern creations. Bangkok is the administrative and economic center of the country. There is no single center in this city, but several equal districts have been created, each of them is original and remarkable in its own way.

Having arrived in Bangkok, I took a taxi to the hotel where some Congress participants were staying. Only foreigners stayed in this building, mostly Asians, who usually stayed in inexpensive hotels.

My colleagues from the All-Russian Rice Research Institute stayed in the Intourist Hotel. It was a little closer to the venue of our event, but much more expensive. One of the advantages of the hotel was that it had a swimming pool.

The Rice Congress was held in a specialized building the Exhibition Center. It was specially built on the outskirts of the city for holding such events and exhibitions. One could get there from our hotel by bus. But the most convenient transport was a taxi. The price of the trip was very low, and the efficiency was high. The drivers went along the streets where there were no traffic jams, jumped out onto the main street and in 10 minutes we were already there.

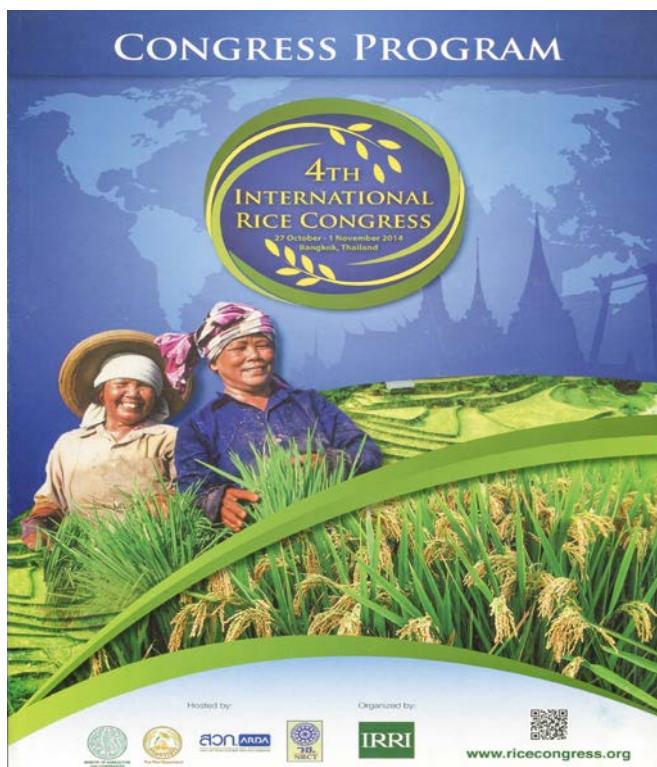
It should be noted that a lot of work had been done with the roads in Bangkok, multi-level interchanges and overpasses had been built. For example, the highway from the airport to the city center was raised on piles to the level of the 3rd floor, with 8 lanes in each direction. There was a parallel railway with electric trains running along it. Therefore, there were practically no problems getting around the city, although there was a lot of transport. Only in some places there were traffic jams, especially in the morning and evening. Considering that I arrived in Bangkok on Sunday, I had time to leisurely look around the area. I checked into a hotel in a single room with breakfast and the option, if necessary, of having lunch and dinner right there in the restaurant. In the evening, I walked around, within a few blocks, to get acquainted with the sights of the city. It was hot during the day — over 30°C, the humidity was high, it was hard to breathe, but by evening it became easier.

Bangkok is located on a swamp. Rice fields begin right outside the city. We saw them from above when the plane was landing. The city is cut by canals, which play two roles: on the one hand, they drain excess water, especially during the rainy season, and on the other, they discharge all sewage. November is the dry season, so the canals are half empty, filled with sewage sludge, the aroma of which spreads far and wide. Because of this stench, it is impossible to walk along the canal, even if you wear a gas mask. However, the locals do not seem to notice this smell, apparently they have gotten used to it.

On Monday after breakfast, we ordered a taxi through the hotel administrator. In 5 minutes, a car arrived and I, in the company of 2 colleagues from Vietnam, went to the Exhibition Center, where the Congress was to be held.

Indeed, it turned out that the Exhibition Center was a huge complex of buildings adapted for holding exhibitions and conferences. While I was reg-

istering, I met many familiar faces with whom I had met before, at previous conferences. There were colleagues from Italy, France, the Philippines, the USA, Australia and especially many from Asian countries.



P619 IRC14-0278 BREEDING OF RICE VARIETIES RESISTANT TO DISEASES IN RUSSIA
Zelensky, G.(1)*; Zelensky, P.(2);

109

In accordance with the program, the opening of the Congress took place in the central hall the following day. As announced, more than 4 thousand participants had registered. At the same time, there were still empty seats in the hall, the room was so huge. Three large screens were placed along the front of the hall, on which all the speeches were broadcast.

In the following days, the meetings were held in sections and poster sessions were iorganized separately. The posters were placed in a special hall, where poster boards were installed. My report was presented as a poster and it hung next to the poster of Aldo Ferrero. We later took a joint photo as a souvenir against poster background.

On the second day of the Congress, a very interesting meeting took place. Ibolya Simon-Kiss, a legendary female breeder from Hungary, came to Bangkok. I met her in 1982, when she came to the All-Russian Rice Research Institute. Then in 1986, V. S. Kovalev and I visited her in Hungary, when we visited the Institute of Irrigated Agriculture in the city of Szarvas. There Ibolya was engaged in rice breeding. She organized our stay very fruitfully, so we were able to get acquainted with Hungarian rice growing in detail.

In the following years, Ibolya and me would meet periodically at conferences in different countries, where she would regularly come and actively participate in the discussion of papers. By the time this Congress was held, she was almost 90, but she was very cheerful. We took a photo for memory. During our conversation, Ibolya told me that this was probably her last trip abroad. She had come to say goodbye to her colleagues. It so happened that Ibolya was flying home via Moscow with us on the same flight. On the eve of her departure, she was not well, and she was brought to the plane in a wheelchair. There was time at the airport, we talked with Ibolya again and said a warm goodbye. For the New Year 2015, I sent her congratulations by e-mail and a group photo taken at the Congress. Her nephew responded. He reported the sad news that Ibolya had passed away a few days earlier.



**Bangkok, 2014: G. L. Zelensky, A. Ferrero, I. Simon-Kiss,
E. M. Kharitonov, Yu. K. Goncharova, V. S. Kovalev**

Simon-Kiss was the last of a series of rice scientists whom I had the chance to get to know closely in the 1980–1990s and learn a lot from them. They are no longer with us: Balal from Egypt, Russo from Italy, Chatagny from France, Alionte from Romania, Aleshin from Russia. They did a lot for the development of rice cultivation in their countries and friendly relations between European rice scientists for many years to come. Their work is being continued by a new generation of scientists.

One of the days of the Congress, when there was a gap in the program, I went out into the city for half a day after lunch. I took a taxi to the historical center of Bangkok. There I visited the Buddha Museum Complex and breathed in the city air.

This part of the city is decorated very interestingly, everything is clean, despite the huge number of people. Tourist buses arrive continuously, like on a conveyor belt. Excursions follow one after another. The whole atmosphere is filled with antiquity and at the same time there are souvenir shops and cafes at every step.



In the historical center of Bangkok

Walking from one building to another, I suddenly saw the Thai Massage Medical Center. I had heard about it before, but I had never tried it. And here was such an opportunity, I couldn't resist. If you come to the country, try to get to know it in detail. Everything in the center was organized well. After

standing in a short line, I bought a ticket at the cash desk and was waiting for an invitation to come inside. There was more than 20 boothses, so the line moved quickly. When invited I went into the reception area, undressed and lay down on the couch. The space was divided by screens into sectors where there were couches. Therefore, you could not see your neighbors. There I discovered that men were served by men, and women were massaged by women. For an hour, all the muscles and bones of my body were kneaded. At the end of the session, when I went outside, I felt such lightness in my body that I had not felt for a long time. I wanted to jump and run, but it was awkward in front of an audience. This is what it means to have a professional work on your body. I was told that the procedure of such a massage should be repeated at least once every six months. On the way back, I walked along the central streets for several kilometers, contemplating the city and taking pictures of different views. The sun was already setting when I stopped a taxi and told the driver to take me to the hotel. By the end of the day, the road was clogged with traffic. The taxi driver decided to speed up the movement, turned onto a side street, and we began to zigzag first in one direction, then in another. It was already dark, and we were still driving until we reached a dead end. At this point, I could no longer stand it, I tried to tell the driver to go to the main road. But he only mumbled something in his own language, he did not know English. In the end, almost by accident, we drove out to the Exhibition Center, and from there the hotel was just a stone's throw away. Instead of using the navigator, I took him to the destination. It was good that the payment was agreed upon right away, and he did not demand more...



Symbols of Bangkok

We spent the following days at section meetings, receptions and conversations with colleagues. At the final meeting, we gathered again in the common room, listened to several lectures, and adopted a final resolution...

The cultural program included performances by local artists showing national dances. Moreover, the performances were held not only on the stage of the large hall, but also in the lobby, next to the poster hall. Photographing of scientists with artists was organized right there. I also could not resist and asked a colleague to take a few photos as a keepsake.



With Thai dancers

During a break between meetings I found myself in the company of Thai colleagues. After handing them my brochure, I asked two questions. The first was about the name of the country: Thailand — a free land?

In response, they explained to me: “Back in the 19th century, a royal decree was issued that required the population to have a constant one-and-a-half-year supply of rice grains — the main food product. This decree is still strictly followed. Well-fed people are not subject to conquerors”. Maybe this is really true.

The second question: Why is Thai rice sold at low price which attracts Russian businessmen?

— Oh, it's very simple. This is a consequence of the same decree on a one-and-a-half-year reserve of rice grain. All rice growers comply with it. When it's

time to harvest the new rice crop, it is necessary to free space in the warehouse. Therefore, part of the previous harvest is urgently sold. Considering that in our conditions there are many pests that settle in warehouses, rice is fumigated during storage, sometimes several times. Therefore, the price of this grain is reduced, just to sell it, — they answered me.

— Thank you. Now it is clear to me why imported rice is often cheaper than local rice in Russian stores...

I left home with a feeling of double benefit: on the one hand, I met and talked with colleagues, and on the other hand, I got to know, at least in general terms, another country — Thailand.

27. Spain, 2016

We had been planning to visit Spain for a long time. After our trips to Italy, Olga once told me in a conversation about our travels that it would be nice to go to Spain. There are many interesting places to see there. I hoped that my Spanish rice-growing colleagues would organize some kind of scientific event so that we could combine business with pleasure. Especially since we knew our colleagues from Valencia. We even started collecting information about this country. Various sources provided historical and current information about Spain, its agriculture, including rice growing, and numerous tourist attractions. The Kingdom of Spain is the fourth largest country in Europe. As of 2016, the country's population was 45.9 million people, with 76% of the population living in urban areas. Only 5% of the country residents are employed in the agricultural sector. Migrant workers are actively involved in seasonal harvesting work. Crop production is traditionally the largest industry. Almost 80% of firms engaged in agriculture are small farming organizations with a maximum staff of up to 250 people.

A fifth of the country's sown area is allocated to wheat, and barley and corn crops dominate in the south and central regions. Irrigated arable land along the Mediterranean is occupied by rice. Large areas are allocated to vegetables, vineyards and olive groves.

Rice has been grown in Spain since the 13th century. It was Valencia and Sicily in Europe that became the pioneers in the production of this crop.



Spain is the second rice producer in the European Union after Italy, which grows about half of the rice, and Spain grows one third of it. At the same time, Spain imports about 20% of the rice it consumes. This is mainly long-grain basmati rice from India and Pakistan, jasmine rice from Thailand, special small-grain rice for risotto from Italy or for sushi from Japan. Spain produces over 750,000 t of rice annually. Domestic consumption is about 247,000 tons. Per capita consumption amounts to 5.8 kg of rice per year, which is close to the medical norm.

More than 97% of Spanish rice is grown in five provinces: Andalucía — 40%, Extremadura — 23%, Valencia — 15.5%, Cataluña — 15%, and the autonomous region of Aragón — 5.75%. The main varieties of rice popular in these areas are medium-grain and round-grain. Spain ranks 5th in the world in rice yields (2016): the first place belongs to Australia — 10.29 t/ha, followed by Egypt — 9.37 t/ha, the USA — 8.11 t/ha, Turkey — 7.93 t/ha and Spain with 7.83 t/ha.

According to Eurostat, Spain exports about 50–60% of the rice it produces. The country meets 30% of the demand for rice groats in the EU. The main buyers of Spanish rice are Great Britain (almost 42% of groats), France (more than 29%) and Belgium (about 8%).

It was, of course, very interesting to get acquainted with Spanish rice growing, and the country itself. However, time passed, and there was no opportunity to travel. We met with Spanish scientists many times at various scientific events. They had planned conferences and seminars on rice several times, but for various reasons everything was postponed.

In 2016, there were two significant events in our family: on May 4th we celebrated 25 years since Olga and I got married (silver wedding), and on May 23rd it was Olga's 50th anniversary. So we decided to celebrate these events with a trip to Spain. Considering that in May I was busy sowing selection experiments, then we could go in June.

At the travel agency, we were offered to go to the coastal town of Tossa de Mar, not far from the border with France. We planned to take several excursions and visit the city of Barcelona. The flight was from Krasnodar to Barcelona, then travel by car.

Tossa de Mar is a small resort town on the Spanish Costa Brava and is located 90 km northeast of Barcelona. The town is part of the province of Girona in the autonomous community of Catalonia. This Spanish resort attracts numerous tourists not only with its beaches, but also with its ancient center. In addition, Tossa de Mar has its own small fortress, which was once built to protect against pirate raids. Now the city is thriving due to tourism, and in the

18th-19th centuries Tossa de Mar was known as the main producer of cork, which was used to seal expensive wines. The population of Tossa de Mar is about 6 thousand people. For comparison, almost 5 thousand people live in the village of Belozerny where the All Russian Rice Research Institute is located. There was a direct flight from Krasnodar to Barcelona. Flight time was 5 hours. Around 10 a.m. local time, we landed at the Spanish airport. Customs formalities and baggage claim took about 1 hour. We went out to the arrivals hall and immediately saw a young pretty woman holding a sign with our name. She was a representative of the travel agency that provided our transfer to the hotel at our destination.

We said hello and went to the parking lot. She was both a driver and a tour guide, spoke good Russian, so along the way she told us about various local attractions that we should definitely see.

Driving through the town of Lloret de Mar, we were told that youth clubs were very popular in this place, they were open 24 hours a day. Young people coming here from other cities in Spain or neighboring countries got so carried away that they often missed their buses and planes. Therefore, they wrote the departure time and flight number on their T-shirts or on the skin of their stomachs. Special security guards monitor the order and at the right time load these young people into a taxi and send them to the bus station or to the airport. The area was located in the foothills, so the road was winding with sharp turns. In two hours we stopped at a hotel. Having thanked our driver, we went to the hotel.

The check-in formalities were completed very quickly and we were given the key to a room on the second floor. It was a small but very cozy room with all the amenities and a huge bed.

There was also a restaurant on the ground floor of the building. We were thirsty after the trip. I asked for a bottle of water at the buffet. The seller gave me a bottle of 0.33 l and immediately added in English that around the corner in the supermarket for that price I could get a 5-liter canister of the same water. Pleasantly surprised, I thanked the seller. Then we did just that, bought water, fruit, some food and local wines in the supermarket.

It was sunny and warm outside, a light breeze was felt from the sea. The time had not yet come for that sweltering heat for which summer Spain was famous. We walked along the street and admired the surrounding areas near our hotel. The fences were covered with various decorative flowering plants, such as bougainvillea.



On the streets of Tossa de Mar

Having made a large semicircle around the town, we came to the seashore. This was the central beach a fairly large bay framed by mountain heights. On the right, on a hill, there was an ancient fortress, and on the left a five-story residential complex overlooking the sea. There were few people on the beach and only the bravest went into the water. It was quite cool, about 20°C. The turquoise water surface was slightly stirred by a light breeze. The beach was covered with a mixture of sand and very small shells, ground almost into sand.



Getting to know the sights of Tossa de Mar

In the center of the beach there was a floating pier, where boats and small excursion boats regularly arrived. Tourist groups were embarking and the boats went on their routes.

The view was very beautiful. We walked along the beach along the water and reached the mountain on which the ancient fortress stood. There was a gate at its foot. The entry was by tickets. The tourists took tickets and went around sightseeing with a group or on their own.

As we later found out, it was like this everywhere: if you wanted to see something, you had to pay. Tourists were welcome in Spain and comfortable conditions were created for them. Judging by the brochures on sale, Russian-speaking travelers were frequent guests here.

Having familiarized ourselves with the town, we approved the plan of our stay. The sea was still cold, so we should visit the beach by the end of the day. It was better to spend the day getting to know the local sights. At the hotel, we were given a schedule of excursions. We chose two: a trip to the mountains, where an ancient castle was located, and a trip to the city of Barcelona.

The next morning, as part of a group of 20 people, we went on an excursion to the mountains. We chose it because the route ran through the National Park (Olga's interest) and an agricultural area (this was interesting to me). Almost all the people were Russian-speaking (Belarusians, Ukrainians, and even the Balts), so our guide spoke Russian. Along the way, he outlined our plan for the whole day's trip with several stops and lunch in a mountain restaurant. This road was certainly not for amateurs — sharp turns, climbs and descents. But the area was really beautiful. The mountains were covered with mixed forests, the valleys were abundant with different herbs. The mountain rivers were noisy with small waterfalls. Sometimes wild animals came into view. We stopped several times to look at this beauty. The air was warm with an intoxicating aroma. We did not notice how time passed and it was time for lunch. The bus turned off the concrete onto a forest road. A couple of kilometers later we drove to a lake, where a campsite was located. Lunch was planned here in a restaurant. In a huge hall made of wooden logs there were large tables and benches looking old. And then at the table we found ourselves next to a married couple — our fellow countrymen, from the Komsomolsky microdistrict of the city of Krasnodar. This was their third trip to Spain. Each time they stopped in different places to fully explore this unusual country. Truly, the world is small. After lunch, our bus took us further up the mountain and reached the final destination in half an hour. Several tour buses were parked on a large platform on the bank of a river. An old stone bridge was built across the river. This was the entrance to

the road that, winding upward, led to the castle. Then the walking tour began. Our group followed the guide, who told the history of these places and the castle standing in front of us.



Ancient city-museum

It turned out that a whole stone city with several cobbled streets and small houses had been built on the mountain. The windows of most of them were shuttered. No one lived in them. Only a few houses had shops with tourist souvenirs, and two houses were turned into taverns. The guide said that only a few families lived here permanently. These were the caretakers of three museums and security guards. Most of the workers came here from other villages. It was clear that this abandoned town on the mountain was gradually decaying. The residents did not have any amenities for their usual life here, so they quit what their ancestors had acquired and left for more comfortable places. However, the guides enthusiastically praised the local architecture, favorable climate and excellent conditions for tourism. I got the impression that we were visiting an ancient cemetery.

The next two days were much warmer, and we spent time on the beach. These days the beach was quite crowded. Under large umbrellas sat groups of vacationers chatting peacefully, occasionally going into the sea, and then sunbathing. There was a crowd of different ages here. We were very surprised by the freedom in clothing: many women were sunbathing topless, demonstrating their beauty. Of course, it was nice to look at the young ones. One could not say anything against it if they were beautiful. But the sight of very old women



in such clothing was not very aesthetic. But they did not pay any attention to the passing men.

On the second day, we saw a funny picture in the center of the beach. It largely characterizes our Russians on vacation abroad. A cheerful Russian-speaking company settled down on a large tarpaulin mat. There were about 10 large women and men. It looked like one of them was celebrating a birthday. The noise of this company's conversation grew louder as the amount of alcohol they had consumed increased. Then came the moment when they needed to cool down, and they all rushed into the sea together. For the locals, the water was cold, no one was swimming. But our compatriots continued their conversations, laughing, rocking on the waves, as if nothing had happened.



On the city beach

We went to the fortress and spent the rest of the day exploring its labyrinths and the surrounding area. An ancient lighthouse stood at the highest point. Nowadays it is a monument to those old times when it showed sailors the way to the shore.

At the foot of the lighthouse there were several old cannons reminding tourists that there used to be a military fortress here. There was a beautiful view of the bay from this point.

During an evening walk along the sea, we witnessed a performance put on by one of the locals. On the left edge of the beach, where there were no vacationers, there was a fisherman dressed in a national costume and a wide-brimmed hat. He had several very long spinning rods. You should have seen

the artistry with which he prepared and cast the gear into the sea. And then he took turns fishing out the fish that attacked his bait. He was openly working for the audience, and every day. We stood aside and watched this whole performance. Within an hour, about 25–30 people gathered. Everyone was watching and commenting on what was going on. The fisherman was apparently used to such attention and demonstrated his skills with even greater diligence.



View of the bay from the fortress

Having waited for the sunset, we enjoyed watching the setting sun and returned to the hotel.

We spent the entire next day, from early morning, on a boat trip. Small excursion boats departed from the beach pier every hour. They had different routes. One of them attracted us. As the guide at the beach told us, the boat had a transparent bottom. Through the glass you could see all the underwater inhabitants. The boat went along the coast, entered several caves inhabited by various sea creatures, and made several stops in bays with beaches. One could get off there, spend the whole day, and then return to the port on subsequent boats. Indeed, this was what we did. While the boat was moving, rocking on

a small wave, various fish were constantly spinning under it. The passengers were allowed to throw pieces of bread to the fish. And the fish, fed by numerous tourists, accompanied all the ships. There were especially many different fish in the caves. These were fairly large grottoes in the mountain coast, into which a boat the size of an Ikarus bus could easily enter. It was in these places that the boatswain was giving out bait for the fish to the tourists. Everyone was diligently throwing pieces into the water, watching how quickly individual fish grabbed the bait. The strongest and most agile won. The spectacle was certainly fascinating.

The boat was sailing 30–40 m from the shore. We stood at the left side and admired the beautiful views of the coastline. Almost all the tourists were armed with cameras or smartphones and were taking pictures of the rocks, grottoes, and steep banks. Everyone's attention was drawn to a lone pine tree on a high cliff. Its roots which held the tree to the rocky surface, were clearly visible.

Considering that there were tourists from different countries on the boat, the guide gave us information in Spanish and repeated it in English, German, French, and Russian. In this way, he showed respect to everyone present.

In one of the bays there was a small lagoon with a sandy beach. There were several buildings higher up on the hill. The guide explained that this was a spa hotel where mostly Germans vacationed. There was a decent cafe on its territory where one could have a tasty and inexpensive meal.



View of the sea coast

We decided to get off at this place. And we did not regret it. It was so cozy there that we left it only in the evening with the last boat. We swam in this

shallow and warm bay, sunbathed. We went to the cafe twice. We breathed in the purest sea and mountain air and simply enjoyed our vacation in this coastal silence. There were few people there, and they behaved very quietly. A real Eden. Later we often recalled this paradise.

On Sunday, we had an excursion planned to the capital of Catalonia — Barcelona. At seven in the morning, we got on the bus as part of almost the same group with which we went to the mountains, and a Russian-speaking guide. The people lived in different parts of the resort, so the bus spent almost an hour driving around the seaside towns until it picked everyone up. The guide talked enthusiastically about local attractions and the relationship between Catalonia and Spain. It turned out that they were very tense. The Catalans had long dreamed of separating into an independent state, but this was suppressed by the central government. Everyone here spoke a local dialect, very different from classical Spanish. It was interesting that children in Catalan schools learnt Spanish as a second foreign language, along with English or French. And this was in Spain! Two hours on the road flew by quickly and at about 9 o'clock we entered Barcelona.



In the center of Barcelona

Our guide told us that Barcelona was the capital of the autonomous region of Catalonia. There is a port located on the Mediterranean Sea, 120 km

from the border with France and 504 km east of Madrid. Barcelona is a major industrial and commercial center of Spain. One of the most important tourist destinations on European routes.

The population of Barcelona is just over 1.6 million. It is the second most populous city in Spain after Madrid and the tenth in the European Union.

In 1992, Barcelona hosted the Summer Olympics. In 2004, it hosted the World Cultural Forum, and in 2013, the World Aquatics Championships.

Barcelona is served by a large international airport, located 10 km from the capital. The airport is connected to the city by a metro line, railway, expressway and bus service. The city is home to the main railway hub of Spain, with the AVE high-speed railway network running through it, connected to the similar TGV in France. Almost the entire coastline of Barcelona is occupied by 8 beaches with a total length of about 5 km. The beaches are a popular holiday destination for local youth and numerous tourists.

The Ring Embankment stretches along the chain of beaches and the Oceanarium, the Historical Museum of Catalonia, the Museum of Natural History, the Maritime Museum of Barcelona, the Ciutadella Park, numerous casinos, hotels and yacht clubs are located there.



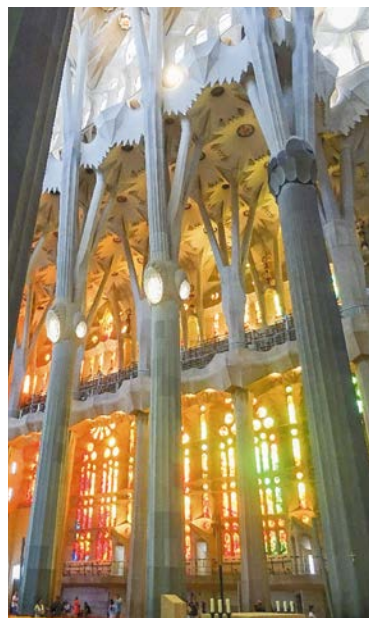
Monument to Christopher Columbus, Barcelona

Next to the seaport is the Montjuic hill, 173 meters high. From the top of the hill there are beautiful views of the city and the sea. Montjuic is one of the largest city parks in Europe (203 hectares). At the top of the hill is a fortress built in 1640. This fortress houses the Military Museum. There was a stop on the hill so we could enjoy the views and walk around the green area. Not far from the sea there is a monument to Christopher Columbus. The 60 m high monument was built for the World Exhibition of 1888 and is located in the place where Columbus returned from his first voyage to America.

The architect Antonio Gaudi played a major role in the development of Barcelona. He was born in 1852 in the small town of Reus, in Catalonia. Twenty years later, Gaudi moved to Barcelona, where he was accepted to the Provincial School of Architecture, he graduated in 1878. At that time, Europe was experiencing an extraordinary rise of the neo-Gothic style, and the young Gaudi followed the ideas of neo-Gothic enthusiasts. The decisive factor in the implementation of the young architect's plans was his meeting with Eusebi Güell. This textile magnate, the richest man in Catalonia, could afford to order any project, and Gaudi received what every creator dreamt of: freedom of expression without regard to the budget. Gaudi carried out a number of projects for the Güell family that adorned Barcelona. Most of the buildings built according to Gaudi's designs were included in the UNESCO World Heritage List in 1984. The style in which Gaudi worked is classified as Art Nouveau. The architect's buildings include complex and spatial structures.

Gaudi considered the construction of the Sagrada Familia, which was to become the temple of the new century, to be the main work in his biography. By the time of the architect's death, the temple was not completed. Difficulties arose because Gaudi worked without drawings. Work is still ongoing on the construction of another facade and the central bell tower. And funds are still being raised to complete the construction.

In his youth, Gaudi looked like a dandy, wore expensive suits. He constantly visited the theater and opera, and drove around construction sites in his own carriage. In adulthood, the architect stopped caring for his appearance, dressed poorly and ate very modestly. In the street, he was sometimes mistaken for a beggar. On June 7, 1926, 73-year-old Gaudi was absentmindedly walking down the street and was hit by a tram. The cabbies refused to take the unkempt, unknown old man to the hospital without money or documents. Gaudi was identified by the rector of the church, and he was taken unconscious to the hospital for the poor. Three days later, Antonio Gaudi died and was buried in the crypt of the unfinished Sagrada Familia.



Sagrada Familia Temple (outside and inside)

Arriving in Barcelona, our group first looked at the city from the bus windows, and then took a walking tour. At the same time, our guide continued to comment on what we saw in the city, drawing our attention to the unusualness of the buildings built according to the design of Antonio Gaudi.

When we came to the Sagrada Família, the grandeur of this building amazed everyone. The interior design and decoration of the temple were fascinating. We had never seen anything like this in temples. Fundamentally differently decorated facades, in different styles. Inside, the temple resembled a tropical forest.

After examining the temple, we went to see Park Güell, built according to the design of Gaudi. The park is so unique that it is very difficult to describe what we saw. Here, unusually designed houses, towers, galleries, figures of animals, reptiles and birds were installed. All the free space is filled with subtropical vegetation — trees, bushes, flowers. It is a large green oasis not far from the center of Barcelona adjacent to residential buildings.

There were many vacationers in the park — locals with children and tourists from different countries. Tourist buses constantly arrived at the parking lot at the entrance to the park. This park is included in all excursion routes that pass through Barcelona.



In Park Güell

After a three-hour tour of the park's attractions, in our free time we walked along the main pedestrian street La Rambla, where the attention of passers-by was attracted by the so-called "living sculptures", musicians and street artists. Then our group gathered at the bus. Ahead was a trip to the last object of our excursion in Barcelona — the "singing fountains". We drove out of town, climbed a hill and left the bus there. We walked about 500 meters along the ridge of the hill and saw an unusual picture. Steps were built down, leading to high columns, behind which streams of water were playing. This was the famous singing fountain.

While the guide was telling us the story of the construction of this fountain, the sun leaned to the west, it began to get dark, and then the backlights were turned on. The height of the fountain jets increased sharply, music began to play and the water jumped in time with the music. The lighting also changed.

It seemed as if a rainbow was playing in the jets of water. The spectacle was, of course, stunning.

It was already completely dark when our guide insistently called everyone to return to the bus. Our fellow excursionists reluctantly responded to this request. Having cast the last glance at this grandiose show, everyone trudged after the guide. The busy program of the day was over when we entered our hotel around midnight.

We spent the final day of our vacation lazily and relaxed, swimming in the sea, walking along the embankment, strolling through the shops. We did not want to run anywhere or see anything else. We even refused the previously planned inspection of the botanical garden in the neighboring town, although Olga later regretted it. The next morning, departure was scheduled for 4 a.m. The airport transfer picked us up first because our town was the farthest from the airport. We had at least three hours to get there. We had to be at the airport 4 hours before departure. It seemed like we had plenty of time. However, the trip took much longer than we expected. A large bus for 40 people picked up all the Russian tourists flying out that day from Costa Brava. People gathered at a certain time at a designated stop and boarded our bus. We were not able to pick everyone up. Two girls did not return to the hotel on time after a night out in Lloret de Mar, and after a short wait and search at the hotel, the bus left without them. We were convinced once again that punctuality was a very good quality. Our bus arrived at the airport on time, there were about 4 hours before departure. So we found free seats and waited for check-in. Olga went shopping with our hotel neighbor Sveta from St.Petersburg, whose husband went for a walk around the airport. They announced check-in for St.Petersburg and Sveta left. About 20 minutes passed and suddenly Sveta ran up to us crying that her husband had not shown up for check-in. She was completely confused and did not know what to do. She had gone around all the nearby cafes and recreation areas — her husband was nowhere to be found. Olga reassured her that he would not go further than the airport. She had to make an announcement and call him. But how could she do that? Sveta only spoke Russian. Olga went with her to the information desk, explained the situation in English, and Sveta was allowed to call her husband over the radio. And she loudly announced in Russian:

— Sergey Ivanov from Petersburg, please show up for check-in immediately, we're late for our flight.

It turned out that Sergey had drunk some beer, sat down on a free bench and fell asleep. He was woken up by his wife's loud voice, coming from all the

speakers. He didn't notice all the announcements in Spanish. He ran to the closing boarding gate.

You should have seen how Sveta thanked Olga with tears for the help she had provided.

"At least for this reason it's worth learning foreign languages," she said waving goodbye.

We waited for our flight and safely flew to Krasnodar.

28. Kazakhstan, 2017

In early July 2017, V. S. Kovalev, Deputy Director for Research at the All-Russian Rice Research Institute, informed me that I had to go to the Kazakh Research Institute of Rice Growing in August. According to the agreement between our Institutes, I was supposed to conduct classes with rice growers and act as an external expert on the educational program for advanced training of seed agronomists.

Last year, Viktor Savelyevich Kovalev acted as an expert, and this time they invited me. The trip was paid for by the host party. I agreed. A week later, I received a letter from the Atameken company (it organized advanced training courses) asking me to inform them of the date of my arrival in Kyzylorda to conduct classes and my details for transferring money to cover the trip expenses. In connection with the admission of students to the Master's program at the Kuban State Agrarian University, I informed them that I would be able to arrive between August 15 and 30. For this trip, I planned the following route: Krasnodar — Moscow — Astana — Kyzylorda, and back: Kyzylorda — Almaty — Aktau — Krasnodar. I decided that on the way back I should talk to colleagues at the Research Institute of General Biology and Biotechnology in Almaty and at the same time meet Doctoral students for whom I was appointed an external scientific supervisor. This was how it was practised in the Republic. Ainur Demesinova was studying for a Doctorate at Kyzylorda University, and Yeldos Zhanbyrbayev was studying in Almaty.

I informed the Kazakh Research Institute of Rice Growing, where the classes would be held, that I would fly to Kyzylorda on August 20 and stay with them for 6 days. My colleagues replied that they were expecting me at the appointed time and would schedule the classes for that time.

While preparing for the trip, I decided that I should combine it with a visit to the All-Russian Research Institute of Phytopathology in the Moscow Region. At the request of our fellow phytopathologists, we collected samples of rice varieties affected by blast during the summer. They wanted to see how the racial composition of the *Pyricularia oryzae* had changed since the 1990s.

We decided to fly to Moscow with my wife Olga Vsevolodovna, who was also on vacation, to combine business with pleasure. She had long wanted to visit the city of Zagorsk (now Sergiev Posad).

We flew to Moscow on August 15. We checked into the Ural Hotel, and on the same day we met the colleagues from the Timiryazev Agricultural Academy, and the next day I went to the All-Russian Research Institute of Phytopathology.

I had not been to the village of Bolshiye Vyazemy, where the Institute is located, for 10 years. Before that, I had come there regularly for conferences and work meetings. While I was walking to the Institute, I didn't see any big changes around, except that they opened the A. S. Pushkin Museum-Estate here.

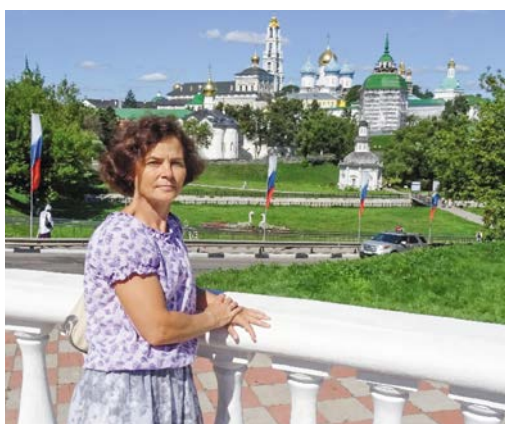
At the Institute, the Head of the department, Tamara Mikhailovna Kolomiets, was waiting for me. I gave her the rice samples, and we discussed the situation regarding further cooperation. She said that in November they would be holding a conference dedicated to the 80th anniversary of Academician S. S. Sanin, the former Director of the Institute and now its Scientific Director.

Sergei Stepanovich Sanin is our fellow countryman worked in Krasnodar, then he was transferred to the All-Russian Research Institute of Phytopathology as the Head of the department, then he was appointed Deputy Director, and then Director of the Institute. We had long-standing warm relations with him. Tamara Mikhailovna took me to Sergei Stepanovich, and we met with great joy. From our conversation with him, I understood that the main topic of the future conference was epidemics of diseases of agricultural plants and ways to contain them. One of the ways to contain epiphytotic diseases was creation of varieties resistant to diseases. I told Sergei Stepanovich about the new rice variety Olymp, which shows high resistance to blast. He suggested that I urgently write an article and give a report at the conference.

The next day, August 17, we dedicated to go on a trip to Sergiev Posad.

This is the ancient center of Orthodox Rus'. Time flew by the place completely unnoticed. Returning to Moscow by train, Olga Vsevolodovna and I continued to talk about what we saw in this holy place. This trip also predetermined the plan for the next day. On the first day at the hotel we were given a brochure about the opening of a hall of Russian history at VDNKh, and we decided to visit this exhibition. After breakfast on Friday we went to VDNKh

through the Tsitsin Botanical Garden. The weather was wonderful, it was sunny, but it was not hot in the shady alleys. Having arrived at the right hall at VDNKh, we bought tickets and went to see the exhibition of Russian history. We thought that these would be paintings, diagrams, graphs, portraits, as usual on the walls of the hall. It turned out that in reality everything was different, in a modern version. A huge amount of historical information was presented in a multimedia format. “Passing from hall to hall, people move here, the whole life of a great country rises before you”, one could say, paraphrasing a famous poem. And it would be good for this exhibition to be permanent. It should be recommended to take young people there, most of whom know the history of Russia very poorly or do not know it at all...



Sergiev Posad, 2017

In the morning of August 19, I saw Olga off, and she went home. I returned to the hotel and after lunch went to Sheremetyevo airport. From there I flew to Astana. At 5 a.m. on August 20, local time (this is + 3 hours to Moscow time), we landed safely at the international airport of Astana. The captain announced that the temperature outside was + 11°C, and in Moscow before the flight it was + 24°C. Having received my luggage, I went to the local lines lounge.

According to the schedule, in 3 hours they announced boarding for the plane to Kyzylorda. It was a small airplane, for 60 passengers. The flight to the destination was about two hours. I could see the surface below. A deserted area, yellow, withered vegetation and sands in places. A huge undeveloped space. No water, no life in these places.

Already approaching Kyzylorda, when they announced the descent for landing, I suddenly heard a conversation between my neighbors on the left, a

girl and a guy. They started talking in Russian, and before that they had been talking in Kazakh. She said to him:

— You see, as soon as we land, go to the store right away and buy 10 kg of Leader rice, we need to cook pilaf. The “toy” will be big.

My ears jumped when I heard the words “Leader” and “pilaf”. This was the first pleasant sign: they knew about our rice variety Leader here.

We arrived in Kyzylorda, got our luggage. I went out to the meeting hall and saw a man waving his hands, looking in my direction. That was a Research fellow from the Kazakh Research Institute of Rice Growing, Zhanuzak Baimanov. He knew me by sight and we exchanged messages by e-mail. When I visited them in 2010, we communicated briefly. At that time, I was under the care of senior colleagues, and he was a Research fellow. Over the past 7 years, he had grown to the Head of the Innovation Department, and also read courses at the Faculty of Advanced Training. And I would be working directly with him.

Zhanuzak was driving from the airport to the city in his car, and I was very surprised by the changes around. The old road had turned into a 4-lane highway. Various buildings were growing along the road, the previously empty territory was being actively developed and built up. But I was even more surprised when we entered the city over the bridge over the River Syr Darya. The city turned to face the river, several bridges were built. There was an embankment along the river. The river was covered in concrete, and along the bank there was a wide walking area for pedestrians and cyclists. Benches and awnings were placed throughout the area so that vacationers could sit in the shade by the river. We are driving along the embankment, on the left was the river, on the right was the city — an area of small cottages, and then high-rise buildings. Kyzylorda had changed so much over the past time that it had become a real city. Wide streets, green areas, modern buildings decorated with illumination. And as I later saw at night, everything shimmered with colored lights. But in 1970, when I came here as a soldier for track and field competitions, it was a large village, and only the name indicated that it was a regional center. During my current visit it was truly a center — a modern city. It was not so much the houses and streets that surprised me, but the cleanliness and well-groomed areas. There was no garbage, not a single weed in the flower beds, the bushes were trimmed, there was bright greenery all around. And this was despite the dry climate. And all because the care and watering were well organized. We drove around the city, and my soul rejoiced, local people were really great, they loved their city. Despite the hot weather, it was pleasant to move around the city. Everything was clean. The walls of the houses were painted. Concrete

ditches were laid along the roads, through which the flowing water fed the trees and flowers. Later, one colleague told me how the city was transformed and cleaned. The city leadership had to seriously work with the population. Strict measures were introduced for violators of cleanliness, littering and smoking in public places were prohibited, except for designated and equipped points. Cameras were installed to monitor all violations. Police officers caught violators, drew up reports, which were sent to court. The court analyzed the situation and issued a fine. In case of repeated violations, the fine was increased. Red tape — yes, but the result justified all the costs.



The transformed city of Kyzylorda, 2017

The population gradually got used to order and cleanliness. The main result of this difficult work, in my opinion, was that children lived in a clean city. Time would pass, a new generation would grow up for whom cleanliness in the city would be a normal state. They would not litter or smoke in the street out of habit. And they would teach their children the same.

Zhanuzak brought me to a hotel with an interesting name “VAN GOF”, which was practically next to the Research Institute of Rice Growing. They put me in a good 2-bed room with all the amenities and breakfast. Having left my things in the room, we went to the Institute. Despite Sunday, there were a lot of people there. As Zhanuzak explained, many employees lived near the institute and came to the laboratories on weekends to work, read, think so that their families did not interfere. This was only welcomed at the institute.

We went up to the 2nd floor to Zhanuzak’s office and worked with papers for almost two hours. In the end, we agreed on a program of further actions. It was news to me that I had to conduct classes not only on rice growing, but also

on testing of grain crops: wheat, barley, oats, millet and rice. I had prepared 5 lectures on rice in the form of presentations. And I had to prepare the same for other crops. Fortunately, the Internet was at hand. I immediately went to the website of my department, where three manuals “Varietal Characteristics of Agricultural Crops ...” were posted. On the website of the Timiryazev Agricultural Academy, I found instructions for testing grain crops. Zhanuzak and I selected drawings and photographs, and thus, the material for the lectures was collected. Now it had to be systematized so that the audience would find it interesting. We decided that since it was time for dinner, we would go to a cafe, then I would take my laptop with me to the hotel and prepare lectures with presentations. Fortunately, the hotel had Wi-Fi. All this helped me a lot. In a few hours I managed to put together presentations for several lectures, with pictures of cultivated and weedy plants. And, as it turned out later, it was not in vain that I worked with my notebook until midnight.



**In the lobby of the Kazakh Research Institute of Rice Growing
named after Ibrai Zhakhaev**

The next day, Monday, the students arrived and I got acquainted with them. This group consisted of 30 specialists working in the regional and district seed inspections. They directly tested crops, drew up documents and gave permission for production to varieties and lots of seeds. The testers listened to the lectures with particular interest, took notes, asked various questions, sometimes far from the topic of our classes. I tried to answer all, even tricky questions. Fortunately, I already had a lot of experience communicating with a student audience.



The classes according to the schedule began on Tuesday, so on the first day the Director of the Institute Serikbay Umirzakov decided to show the guests the experimental fields. They were located in the Experimental Production Farm about 20 km from the city.

On the way to the farm, the Director told about the program adopted in the Republic on the allocation of land for residential construction. Every resident of the country could get 10 acres of land for free to build a house with a loan at a very low interest rate for the purchase of materials and the construction work. When I was in Kyzylorda in 2010, there were wastelands around the city. This time all this land had been divided into plots and mass construction was underway. As Serikbay said, if earlier, 10–15 years ago, houses were built from unfired adobe bricks and then plastered, now they are built from modern materials — bricks or foam concrete blocks. The result was very beautiful houses. It should be added that roads, water and electricity were provided free of charge at the state's expense on the construction sites. Therefore, mass construction of private houses was underway throughout the country.



**At the experimental field of the Kazakh Research Institute
of Rice Growing**

When we arrived at the rice system of the Experimenta Farm, we immediately headed to the field where the seed plot of the rice variety Leader was located. Seven years earlier, the Kazakh Research Institute of Rice Growing signed an agreement with the All-Russian Rice Research Institute for the primary seed production of the variety Leader. This important work was entrusted to the leading specialist of the Institute in selection and seed production. Under his leadership, all the work was carried out with special care. They selected the original elite plants, laid out nurseries P-1, then P-2, PR, super-elite and elite. And after five years of works, at the output, they received 20 tons of elite seeds of the variety Leader. And the demand of the Republic's farms exceeds 500 tons. Therefore, they naturally went to Kuban for Leader seeds. But even there, the production of its seeds was very limited. In Kuban, Leader was sown on a small area and only in sanitary zones where chemical plant protection products against weeds and diseases could not be used. (*New generation rice varieties have arrived in the Kuban fields.* — Author).

The Institute staff were waiting for us in the rice field. Several new pairs of wading boots were lying next to them. Now I understood why I had been asked at the meeting in the Director's office what size of boots suited me. When I said that I needed size 46, the staff sitting at the table suddenly started talking in Kazakh, and the Director said something in a commanding tone at the end. Probably, they were told to find the right size, because they gave me boots of my size.

The Director suggested going to the check to inspect the quality of the weeding. About 10 men and women were working in the check. Although it was difficult to distinguish them. Everyone was dressed in overalls, and mesh masks on their heads. This is how they protect themselves from mosquitoes, which actively attacked throughout the day, despite the high temperature and broad daylight.

The rice panicles were formed at that time, and impurities were clearly visible. These were mainly awned red-grain forms. Walking through a section of the field where weeding had already been done, I found an awnless plant similar to Leader. But it was shorter, earlier (like Kuban 3) and had red grain. The workers let it pass. I pulled out several of these plants, showed them to the workers, and told them that this was an admixture and how dangerous it was in Leader sowing. And then something happened that surprised me very much. The oldest worker suddenly began to translate my words into Kazakh. It turned out that the young people did not understand Russian. I later asked Serikbay about this, and he confirmed that Russian was studied at school as a



second foreign language, along with English and others. And as a result, many young people practically did not know Russian, especially if their families did not speak Russian. The second thing that surprised me was the payment system for weeding. I saw that the workers pulled out the admixture plants by the roots, cut off the panicles with a sickle and put them in a bag hanging over their shoulder. Then the senior member of the team weighed the full bag and wrote down the result in a notebook. For each kilogram of impurity panicles they were paid 40 tenge. I asked how many such panicles they collected per day. The answer was up to 50 kg. Thus they could earn 2,000 tenge (400 rubles) per day.

I don't know if they will be able to remove the impurity I found in the plant stand of the Leader, but the fact of its discovery is very important to me. We must check our Leader crops for impurities, maybe they have appeared in our fields too.

In general, the Leader crops looked good after weeding, especially from the road. After that, we moved to the drip irrigation site. It was arranged on a fallow field of the rice system. Next to the canal there was a large barrel on a stand, into which water was pumped by an electric pump. An electric line ran nearby along the road. From the barrel, water went through filters into the irrigation system. Cucumbers, watermelons, melons and millet were grown on the site. At the same time, they studied the rates and timing of irrigation. Judging by the development of these plants, it was clear that the effect of drip irrigation was very good. There was a big problem there: at night, jackals came to the field and damaged the melons, eating out the seeds. The remaining part of the fruit would rot. Therefore, the guards were on duty with a gun around the clock. In another check, they were testing drip irrigation when growing rice. Judging by the condition of the plants, there would be little benefit from this. The rice plants were depressed, low, with small panicles. The reasons for this were not explained to us, but I think there were three reasons: depression after treatment with herbicides to control many weeds that sprouted with drip irrigation, insufficient nutrition of the plants and the beginning of secondary soil salinization. In some places, the soil was already white. In heavily saline areas, the rice plants gradually dried out.

At the end of the inspection, we went to the mechanized grain threshing site, where we were shown warehouses and cleaning machines. There, we also tested the melons grown in the experimental field. We cut melons of three varieties, and it turned out that one was tastier than the other. The size of the fruit was amazing — about 5 kg. The sweetness in the mouth after these melons was such that one had to definitely wash it down with water. The satiety from



the eaten melon was so high that I had to give up dinner and drink only tea. In the evening, I continued preparing for the lectures on approbation. Thanks to the availability of the Internet, I was able to collect all the necessary information. As a result, the material turned out to be interesting, and my lectures were a success.



Study of rice drip irrigation



Testing Kazakh melons

The next two days were devoted to theoretical classes. In accordance with the program, the courses were opened by the Director of the Institute with a

lecture on the state and prospects for the development of rice growing in Kazakhstan. Then there was my lecture on the seed production system of grain crops. After lunch, local scientists spoke on rice cultivation technology, weeds, diseases and pests. I was pleasantly surprised by the attitude of the listeners to the classes. They not only listened with great interest, asked questions, but also commented on the lecturers' answers. It turned out to be a good, mutually interesting informal conversation. By the way, the lunch was well organized. A common table was set in the cafeteria next to the Institute, at which all the listeners and lecturers sat. Several dishes were served. The costs were covered by the organizers of the courses.



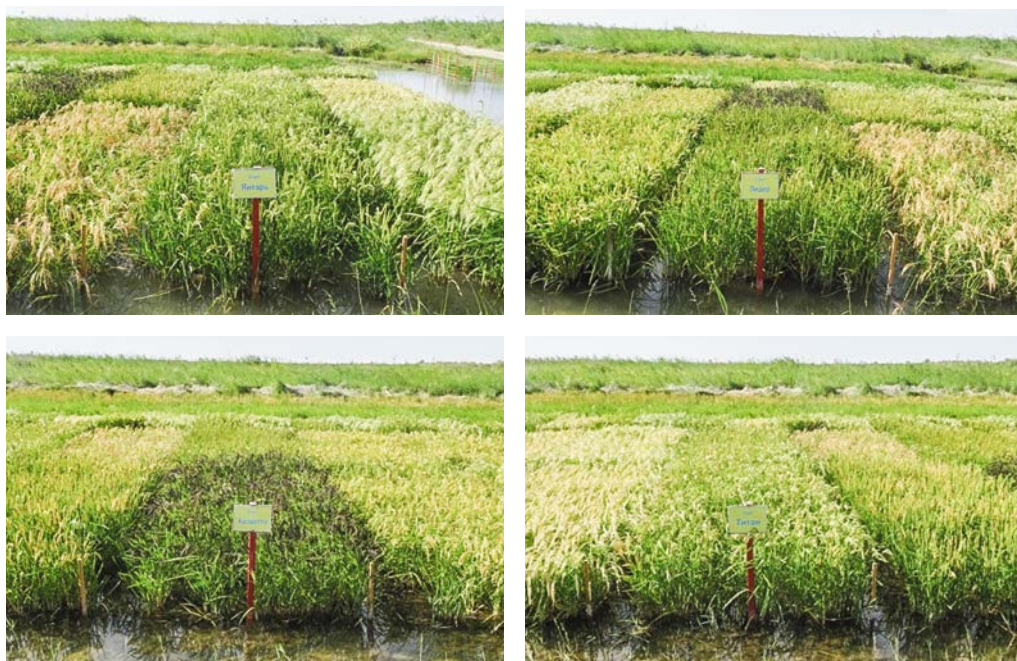
Lecture at the courses for approbators in the Kyzylorda region

The next day I had a one-man show in the morning. I lectured from 9 a.m. until lunch. First I talked about the testing technique and characteristics of grain crops, and then I presented three topics on rice: selection for drought resistance, variety rotation, and problems of rice growing in Kuban.

A representative of the Ministry of Agriculture from Astana attended the lectures — a young, nice and very polite man. At lunch he invited me to a separate table to chat, as he said, in an informal setting. He asked a lot of questions about rice, right up to how varieties were created. I still don't understand whether he asked all this out of interest or to keep up the conversation at the table.

And after lunch, all the listeners went by bus to a field lesson at the Experimental Farm. The route was almost the same as last time. They just added a visit to experimental plots for selection and variety testing of rice and forage grasses. The rice experiments were located in one small check: ecological test-

ing of varieties and selection crops: competitive variety testing, control and selection nurseries. All nurseries are sown on micro plots, and the total area of selection crops does not exceed 0.5 ha. At the same time, as the Director of the Institute said, these crops were placed for many years in a row in one place and a very low agricultural background. Judging by the development of the plants they clearly lacked nutrition. It was a pity that the breeders were not with us, there was no one to ask questions. This sowing showed that our Kazakh colleagues had weak rice selection. And there was no reason to expect breakthrough achievements. For this reason, probably, most of the rice fields in Kazakhstan are occupied by Russian varieties from Kuban.



Russian rice varieties Yantar, Leader, Novator, Titan in ecological testing of the Kazakh Research Institute of Rice Growing, 2017

More interesting were the selection crops of forage crops. They were located on the neighboring rice system check. Our classmate in Graduate Course at the All-Russian Rice Research Institute, Umirzak Aimukhambetov, was breeding forage crops: alfalfa, sweet clover, and sainfoin. His great achievement was the creation of a variety of yellow melilot, the plants of which did not contain coumarin. This substance caused bloating in cattle when eating ordinary melilot. Umirzak managed to create such a variety, but he did not reveal the



secret of how he had reached the result. Now this variety was being rapidly propagated for sowing in a rice system instead of alfalfa. Yellow melilot had two advantages over alfalfa. First, yellow melilot was less capricious and could withstand salinity. Second, yellow melilot was a biennial crop, after two years the root system dried up and did not regrow like alfalfa.

Fate has thrown Umirzak around a lot in his scientific life. Immediately after returning from Graduate School, he was engaged in rice breeding and seed production. But after several years of work, he was assigned to breed melons. He took this assignment very seriously. He went to Israel for a six-month internship, collected the necessary source material and launched breeding in full. A few years later, melon varieties began to roll off his breeding conveyor. As a result, he created 5 melon varieties that went into production. And then a new twist — it was necessary to create a yellow melilot variety without coumarin. Again, Umirzak was assigned this task. Time passed, and he completed this task as well.



Umirzak Aimukhambetov talks about the selection of perennial grasses

But, unfortunately, due to routine and daily concerns, Umirzak's hands never got around to defending his Ph.D. thesis. Although, based on his work and

the results he obtained, he has long deserved the academic degree of Doctor of Sciences. In 2017, he turned 67 years old, he still has strength, but he is no longer going to write a dissertation...

Having returned from the field to the Institute, Zhanuzak and I sat down to write some documents. I had to write an expert opinion on the Program of Seminars for Rice Growers, developed at the refresher course, as well as a report on the work done here. This report was to be attached to the financial documents for payment for my work at this event.

I had to take the notebook to the hotel again and sit until midnight, drawing up the necessary papers. At that time, a very interesting TV program of the local geographical society was on about the sights of Kazakhstan, about the flora and fauna. True, I listened more than watched, but still it was very interesting.



With the students of the approbation courses

Thursday was the final day of classes. In the morning I gave a lecture on the biological foundations of rice farming. The lecture was extensive, but they listened with great attention. Towards the end of my speech, the Director of the Institute came and started asking me questions. I had to go back and repeat what I had already said. Then a representative from Astana brought two young men with a movie camera and asked me to repeat the main points of the lecture to record on video.

After lunch, we held a final meeting at the refresher courses and presented certificates to the students. Several of them, upon receiving the certificate, expressed gratitude to the course organizers and lecturers.

Now it was time to switch to Kazakh rice. Trips to three rice farms were planned for Friday and Saturday: “Abzal and Co”, “TAN LTD” and “Baikonur”. This was also part of my work program.

The next morning, a group of research fellows and postgraduate students gathered for a trip to the production rice fields. The Abzal&Co farm was located 80 km from Kyzylorda. We drove for about an hour along an excellent highway. This was part of the Silk Road from China to Europe. The highway was very well made, with animal barriers on both sides. The exits and intersections are equipped with bridges. Everything was good on this road, but it was narrow, with only two traffic lanes. Therefore, when overtaking, you have to drive into the oncoming lane. And this was inconvenient, especially when the traffic in the highway was heavy. When I was here in 2010, the road was just being built. On the old section, the roadbed was completely broken. Then we had driven to the farm for more than two hours, and had been really exhausted. Now we drove along the highway quickly and with pleasure. Magzhan, the son of Abzal Aliakparov, drove the car very carefully, the speed did not exceed 80 km/h. Upon arrival at the place, I praised him for this. After the monotony of the steppe, the central village of the “Abza&Co” farm seemed like a real oasis. Over the past 7 years, it had been transformed for the better even more. A large mosque was built, roads were renovated. The trees had grown, flowers were everywhere — bliss!



Contrasts: at the office of the farm “Abzal and Co” and outside the village

In the village we were met by the Executive Director and several specialists. They briefly told us about the changes that had taken place on the farm over the past five years. The Head of the Company, Abzal Zhamushevich Yer-

aliev, received the star of the Hero of Labor of Kazakhstan and was elected as a Deputy to the State Duma, so he spent most of his time in Astana. But the work on the farm did not stop. Rice was grown for both commercial and seed purposes. Russian varieties were replicated here. About 70% of the area was occupied by Yantar and almost 30% by Leader. A small area was occupied by Favorit. This variety had grain similar to that of Leader. But an attempt to sell Favorit cereals under the guise of Leader led to a scandal. Local buyers already clearly distinguished Yantar, Leader from other varieties. After a short conversation, we went to look at the rice fields. The variety Yantar was ready for harvesting. In some places, crops had begun to be mown down on the checks. Leader was still standing with water. It had a longer growing season. This was its disadvantage. It was late for local conditions, although more productive. Rice growers said that if Leader was 5–7 days earlier, it would be priceless in Kazakhstan. But it was what it was.



In the rice field

Kazakhstan rice growers buy elite seeds of the varieties Yantar and Leader in the Krasnodar Territory, where the production of seeds of these varieties is difficult, because Kuban farms practically do not sow them anymore. Growing seeds for the Kazakh companies is of little interest since they are very unreliable buyers: they either take them, or, having placed an order, do not come for the seeds. There is no answer to why this is so. Various objective reasons are given. The main problem for rice growers in Kazakhstan is obtaining crops

that are free of red-grain rice. Crops there are very heavily contaminated with weedy field forms of rice in places. This also happens because when seedlings are obtained from under a layer of water in the presence of a problem of soil salinity, the cultivated varieties are thinned out, and red-grain rice overcomes the water layer better, gives more shoots and therefore reproduces faster. In order to get rid of red-grain rice, it is necessary to clear the soil of it and sow clean seeds. For this reason, Kazakhstan has very strict requirements for the purity of elite seeds. Contamination of the elite seeds with red grain rice is not allowed. But there are apparently big problems with cleaning the fields.

We were shown fallow fields where major leveling had been carried out and provocative irrigation was done. Judging by the volunteer rice that had risen, there was a lot of weed rice here, and one flooding would obviously not be enough. But they would not be able to flood the plot a second time, there was no water in the canals. It should be noted that many fields were also infested with reeds. Most of the canals, drains and edges of the checks were in reed thickets.

- How do you control the reeds?— I asked.
- We mow them.
- Do you use the herbicide glyphosate?
- Very little, too expensive, — was the answer.

Some checks of the fallow field were covered with a white coating of salts that had come to the surface of the soil. Even weeds did not grow here.



Soil salinization is the main problem of Kazakhstan rice growers

We drove around almost all the rice fields of the farm. The steppe was nearby. The border was marked with a barbed wire fence. When I paid attention to this, they explained to me that the fence was to protect the fields from animals grazing in the steppe. And then they added that it was also to protect from people.

Returning to the village, we were immediately taken to lunch in the same fancy restaurant as last time. But the table was set in a small hall for 10 people. There were many delicious things on the table. They treated the guest to traditional pilaf made from the rice variety Leader.

We were returning to Kyzylorda with Zhanuzak. The farm's agronomist, Askar, was traveling to the city with us. Arriving at the hotel, he invited me to have dinner together. We agreed on 7 p.m. I had two hours of rest.

As soon as I washed up from the road, there was a knock on the door. It was Ibadulla Tautenov, former Deputy Director of Kazakh Research Institute of Rice Growing, and Vice-Rector at the University, at the time of my visit. We knew each other for a long time, he was almost my age and a great friend of Asker Udzhuhu. They were in Graduate School together in Moscow and defended their Doctoral thesis at the same time. The last time I saw Ibadulla was 5 years ago, when Bakdaulet and I flew to Kyzylorda. Outwardly, Ibadulla did not change, he was still energetic and friendly.

He came to say hello to me and discuss the affairs of his graduate student Ainur, for whom I was registered as a foreign scientific supervisor. The following procedure was adopted in Kazakhstan: each PhD candidate (Doctoral student) was assigned a foreign supervisor in addition to a local one. This person had to be a well-known scientist from any country working on a similar topic and who had agreed to perform the supervision. I signed such consent two years earlier.

Ainur had one year left before completing her studies. We talked about Ainur's thesis and what else needed to be done. As we were finishing our conversation, I complained that I couldn't find out information about the area under the variety Leader. I heard a lot about it here, but it was not clear how much had been sown. Ibadulla called his former graduate student, who worked in the Seed Production Department of the regional Ministry of Agriculture. And she told me some amazing news about the variety Leader. In 2017, rice was sown on the area of 89,268 ha in the Kyzylorda region. Of these, Leader occupied 45,965 hectares, i.e. 51.5%, Yantar — 23.6%, Marzhan — 14.2%, Favorit — 7.2%, Novator — 2.0%, KazER-6 — 0.8%, Anait — 0.5%, and other varieties — 0.2%. Thus, Kuban rice varieties occupied there 84.8%.

This information, of course, pleased and surprised me. Why did I learn about this only now and almost by accident? My colleagues from the All-Russian Rice Research Institute came here regularly, they had been there a year before me. But not a word was said about expanding the area under Leader in Kazakhstan.

In 2010, Leader occupied about 29.000 ha there. Then my colleagues said that the area under it had decreased to 10.000–12.000 ha. And then, it turned out, it suddenly grew to almost 46.000 ha...

Oh well. We should proceed from the current situation and think about how to increase the supply of elite seeds here. At the same time, no admixture of red grains were allowed.

As soon as I managed to thank Ibadulla for the good news about the rice variety Leader, Askar Aliakparov arrived. It was already 7 p.m., and it was time to have dinner. Two hours of communication with Ibadulla flew by for me completely unnoticed. And as often happened, the same two hours dragged on very slowly, especially when you were waiting...

We went outside. There was a taxi at the entrance. I asked:

— Are we going far?

— No, nearby, to the river. There is a good place with excellent cuisine there.

We drove for 5–7 minutes. The restaurant had two large halls, one indoors and the other under a canopy. We decided to sit outside. We sat at a small table, almost in the center of the hall. Askar ordered a hearty dinner, including shashlik, which would have been enough on its own, without other dishes...

I looked around. There were about 30 tables of different sizes in this hall, from 4 to 12 people. When we arrived, the hall was half empty, and by 9 p.m. there were no more free seats. At the same time, there were very few young people. Mostly middle-aged people. I looked at the crowd and thought that, judging by the cars on the roads, by the fullness of this hall, the population here did not live poorly. People were having dinner and chatting merrily. Music was playing unobtrusively. No one was making noise. People were talking in low voices, laughing quietly. There was a light hum, like in a beehive. The waiters — boys and girls in the uniform, fluttered between the tables, quickly serving visitors. And it was nice that after 5–7 minutes after the order, they began to bring dishes, but not all at once, but in stages, so that they were hot. And what surprised me was that each table had a call button, which you could press to invite a waiter.

A group of women sitting at the next 12-seat table were celebrating a birthday. And I admired how they congratulated the birthday girl with toasts

and custom songs. At the same time, the performance was alternated between Russian and Kazakh, maybe because there was an international company at their table.

During the dinner, Askar told about himself. While he was studying for a Master's degree at Kuban State Agrarian University (full-time and part-time), he worked as an Agronomist at Abzal's farm. After receiving his diploma, he moved to work for a company that supplied them with chemicals — fertilizers, herbicides and fungicides. The main reason for the transfer was the salary that the company gave. By that time, Askar had gotten married, and his expenses had increased significantly. He worked for the company for almost a year, and then Abzal invited him back, giving him the same salary plus bonuses at the end of the year. At the time of our meeting Askar worked at the Head Office in Kyzylorda, he was responsible for selecting and delivering rice seeds, fertilizers and pesticides to the farm. He was expecting an addition to the family. And, judging by his appearance, he was quite happy.

After dinner, when we were returning to the hotel, I drew Askar's attention to the cleanliness of the city. The roads were covered with fresh asphalt, there were new curbs, drainage ditches along the roads were lined with new slabs. These ditches were used during heavy rains to drain water, and in drought — as irrigation ditches for watering trees. Askar said that order in the city was restored gradually and with difficulty. But the result was worth it. The walls of the houses were decorated with illumination, colorful paintings. I could not resist and took several photos of the views of the night city.

Saturday was my last working day in Kyzylorda. At 7–30 p.m. I had to fly to Almaty. However, the whole day was planned, we had to visit two rice farms TAN LTD and Baikonur, which specialized in growing rice seeds. They replicated the main varieties of rice and supplied first-generation seeds to other farms in the region.

Right after an early breakfast, Zhanuzak arrived, and we went to the Dzhal-agash district. It was about 150 km from Kyzylorda. After 1.5 hours of driving along a good highway, we arrived at the village where the TAN LTD farm was located. I did not figure out where the name came from.

The village was clean, everything was well-groomed, but the territory, of course, was much more modest than in the Abzal's village. Ordinary one-story houses. Nearby were outbuildings, there were animals in the yards — cows and sheep. Behind the village, a herd of camels roamed in the pasture. The office building was small, one-story. The Director and specialists met us at the threshold. They said hello, and we went into the office. A table was set

in the Director's office for our arrival. Director Imamzada Kuanyshbaevich Shagirtayev introduced the specialists and invited us to have a snack after our journey. As soon as we sat down at the table, a large dish of pilaf was brought in and placed in front of me.

— We want to greet the author of the rice variety Leader with this treat, which is very popular in Kazakhstan. Our population cooks pilaf using only Leader grain.

Of course, the surprise was pleasant. I tried it, the pilaf was really excellent. I thanked him for the attention.

— How much Leader do you sow?— I asked.

— After breakfast, I will tell you and show you everything, — the Director answered.

After the treat, at my request, Imamzada wrote down the area of rice sowing in my notebook. In 2017 the farm sowed rice on 3,200 ha, of which Leader occupied 2,800 ha and the variety Titan occupied 400 ha. In 2015 they bought 2 t of Titan elite and multiplied these seeds. They planned to expand sown areas under Titan, so they wanted to regularly take its elite, along with the Leader.



In field of rice variety Leader in the farm TAN LTD

TAN LTD worked in tandem with the Baikonur farm. The head of Baikonur bought the elite seeds in the Krasnodar Territory and handed it over to other farms for propagation. The resulting seed material was taken to their plant. There, the seeds were brought up to standard and the first reproduction was sold

to small farms that produced commercial grain. For the 2017 sowing, 4.000 t of the first reproduction of the Leader seeds were sold. In Kazakhstan, farms were subsidized for the purchase of first reproduction rice seeds produced by local farms, and the elite seeds purchased abroad was not subsidized. This was how the state supported local producers.

After chatting at the table, we went to look at the rice fields. Having looked at several fields where the variety Titan was sown, I realized that the fields of this farm looked very decent for Kazakhstan. The farm purchased 7 laser planners and actively used them. The checks were aligned and quite clean. True, in some places the variety Titan was infested with reeds. The water from the checks had already been drained, the soil had dried out, and they had begun mowing the borders.

Next we looked at the variety Leader. Its crop looked much better, clean, even and almost ripe. The panicles acquired a bronze color. I was pleasantly surprised by the appearance of this field. Leader looked like ours in better times. The plants were short with a large panicle, the stem was quite dense. I could not resist and went into the crop. I stood there, and ran my hand over the panicles around me and told the Director that Leader looked so good that it would probably add a year to my life. It was not in vain that I spent 17 years creating this variety.

Imamzada laughed and asked what I thought about the harvest in this field. I said with confidence that at least 7.5 t/ha was growing here. Looking ahead, I will note that I was off by almost 1 t. After harvesting, Imamzada wrote to me that the yield of this check had been 8.4 t/ha.

The director said that they applied all fertilizers before sowing. Ammonium sulfate, bought in Russia, was used as nitrogen fertilizer. There was no agricultural aviation there, so all work was carried out on the ground. Capital and operational leveling was regularly carried out. Rice seedlings were obtained only from under a layer of water, because the soil was highly saline. Without a layer of water, rice seedlings simply were burned by the salt. Of the herbicides, they used "Citadel", on the ground and selectively, not on all checks. In fact, they used it to control *Echinochloa oryzoides* remaining after suppression with a layer of water. Under such conditions, the leveling of the check was of particular importance. Judging by the state of the fields, they understood its importance.

The second thing that helped to increase the harvest of rice grain was modern rotary combines. In recent years, this farm had completely updated its fleet of combines. They bought 11 machines from the company "John Deere". I asked why they didn't buy Russian combines "Torum 740", which were not

inferior to “John Deere” in productivity, and almost twice cheaper. The point was that “Rostselmash” did not establish its service there. The neighbor farm bought two combines “Torum 740” but during harvest a breakdown occurred, and the combine stood for 10 days until the necessary spare part was brought from Rostov-on-Don.

The company “John Deere” organized the service so that from the moment the combine stopped due to a breakdown they allowed a maximum of 12 hours to its complete repair. If it took longer, then the company paid the farm for the losses incurred due to the downtime of the combine. This was written in the contract. The company’s specialists came to the farm at the call of the agronomist and eliminated the malfunction within 2–3 hours. There was a case when the necessary spare part was not available, so it was brought from the USA by plane during the night, and the combine continued to work the next day.

We spent several hours at the TAN LTD farm, and I was very pleased with the crops of the variety Leader .



At the mechanical yard of the TAN LTD farm

By midday we had to be in the regional center of Dzhalagash, where the “Baikonur” farm was located. I thought that we would get acquainted with this farm as well. However, we arrived in the center of the town, and not in the fields. Dzhalagash appeared to be a large one-story village. Only in the center

there were several tall buildings. We had come for an event. On this day, the Director of the Kazakh Research Institute of Rice Growing, S. I. Umirzakov, was celebrating the 100th anniversary of his mother's birthday, who had passed away 40 years earlier. The Kazakhs have a tradition of celebrating the anniversaries of their parents, not only those who are alive, but also those who have passed away. We were also invited. Zhanuzak told me about this when we had already arrived in the center of the town. The event was held in a large hall built on the central square. When we arrived, we saw a large number of people, mostly elderly, standing at the entrance to the building. Everyone was streaming into the hall on the second floor. Serikbay met everyone at the entrance, greeted them and invited them in. He greeted us very warmly and led us into the hall directly to the table where we had been assigned a place. There were 8 people sitting at each table. We greeted our neighbors at the table. Serikbay's sister and her husband and friends were sitting there. In total, about 200 people gathered in the hall. At the next table, judging by their clothes, there were priests and mullahs. Soon the eldest of them stood up and read a prayer. After that, about 10 people came out on stage and began to talk about the hero of the day in turn. Everyone spoke in Kazakh, but my neighbor, the husband of Serikbay's sister, translated their speeches for me. He was a Doctor of Philosophy, a Professor, and worked at the University of Almaty.

The memorial dinner lasted about two hours. At the end, all participants were given bags with gifts. When I returned to the hotel and looked at the contents of the bag, I saw a shirt, a cap made of white felt, and a box of chocolates.

Everyone leaving the hall thanked the owner who organized this dinner. We also approached Serikbay and thanked him for the reception.

On the street, we briefly talked with the Deputy Director of the "Baikonur" farm, since there was no time to go to his farm. That concluded the program of my stay at the Kazakh Research Institute of Rice Growing. Around 6 p.m. Zhanuzak took me to the airport, and I flew to Almaty. At the airport of the former capital of Kazakhstan, I was met by local colleagues — Bakdaulet Usenbekov and Yeldos Zhanbyrbayev; I was an external scientific supervisor for Yeldos's Doctoral studies.

Over dinner, Bakdaulet told me his scientific and domestic news, and Yeldos said that he would have a pre-defense in December. He asked me to write a review of his dissertation. We agreed that he would send me all the necessary materials, and I would write and send him the review. And right there at the table, the guys told me the good news: together with their scientific team, they

had written two articles in English and sent them to journals included in the Scopus citation system. I was also one of co-authors.

Considering that my plane to Aktau was leaving on Monday evening, we agreed that we would spend Sunday on a cultural program, and work on Monday morning.

The night at the hotel passed so quickly, as if I had not slept. Apparently, I just switched off after a week of overload. I woke up from a ray of sunlight that penetrated through the curtains right onto the pillow. It was a wonderful fresh morning. I got up and even wanted to do some exercises, which meant I had rested. While I was leisurely having breakfast, Yeldos showed up. We discussed our program. He suggested that we spent a couple of hours looking around the city and then went to the Institute to talk about future work. We arrived at the central square of the city. I had never been there before. The square was decorated with a grandiose monument erected on the occasion of the proclamation of Kazakhstan's independence in 1991. At the foot of the pedestal there was a bronze book of "wish fulfillment". One should put a hand on it and make a wish. It would definitely come true. This was what the entry on the left page said in Kazakh and Russian.



At the monument in honor of Kazakhstan's independence, Almaty

It was Sunday, a general day off. I was surprised that all city establishments were closed. Only the some grocery stores and cafeterias were open. We visited two more green corners of the city, looked at historical sights. We sat on a bench in front of the fountain, and then Bakdaulet called. He was already at the Institute and asked us to come. Despite the day off, the Institute was open. When we arrived, we saw several people standing at the entrance and discussing something heatedly. There was a rule there that if any of the employees needed to work in the laboratory or on the vegetation site, they could come any day from morning until late evening. First, Bakdaulet took me to the third floor to the Director of the Institute, who was also at his workplace. After greeting us, the Director told me about current affairs and problems, especially financial ones, which were difficult to solve. He asked me about the current trip, about future plans. He thanked me for supporting his guys working with rice. I briefly informed him on the questions asked, and then we parted.

We went down to the first floor to the laboratory. There, the Head of the department, Batyrbek Ashirimbetovich Sarsenbayev, was waiting for us. After greeting us, he offered us tea brewed with local herbs that he had collected. Indeed, the drink was very unusual, with an amazing aroma. The conversation was about selection, seed production and agricultural technology of grain crops and rice on saline lands. The problem of salinization in Kazakhstan is the most pressing...

It was already about 3 o'clock in the afternoon, and Batyrbek Ashirimbetovich suggested going to lunch together. We drove towards the mountains. At the foot of the mountains, in the green area, there were numerous cafes and restaurants. We went into one of them. Having passed the gate, I saw a large park area, where under each large tree there were gazebos with tables of various sizes from 4 to 20–25 seats. All the seats were taken. It seemed as if several hundred people had gathered here. The administrator invited us to go into the hall. The conversation at the table lasted for several hours...

The next day, Monday, was the last day of my trip. In the evening I had to fly via Aktau to Krasnodar. Right after breakfast, Yeldos arrived and we went to the Institute, where we looked at laboratory experiments on rice and plants of new forms and hybrids on the vegetation site. Bakdaulet's team did a good job, having received a whole series of various rice samples. Among them were very interesting glutinous plants, which could be brought to a variety over time. Yeldos told me about the progress of his work. He showed the received materials and the first version of his thesis. It seems that he would do everything on time and would be able to defend the thesis without any problems.

Then we went to the Institute of Agriculture. I asked the guys to arrange this trip in advance. I wanted to see the drip irrigation site again. The Institute was located about 15 km outside the city. We thought that we would get there very quickly, but there was a huge traffic jam on the way out of the city. As the guys explained, in Almaty they were carrying out mass repairs of the road surface and replacing the city sewer pipes. This created additional difficulties for drivers. In the morning there was a traffic jam at the entrance to the city, and in the evening when leaving. Apparently, this is a common problem for large cities. The number of cars among residents is growing much faster than the roads are expanding.



In the Almaty park with Bakdaulet and Yeldos

At the Institute of Agriculture, the Head of the department that conducted experiments on drip irrigation was waiting for us. In 2013, I visited this site, and I was interested in what had changed over the past time.

The Head kindly agreed to show his experiments. On the way, he told us that interest in drip irrigation had increased significantly in Kazakhstan. There was clearly not enough water. And without irrigation, nothing grew here. New technologies were required for growing agricultural crops with irrigation. One of the rational options for reducing the volume of irrigation water was drip irrigation. Field seminars for farmers were regularly held at the experimental site, showing them how different crops could grow with this type of irrigation. Something new had been added to what had been on the site 5 years earlier.



Installation of water supply of the drip irrigation system

We arrived at the site, and I was indeed pleasantly surprised when I saw the new irrigation system. There was a solar panel at the edge of the site. A 4 m³ water tank had been dug nearby, lined with a film to hold water. Water from the river was first pumped into a barrel. Here the water got warm and then drained into the tank. A foam shield floated on the water surface. An electric pump was installed on it, powered by a solar battery. It produced 1.5 kW, which

was quite enough for the pump. A hose, a filter, a water meter and then hoses went from the pump to the field where the drippers were located.

They turned on the switch to show me how this system worked. The pump started working, and water began to flow into the system. The convenience of the float system was that the pump automatically lowered as the water was pumped out. There was no need to constantly monitor its depth in the water.

As I was told, this model of the irrigation system was designed for areas where there was no power line nearby. For example, in a rice system on fallow fields there was water nearby, but no electricity. This installation guaranteed drip irrigation of crops in rice crop rotation. A very interesting solution. What was the price of the issue? How much did such an installation cost, and what area could it provide with irrigation?



Drip irrigation: dryland crops and rice

We spent almost two hours looking at the entire irrigated area. The same crops were sown in the field as in 2013: winter wheat, rice, soybeans, beets, rapeseed, and corn. The efficiency of drip irrigation was obvious. The growing plants were well developed. The wheat had already been harvested. I was more interested in rice. The local rice variety Marzhan was sown there. The plants looked very good. The panicles were large, but the sterility was high, up to 50% on some plants. They explained this by the fact that during the flowering of the rice there was high temperature with a dry wind. I advised them to test different varieties of rice there and include our variety Atlant in the experiment. And I told them a story how the Director of one dry-land farm in Kuban decided to grow rice with sprinkler irrigation. He sowed several varieties and got a harvest of 3 t/ha to 7 t/ha. So, it was Atlant that gave 7 t/ha of normal grain.

Atlant plants had a well-developed root system, and therefore the variety could grow with less moisture.



Discussion of the results of drip irrigation

After a detailed inspection of the experimental site, we headed towards the city. On the way, my colleagues suggested that we stopped at a roadside restaurant and had lunch. The hosts ordered a very hearty lunch, including borscht and traditional pilaf. In the evening, I flew to Krasnodar via the city of Aktau, formerly Shevchenko. This city was named in Soviet times in honor of the famous “kobzar” Taras Grigorievich Shevchenko, who served his exile in these parts as a soldier during the tsarist period. At that time, it was a remote outskirts of the Russian Empire. Nowadays, Aktau is a beautiful, large industrial city on the coast of the Caspian Sea in Kazakhstan, the administrative center of the Mangistau region, located in the southwest of the country. Aktau has a special status — it is the only seaport in Kazakhstan. Aktau has no natural sources of drinking water, the city is completely supplied with processed sea water, desalinated using nuclear energy. In recent years, the industrial sector has been increasingly replaced by the leisure and entertainment industry, and signs of a growing tourist boom are becoming increasingly evident.



Aktau

At the beginning of 2020, the population of Aktau was more than 183.000 people. Aktau airport is a convenient stopover when flying from Krasnodar to Kazakhstan. This city was the final memorable touch on this eventful trip.

29. Austria, Hungary, August 2019

Austria was attracting our attention for some years. But it is not a rice-producing country, and my wife and me somehow did not dare to go there just for an excursion. However, having visited Italy, the Czech Republic, and then Spain, our opinion about a trip to Austria began to change.

Austria is the birthplace of great musicians and composers, a country where high culture coexists with beautiful mountain landscapes and wonderful gastronomy.

In August 2019, we finally got ready and flew to Moscow, and from there to Vienna. A representative of the travel agency met us and took us to the “ARTOTEL”. We were expected at the hotel, but check-in was only from 2 p.m. Therefore, after checking in, we left our things in the storage room and went out into the city. Having looked at the city map given at the hotel, we headed towards the center. We walked slowly, looking around the city. The first impression was favorable. A clean, unhurried city. There was very little traffic on

the street we were walking along. But there were lots of bicycle and electric scooter rental stands. Pedestrian groups were leisurely moving along the wide sidewalks. Horse-drawn carriages were giving rides to those who wanted to. There was unobtrusive advertising on the facades of the buildings. Almost every building had shops, cafes and snack bars on the ground floor. We had a snack and some coffee in one of them.

Half an hour later we reached the central square, where the palaces and museums were located. Considering that this was our first introductory walk, we did not go anywhere, but only made a circle around the perimeter of the square, marking out the must-see sites.

In the evening we went to the center again, but by a different route. On the way we looked at a church, a very old building, and reached an old settlement in the very center of the city. Here archaeologists conducted excavations and left the uncovered underground structures for the edification of descendants.

We came out to the famous Vienna Opera House. On this square, near the theater, we were going for a guided tour of the city.

On the edge of the square there was a snack bar where they fried and served local sausages, French fries and a can of beer could be bought. People were standing in line, but three pick-up points ensured fast movement. We could not resist and had a meal there instead of dinner. It was delicious and quite filling.



First walk around Vienna, 2019

It was already about 7 p.m. when we headed back. The lanterns and advertising lights came on, and the city was transformed. When we approached the palace square, we heard music. The orchestra was playing a waltz, and more than a dozen pairs of dancers were on the platform. Moreover, these were adults and even elderly people. The couples were twirling in a whirlwind of dance, and it was obvious that they were doing it with pleasure. After the waltz, there followed the Argentine tango, foxtrot and other melodies. Some couples changed after each dance, and several were constant. They danced so fiery that our feet involuntarily beat out these rhythms. That was a meeting of dance lovers of a local hobby club.

We admired the evening city, its brightly colored illumination. There were many people walking on the streets. All the seats in the cafeterias were taken. Saturday was a day off, people were resting...

In the morning we discovered that in Vienna, like in other large European cities, Sunday was a general day off: everything was closed, even supermarkets. Only small cafes and museums were open. Therefore, after breakfast, we could only visit a museum. We decided to start with the Albertino Museum, where an exhibition was open — Art of the 20th Century. It presented works by many famous artists: Pablo Picasso, Claude Monet, Marc Chagall and others.



New style of work of the artist

And then we saw, with great surprise, ultra-modern art. We had never seen anything like this before. In the basement of the museum, an artist was creating:



he poured paint from a bucket onto a canvas, and then smeared it with tow. Nearby there were ready-made multi-colored “paintings”. The master worked with great enthusiasm, occasionally exchanging remarks with connoisseurs of his art. About 10 people stood nearby in a semicircle and, it seemed, gave the artist their advice. We, apparently, had not reached the heights of such art to understand this creation.

We walked around the museum halls for more than 2 hours, admiring the works of famous artists. We went outside when we got tired looking at the huge number of exhibits presented in the museum.

We had some time before the city tour, so we decided to have lunch in the nearest cafeteria. It was a fish restaurant called Nord Fish (Northern fish). They served us a fish soup, a salad and fried flounder. Very tasty and filling. Then, until the end of the day, we drank only water.

Relaxed after lunch, we slowly came to the city garden to the gilded monument to Johann Strauss, next to which an unusual flower bed was arranged a clock showing the real time. Numerous tourists stopped and took pictures. Local photographers were also working there, offering their services.



Monument to Johann Strauss, the Waltz King

At 3 p.m. we set off on a tour of the historical center of Vienna. The tour guide was apparently a polyglot, repeating individual phrases in English, Ger-

man, French and Russian. In 2 hours we walked through the old center and heard many interesting historical facts about the life of the city of Vienna. The route went from the Opera House to St. Stephen's Cathedral, winding through the alleys, stopping at individual houses, churches and other iconic places. For example, a cafe that had been operating since the time of Maria Theresa. Her personal chef, after finishing his work with her, opened his own establishment, where he offered dishes and drinks prepared according to his own recipe.

To attract visitors, the chef invited Mozart and other famous musicians, who pleased the ears of diners.

During the tour, we were shown the Jesuit temple, a house built by the Templars. It is still in operation.

In one of the beautifully decorated courtyards between the houses, the conversation between the tour participants turned to the ecology of the city. The city authorities of Vienna pay great attention to the cleanliness of streets and local areas. They claim that water from city taps can be drunk without fear. We, frightened by numerous cases of water poisoning, bought bottled water for €1.5.

The Church of St. Stephen was similar to the Duomo in the Italian city of Milan. The same Gothic style. This kind of excursion was very tiring due to the slow movement. Therefore, we returned to the hotel at a very fast pace to stretch our legs a little.

On Monday, our plan was to go to Schönbrunn. This is a country summer residence of the Austrian emperors of the Habsburg dynasty, one of the largest buildings of the Austrian Baroque. It is located in the western part of Vienna, 5 km from the city center. One of the most beautiful palace and park ensembles in Europe. It is noteworthy that Schönbrunn consists not only of the palace itself, but also of a large park with a botanical garden, fountains and labyrinths. The oldest zoo in Europe is also located here. The famous ruler of the country, Maria Theresa (1717–1780), settled in Schönbrunn after her coronation in 1740 and lived here until her death. Over the course of 20 years, she gave birth to 16 children (11 girls and 5 boys), of which 12 survived to adulthood. She was not only a caring mother, but also an effective ruler of the country, who had great authority among European states. In 1996, the Schönbrunn palace complex was included in the list of UNESCO heritage sites.

During the time of Maria Theresa, the residence was far outside the city, and now the city has practically swallowed this place, embracing it from three sides. We were told that the easiest way to get to Schönbrunn is by metro. The metro in Vienna is an underground-surface road. In the city center, the stops

are located deep underground, and beyond the center, the rails come to the surface, and it was like taking a tram. High concrete walls fenced the road.

Half an hour later, we were already standing in line at the ticket office. There were many tourists here, especially from Asian countries: Chinese, Indians, Japanese and others, crowded in groups in a huge hall. With the tickets, we were given a plan of the park with the buildings located in it.

The huge palace and the adjacent park are a complex that reminds of Versailles. The park is located on the slope of a hill, on top of which stands the Gloretta pavilion. From the pavilion's observation deck, a beautiful view of the park, the palace, the flower beds in front of the palace opens up, as well as a panorama of the city surrounding this green spot in a horseshoe. The park has an area with a glass greenhouse complex for tropical plants.



Schönbrunn Palace Complex

In a separate area of the park there is a zoo with a large number of animals, which are kept in free enclosures. Adjacent to it is a zone of five labyrinths of varying complexity, one of which is a mirror one, most often visited by numerous tourists.

A special attraction of the park is a huge plane tree (Platanus), the age of which exceeds 250 years. Benches are placed in the alleys of the park so that visitors can catch their breath in the shade of various trees. Numerous cafes are hidden in green nooks where you can have a snack.

A large number of visitors move around the park, as if in an anthill. But, surprisingly, there is not a speck of litter anywhere. Amazing cleanliness. To facilitate movement along the alleys, electric cars and carriages drawn by horses are driving around. Many tourists prefer to travel by this transport.

We walked around almost all corners of the park for 5 hours, climbed to the Gloretta pavilion and admired this beauty from above. The tour ended with a visit to the palace, examining the numerous rooms, offices and bedrooms where not only the interior, but also the spirit of a bygone era were preserved.



In the mirror labyrinth of Schönbrunn

The next day, in the morning we decided to spend time without running around, so we went to the Museum of Art History. It houses the Habsburg art collection. The assortment presented in the museum was collected over several centuries in a row during the reign of Emperor Rudolf II and Archdukes Leopold Wilhelm and Ferdinand II. There is a huge collection of sculptures, decorative and applied art, culture and everyday life items, starting from the times of Ancient Egypt. The exhibits we saw testify to the amazing art of the masters who created these items from glass, ceramics, silver and gold. During the inspection, we took more than a hundred photographs of the most interesting items. There is no way to describe them here, you have to see them.



Stone Flower

After a three-hour tour of the museum, we went to a place called the “Anchor Clock”, where at 12 o’clock in a crowd of tourists we observed an interesting picture: the passage of 12 figures on the dial with musical accompaniment. This clock is more than 200 years old and it still works, gathering crowds of spectators every day.

After trying the famous Viennese cake “Zachary” in a cafe, we went for spiritual food: we visited St. Peter’s Church, then St. Augustine’s Cathedral, where the hearts of the Habsburgs were kept. The residents of Vienna especially revered these holy places.



Anchor Clock

An interesting, rather funny meeting took place in the park near the monument to Mozart. We walked along the path, admiring the centuries-old trees with labels: oak, linden, Atlas cedar. Two elderly ladies, very intelligent looking, came up to us and one turned to us:

— Excuse me, where is the monument to Maria Theresa?

Hearing the word “monument” in Russian, I immediately answered in my native language:

— The monument to Maria Theresa is almost nearby.

The woman, hearing my answer, exclaimed:

— Well, how lucky we are!

I continued, pointing towards the museum complex:

— This monument is located between these buildings. When you get to the traffic light, turn left and you will see it.

— Thank you very much. How lucky we are to have met our fellow countrymen. Otherwise, we walk around here and can’t ask.

The ladies walked away from us, chatting cheerfully. And we were glad that in this foreign city we helped our fellow countrymen.

On Wednesday morning, we had a discussion about which museums we would go to. In the end, Olga decided to visit the Leopold Art Museum, and I decided to visit the Natural History Museum. Having arrived by metro to the museum square, we agreed to meet at 1:30 p.m., considering that three hours

would be enough to see the museum. But it was not enough to get acquainted with even a tenth of what was presented in the museum pavilions. The Vienna Museum of Natural History contains unique collections of everything that has been discovered on the globe and is now exhibited in separate halls:

The stuffed animals and birds are made so well that they all seem alive. At the same time, the collections are divided into families to make it easier to navigate. Each exhibit is provided with a label with a brief description. The result is visual teaching aids.

The impression from even a cursory examination of the museum exhibits is so strong that it takes time to digest all this information. Selected photographs will help me with this. A lot of time is needed for a detailed acquaintance and study of the exhibitions.



At the entrance to the Natural History Museum

After this museum, the only thing we could do was take a walk around the city. Olga expressed the same thought when she left the art museum.

After the museums, we strolled to the city hall and another church, the high spires of which stood out against the background of other buildings. On the way, we stopped in the park, which was laid out between the theater and the city hall. There were beautiful flowerbeds and collections of roses there. Their aroma filled the surrounding air. Standard roses grew along the paths,

at the base of which there were labels with unusual inscriptions. For example, “Lucy and Pasha on their wedding day, 2011”; “Masha and Artur on their golden wedding day, 2012.” (in German).

Having admired the roses, we moved on. We crossed a wide street and stopped, amazed by the architecture of the cathedral. The fine work of the builders three hundred years before was impressive in its elegance. In front of the Botivkirche there was a huge lawn with red fabric lounge chairs with the inscription: Wiegen liegt gut (literal translation from German — Enjoy your lullaby).

Numerous groups of people were settled in the lounge chairs on the lawn in groups and were relaxing, basking in the sun. If in the previous days people sought shelter in the shade (it was over 30°C), that day by morning it had cooled down to 19°C, and a refreshing breeze blew. Therefore, everyone was happy to catch the sun rays.

Most of the city squares had horse-drawn transport parking lots. Horses in beautiful harnesses were selected by color. Smartly dressed coachmen were inviting people for a horse ride.



City horse-drawn transport waiting for tourists

On Thursday, August 15, the population of Vienna celebrates the “Day of the Assumption of the Virgin Mary” — a very big holiday. It is a general day off in the country, so everything is closed except for museums and cafes.

In this regard, we went on an excursion to the Belvedere museum complex — the nearest dacha of the Habsburgs — one of the attractions of Vienna. The complex consists of two parts: lower and upper.

The lower part is several two-story buildings covered with tiles and looking like outbuildings. Here are the chambers of the Prince of Savoy, now they organize various art exhibitions there. The upper part is a beautiful palace with basement and attic rooms.

Having joined the English-speaking group, for almost three hours we listened to the history of this palace and looked at its attractions and thematic exhibitions of paintings.

In the upper palace in 1955, the Declaration on the establishment of the state of Austria was signed.

In 2007, the palace complex underwent a large-scale reconstruction and was opened to tourists. Beautiful flowerbeds and a water cascade were arranged between the upper and lower buildings. As a result, the appearance of the complex began to resemble Versailles. From the museum complex, we went out into the city, crossing the botanical garden. A large variety of trees and shrubs were planted on a small area: from sequoia to a collection of cacti. Walking paths with benches for rest in shady places were designed.



A memorable photo at Belvedere

After this excursion we had lunch in a cafe and went to the fountain square. Near this square there was a monument to the Soviet soldiers who had died during the liberation of Vienna from the Nazis.

The monument looks unusual. On a huge stele-column there is a bronze figure of a Soviet soldier with a machine gun on his chest, in a helmet covered in gold. In his right hand he holds a banner, and in his left — a shield in the form of the coat of arms of the Soviet Union. At the base of the column on red marble is carved in gold Stalin's order on the occasion of the liberation of Vienna, a list of soldiers who died during the liberation of the city and the anthem of the Soviet Union. Behind the stele there is a marble semicircle on which the words are carved in gold: "Glory to the heroes of the Red Army who died during the liberation of Vienna."



Monument to Soviet soldiers, Vienna

There is a fountain with powerful streams in front of the monument. There are always crowds of people with children on the square. Cleanliness and order are all around.

The impression from the monument was amazing! I had a lump in my chest and tears were welling up involuntarily. I stood in front of this monument and the thought beat in my head: "How many of our men died here, and what great fellows the people of Vienna are that they maintain the monument so well." The driver who took us to Budapest the next day told us that Vienna remained practically undamaged during the war. It was not bombed by the Germans, because Hitler was an Austrian and loved Vienna. The Soviet troops also did not damage this city, because Stalin had warm feelings towards Austria and Vienna in particular. Several buildings were bombed by the Americans. Moreover, the Opera building was destroyed by mistake. It was mistaken for a railway station.

According to the plan, on August 16th we went to the capital of Hungary, Budapest. We left at 8 a.m. All 10 seats in the minibus were filled with Russian-speaking tourists. Our driver also acted as a tour guide. All the way he continuously shared various information from historical facts about the country and Vienna to the personal life of the Prime Minister. The Prime Minister showed all residents his simplicity and great interest in the development of Austria. He did everything for the benefit of his fellow citizens. When the Americans insisted that Austria should not support the construction of a gas pipeline from Russia, he said that he would support it because it was good for Austria.

Budapest is the capital and also the largest city of Hungary. The modern metropolis — the leading political, economic and cultural center of the country — is located on the banks of the Danube. Of the almost 10 million population of this small state, about 1.8 million people live in the capital. The city is located in the lowland Carpathian Basin, bordered by the Carpathians, the Alps and the South Slavic mountain ranges. The Danube divides the city into two parts: hilly and green Buda (right bank, western) and flat Pest.

At about 11 o'clock our bus pulled up to the fortress "Fisherman's Bastion" on the bank of the Danube. Buda is located on this side of the river and Pest is on the other side. These parts of the city are connected across the river by several large bridges. As soon as our bus stopped, the door opened and a girl looked into the car. She asked everyone to get out and introduced herself in good Russian:

— My name is Ingrid, but call me Inga. I am your guide in Budapest. The total time of our excursion is 3 hours. The excursion begins with a tour of this fortress, and then we will go to the other bank of the Danube.

Our group climbed the steps of the old staircase to the upper platform of the fortress. From above, there was a beautiful view of the river and the second half of the city — Pest. The guide told us about the history of these places.

There was a large fish market near the walls of the fortress. They sold fresh fish, just caught in the river. Special inspectors made sure that the sellers did not cut corners and did not offer customers fish caught the day before. If the seller tried to sell three-day-old fish, he could be sent to prison.

On the territory of the fortress there is an ancient church, which is called the Coronation Church. Local kings were crowned in it.

Then we were led through the old part of the city to the buildings where the Prime Minister and President of Hungary worked. They moved there in January 2019. The sectoral ministries were located in different parts of Budapest and ministers came here to meet with the Prime Minister.

We were surprised by the modesty of these buildings. Ordinary two-story houses, without any pomposity. Unlike the others, there were sentries at the entrance to the presidential one — two soldiers with carbines. At noon, the changing of the guard took place. A huge crowd of tourists gathered, and we also saw the ceremony.

The guide told us that this part of the city was located on karst caves. During the Second World War, a military hospital was located in one of the caves. When the Germans occupied the city, they did not know about this hospital. No one gave away the secret. There was a big problem providing the hospital with water. They came up with a very original solution. They installed tubs along the road, in which trees were planted. They were watered abundantly in the morning and evening. The water seeped down into the cave, where it was collected.

Having looked at the upper part of the city, we took the steps down to the river. Previously, the path was paved with granite, and, apparently, it was very beautiful here. Now most of the granite was worn out, so it was quite difficult to go down. Inga, with great embarrassment, explained that this problem arose due to the scarcity of funding of the tourism business. In the city center, historical places are kept clean, but the funds did not reach the outskirts.

Down by the river, a bus was waiting for us, and we went across the Danube to Pest. As soon as we crossed the bridge, we immediately got stuck in a traffic jam. The transport was standing still, not moving in either direction. Inga jumped out to find out the reason. Ten minutes later, she got on the bus and explained the situation. The transport had stopped because the drivers were on strike. And our driver also supported them. Inga was calling on her cell phone and talking to someone in a raised voice. Then she suggested that everyone get off the bus and walk two blocks forward. There, another bus was waiting for us, the driver of which was not participating in the strike.

We went to the city center on the new bus. The central street of Budapest is Andrassy Avenue. It connects Erzsébet Square with Heroes' Square and the city park Varosliget. The Hungarian Opera House stands out for its beauty on the avenue.



Budapest, view across the Danube towards the Parliament building

Heroes' Square is one of the main squares of the city. It is located at the end of Andrassy Avenue, next to the City Park. The square is framed by two buildings: the Museum of Fine Arts on the left and the Mücsarnok Exhibition Hall on the right. The central part of the square is occupied by the Memorial to the 1000th Anniversary of the Redemption of the Homeland with statues of the leaders of Hungary, starting from the 9th century, and other significant figures in Hungarian history. These were bronze monuments of each, more than 5 m high, and below the text of the main deeds of the ruler for the benefit of the country. The guide talked for quite a long time about each ruler. It must be admitted that our group did not listen very attentively, they mostly looked around and took pictures. In the city park where we came, there are the Széchenyi Baths, Vajdahunyad Castle, a zoo, a circus, an amusement park and an ice rink open in winter. The complex of buildings called "Vajdahunyad Castle" was built in 1896, for the 1000th anniversary of the Redemption of the Homeland by the Hungarians. The Széchenyi Baths are the largest in Europe. The water comes from two underground hot mineral springs with a temperature of 74°C and 77°C. Unfortunately, we had no time for bathing.

There is the grand Parliament building on the Danube embankment. Seven years after the unification of Buda, Pest and Óbuda, in 1880, the National

Assembly decided to build the Parliament building to emphasize the sovereign right of the Hungarian nation. The construction was completed only in 1906. The building faces the Danube.

There are also other famous buildings on the embankment, such as the Vigadó Concert Hall, Gresham Palace (now the Four Seasons Hotel), bronze statues of Shakespeare and Princess in carnival costume.

Not far from the Danube embankment and the Parliament building is Freedom Square. In the center of the square is a large monument to the soldiers of the Soviet Army who died during the liberation of Budapest from fascism. The Great Synagogue, which is the largest in Europe and the second largest in the world, was built here on Dohany Street. It can accommodate up to 3,000 worshippers. The Raoul Wallenberg Memorial Park in the courtyard of the synagogue is dedicated to the memory of the 600,000 Hungarian Jews who died during the Holocaust. In the center of the memorial is a metal tree (weeping willow), on the leaves of which the names of the victims are carved.



Monument to Soviet soldiers

Budapest is the only capital of a European state that is also a resort thanks to its numerous hot mineral springs.

The guide told us all of this. I carefully wrote down the main points of her explanations, looked at this short, thin girl and was amazed by the energy with which she led our excursion. It was obvious that she spoke Russian perfectly, but the question of her nationality arose. I could not resist asking where she was from. Inga told us about herself without any embarrassment.

She was from the region of Western Ukraine that was part of Hungary before the war. She graduated from a Russian school and the Faculty of Philology of the University of Lvov. Everyone in the family spoke Hungarian. In her last year of study, she went to Budapest for an internship. Her father bought her a one-room apartment in Budapest to support her. Inga lived in this apartment intermittently, because she was constantly traveling, participating in various television projects. When she had time, she conducted excursions with Russian-speaking tourists so as not to forget the language.

I looked at Inga and thought:

— The restless people like her move life forward...

Returning from Budapest late in the evening, we saw Vienna illuminated at night. We were dropped off right at the Opera House. We walked to our hotel and admired the illumination. What a beautiful sight!



Vienna Opera House at night

Saturday, August 17th, was the day of our return home. At 12 o'clock the car was supposed to come to take us to the airport.

After our trip to Budapest, we slept very well. Early in the morning we went outside. The weather was wonderful, sunny, warm, about 24°C, and a light breeze was blowing. We decided to walk along our street, but in the other direction. We had not walked there before. The awakening city left a very pleasant impression. As did the whole trip.

Having returned to the hotel, we packed the remaining things and left for the airport.



Before leaving for the airport

We took off exactly on schedule and landed safely in Moscow at the A. S. Pushkin Sheremetyevo Airport 2.5 hours later. At the appointed time, we flew to Krasnodar and arrived home in the morning. Entering the house, I said:

— East or West, home is best.

30. China, November 2019

At the end of September 2019, I received an email from the International Rice Institute (IRRI). It was sent by Vina Alvarez, an employee of this Institute and a member of the TRRC Committee. This is an organization for the study of rice in the temperate climate zone. It had been created 10 years earlier under the auspices and coordination of the IRRI. It included 8 countries: China, Korea, Japan, the USA, Russia, Turkey, Italy and Egypt. These are the countries where rice is grown in the temperate climate zone.

TRRC is a purely scientific organization. It has 4 groups in different research areas:

- increasing rice productivity;
- improving grain quality;
- increasing rice cold resistance;
- increasing resistance to blast.

Several rice varieties from each country were included in the research. The total set of varieties was studied in the conditions of these countries. Based on the results, the best varieties were recommended for inclusion in the hybridization program. Then hybrid populations were studied with the prospect of creating varieties. Of particular interest to us was the research in Group 4 — increasing resistance to blast. This group included not only breeders, but also biotechnologists to speed up the breeding process.

The TRRC Steering Committee includes directors of Research Institutes from each country. The Committee organizes working meetings in one of the countries, usually in turns. Such meetings were also held at the All-Russian Rice Research Institute. They were usually timed to coincide with a conference held by the institute or with Field Day. Leading researchers in each topic are invited to the Committee meetings. I had the opportunity to participate in such work four times: in 2011 and 2016 at our Institute, in 2012 and 2015 in Türkiye. Scientists involved in this research reported on the results obtained during the work.

Each institution independently finances the research. Those specialists who were invited to the Committee meeting had all travel, hotel and food expenses paid by the IRRI and the country where the meeting was held.

In 2011, the All-Russian Rice Research Institute celebrated the 80th anniversary of the institute, timing the event to coincide with the International Conference and the TRRC Committee meeting, and in 2016, they combined it with the celebration of the 85th anniversary of the institute.



During the reports in Türkiye in 2012, I drew the attention of colleagues to the fact that in the hybridization program for resistance to blast in all countries, one donor with the Pi-40 gene was used. I asked the speaker, and then the host of the reception, Halil Surek, whether they were not afraid that the use of one gene for resistance to blast in all crosses could lead to a catastrophe if the fungus mutated. Their answer was optimistic. The Pi-40 gene had a broad spectrum of action and therefore provided good protection of rice from blast. And yet, apparently, my statement was noticed, because in the following years, donors with other genes began to be involved in hybridization.

This is just the beginning and that is what followed. In her letter, Vina said that back in January 2019, she sent the director of the All-Russian Rice Research Institute information about a working meeting of the Committee members in China. Her message received an automatic response that the letter was received. And that was it. There was no further reaction. Therefore, she repeated the previous letter with an invitation to the director of the Institute to take part in the meeting of the Committee.

I looked at this invitation addressed to S. V. Garkusha. It said that Professor S. V. Garkusha was invited to take part in a working meeting of the TRRC Committee, which would be held on November 6–9 in Nanjing, China. At the same time, it was emphasized that the expenses for the trip to China would be covered by the organizing committee. I forwarded this letter to the All-Russian Rice Research Institute and told Vina about it.

About two weeks later, I went to the director of the All-Russian Rice Research Institute with current issues, and his deputy for innovation work, Zhanna Mikhailovna Mukhina, was in his office. I couldn't resist asking:

“What have you decided about the trip to China?”

Sergey Valentinovich answered:

“The decision about this trip hasn't been made yet. Maybe we'll send I. I. Suprun, who is participating in the implementation of this program.”

The director did not say why he wouldn't go himself.

Two days later, Zhanna Mikhailovna invited me and immediately asked:

“Can you fly to China?”

“It seems as if Suprun should go,” I was surprised.

“The thing is, Ivan Ivanovich replied that he is currently busy with his doctoral thesis and doesn't see any reason to be distracted by this trip. And you don't need a translator.”

“And what will the director say?”

“I've already spoken to him. He agrees that you go”.

I thought for a couple of minutes, estimating all the difficulties of the flight Krasnodar — Moscow — Beijing — Nanjing and back. And also Chinese food. Last time in 2006, when we went to China, we were fed such dishes that it took me a long time to restore my stomach. I did not see any other obstacles. Therefore, if we took into account previous experience, we could fly.

— Okay, I agree. But the trip will be on the terms proposed to our director.

— Good. We will send the letter to the organizers today, indicate these conditions and wait for an answer.

Ten days later, I received an invitation to travel to China. All expenses were covered by the organizing committee. Then things went as usual when I was preparing for foreign trips. Before leaving, I went to see the Director of the All-Russian Research Institute of Rice. We briefly discussed the upcoming business trip. At the end of the conversation, I asked a question:

— Sergey Valentinovich, what powers do you give me at this meeting of the TRRC Committee?

— You are going on behalf of the All-Russian Research Institute of Rice and fully represent me at this meeting, — he answered.

— Apparently, there will be a discussion about plans for further work. In 2021, the All-Russian Rice Research Institute turns 90. We will celebrate this event. Perhaps we should propose holding a working meeting of the TRRC Committee at the All-Russian Research Institute of Rice, combining it with our events?

— A good proposal. Make it and invite your colleagues to come to us in 2021. We are planning to hold an International Conference, and this meeting will be appropriate.

My trip to China began on November 5. The flight Krasnodar–Moscow–Beijing was as usual. The time difference between Moscow and Beijing is +5 hours. We arrived in Beijing around midnight local time. There was something new for us at the customs. To register, one had to scan the passport and fingerprints with a special device, fill out a special entry form, then go through passport control. After that all passengers could go and collect their luggage. Luckily, I had my suitcase with me.

I asked at the information desk about the flight to Nanjing. I had to move to another terminal for local flights. I was explained how to find the bus at the station square. I went outside. Here I easily found a parking spot for the bus. There were several young guys standing there. I tried to ask one of them in English about the bus, when I heard a voice from the group in Russian:

— Where do you need to fly?

This was asked by a Chinese man, about 40 years old, dressed in very simple work clothes.

I asked:

— Where are you from, that you speak Russian so well? What is your name?

— My parents named me Lin. I am from Harbin. I have been learning Russian since childhood. And now I am returning from Siberia. I've been working there for 5 years in the oil field. Now I am going home.

I also gave my name:

— Grigory.

In the meantime, the bus arrived. We continued our conversation with Lin.

— So where are you flying?— Lin asked me.

— I'm going to the city of Nanjing.

— Why? Do you have a business there?

— No, a scientific conference on rice.

— Grigory, do you grow rice?

— I grow and create new varieties.

— And does rice grow in Russia? It's cold there. Rice likes warmth. I know this from my parents. They grew rice in their youth.

— It's not cold everywhere. There are warm places. That's where rice grows.

— Where are these places? I've only heard of cold ones.

— In the southern part of Russia, near the Black Sea.

— The Black Sea? where Sochi is located?— he asked.

— Yes, the city of Sochi is on the shores of the Black Sea.

— How warm is it there if the Olympics were held in winter. I saw it on TV. They showed a lot of snow.

— Yes, in the mountains it snows in winter, and in the valleys it is warm in summer, and not only in Sochi, but also in the whole Krasnodar region. That's where the rice grows, — I explained.

Before we could finish our conversation, we reached terminal #3 and they announced a stop. We arrived to the other side of the airport. It was a huge building. We got out, and Lin walked me to the boarding gate for Nanjing. It was 2 a.m. The waiting room was crowded, there was nowhere to sit. Lin wished me luck and left, saying that check-in for my flight would be 2.5 hours before the flight. And my flight was at 8:35. There was still long time before departure.



View of Beijing Airport

After walking around the hall, I found a free seat. I put my suitcase in front of me, leaned on it and began to doze off. Suddenly I heard noise and shouts. I raised my head and saw a couple of police officers moving on the left, everyone in a row was being picked up and their documents were checked. One lady, apparently fast asleep, did not answer the call. Then the senior policeman, without much ceremony, kicked her so hard that she almost fell off the bench. The woman jumped up, began to quickly mumble something, apologizing, took out a document — a plastic card, and handed it to the policeman. He read it carefully, asked a couple more questions and came up to me. I took out my passport and a printout of the ticket and handed them to the policeman. After looking through my papers, he silently returned them to me, nodded his head and moved on. After this not very pleasant episode, for some reason I did not feel like sleeping. I took out a notebook, a pen and continued my travel notes. Three hours passed like this. Suddenly my fellow traveler, Lin from Harbin, came up to me.

— Sorry, — he said, — I barely found you.

— What happened?— You see, Grigory, I have to board in half an hour, and I thought about you. You got here, and here everyone speaks only Chinese. It will be difficult for you to check in. I decided to help you.

— Thank you, Lin, but you said that check-in is 2.5 hours before departure. It's still early.

— You can check in at the machine 4 hours before. You don't have a lot of luggage, so you can check in at the machine. Come on, I'll show you.

We went to the machine. And there on the screen was a menu in Chinese. Yes, I wouldn't have figured it out. Lin put my passport to be scanned and in the window that appeared, I had to click on the name of the city. It was written there in Chinese and the abbreviation in English: NKG, which meant Nanjing. After pressing the button, my boarding pass came out: Beijing — Nanjing.

I thanked my random fellow traveler. And I decided to give him my brochure about rice in Russian and English as a keepsake, let him read it. You should have seen how happy Lin was and thanked me. And that was how we parted. I returned to my place. I sat and thought about this meeting with a complete stranger. Why did Lin treat me so kindly? Perhaps, in my person, he treated Russia in general, which provided him with work and shelter for 5 years.

Finally, it was time to board, and I flew on to Nanjing without any problems. It is about 1,000 km south of Beijing and 300 km from Shanghai. We landed an hour and a half later.



**The People's Republic of China
celebrated its 70th anniversary in 2019**

I was met in the arrivals area: a guy was standing in a prominent place, holding a sign with my last name. I went up to him and said hello. (*From that*

moment on, I switched to English. — Author). The guy immediately took me outside to the parking lot. We found his car. A luxury Nissan, locally assembled. There was already a man in the car who had arrived the day before. They were waiting for me. As soon as I got into the car, we immediately hit the road. On the way, we were talking with a fellow traveler. He was Indian, working at the IRRI. His name was Nicholas Sharm. He came to participate in a working meeting of TRRC, my colleague.

On the way from the airport, we looked around the city. Nanjing is the capital of Jiangsu Province. In the history of the country, it was the capital of China several times, alternating with Beijing. Nowadays, Nanjing is called the “southern capital”. The city is very old. It is located on the banks of the Yangtze River. The population was about 6 million people. That year the PRC celebrated the 70th anniversary of a new page in its centuries-old history. On October 1, 1949, the People’s Republic of China was formed. On the occasion of the anniversary, mass celebrations were held in the country and in the city.

Between the airport and the city there was a large forest area. Autumn had barely touched the trees. They were all still green and only a few had the first yellow leaves. Judging by the trees, the climate there resembled that of Sochi. Palm trees, magnolias and other subtropical plants grew everywhere. The highway was raised above the ground, 6 lanes in each direction. Large signboards indicated the speed limit for each lane from 90 to 120 km/h. I asked the driver how they observed the speed limit on the highway and heard the answer that it was very strict. There were cameras everywhere. Fines were high, so everyone followed the traffic rules. You could see that the city was ancient. But in some places high-rise areas wedged in — buildings of 25 floors and higher. We got through our way along the highway without delay, but slowed down closer to the center. There were a lot of cars here, traffic jams appeared, and the traffic lights abruptly slowed down the traffic. The central part of the city was surrounded by a high wall. The entrance was through a beautifully decorated arch — the former city gate. As we were later explained, a road for excursions was installed along the top of the wall. In the city, the street went along an alley of huge trees — plane trees. Therefore, it seemed like you were driving in a green tunnel.

In about 40 minutes we reached our hotel (Zhongshan Hotel). This was a high-rise building with 28 floors, surrounded by accompanying 2–3-story buildings with traditional roofs in the style of Chinese antiquity.

At the entrance to the hotel grounds, a colorful panel for the 70th anniversary of the PRC was installed.



Nanjing City, historical center

There were tables along the walls on both sides covered with green cloth in the huge lobby of the hotel. Here sat the registrars who received those arriving at the conference. There were two of them at once.

Near the TRRC stand, I checked in, then moved into a spacious room on the 13th floor and went to the hotel restaurant for lunch.

Keeping in mind the peculiarities of the local cuisine, I decided not to take risks and choose the most neutral dishes. The service was a buffet and I could choose for myself safe dishes. Having looked at the products on display, I took soup, boiled rice, assorted meat and a vegetable salad. All this is not salty, not peppery. Then the guest could take different sauces and add them to taste. I put the plates on the table, but I did not see forks or spoons, there were no knives, only chopsticks of different sizes. I was not trained to use them. I approached a girl in national clothes who was standing at the entrance to the restaurant. I tried to explain to her that I needed a spoon, a fork and a knife. She barely understood me, blushed deeply and ran out the door. About five minutes later, the girl flied in with a bundle in her hands. She came up to my table and put out a spoon, a fork and a knife. She apologized and wished me a good appetite. I could not resist and asked her where she went for these utensils. The girl was very embarrassed and quietly said in English:

— To the neighboring restaurant.

Since then every time I went into this hall, a girl came up to me with cutlery wrapped in a napkin. Apparently, I was such a rare specimen for them that they served me personally. Almost all the other visitors to the restaurant used chopsticks when eating. And they wielded them so deftly that I looked at them with slight envy.

Due to the change in time zones, I almost overslept in the morning. I got dressed and ran down to get breakfast. And there were already colleagues sitting there. They greeted each other, exchanged a few phrases about the weather and started eating.



In the hotel restaurant hall before lunch

At exactly 8 o'clock on November 7, we entered the meeting room. It was not a very large room, equipped with multimedia for presentations. The tables were arranged in a U-shape with seats for 20 people. On the tables were signs with the names of the participants in the meeting. At the head of the tables sat the chairman, Matthew Morel, Director General of IRRI, and next to him were his two deputies for this meeting — Fang Jihao, Vice President of the Jiagsu Academy of Agricultural Sciences (JAAS), which acted as the host organization, and the Vice Mayor of Nanjing. Chairman M. Morel introduced those present at the meeting one by one: representatives of China (Wan Jianmin and 10 people with him), Korea (Seung ho Cho, with 5 members of the dele-

gation), Japan (Masayuki Yamaguchi and Yoshimichi Fukuta), Russia (Grigory Zelensky), Türkiye (Halil Surek), Egypt (Mahmoud Abo Yousef) and Australia (Leigh Vial). In the end, he added that colleagues from Italy (Massimo Biloni) and the USA (Kent McKenzie) did not come. For some reason, they were not given a visa to enter China. Therefore, they sent their reports and wishes for further joint work in writing.

In conclusion, M. Morel said that our meeting was timed to coincide with the International Symposium, which would begin on November 8. It was organized by our Chinese colleagues. About 150 scientists from 9 countries, as well as a delegation of 10 specialists from IRRI, registered for the symposium.

After that, he added that Oliver Frith, head of the IRRI department, would moderate our meeting. His candidacy was proposed by the Acting TRRC Program Coordinator instead of Russell Rinke from Australia, who was unable to come to our meeting and sent the final report in the form of a video presentation.



Plenary meeting of the TRRC Committee in Nanjing

Then the meeting was chaired by O. Frith. He announced the program, the schedule of speeches and the rest of our actions.

We had to listen to a report on the work of the TRRC over the past 5 years, discuss it, outline ways to improve joint research and effectively use the results obtained.

The report was presented by the coordinator R. Rinke. It was a video with a presentation of the main results on the screen. Rinke made a detailed analysis of the work of each TRRC group. A printout of the text of his speech was distributed to all those present. Then, in the discussion of the report, representatives of each delegation spoke. They assessed the work of all groups and made proposals for the future.

It should be noted that the atmosphere at the meeting was friendly. After every hour of work, there was a break for coffee and communication. All participants quickly got acquainted and asked each other many questions. A colleague from Türkiye, Halil Surek, hugged me and loudly said:

— I have known Grigory Zelensky since 1996. We first met in France at a Symposium on rice. And we have maintained very good relations ever since.

To which I replied:

— Thank you, Khalil. It is indeed so. We have met many times in Türkiye, Russia, and other countries. And now I am pleased to note that you have not changed over all these years. You are in good physical shape.

— You have not changed either. Apparently, selection helps us not to relax. And then Khalil took me aside and said almost in a whisper:

— However, you've offended me, Grigory.

— Why? I have not done anything bad to you.

— Your rice variety Leader does not allow me to go to Kazakhstan. I sent my new variety there, but the Kazakhs do not want to sow it. They like Leader better.

— Dear Khalil, some of our farmers in Kuban sow your rice variety Osmanchik 97, and I am not offended. What to do if they like the variety. Farmers choose the best for themselves. The Kazakhs liked Leader, so they sow it. If your new variety is better than Leader, they will sow it.

This was the situation with the varieties. Thanks to Khalil, who clarified it. And I was wondering why I was told last year in Kyzylorda that all attempts to find a replacement for the Leader had failed so far. They were looking for varieties from other countries, including Iran and Türkiye. But the Russian varieties turned out to be the best for their conditions.

But let's get back to our meeting. As a result of a comprehensive discussion of the report, colleagues came to the conclusion that the disunited work of each group is not very effective. Therefore, they decided:

1). To abolish the groups, and work as a joint team according to a single program, which would be sent to all participants for approval in the near future.

2). To hold meetings of the TRRC Steering Committee every two years, instead of annual meetings.

Accordingly, the next meeting was scheduled for 2021. I, fulfilling the instructions of the Director, made a proposal to hold this meeting in Krasnodar, timed to coincide with the events that would be held on the occasion of the 90th anniversary of the All-Russian Rice Research Institute. My proposal was accepted with gratitude and then recorded in the final resolution. At the same time, the resolution also recorded that the meeting in 2023 would be held in Egypt.



Photo for memory: TRRC Committee, 2019

All this took the day of November 7 from 8 a.m. to 3 p.m., with a break for lunch. Before lunch, we were invited outside to take a photo of the participants of our meeting. And immediately after lunch, the photos were distributed. It was great sunny weather, so the photo turned out excellent.

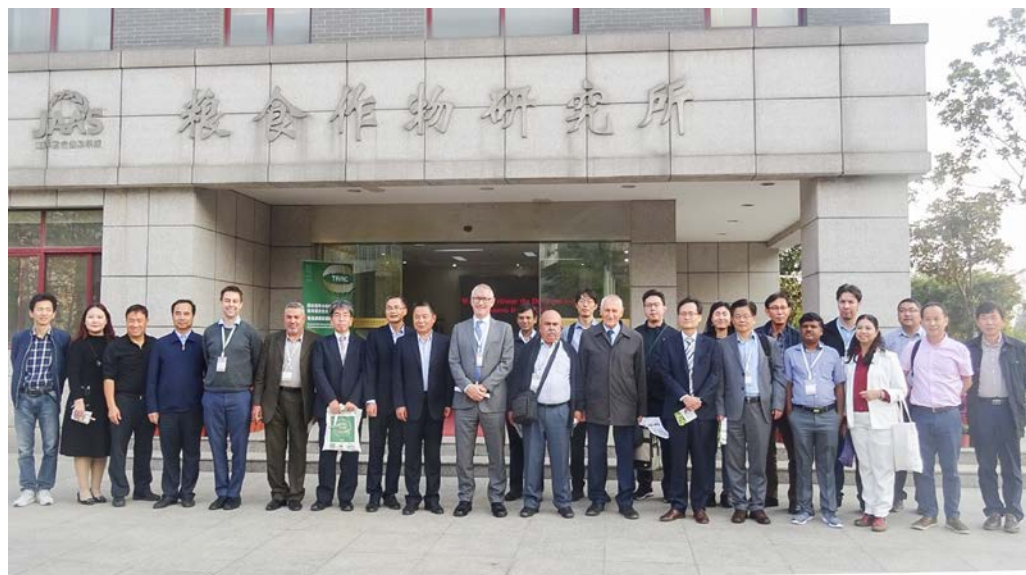
At 3 p.m., we were invited to the bus and taken on an excursion to the regional Agricultural Academy (JAAS). It was located behind the fortress wall in the outskirts of the city in a beautiful forest park area. The Academy brought together industry research institutes for grain crops, rice, vegetables and fruits,

plant protection, forestry, animal husbandry, fish farming. Each institute was located in a separate 9-story building. Between the buildings there were trees and flower beds. A residential complex had been built nearby, where the Institute employees lived. The Academy employed a total of 1,300 researchers.

We visited two facilities at the Academy: the Rice Research Institute and the greenhouse complex. At the Institute, they told us about its work, showed us the laboratories and equipment in them. Among the various areas of research, special attention was paid to breeding rice for resistance to diseases, of which there were more than ten in China.

We were greatly impressed by the greenhouses. This huge complex of metal and glass occupied several dozen hectares. The height of the structures was at the level of the 3rd floor. The greenhouses were divided into blocks, with different crops studied in each of them. For example, tomatoes and cucumbers were grown using different types of hydroponics. Rice was grown in trays on racks. They studied agricultural practices on a huge number of strawberry varieties in vessels, trays and containers. A separate block of the greenhouse was occupied by flowers.

Due to time constraints, we looked at only a small part of the greenhouse complex. Then we were taken to the Academy assembly hall and shown a film about its history and the events held here: conferences, symposiums, meetings, receptions for foreign delegations.



At the building of the Rice Institute of the Agrarian Academy (JAAS)



JAAS Greenhouse complex

A separate film was shown about the advanced training courses held at the Academy. A well-organized system of training specialists has been developed here. The first stage of classes is held with schoolchildren, then with students of agronomic specialties. The next stage is advanced training for research staff, teachers, and senior specialists. Separate classes, theoretical and practical, are held with farmers who grow various agricultural crops, breed livestock and fish.

Special programs have been developed for schoolchildren, which provide for theoretical classes and practical experiments in the field and laboratories of the institutes. At the same time, the most talented children are selected for further education at universities.

This system of training personnel deserves special attention.

We returned to the hotel late in the evening. And with some delay, a joint dinner was held in the small hall of the restaurant.

Late in the evening, an e-mail letter arrived. It was good that I could control my mail via my phone. The information was sent by the Organizing Committee of the 7th International Conference on Rice of Temperate Climate Countries. It stated that the Conference would be held in Brazil in February 2020. The organizing committee asked that this information be shared with their colleagues.

I immediately sent a letter to all my rice growing friends whose e-mail addresses I had recorded, including current friends. My colleagues from the meeting in Nanjing gave me their business cards. So I sent this letter to them too. In the morning, I received several replies thanking me for the information.

At breakfast, I asked IRRI Director M. Morell about the conference in Brazil. Would IRRI participate in this event? He replied that he knew about

it, and that the Institute's staff was planning to go to Brazil. The organizer was the FAO Rice Commission. They also financed this conference.

On Friday, November 8, from 8 a.m., we participated in the International Symposium organized by the JAAS Academy: "Healthier Rice for a Healthier World". The meeting was held in a large hall that was part of the hotel complex. The 500-seat hall was filled mainly with local scientists. There were many young people among them. Most of the reports were made by Chinese scientists. Two reports were made by specialists from IRRI and Korea. We also submitted our presentations for delivery. We were told that TRRC members would be able to deliver their reports at the end of the day if there was time left. Looking ahead, I would say that there was not enough time for our presentations. Most of the speakers spoke for 20–30 minutes instead of the designated 15. The chair did not follow the rules, so the symposium ended 1.5 hours later than indicated in the program. The symposium was opened by the President of the JAAS, Academician Yi Zhongyi. He spoke in Chinese with simultaneous translation into English. In a few phrases, the Academician outlined the strategic importance of rice plants as a food crop for the world in general and China in particular. He emphasized that the scientists of the Academy paid special attention to the development of rice varieties that were resistant to diseases and did not require chemical protection.

The words of welcome were delivered by IRRI Director General M. Morel, followed by three more officials from the Nanjing City Administration.

After that a break was announced for a group photo. We all went out onto the same lawn again. There were special scaffolds set up there in several tiers so that everyone could be seen in the photo. I could not imagine the result of having several hundred people in the frame. We were promised that the photos would be ready by Monday and the guests would get them by mail.

After this break, 8 scientific reports were presented before lunch and 10 after lunch. Most of the speakers reported the results of studying rice diseases and pests, including molecular methods, as well as ways to combat them. Several reports were about grain quality and the problems of improving it.

Here, one thing really surprised me. During the discussion, our moderator Oliver Frith asked questions equally well in English and Chinese. I was amazed by his proficiency in Chinese. When we met, Oliver told me that he lived in Australia. During the break, I asked Oliver how he managed to master Chinese so well. Oliver opened up and revealed his secret. He was born in England. His father was English, and his mother was from China. Since childhood, he spoke two languages. After university, he moved to Australia, where his father's

relatives already lived. There, he married a Chinese woman. Thus his family spoke two languages: English and Chinese. Moreover, his knowledge of Chinese brought Oliver to the TRRC working group. And his fellow countryman Russell Rinke recommended him to work at IRRI. As everywhere, you can't get anywhere without connections.



At the International Symposium “Healthier Rice for a Healthier World”, 2019

At the Symposium, I was particularly interested in two reports. The first was devoted to rice breeding for resistance to blast. I photographed almost all the slides so that I could analyze this material later at home. And the second report was about the creation of the “super hybrid” rice in China.

The report was presented not by the author himself, but by his assistant. Judging by the data presented, this hybrid showed a yield of 13,260 kg/ha in 2018, i.e. 13.2 t/ha. By our standards, that was a very high yield. At the same time, the speaker emphasized that they managed to overcome the threshold of forming grain yield of 80 kg/day/ha. But he did not mention the duration of the growing season.

I could not resist asking a question:

- Please tell me, what is the growing season of your new hybrid?
- Very short, only 158–162 days.
- Is it from sowing seeds to ripening or from planting seedlings to ripening of the crop?

— I don't know exactly. Probably from sowing seeds in the nursery.

Okay, I think we'll take from sowing to ripening. Now let's divide the yield of 13,260 kg/ha by a period of 160 days. The result is 82.9 kg/day/ha. Indeed, the Chinese have overcome this milestone.

My thought ran further. In 2019, my early-ripening rice variety Azovsky formed a yield of 10.5 t/ha at the "Soyuz Agro" farm. And it ripened in 107 days. I divided 105 by 107 and got 98.1 kg/day/ha. So what category should we classify the Azovsky rice variety into?

This is the real benefit of such trips. To see others and determine your place among them.

On Saturday, the hosts organized a large excursion for the participants of the TRRC meeting. In the morning, they took us to the National Park. It is 20 km outside the city. A huge area of wild forest begins at the foot of the mountain and smoothly spirals up the slope. A winding narrow asphalt road was laid through the forest, so that oncoming cars barely passed each other. At the very top of the mountain, there was a mausoleum of the "Father of the Nation". This title was posthumously received by Sun Yat-sen, a Chinese revolutionary. He actively fought against the Manchus. After the Xinhai Revolution in 1911, which overthrew the Manchu Qing Dynasty, which ruled China for 300 years, Sun Yat-sen was elected President. He proclaimed the formation of the Republic of China in Nanjing, which was the southern capital of the country. Sun Yat-sen did not live long; he died in 1925 at the age of 59. He was buried on the top of a mountain outside the city.

There was an entrance fee to the park — 10 dollars. The entrance was free for pensioners over 70 years old and children. We were amazed by the huge number of people who were moving along the alleys of the park. As the Professor accompanying us explained, every Chinese person considered it his duty to visit the grave of the "Father of the Nation" at least once in his life. It was Saturday, a day off, excellent warm weather. Therefore, many residents of the city and surrounding areas came here to spend their free time and climb to the Pantheon. Along the way, across the long alley, there were old buildings in the form of small fortresses. The last part of the path must be overcome by a wide staircase of 600 steps made of red granite.

The location for the Pantheon was not chosen by chance. A beautiful view of the surroundings opened up from above. However, photography and video shooting were prohibited. People silently walked around the Monument and went down. Like in Moscow when visiting the Mausoleum.



At the foot of the Pantheon: M. Morell, O. Frith, G. Zelensky, N. Sharm

After the Pantheon, we looked at a number of beautiful corners of the park, several historical sites, including the Empress's Palace located below and on the left side of the park from the Pantheon. Despite the huge crowd of people, the area was very clean. Many visitors, especially children, carried bags of food. It was sold there in numerous tents. No one left trash. Gradually descending to the foot of the mountain, we reached the parking place of our bus. It was about 1 p.m. and we were taken to the city for lunch. We drove up to one of the many private restaurants. The interior was nicely decorated. In separate rooms there were round tables of different sizes. On the table there was a rotating glass stand. There were displayed numerous dishes with different types of meat, boiled, fried, steamed fish, various salads and vegetables on it. In front of each person there were large flat plates where they put the product they liked. There were not only chopsticks here, but also European cutlery: a knife, a spoon, a fork. Rotating the glass stand, everyone chose food to their taste. I didn't take any risks here either, but took the already familiar products.

Several pots stood on small burners, which constantly heated them. The Chinese believe that fish soup, for example, should be served only hot. When it cools down, it loses its aroma and taste.



My lunch in China

I don't know why, but on this trip we were never offered alcohol. Maybe it wasn't part of the protocol. I was glad about it. When I remember how much we drank on our trip to China in 2006, I shudder. Then, at every lunch, we were offered local vodka with a worse aroma than our moonshine. It was awkward to refuse, and disgusting to drink it. Now, to my delight, this problem was gone.

The lunch lasted about 2 hours. Everyone ate and continued to chat. Then we were taken to the historical center — the old city. As in any capital, a section of the city, the old center, was left there. The city of Nanjing arose before our era. The first settlements were built on the islands of the river floodplain. These buildings were left as a monument to the founding of the city. They were restored, of course, but the style remained.

The historical center is an inner city, surrounded by a fortress wall. All the old buildings are built in the style of architecture typical for China. The narrow streets are paved with cobblestones. Moreover, the road is made so well that the surface is smooth, like asphalt, divided into small squares. These are the craftsmen of those old days. Bridges for transport and bridges for pedestrians are thrown across the numerous channels of the river. Boats sail along the river, giving rides to anyone who wants to ride. And there is their own transport on the streets — rickshaws. They offer their services to anyone who wants to. We walked along the streets of the old city. Lots of people are moving around. We saw huge number of people here. It seemed that most of the 6-million city was strolling through the old center. And what struck us was that with such an abundance of people the streets were amazingly clean. Not a speck of dust

anywhere. In one place we noticed that a yellow leaf had fallen from a tree. A cleaner immediately ran up to it with a dustpan and broom and immediately removed the leaf. I couldn't resist and turned to my colleague from Egypt:

— Mahmud, have you noticed how clean it is?

— Yes, I am very surprised and wonder how they managed to achieve this? No one litters.

I immediately asked Professor, our guide. He answered with all seriousness:

— Oh, we didn't manage to do this right away. More than 20 years ago, a law on cleanliness in cities was adopted in the country. And for a long time, 5–7 years, the population was taught order and cleanliness, collecting very large fines. And then a new generation grew up, which, in principle, does not litter. Most young people do not even imagine how it is possible to throw something in the street. And the elders simply remember well the time when they paid fines for throwing a cigarette butt or a piece of paper, so they also do not litter and educate the youth accordingly.



In the historical center of Nanjing

Slowly moving along the streets, we came to the National Historical Museum in the central square. And again we were surprised when they showed us an ordinary 2-story building, which differed from the others only in the museum label. But this building had six floors, of which four went deep into the ground. Moreover, the descent to the first floor was a narrow passage in a

spiral. The walls of this passage, 4 floors high, were covered with panels that were filled with some signs. These are hieroglyphs made of willow twigs. They wrote the history of the city and the most significant events of the past centuries. Of course, we took pictures of these walls. But we could not understand what was written there. All we could do just admire the work of those craftsmen who completed this colossal work.



**A fragment of the description of the history of Nanjing
in the History Museum**

Having gone down to the first floor, we found ourselves in an area where the events that began the history of China were described and shown in pictures and videos.

Ascending to the 2nd and subsequent floors, we found ourselves in a new era of the country. And so gradually we reached modern China, where robots and spaceships were shown.

At each stage of China's development, outstanding leaders stood at the head of the country. Their portraits were presented there and the deeds they accomplished were described. Various exhibits, technology and equipment that were used during this period were also there.

We spent more than three hours in the museum and looked at only a small part of its exhibits. We came out terribly tired physically and emotionally. To switch our sensations to new impressions, we were offered to take a 2-hour boat ride along the river channels.

The boat was small, with 30 seats, it went slowly, and the guide in good English told us about the sights that we came across. Along the banks grew various, mostly subtropical, trees and flowers in flowerbeds of various shapes. Behind this green wall, 2–3 storey houses could be seen standing along the river bank. Judging by the things hanging on the balconies, it was clear that these houses were residential.

And a new amazing fact. A boat with a small motor was heading towards us. There were two people in it. One was steering, and the other was using a large net to catch fallen leaves from the trees standing along the river. This was how they fought water pollution.



Journey along the Yangtze River

After meandering along the river channels, the boat reached the pier, where there were 5-6 such boats. There was the entry to the old fortress, which we were invited to inspect. These were the remains of a gigantic defensive structure. The entrance gates remained from the fortress. They were made in five tiers with intervals of 20 meters. On the side of the passage there were loopholes for shooting at those who broke through the first gate, then the second and subsequent ones. The passage was quite narrow, only 5–6 people could move in a row. The defenders could easily shoot the invaders from above.

Having inspected the defensive gates, we climbed the fortress wall. Its dimensions were amazing. The height was about 30 meters. The width at the top was such that two cars could easily pass each other along the constructed road. This wall surrounded the entire old city. Now only some fragments of it

remain, to be shown to numerous tourists. Excursions on electric cars were organized there to view the city from the height of the fortress wall.

In this area, the wall ran along the very bank of the Yangtze River, so the wall had to be stormed directly from the water.

A bridge was thrown across the river, which rested against a gate. And the only way to get from the bridge into the city was through the gate. As soon as they were closed, there was no passage. And considering that five gates were built in a row, even now you understand what a serious obstacle it was.

We regretted one thing, that we did not have a professional guide with us. Our guides answered numerous questions evasively or very briefly. It seemed that they knew their history very poorly, despite their professorial title.



An ancient weapon on the fortress wall

Having looked at the city from above, we headed back to our boat. It was patiently waiting for us at the pier. It was already evening, the sun was setting. Its last rays colored the water with golden stripes. We sailed back, mentally saying goodbye to the old city. The evening lights on the houses were turned on. The river banks were transformed. The gray houses along the banks looked like colorful fairy-tale structures.

By the time we moored at the starting point, colorful illumination brightened the entire old city. It was completely different from what we had seen during the day. Now we were surrounded by fairy-tale scenery from the ancient world, which was Nanjing many centuries ago.

We made it to our bus and returned to our reality. The TRRC work meeting was over. During the night and next day, colleagues were leaving. Everyone started saying goodbye already on the bus.

I had one more day to spare. I was flying out on Sunday evening. I was told that at 5 p.m. a car would be waiting for me at the hotel to take me to the airport.

I was so busy during the week that I could not even walk around our neighborhood. On the bus, before parting, Vina told me to come to the restaurant for breakfast and lunch with a guest card. I did not have to pay for meals.

In the morning, as usual, I got up early. Had a hearty breakfast and went for a walk. The first thing I decided to do was look around our neighborhood and if possible, buy souvenirs, at least something to remember this trip by.

I walked along the road and wondered why there was so little traffic and pedestrians. Literally a few people walked by, while the day before there had been a stream and one could not push one's way through. And only when I reached the first store and saw that it was closed, I realized that it was Sunday, a day off. On the first day, I was told that only grocery stores and cafes were open on Sundays. How could I not have remembered this before! Well, that was it, I forgot about souvenirs.



Green corner in Nanjing

A couple of kilometers later I reached an intersection with a wide avenue. On the right, along the road, a river flowed, about 20 m wide. It was shallow, so in some places there were clumps of aquatic plants. Every 100 m, a seething stream rose from the water. At first, I did not understand where this fountain came from. And then I guessed that it was a device for aerating the water. Apparently, there was a pipe along the bottom through which air was pumped. The air burst out into the water through tiny holes saturating it with oxygen. Otherwise, all living creatures would die in stagnant water. I saw men with fishing rods sitting by the water in some places. So, fish lived in the river.

Admiring the surroundings, I reached the next intersection, turned right and after 50 m I came across a park. A wide green area, suitable for walks and recreation for city dwellers. Various ornamental trees and flowers were planted here in clumps. There were green lawns between them. The grass on them was neatly trimmed. And everything was perfectly clean. This was despite the fact that there were many families with preschool-age children there. Or rather, a mother, father and one child: a boy or a girl. There was not a couple with two children. And then I remembered that on our last trip we were told about the law adopted in China: one woman — one child. Little children were frolicking on the lawns, and their young parents, admiring them, sat on benches placed along the paths. Older children played on playgrounds with sports equipment. I looked at this general idyll and thought about the problems that arise when raising one child in a family. But the law here was very strict, and everyone strictly followed it. At the end of the park, under the awnings, there were tables with books of various formats: from children's to scientific. At first I thought that these were shopping arcades. It turns out, no. This was a book rental. Visitors to the park chose books to read here during the day. There were many who wanted to, especially children.

After walking through the entire park, I turned towards my hotel. I decided to have lunch and continue my walk.

In the restaurant after lunch I asked a Chinese woman who spoke passable English:

- What souvenir can I buy today on a day off?
- Today it's a problem. You can buy traditional Chinese green tea. Everyone buys it.
- Where?
- It's not far from the hotel. There's a small grocery store. They'll definitely have tea there.

And so that I could find this store, she took out a map of the area and showed me the point where I needed to go. I immediately went to the indicated place. Indeed, I found this little store on the next street. There were two salespeople in the store: a woman of about 40 and a young guy. The small room was filled with a variety of food products. There was also tea. But, unfortunately, there were only 3 bags on the shelf. And I wanted to take about 10. I expressed my regret in such a way that they understood, even without knowing English. They had a quick conversation and the woman ran out into the street. The guy muttered “one moment” to me and held my hand so that I wouldn’t leave. I realized that I had to wait. The woman rushed in and put bags of tea on the counter. I happily took 12 bags, which pleased the sellers. Tea was a souvenir that you could give as a gift and use yourself.

While I was looking at the windows, I noticed that the price for a 0.33 l bottle of water was only 1.5 yuan. I wanted to take it with me on the road. Then I remembered that they would take it away at the airport anyway. Okay, I would buy it on the spot.

There was still time before departure, and I continued my walk. I went in the other direction, looking around the area. There were few cars today, but there were a lot of pedestrians and cyclists. And the bicycles were not simple, but electric with a motor on the front wheel and a battery in the frame. I saw them up close when I got to the metro station.

Next to the exit from the subway there was a parking lot for bicycles both regular and with electric motors. There were more than a hundred of them on a fairly large area. All of the same color — orange. In another place I saw a similar parking lot, but with blue bicycles. I realized that these were different rental companies.

The city had a very rational traffic management system. The main roads were very wide — 3–4 lanes. Trees grew along the roadsides, mostly plane trees. A one-way lane of about 4 m wide was allocated to bicycles and scooters, most of which were also electric. Then there were bushes and a wide pedestrian path. Everyone moved without interfering with anyone. Underground crossings were arranged across the roads used by pedestrians and cyclists. Electronic traffic lights with time sensors worked at all intersections. This was very convenient to cross a wide street. Police officers were practically invisible. However, there were cameras everywhere recording any violation. The people were very disciplined. At the same time, as we were told, discipline was maintained by large fines.



Electric bicycles are a popular form of transport in China

Next to the store there was a Volkswagen Tiguan, very similar to mine, assembled in Russia.

As for cars, there were very many of them. The brands were very different, but according to local colleagues, almost all of them were assembled in China. The most prestigious car and a well-selling brand was the Audi 8. More than 160 million residents of the country could afford buying it at a fairly high price (\$40,000).

We were told an interesting story about this car. 25 years ago, China adopted the “Roads and Cars” program. Over the past time, a network of roads had been built and the market had been saturated with cars. Among the purchased licenses was the Audi 8. At the beginning of assembly, license fees were paid to the Audi company, but then the payment was stopped. The company appealed to the International Court. The manufacturers put cars up for comparison: the original and the one assembled in China. Outwardly, they were similar, but not a single spare part from one car fit the other. Everything was decided by the tolerances that were included in the manufacture of parts and accepted during assembly. The differences in the cars were based on them. The Audi company lost the case.

Having walked around for about 5 km, I still did not see a single supermarket. Apparently, this was the business district of the city, where there were practically no retail outlets. I returned to the hotel and packed my things. There was about an hour left before departure. However, less than 10 minutes had passed when a guy came in with a paper in his hands. It was a list of my

colleagues leaving. The guy was responsible for arranging their departure. He immediately turned to me:

— Are you Zelensky?

— Yes.

— Please, let's go to the car.

We went outside. A blue Audi 8 was parked at the porch. The driver picked up my suitcase and invited me into the car. I mentally said goodbye to the hospitable hosts, and we went to the airport. On the way, I was able to look at the city again, see its rational layout. Most of the city had already been reconstructed. The houses were new and almost all high-rise buildings more than 25 stories high. There were large green areas between the houses. Residential areas were separated from the roads by a wide strip of trees. On the way out of the city, near the ring road, I saw a new Chinese miracle — 4-story interchanges on the road. Previously, I had seen 3-story interchanges, but this was the first time.

The traffic in the city was not heavy that day, and we were at the airport in 40 minutes. I went through check-in and customs at the airport without any problems. There was enough time before the flight, more than 2 hours. So I calmly walked around the hall, looking into the shops. I didn't find anything suitable to buy as souvenirs. And when I saw the price on a bottle of water — 62 yuan versus 1.5 yuan, which was in the city store, I was simply stunned. I didn't even want to drink when I saw this price. Then I realized why there was such a difference in price. Who could afford to fly on airplanes in China? Only wealthy people. And they could buy water at such a price. By the way, this was practised at the airports of almost all the countries where I had been, including ours.

Strictly on schedule, we were invited to board. I said goodbye to the city of Nanjing. I'm unlikely to ever get here again. The city left a pleasant impression.

In 1.5 hours we were at the Beijing airport. There we had to transfer from the local terminal to the international one. I already knew the transfer technology. We drove right up to the entrance to the airport. I entered the hall and involuntarily gasped. There was an endless line of three rows at the check-in counters. Each person had 3–4 huge suitcases on their carts. I stood there and sadly thought, how long I would have to wait for check-in.

Although I had enough time, more than 4 hours before departure, but standing in line was no fun. My luggage was a small suitcase. I tried to ask if it was possible to check in through the machine. No one really answered. I hear four men walking nearby talking in Russian and moving past the line. They were holding only briefcases. I followed them. I saw that they approached the

business class counter and quickly checked in without waiting in line. I decided to ask where they were flying. It turned out that they were flying to Moscow. I immediately plucked up the courage and began to clarify:

— Are you flying without luggage?

— With luggage, — answered the senior with a lush, but completely gray head of hair. Then he added:

— We sent the suitcases with a courier. They have such a service here. And we travel light.

— Yes, a reasonable solution. And here I am, stuck. I don't know what to do. Such a queue at check-in.

— You know what I'll tell you. Your luggage is small, you look respectable, go straight to the business class counter and hand over your passport. You'll see, you'll succeed.



At Beijing airport

I stood there for a while, doubting, looking at the line. Then I heard an inner voice:

— Go, impudence is the second happiness.

I approached the counter. A large man was sitting at the check-in desk, not looking like a Chinese person. I handed him my passport and quietly said:

— To Moscow.

I heard a question in Russian:

— Business?

— No.

— Baggage?

— No.

I showed my suitcase and a minute later I received my boarding pass and a wish:

— Bon voyage!

— Thank you!

And I rushed to the entrance for security. I was grateful to my fellow countrymen, they helped me. They were right when they said that there were no hopeless situations.

There were more than 2 hours until boarding. I could look for local souvenirs in numerous shops. In the children's department, among the mass of toys, I found a cute stuffed toy dog with a sad face. I liked it so much that I decided to get it for my grandson Grisha, who adores stuffed toys. And right there in the neighboring store they were selling women's silk scarves. So beautiful that I could not resist and bought one for Olga, despite the high price. The thing was really worth it.

The flight went without problems. In Moscow, the weather was already pre-winter. Drizzle and snow. Chilly. There was the last part of the Moscow-Krasnodar route. Two hours of flight, and we landed at our home airport. I got off the plane, and the air was different here. We were greeted by warmth. Exactly an hour later, I opened the door of my house. 25 hours had passed since I left the hotel in Nanjing and got into the car for the trip to the airport. The long journey was over. Pictures and images from this exciting trip will pop up in my memory more than once.

31. Brazil, 2020

In November 2019, when I was in China in Nanjing for a working meeting of rice growers of the TRRC Committee, a message was received from the Organizing Committee of the International Temperate Rice Conference that the next 7th Conference would be held on February 9–12, 2020 in Brazil in the city of Pelotas. Such conferences are held under the auspices of FAO every 4 years in different countries, alternating continents. The previous one was held in Australia. This time the lot fell on Brazil. Brazil is one of the large rice-producing countries. Rice occupies about 2.5 million hectares and 12–14 million ton of its grain are produced there annually. February in the southern hemisphere is the third month of summer, like August here. In March 2003, such a conference was held in Uruguay. And then there were four of us in our delegation: V. S. Kovalev, L. G. Kuryachiy, A. Kh. Sheudzhn and me. It was a very interesting trip, the details of which are still remembered. Even the fact that one arrives from winter into summer and in the subtropical zone, already arouses great interest.

Returning from China, on November 12, I informed the director of the All-Russian Rice Research Institute S. V. Garkusha about the upcoming conference and made a proposal for the Institute specialists to go to Brazil. At the same time, I gave him two arguments: it was necessary to represent Russian rice growing at the international level and, most importantly, after talking with colleagues, invite them to our conference, which we planned to hold in 2021 on the occasion of the 90th anniversary of the All-Russian Rice Research Institute.

Having told all this to Sergei Valentinovich, I repeated once again:

— If we want foreign scientists to come to us, we need to meet with them and personally invite them. Moreover, we had similar experience: in 2001, E. M. Kharitonov and I went to France, and in 2006— to Italy. And then, at our subsequent domestic conferences, there was good international representation.

The Director listened to my information with interest and made a verdict:

— Yes, we need to go to Brazil. We will go with a delegation of 5 people. And then he named them: Garkusha S. V., Kovalev V. S., Yesaulova L. V., Bulgakov I. V. and Zelensky G. L.

On the same day, after our meeting, the Director instructed the Head of the international relations department I. V. Bulgakov to begin preparations for the trip to Brazil. Igor Vladimirovich quickly studied the 7th ITRC-2020 website, where detailed information about the conference was posted: conditions of registration, accommodation, arrival, etc. And two days later he informed me

that he had booked a place at the Ales Blue Hotel in Pelotas. And a day later we received information by e-mail that all conference participants must pay a registration fee of \$420 and send a topic of their paper, as well as indicate the section where they would be speaking. It was also added that if the registration fee was paid before December, a 20% discount was provided.

Having weighed all the pros and cons, I suggested that Olga Vsevolodovna go with me to Brazil as an accompanying person. Because leading scientists from other countries came to all such events with their wives. (*That was what happened that time too.* — Author). This was a big surprise for her. Of course, Olga was happy, although we would have to pay for her trip ourselves.

Another thing was that Brazil is in the southern hemisphere and the flight there was quite long. I already experienced a 13-hour flight when I flew to Uruguay in 2003. And Olga had never made such a flight before. But she had to try.

When I learned that a delegation was preparing for the trip, I proposed to Viktor Savelyevich Kovalev that two abstracts for the reports from our delegation should be written. My co-authors would be Sergey Valentinovich Garkusha and Olga Vsevolodovna, and he would write with the others. I would take the topic of selection for productivity and stress resistance, and he would take the topic of selection for yield and quality. Viktor Savelyevich agreed and involved Natalya Georgievna Tumanyan in writing, although she had not planned to go to Brazil.

Within a week, we had written our abstracts in English and sent them to the Organizing Committee. In response, we received a message that our report had been accepted and that we had to pay the registration fee without delay.

I went to the Director with this question. And then I was very surprised. Over the past week the decision about the trip had been changed for economic reasons. Sergey Valentinovich informed me that only Professor G. L. Zelensky, would fly to Brazil. He would present Russian rice growing at this conference and would also invite foreign colleagues to visit Russia in 2021.

The tickets were ordered for us by the Head of the external relations department, I. V. Bulgakov, via the on-line system. Olga and I came to him to agree on all the issues that arose on the spot. Igor Vladimirovich looked through several options on the computer and suggested the most optimal route: Krasnodar — Istanbul — Sao Paulo (by Turkish airlines), then by local plane to Porto Alegre. And the last section of about 300 km must be taken by bus to the city of Pelotas.

The day of departure approached, Saturday, February 8, and we set off. We had a well-established plan for foreign trips. In such cases, Pavel and his family moved into our house so that our pets, a dog and a cat, did not suffer alone.

Departure from Krasnodar was at 5–20 a.m. We left home three hours before departure, so the night was almost sleepless. We checked in at the airport. We were given two boarding passes: one to Istanbul, and the second to Sao Paulo. When registering our luggage, our large suitcase was sent straight to the final destination. We took it in order to pack our outerwear there. After all, there would be summer weather in Brazil. We took a small suitcase with things necessary for the trip with us. With a two-hour delay, our plane took off towards Istanbul. On the plane, we dozed for about two hours and landed safely on the field of the new Istanbul airport. The new airport is a grandiose structure on a huge territory of former wastelands 30 km from the city. Now it is the largest airport in Europe, and one of the largest in the world. Its detailed study and understanding is a matter for the future. But then we walked along endless passages and halls and were not even surprised by the advertising glitter of numerous shops and cafes. It should be noted that it was winter outside the airport windows: we saw snow and ice on puddles. It was minus 7°C.

While we were getting to know the new airport, it was time for the next flight. We boarded a huge plane. There were more than 300 people in the cabin. And all the seats were occupied. I flew on a similar plane to Australia from Bangkok to Sydney in 1997. During the 13-hour flight, we managed to sleep, read magazines, and chat with our neighbors. In front of us sat a Slavic family: a husband, wife, and two children: a girl of about 15 and a 6-year-old boy. They lived in the Czech Republic. She was Czech, and he was a native of Western Ukraine. They had been living together for 15 years. They traveled a lot around the world. That time they were flying to South America to the city of Sao Paulo. There they planned to rent a car and go to see three countries: Brazil, Paraguay, and Argentina. They had planned the route in advance. They ordered a car on the Internet and booked places in hotels along the route where they would stay overnight.

To our surprise, our neighbors explained that they had worked out the technology of such travels well. They had traveled this way in Asia, Africa, the USA and Russia, though without children. And now the time had come to visit South America. They decided to take their children there so that they could see the world. Surprisingly, we later met this family again in Sao Paulo. But I would tell you about this below.

To our delight, the flight did not bring either great fatigue or particular discomfort. We arrived at Sao Paulo airport on schedule. When approaching the city from above, we could see how huge the city territory is. It was night, and the lighted area of the city against the background of dark surroundings outlined its endless borders. More than 17 million people lived in Sao Paulo. It was the largest city in this part of the Earth.

The airport was also very large, one of the largest in South America. We found out from the information desk that we would have to take a bus from the international airport to the local terminal. We just went outside and immediately returned to the airport. The reason for this was the heat outside. Even at night, it was +26°C there, and we were dressed for winter. We had to quickly change into summer clothes. The clock at the station showed midnight. There were several people in flight uniforms standing at the bus stop. Apparently, some crew had returned home. I approached them and asked in English how to get to Terminal 1. The young guy clearly explained and showed the stop on the next runway where the bus stopped. And then he added that the transfer between the terminals was free. We had to wait until the morning for local airlines, the flight was at 8–20 a.m. Seeing some suspicious individuals wandering around the hall, we decided to sleep in turns. According to the road map, we should fly from there to the city of Porto Alegre. There we would be met and taken by bus to the city of Pelotas, where our conference would be held. This was the southern part of Brazil, about 150 km from the border with Uruguay.

Finally, it was time to board the plane. We checked in and went outside to the bus that would take us to the plane. When the bus was almost full, I heard a voice in English:

– Gregory, hello!.

I turned around, and standing behind me was a colleague from Australia — Russell Ford. We had seen each other in Thailand, and had met even earlier, in 2007, at a conference in Vercelli, Italy. Now we happily greeted each other. There was a pretty woman standing next to him. He introduced his wife Robin. I introduced Olga. A conversation started. It turned out that they were flying from Sydney via Chile, from the other side of the Earth. As soon as boarding began, our conversation was interrupted. We found ourselves at opposite ends of the cabin.

The local plane was small, about 100 passengers. There were no comfortable zones, the entire cabin was economy class. The flight took 1.5 hours.

The airport in Porto Alegre struck us with its modern design. We were supposed to be met here. After receiving our luggage, we went to the exit and

stopped in the last hall. The hall was air-conditioned and quite comfortable compared to the outside. It was already over 30°C there. We settled down on soft chairs and “switched on” the waiting mode.

At 11 o'clock, a guy and two girls in orange T-shirts with the emblem of our conference entered the hall. They were our guides from the Organizing Committee. They said that our departure was scheduled for 13–30. They had to meet three more planes.

When everyone had gathered, there were 22 persons in our company. We were invited to a very comfortable bus. The journey to the city of Pelotas took almost 4 hours with two stops. One of them was near a motel in the foothills. A wonderful view from above of the valley, delineated by the boundaries of fields. In this area of the country, soybeans and corn was mainly grown. The fields were intermitten with small hills with forest growing like islands. These were man-made eucalyptus plantations. Farmhouses could be seen in the shade of the trees. And to the right of the highway on a hill grew a natural forest of different types of trees. A beautiful place was chosen for a motel for passing motorists.



At the airport of Porto Alegre

Along the way, we were very surprised by the local soils — red soils. I had heard about them, but I saw them in real life for the first time. We were told

that such soils were formed due to the abundance of precipitation. It exceeds 3000 mm per year in this area.



Brazilian red soils

The city of Pelotas was a small settlement with low-rise buildings. Only in the center of the town there were 5-story old buildings. Narrow and sometimes winding streets testified to the old planning of the city, when there was no motor transport here. Therefore, most streets had one-way traffic.

The population of Pelotas is about 300 thousand people, but it is considered the main scientific center of rice cultivation in the country. The Brazilian Agricultural Research Corporation (Embrapa) is located here. The corporation includes an Agricultural University, a Rice Research Center and a large farm with a total area of 25 thousand hectares of agricultural land. Scientists working in the corporation train specialists, create rice varieties and develop elements of technology, test their developments in production conditions and issue recommendations for widespread use in rice cultivation in the country.

Embrapa Corporation was the host organization of the 7th ITRC-2020 conference. Embrapa was founded in 1973 to develop technologies, obtain knowledge and scientific and technical information, and improve the efficiency of Brazilian agriculture, including livestock farming. The corporation employs more than 9,700 people, including more than 2,400 research scientists. The conference participants were accommodated in three different hotels, which were located within 2 blocks of each other. Our guides asked us to be ready in 1.5 hours for the trip to the opening of the conference.



Opening of the conference “ITRC-2020”

Of course, after such a long journey and two sleepless nights at the airports, we would have liked to have had a good night's sleep. But there was no time for that.

The opening of the conference was an evening event and was held on February 9 at the City Hall Club. There was a huge hall right at the entrance. The conference delegates were registered there. Behind the side door was a conference hall with 200 seats. When the hall was filled, we counted more than 150 people. Among the scientists who came to the conference were many of my acquaintances whom I had met earlier. One of the first was a colleague from Uruguay, Gonzalo Zorillo. He greeted me very warmly, almost on his native soil, as he said. Gonzalo arrived in Pelotas in his own car. Those who met him made loud joyful exclamations. Everyone was in a very high spirits. At exactly 6 p.m., 11 people took their places in the presidium — leading scientists and representatives of the local administration. The city Mayor addressed the conference participants. After the official part, a banquet was organized in the hall, where all those who arrived exchanged greetings, since most of them regularly attended such events and had known each other for a long time.

At the opening of the conference, it was reported that 156 participants from 14 countries of North and South America, Asia, Europe and Australia, growing rice in temperate climates, had registered. The following three days were spent in a scientific session. The meetings were held in the hall of the Embrapa corporation, which was located on the outskirts of the city. The working

languages of the conference were English and Portuguese with simultaneous translation (*The official language of Brazil is Portuguese.* — Author).



**In City Hall of Pelotas at the opening
of the conference “ITRC-2020”**

To reduce the language barrier between the conference delegates and their Brazilian colleagues, the organizing committee invited students from the local Agricultural University studying English as volunteers. They took an active part in organizing, accommodating and accompanying the conference participants.



During a break in the meeting:— Tea or coffee?

On the second day, February 10, we listen to 20 reports, and on the third day before lunch — 10. After lunch, there was a field trip to inspect production crops.

The reports of scientists from almost all countries covered both traditional and new topics: rice breeding to increase yield, quality and resistance to stresses such as blast, low temperatures, soil salinity; rice agricultural technology using innovative technologies; the use of rice protection products against diseases and weeds; achievements in the direction of sustainable development and greening of rice cultivation.

One of the sessions of the conference was devoted to the study of weed-field red-grain forms of rice and their control, including the use of the “Clearfield” technology. In Brazil, this technology began to be studied and applied in 2003. And after only 7 years, red-grain forms resistant to the applied herbicides with an ALS-inhibiting effect appeared in production rice crops. Therefore, specialists were forced to urgently change the principle of action of herbicides and create new varieties of rice resistant to them. The speaker admitted that this process would be recurrent, because the law of “selection swings” had not been cancelled.



In the lobby of the Embrapa corporation



With colleagues from Italy, Uruguay and Chile

The speaker, Professor Francesco Vidotto from the University of Turin (Italy), expressed serious concern about the increase in the number of weeds in rice fields, especially invasive ones, and the significant decrease in the number of specialists who knew these plants. At the current stage in rice growing, there were certain difficulties in establishing taxa of new alien species of weeds in order to develop strategies to combat them, which required the consolidation of forces and the development of cooperation in this area. The scientific community agreed with the Professor's opinion and included the information in the final resolution. To get acquainted with the field research of Embrapa scientists, a trip was organized to the largest multi-profile farm of this corporation: an agricultural farm with 25 thousand hectares of land, of which 10 thousand hectares were irrigation systems. There they produced rice, soybeans, milk, meat, as well as grain and forage crops for livestock raised on the farm. All manufactured products were processed at their own factories. Rice was grown on an irrigated plot in a crop rotation: rice, soybeans, pasture ryegrass for two years for grazing cattle. The annual area under rice was about 6 thousand hectares. Over the past 5 years, the average rice yield at the farm had been 10 t/ha. Up to 70% of the produced rice was exported. Soybeans occupied about 4 thousand hectares with a yield of 3.25 t/ha. Almost all soybeans were used for animal feed.



Embrapa workers' houses

The farm kept 10 thousand heads of cattle. Out of them 4.5 thousand cows were used for milk production, and 5.5 thousand bulls — for meat. The cattle were kept on pasture all year round, with additional feeding of compound feed and silage. To produce silage, corn was sown on dry lands. It should be noted that in this region, 1200–1400 mm of precipitation falls per year, so the yield of silage mass of corn was very high.



On a tour of the Embrapa corporation's farm



Agronomist's drone at Embrapa Corporation's farm

In the rice system, the size of the checks was 20–25 hectares. In some of them, transverse winding ridges 15–20 cm high were made. They were cut before sowing rice by a special machine with a satellite navigator to maintain the water layer of up to 10 cm. Seeding units, and then combines, easily drove over these ridges.

For operational control of the water layer and the condition of rice crops, density, logging, disease damage, etc., the farm's specialists used aircraft — drones to inspect each hectare of the huge check in real time.

At various demonstration sites, we were introduced to the cultivated rice varieties, technology options, features of weed control, including the “Clearfield” technology. About 30% of rice crops were grown on the farm using it. It should be noted that the production specialists who commented on the demonstration crops were not particularly enthusiastic about the Clearfield technology. They emphasized that this technology did not completely clear the fields of red rice, because its seeds were stored in the soil for several years, and soybeans grown after rice experienced a negative aftereffect of the herbicide.

Scientists from the Embrapa corporation were especially pleased to show rice varieties of their own selection which had begun there in 1972. Over the past time, they managed to reduce the height of the plants from 95 cm to 80–82 cm, shorten the period from flooding to flowering of rice from 97 to 88 days, and at the same time increase the yield from 7 to 10 t/ha in production conditions, with a seeding rate of 90–110 kg/ha.



With Professor Gonzalo Zorillo

On the day of the field inspection on February 11 (identical to the first ten days of August in the northern hemisphere), the plants of the earliest rice varieties were in the milky ripeness phase. These were dense crops with strongly tillering plants, having 20–25 drooping panicles. The grains were small, elongated (l/b about 3). The stems were tightly compressed, with short leaves and a vertical flag. Experts claimed that the plants of the varieties did not lodge in the ripening phase and were easily threshed during direct combining.

Most varieties were highly resistant to blast. The weather conditions in Brazil were very favorable for the development of the disease, so special attention was paid to solving this problem during selection.

Rice was sown dry with seeders on well-planned checks, with a seeding rate of 90 kg of seeds per 1 ha. Seedlings were obtained with moistening. After the appearance of the 3rd leaf, a 5–7 cm layer of water was obtained, which after tillering was raised to 8–10 cm and maintained until wax ripeness. Heavy rainfall during the rice growing season allowed saving water for irrigation.

Preparation of the field for sowing rice began with plowing in the remains of ryegrass after two years of grazing, which left a significant amount of organic fertilizer. Capital leveling was carried out on the checks using units with sat-

elite navigators. When demonstrating the planning to us, 8 planners worked in a 20 ha plot.

At the next checkpoint, they showed aviation at work on rice sowing. These were, of course, staged flights with water spraying, but very visual. One mini-plane of Brazilian manufacturer, the size of a small passenger car, flew over the checkpoint at a height of 5–8 m and carried out spraying, and the other plane applied fertilizers. Aviation was widely used there not only in agriculture, but also controlling mosquitoes, which were a big problem for people and animals in this area. Water was supplied to the rice through a system of canals that originated from the river. There was a powerful pumping station there, lifting water 15 m from the river into a large distribution canal.

We were very surprised that the bed of the supply canal from the river was completely overgrown with water lily (*Pistia stratiotes* L.), which we grow in closed-ground reservoirs (including in the greenhouse of the Kuban State Agrarian University) and aquariums as an ornamental. These plants pose a major problem for Brazilian rice farmers, filling up the water spaces in canals along with water hyacinths.



Brazilian agricultural aviation aircraft

The day ended with a gala dinner at a restaurant in Pelotas, where the organizers treated the guests to national cuisine.

The fourth day of the conference was devoted to visiting the agricultural exhibition “Harvest Day”. This is a regular annual event at a special site. An exhibition center was created 10 km from the city of Pelotas, where an annual

exhibition and sale of agricultural and engineering products were held for a week in mid-February.



At the rice field with a colleague from Chile

Microfields were planned here: rice paddies of 100 m² and similar plots for other agricultural crops grown in the region. For demonstration, different varieties of rice, soybeans, corn, perennial grasses from various breeding centers and commercial firms were grown on these plots. In addition, sowing was carried out to demonstrate various technologies, irrigation, fertilizers, and plant protection products offered by the world's largest firms working in agriculture: BASF, Bayer, Pioneer, Syngenta, and others.



Rice on the exhibition field

Each demonstration site had sun and rain shelters, where specialists told visitors about their achievements. There was one difficulty for our group — language. Very few local specialists spoke English. Therefore, in most cases, we listened to their message in Portuguese, and the simultaneous interpreter spoke in English, but this extended the presentation time. In special fenced areas with cereal grasses, animals of different breeds of cattle and sheep grazed. Combines, tractors, seeders, sets of agricultural implements and equipment from manufacturers working in Brazil were exhibited there at separate sites. We saw a mini-plane and different types of drones that were used in the country's agriculture. All of them were locally produced. These aircraft used technical ethanol as fuel produced from processing wastes of agricultural products.



At the exhibition of soybean varieties

This demonstration of agricultural achievements was organized for specialists and numerous farmers of the region visiting the exhibition not only for inspection, but also to conclude contracts for the purchase of the necessary products.

During the excursions, we noticed that many men from South American countries carried special thermoses for constant refreshment with “Mate” tea. I tried to find out from Gonzalo the composition of this drink, but he limited himself to the phrase that everyone had their own author's secret.

At the end of the conference, an evening “round table” was organized, moderated by the famous Uruguayan scientist Professor Gonzalo Zorillo. The meeting summed up the results of the conference. Representatives of delegations from each continent outlined the range of problems existing in rice growing in their regions, expressed gratitude, comments and wishes to the organizers of this event. In our speech, we repeated the invitation to colleagues made in the report to come to Krasnodar in 2021 for the International Rice Conference, dedicated to the 90th anniversary of the All-Russian Rice Research Institute.

Before the closing of the round table, it was announced that the next 8th ITRC-2024 would be held in the USA, in the state of Louisiana, at the Rice Research Station.

The materials of the 7th ITRC-2020 conference — reports and posters — were posted on the website: <https://itrconference2020.com/downloads/Proceedings-7th-ITRC.pdf>.



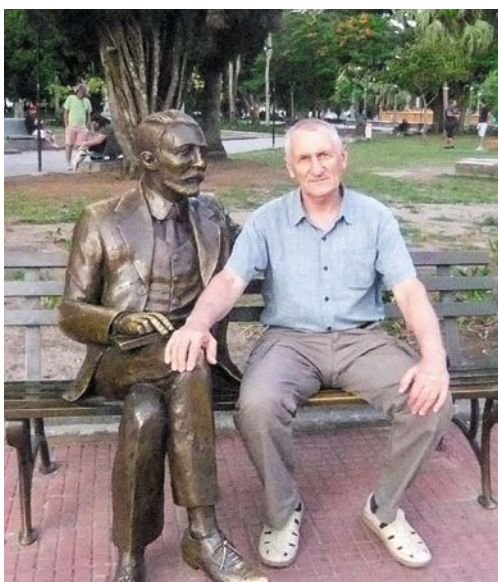
With a cup of mate

To the above it is necessary to add the words of Professor G. Zorillo that about 70% of rice crops of temperate climate were in the areas with problems of cold resistance for rice plants. Therefore, options for solving this problem would be discussed at the next conference in the USA.

On the penultimate day before departure in the evening we had free time, and we made a short excursion around the city. We walked around its center, visited the local park and several shops. In the city park we were very

surprised not so much by the abundance and variety of trees and shrubs, but by the labels that stood next to each tree and bush. On them in Portuguese and Latin were written the names of plants: family, genus and species. So the park had not only entertainment, but also educational value. Literally at every step there were benches and recreation areas. In one of them we saw chess tables. Apparently, fans of this wise game gathered there. And a little to the side there was an art object — a bench with a city sculpture. There was one more detail that should be mentioned. The Embrapa corporation was located outside the city. We were taken there and back by bus. We only spent the night and had breakfast in the hotel, and were on the move all day. On the way, the specialist accompanying us told us about the country, the region and the city of Pelotas. At the same time, he drew our attention to the historical monuments of the city. In one place, we saw an unusual 3-story building, the façade of which looked like a catalog cabinet. Long balconies were arranged along the entire perimeter of the building, and small squares with wreaths or bouquets of flowers were visible in the wall. It turned out that this was the city cemetery. The urns after cremation of the deceased were buried here. They were installed in a niche and covered with a slab with an inscription indicating the name of the passed away.

The outskirts of Pelotas were built up with small one-story houses. A tree and lawn grass grew near every house. No fences. A cinder path led from the asphalt highway to the house.



In the park of the city of Pelotas

We left Pelotas for home on the morning of February 13. The night before, Germani from the Organizing Committee had come to us late in the evening and offered his help. We had to go to the bus station and get tickets for the next day trip. The tickets we bought in Porto Alegre for the return trip from Pelotas were a voucher that had to be exchanged for a boarding pass. And it was better to do this the day before, so as not to waste time early in the morning. We arrived at the bus station. We got our boarding passes at the ticket office without any problems. Germani took us to the hotel and said that he would pick us up in the morning. At 5 a.m. Germani was already waiting for us at the entrance to the hotel. On the way to the station, he told us that his ancestors had come here from Italy. There was a large Italian diaspora living in Pelotas. They remembered their homeland. An example of this was the company “City Taxi”. Its owner was Italian. He bought exclusively Italian-made Fiats for his company. Children born there were considered Brazilians, but their native Italian was not forgotten in the families. When they met, they spoke only Italian. But everyone knew Portuguese and many were learning English, especially those who dreamt of a career as scientists.

We left Pelotas at exactly 6 a.m. and two hours later stopped at the bridge over the river before the city of Porto Alegre. There was a column of cars ahead. We went out onto the road to find out what had happened. We were told that from 8 a.m. for 40 minutes the bridge was raised to allow the passage of steamboats and barges. They went up the river and then down. Every 4 hours the bridge was raised to allow them to pass. It was good that our flight was at 2 p.m., and this delay was not a problem for us. At the airport we checked in and in the queue to board the plane to Sao Paulo we met colleagues from the University of Turin in Italy — Francesco Vidotto and Silvia Folliato. They said that they had arrived from Pelotas the previous evening. They had spent the night there so that they could see the local sights in the morning.

— So how was the city?— I asked.

— Nothing special. It was so jammed with transport that we almost missed our flight. It’s good that we had practically no luggage. We didn’t leave our things at the hotel, otherwise we definitely wouldn’t have made it to the airport. It’s impossible to push through the city in the morning.

— Yes, this is a problem for almost all large cities now.

— True. They are not ready for such an abundance of cars.

We traveled by A-340, a middle class plane, used on local routes. The flight took two hours. Approaching the city of Sao Paulo, the plane made a circle, turning around, and we again saw what a huge city it was.

At the airport, a representative of the company that organized our trip to Sao Paulo and provided the transfer was supposed to be waiting for us. Before the trip we planned a 3-day stop in this city to see the sights.

We landed, got our luggage and nervously headed to the exit. Would there be someone to meet us? Imagine our surprise when we saw a woman in the meeting room holding a label with our last name written in English in large letters. We went up to her and said hello. That was our driver. She easily picked up the heavy suitcase and led us to the parking lot. I tried to help her, but, alas, the suitcase was carried and put into the trunk of the new Renault without my participation. It was about 11 a.m. The traffic was heavy although there were three lanes there. We looked sadly at this traffic jam and thought that we would not get to our hotel soon. However, our driver drove the car so recklessly, sometimes jumping from one lane to another and back, that sometimes my leg twitched to brake. The distance from the airport to the hotel was about 30 km, we drove for almost an hour. The speed of the car allowed us to see many sights of the city. In two places under the overpass we saw tent camps. A stop at a traffic light allowed us to examine this settlement in detail. Men lying side by side. Two women were by the fire. One was washing, and the other was cooking something. The driver explained that homeless people lived here.

– There are many of them in the city. Sometimes they behave very aggressively. Therefore, in such places you need to be especially careful not to get robbed. And it is better to avoid them.

Germani told us about this back in Pelotas, when he found out that we were planning a stop in Sao Paulo. Now we realized that this danger was real. Our mood somehow immediately worsened.

However, we cheered up at the hotel. The hotel — a 25-story building — stood in a quiet green area of the city, surrounded by huge tropical trees. The fenced area, the guard at the entrance gave the hotel a very respectable look. The taxi driver gave us a suitcase and a piece of paper with the phone number and last name of the person who would be taking us back to the airport. This was important because our departure was scheduled for the night of February 17th. She added:

— Your transfer has been paid for, so don't worry. Our company works very thoroughly.

When checking into the hotel, we were informed that we could eat in the restaurant or order food to our room. In addition, there was a supermarket near the hotel with a large selection of products. Some guests ate on their own. For this purpose, our room had everything necessary because it was an apart-



ments hotel. And indeed, there was a bedroom with a huge bed, a bathroom with two washbasins, a shower and a bath, an office with a sofa and a desk for work, a hall, a dining room, a kitchen with a set of equipment — a gas oven, a microwave oven, a coffee maker, a large two-chamber refrigerator and a washing machine. In the closet there was a set of dishes and a mini bar with drinks. On the balcony there was a metal table with chairs that could not be damaged by the rain. The balcony was covered with a large metal mesh to protect against penetration from the outside, even though it was the 5th floor. It was possible to live comfortably for a long time, but we only had a few days left before departure, and there were many plans to explore the city. The hotel staff, as well as our Brazilian colleagues, strongly recommended that we did not leave the hotel grounds or walk around the city, especially at night. It was not safe.

On the eve of this trip, Olga developed a clear plan of what we should see in three days in Sao Paulo. The city was huge, but it had attractions that were a must-see.

So, on the first day we wanted to see the city park not very far from our hotel.

On the second day we planned a visit to the central street of the city, its business center and art museum. There was also a city square founded at the beginning of the 20th century to be seen.

The third day was assigned for a trip to the old city center and a visit to the main cathedral.

When talking with the hotel receptionist we asked for advice how to implement our plan of getting acquainted with the city. The guy spoke good English and immediately figured out what we wanted.

— You will have no problems during the first two days. You will have a short walk. And on the third day you need to take a taxi. The distance to the old center is more than 10 km. And you cannot get there easily. It is better to go by car. When you are ready for this walk, I will help you call a taxi.

We thanked the guy, and later followed his advice. First we decided to walk around the block around the hotel before the end of the day to get an idea of this corner of the city. It was a fashionable area. There were 25-story buildings with security. Huge trees grew near each house and along the streets. In some places they were very unusual — ficus trees with walking roots. We saw this for the first time. The fences were covered with greenery. On every free patch of land there were decorative shrubs and beautiful flower beds. At the same time, the streets were very narrow, so there was mostly one-way traffic there. And the traffic was light. It was such a beautiful, almost heavenly nook.



Tropical vegetation on the hotel grounds

The weather was conducive to our getting to know the city. It was quiet and warm. We had barely made a circle when it suddenly began to get dark. It was about 6 p.m. Sao Paulo was closer to the equator, and the day was shorter here than in Pelotas. We bought exotic tropical fruits and, of course, Brazilian coffee in the supermarket and had a wonderful evening.



In a supermarket in Sao Paulo

In the morning we got up early and went for a walk to the famous city park Ibirapuera. Sao Paulo is located on a hilly area, and the road to the park went down. We walked along a shady alley formed by trees along the road. Each house had a flowerbed, one was more beautiful than the other. Everything was in bloom. The air was filled with a sweet flower scent. Pots with blooming orchids were tied to the trunks of some trees. Apparently, the frequent rains there allowed them to grow without special care and additional watering.

In half an hour we reached the park. We saw it from across the highway, along which a continuous stream of cars rushed. It was impossible to cross. I saw cars stopping on the right side. That meant there was a traffic light. We could cross the highway. On the way we saw a very small park, fenced with a net. There, on the green lawn, dogs of different breeds were running with their owners. That was a dog park. And what surprised us there were two policemen guarding the entrance to the park. (*Later we learned that all public places in the city are guarded by the police from the homeless.* — Author). Right at the entrance we saw a picture that made us feel sad and touched. A very old dachshund was walking along the path. It could barely move its legs. Next to it, the owner was pushing a small stroller. The owner brought the dachshund for a walk in the dog park. The city park occupied a huge territory, which was quite surprising for such a densely populated city. There were high-rise buildings around the park and this was a green oasis with two lakes among them. The park was a recreation area for city residents. Paths and trails were laid out in winding ways, along which alleys of different types of trees were planted. For example, here were Benjamin's ficuses, which we grow as indoor plants, — these were huge trees. Between them, on green lawns, clumps of ornamental shrubs were planted. On the very smooth asphalt paths, lanes for pedestrians, cyclists, rollerbladers and skateboarders were separated with colored lines.

It was Friday, there were not many people. We calmly walked along the alleys, contemplating and photographing the flowering trees and shrubs, many of which we had not seen before. On the lake, we admired the birds. Geese, ducks, white and black swans swam up to the shore without fear when walkers, especially children, offered them treats.

Shoals of fish similar to carp were visible in the water. Some of them were quite large. I threw a dry stick into the water, and immediately several fish longer than 1 m emerged from the depths.

Judging by the damp soil, it had rained heavily recently. Fresh greenery, clean air. What a bliss! The lawn grass was carefully trimmed. No litter. No one

picked flowers. Cleanliness and order were all around. Decent-looking citizens were walking around, many with children.

By the way, the police were keeping order, periodically driving by in cars, motorcycles, bicycles or walking in pairs. We did not see a single homeless person in the park. They were not allowed there.

Walking along the alleys, we came across several clumps of ordinary bamboo, with a trunk up to 5 cm in diameter and 5–7 m high. And in one corner there was a giant bamboo. I saw similar bamboo plants near the city of Kobuleti in Adjara. Their height in this park was up to 40 m, and the diameter of the trunk was more than 20 cm. On the edge of one clump we saw shoots of this bamboo: the height was up to 1 m but the diameter was already about 20 cm. Imagine such tusks sticking out from under the ground.



Giant bamboo in Ibirapuera Park

We spent the whole day in the park. We also had lunch in one of the cafes there. Unfortunately, we were only able to see a small part of the park.

In addition to various trees and bushes, we saw more than a dozen well-equipped playgrounds and several football fields. However, there were few people in the park that day, and the waiters in the cafeterias and the sellers of numerous stalls were frankly bored.

We returned home in the evening, barely able to move our legs. We had walked so much. On the way, we stopped at a supermarket and bought food for dinner for 3 days in advance. And there we were once again convinced of the friendliness of the locals. There was a hitch at the checkout. The cashier was saying something in Portuguese, and we were trying to ask in English

what was going on, why they weren't accepting our cash? Everything came to a standstill. A very intelligent-looking man came up and explained to us in English so that we wouldn't worry. There was a program failure in the computer at the checkout. It was the same on the street: when we were confused with the route, strangers approached us with a smile and tried to help us find the right way, pointing to pedestrian crossings.

The next morning we got up quite early. After breakfast we went to the central street of the city. It was about 9 o'clock, and the air temperature had already risen to 29°C. Closer to lunch it got even warmer and reached 34°C.



In the central street of Sao Paulo

The central street, Avenida Paulista, is an avenue up to 80 m wide. Six lanes were allocated for transport. All of them were jammed. There were wide sidewalks along the road. However, it was difficult to walk because of the abundance of people. On the very first block where we came out from a side street, there was a small ancient church. We went in, stood, and looked

at the interior. There was a solemn service in the church — the rite of baptism of a child. A small group of people stood around the font. Quiet music was playing... Saturday was a day off. It seemed that the entire population of the city went out into the streets. The sidewalks looked like a market. There were small stalls selling all sorts of industrial and souvenir goods there. Shoppers milled around. But it seemed that they did not come there to buy anything, but to look and haggle. Huge skyscrapers were built along the highway, their first floors were given over to trade. Colorful advertising lured visitors. We were moving forward slowly. Our goal was to reach the Art Museum, where famous paintings by artists from all over the world were exhibited. That was one of the largest and most visited museums in Latin America.

Finally, we saw the building of the museum, known as MASP. It was an unusual structure and was a symbol of modern Brazilian architecture.

A three-story glass parallelepiped stood on red column-pillars.



MASP Art Museum

There was a ticket office at the entrance. We bought tickets. Pensioners got a 50% discount. We immediately took the elevator to the top floor. There was a huge exhibition hall divided into zones. Indeed, paintings by famous artists, as well as those little known to us, were on display. It took more than 3 hours to take in everything in this hall. Olga was delighted with what she saw. Even

I, not a very big art connoisseur, stood for a long time in front of some of the paintings.

On the lower floors there was an exhibition of modern art: various crafts and paintings of the so-called avant-garde artists.

Spiritually charged and completely tired, we went outside. Opposite, across the road, there was the city park “Trianon”, marked on all maps of the city. That was a piece of wild nature. A small selection of tree species of the local tropical flora.

Between the densely growing huge trees, cinder paths were laid. Periodically, benches were placed for rest and contemplation of the surrounding forest diversity. In the shade of the trees, even on a hot afternoon, it was semi-dark and cool. One could sit on a bench, look at these giant trees, and one could not believe that a densely populated city was just a hundred meters away. It was good to rest from the city bustle there and think about the frailty of our lives. This was the kind of paradise that the townspeople created back in 1904 and preserved it until the 21st century. The park was fenced and the territory was patrolled by police. At the same time, admission to the park was free. When we walked around almost the entire park, we saw playgrounds in two places.



Tropical trees in the Trianon park

We were sitting on a bench, quietly talking about the days we had enjoyed in Brazil. We already wanted to go home. Everywhere was nice, but home was better.

As soon as we left the park, we immediately encountered one of the city contrasts. Literally 10 meters from the exit, a man was lying under a bench. His shabby appearance showed that he was a homeless person. A policeman was walking nearby and did not pay any attention, as if he did not see him. And at the end of the block, between two kiosks, there was a whole group of homeless people dressed in torn jeans and light T-shirts. They pestered people passing by, begged money and behaved very aggressively. And all this was happening practically next to the police station. There were 5–6 policemen standing there, they drove up on motorcycles and cars, but they did not even look at these homeless. This, of course, spoiled the overall good impression of the city. On the way back to the hotel, we could not resist the temptation to drop into the numerous souvenir shops. We bought small gifts for our loved ones. And in a brand store I bought myself a good leather briefcase as a souvenir of Brazil.

By sunset we returned to the hotel. And only then did we realize how tired we were.

The next morning, when we went down to the restaurant for breakfast, a completely unexpected meeting took place. While I was filling a plate with food from the buffet, Olga went out onto the veranda to take a table. I waited, but she did not come. I went out onto the veranda with the food and saw that Olga was busy talking with a married couple sitting at the next table. To my surprise, they were our neighbors on the flight from Istanbul. We introduced ourselves and they gave their names. The guy's name was Roman, and his wife's name was Nadya.

They were also very surprised that our paths crossed here, at the hotel. They arrived at the hotel the day before to spend three days in Sao Paulo. To see the city and the annual Brazilian carnival, which opened that night. They had already driven a circle from Brazil through Paraguay and Argentina. And then they would go further south. They said that the rented car turned out to be very good. There were no problems with overnight stops and food along the way. There was a small incident with the police in Paraguay, but they were able to leave without any problems. A well-developed plan and pre-paid hotels and campsites, where they stayed overnight, helped. Along the way, they took a lot of photos and videos to show their friends and colleagues later. The biggest impression they got from the huge complex of Iguazu Falls on the border of Brazil and Argentina.

We were once again amazed at the persistent and optimistic attitude of this family to such trips. Especially considering that they had disabled children. Of course, they were right that the difficulties would be forgotten, and the pleasant impressions would be remembered for a very long time. Having wished each other good luck, we parted with them. Nadya, saying goodbye, wrote her phone number on a piece of paper and gave it to Olga with the words:

— When you come to Prague, call us, we invite you to visit. We will be happy to show you our videos about our travels around the world.

We frivolously promised to visit Prague in the summer, especially since we dreamed about it. At that moment, we could not even imagine that in a month everything in the world would turn upside down due to a pandemic.

After breakfast, they called us a taxi, and we went to the old city center. There was one of the largest neo-Gothic Catholic cathedrals in the world there — the Cathedral of the city of Sao Paulo.

On this Sunday, the road was relatively free, and in 10 minutes we arrived at the taxi rank at the temple.

Despite the morning, it was already hot. There was some unusual aroma in the air, as if there was a city dump nearby. We even thought that it was the unpleasant smell of a blossoming tree. But when we approached the cathedral, we immediately understood where the smell came from. A camp of the homeless was set up in the square in front of the cathedral: many different types of tents and awnings made of film stretched over poles. Dozens of beggars were sitting in groups and alone on benches, lying right on the concrete square. There were also mountains of garbage, in which a dozen dogs were digging. Dirt and an unbearable smell. Women were rinsing their laundry in the fountain on the square, beggars obsessively pursued the rare passers-by. A stunning contrast to the majestic beauty of the cathedral. We quickly took a photo of the cathedral, guarding each other so that none of the homeless people snatched the phone and bags from our hands, and quickly went inside. There was a guard at the entrance.

It was about 11 o'clock. A service was going on in the church. The hall was filled with respectable parishioners. We sat down on a bench. The organ was playing, the church choir was singing. The parishioners were listening to the sermon and periodically singing along. The peaceful atmosphere relieved the nervous tension that had arisen in the square. The cathedral had stunning stained glass windows. About 20 minutes later, we left the church through a side entrance and immediately ran to the taxi rank. What we saw there was enough for us to refuse further inspection of the old city center and its sights.

And all the warnings we had heard earlier from the locals became clear. There were several cars waiting for passengers in the parking lot. We approached the first car and showed the driver the place we wanted to go on the city map. We decided to go to the city park again, where we had been two days earlier. On the way, our driver said the word carnival several times. And then he pointed to a group of young people dressed in carnival costumes on the street and pointed at his watch. We finally realized that a carnival was opening that evening in the square near the city park Ibirapuera.



Cathedral of Sao Paulo

The side entrance to the park, which we had used the day before, was blocked off. They were finishing assembling the stands and the stage for the opening of the carnival. The driver took us to the central entrance.

We entered the park and were very surprised by the abundance of people. The alleys were jam-packed. People were sitting and lying on the lawns sunbathing. Some were sleeping in hammocks they had brought with them, for which special poles with hooks were installed. Companies were sitting under

large trees, as if on picnics. Only now did we remember that it was Sunday, and the city dwellers had come here to relax in the fresh air. Children were running around on the playground, squealing. Men were kicking a soccer ball on the football field. And countless cyclists were racing along the asphalt paths. The park was buzzing like the bee hive. The cafeterias were packed with people wanting a snack. Numerous stalls sold water, sweets and coconuts. The huge fruits were immediately cut, the juice was poured out and served to those wanting a drink. We walked, without looking where we were going, straight across the lawns to that part of the park we had not visited the day before. And there we continued to examine the tropical flora.



The “walking” ficus

Around 3 p.m. a cloud came over and it started to drizzle, gently at first, then it started to rain harder. We had to run under the canopy. Half an hour later the sun came out and the rain was gone.

Walking around the park, we approached the lake and the side exit. From this place we would have gone straight to our road, which led to the hotel. When we were about 600 meters from the exit, we realized that we would not be able to walk here. A crowd of thousands had gathered in this area. Many were painted up and dressed in carnival costumes. They willingly posed for photos and greeted us. It was more likely a performance by bands of musicians and dancing than carnival. We did not want to attend a disco of a huge excited crowd.



In the city park of Sao Paulo

We had to go around. When we went beyond the park onto a side street, we realized that it had lengthened our journey to the hotel three times. But another cloud, covering half the horizon, was urging us on. Meanwhile the residents of Sao Paulo were preparing for the traditional Brazilian carnival.



Brazilian Carnival

Returning to the hotel, we immediately began to get ready for the journey home. In the evening, we had dinner at a restaurant and at midnight a transfer car picked us up.

We drove through the night Sao Paulo and mentally said goodbye to this incomprehensible metropolis, full of contrasts. On the way, we still managed to see a number of city attractions from the car window, which we did not dare to reach on foot. It is unlikely that we will have to come here again. In general, we took with us positive impressions. We were leaving the warm summer for home, where winter weather awaited us.

At the airport we went through security, passport control, checked in our luggage and headed to the boarding area. Less than half an hour had passed when a large crowd had gathered at our boarding gate. It was a tour group. The noise and hubbub immediately increased. Among the general uproar, we heard Russian speech. It was the group leader who had arrived and announced that our flight would be delayed. The group consisted of Belarusians, Balts and Poles. The common spoken language in their group was Russian. And everyone understood each other perfectly. There was no Russophobia!

And sure enough, 5 minutes later the radio announced that our flight was delayed by 2 hours due to the plane from Buenos Aires (the departure point of our flight to Moscow) not arriving. In fact, we took off 2.5 hours later than scheduled. Another sleepless night at the airport.

While we were waiting to board, I talked to the leader of this tourist group, a Belarusian of about 40. An engineer by profession. But with the beginning of perestroika, he was forced to go into the tourism business. He took such mixed groups to different regions of the globe. That time they spent a week in Sao Paulo and other regions of Brazil. He had never seen such outright crime as in this city. His tourists were robbed several times. But the most serious incident occurred near the central cathedral. (*That was the place we had visited.* — Author). Despite the instructions and warnings, the tourists behaved extremely carelessly. Their phones were snatched from their hands and a gold chain was torn from somebody's neck. And complaining to the police was useless.

Yes, I thought, it was good that we had immediately left that square. Without waiting for some unpleasant incident. And we walked mostly in fenced and well-guarded areas. Such was the city of San Paolo.

Finally, boarding for the plane was announced. From then on, everything went without a hitch. The flight was long (13 hours), but not as tiring as we expected. Probably because we were flying home.

We landed in Istanbul at night, two hours later than scheduled. We had to wait for our flight for almost 25 hours.

By the time we got our luggage and went to the transfer area, it was already 2:30 a.m. Our son Pavel had booked a hotel for us at the airport in advance from 11 p.m. The hotel was inside the airport. To get there, one had to go through customs. They did not let you through customs with luggage. We had to check in for our flight first and then they would let you into the airport through customs.

Check-in for the flight starts 4 hours before departure, so we could not check in our luggage. And they did not let us through customs with luggage. A vicious circle. To find out all this, I walked around twice without luggage. Olga was sitting with our things in the arrivals hall. We could have checked our things in the storage room, but it was also inside the airport. We were so tired that we could have fallen over in the arrivals hall and slept there.

In the end, I apparently bothered the customs officers so much with my questions and explanations that one officer literally led us by the hand with our things through the checkpoint, x-raying the suitcase, which was packed in special film.

Completely exhausted, we arrived at the place where we would spend the night. It was already about 4 o'clock in the morning. To our joy, there were no problems there. They immediately registered us and gave us the key to the room.

We took a shower and slept like babies. We woke up when it was already 11 o'clock. There was plenty of time before the flight. In order not to sit at the airport, we checked our luggage into the storage room and went out to the bus stop. An express bus to the city and back ran there every half hour. We took a bus and went to the center of Istanbul. We had breakfast in a cafe and went to see the sights of the city. We visited the Hagia Sophia, the Blue Mosque and other historical places in the city centre on a tour. It was already cool here, but sunny.

The evening came unnoticed. We decided to have a snack in the city. We went into the same cafe, leisurely summed up the results of our tour. Then we took the bus and soon were at the airport. We collected our things from the storage room and went to check in for our flight. To do this, we had to go to the arrivals hall through customs. Without our things, we could pass without any problems. But we were carrying our big suitcase. The customs officer stopped me and asked a question:

- Where did you get this suitcase?
- From the storage room in the airport waiting room. Here is the receipt.
- How did you get there with this suitcase?— he was perplexed.
- Through customs, — I answer.



In Istanbul, February 2020



At the airport of Istanbul

- You shouldn't have been let through with such things.
- As you can see, they let us through.
- This is a violation. You get fined for such things.
- The shift supervisor let us through.
- Okay, go ahead. But this is the last time.
- Thank you, — I said.

While we were arguing with the customs officer, it was time to check in for the flight. Right on schedule, our plane left Istanbul, taking us home. Less than two hours later, the landing was announced in Krasnodar.

Finally, we were home. The trip was over. We didn't know yet that in a month they would announce a general quarantine due to the COVID-19 pandemic. Then we would wonder more than once how we managed to fly to this distant sunny Brazil.

CONCLUSION

I would like to finish my story about foreign trips on a positive note. After all, a lot of useful impressions and necessary information remained from what we had seen in many countries and heard at conferences, seminars and symposiums. In meetings and conversations with colleagues from other rice-growing countries, we learned a lot of useful information. Visiting breeding fields and production crops, we saw directions in the creation of new rice varieties, types of plants obtained by foreign breeders. In the process of communication, agreements were reached on the exchange of collection samples, and sometimes on obtaining new unique forms of rice.

Here are some examples:

- After a trip to India, over the course of three years, we were sent more than 700 collection samples of rice, among which there were forms with complex resistance to diseases and with high quality cereals.

- The exchange of rice collection material expanded significantly after visiting the International Rice Institute (IRRI) and fruitful communication with the leading IRRI breeder Gurdev S. Khush, who carried out extensive work on creating varieties with complex resistance to the main rice diseases and pests.

- Our French colleagues gave us their samples with high resistance to blast, as well as rice collection varieties from the USA, resistant to rice leaf nematode, for study. Most of them were used for hybridization in our breeding program, and also replenished the collection of the All-Russian Rice Research Institute.

- In Australia, we were presented with seeds of the highly productive long-grain variety AV-1 resistant to air drought. Its leaves curled at high temperatures. There were no rice samples with such a trait in our collection. After crossing AV-1 with Russian early maturing samples, the rice variety Avstral with curling leaves was created. In subsequent studies, Avstral was the donor of a new trait in the selection of rice for resistance to air drought in the conditions of Kuban.

No less important was the cultural programs in various countries. Visiting museums, exhibitions, temples and various attractions of the cities we had visited, we got acquainted with the world cultural heritage.

We saw how differently the population lived in the countries of Europe, Asia, Africa, South America and Australia. Getting acquainted with the life and



customs of the people of these countries, of course, we involuntarily compared their life with ours.

As a result, analyzing all the impressions from my trips, I can say that the best country to live in is Russia, with its huge variety of soil and climatic conditions and a special spirit of human relationships. I have never seen such warmth of soul as the Russians have. However, to understand this, you need to travel around the world and our vast Russia.

One thing you need to remember when you cross the border and communicate with the customs service. A customs officer has a very difficult job. Every day they have to communicate with many different people. They all try to do their job conscientiously and prevent violation of the laws of their country. You need to communicate with customs officers in a friendly manner and answer their questions clearly. Under no circumstances should you joke here. They will not understand you.

I will give two examples. Chess journalist E. Ya. Gik described such a case: chess player Volodin arrived for a tournament in Tel Aviv.

— Do you have any weapon?— they asked him the traditional question at the airport.

— Only ideological ones, — the guest joked.

— Show me, — the security officer said sternly.

— Marx, Engels ...— the self-taught wit tried to explain to the girl what an ideological weapon was.

Useless! He was subjected to such a customs inspection that it discouraged him from joking. He had to strip naked, so to speak, he was ideologically disarmed.

L. G. Kuryachy gave me another example after the trip to the USA with a delegation of Russian rice growers, headed by Academician E. P. Aleshin. Leonid brought some food products on all his trips abroad: dried fish, home-made sausage, boiled pork and lard. When they went through customs, they were asked:

— Are there any weapons, drugs or other prohibited items?

And then Academician Aleshin joked:

— If we only consider lard a drug, then we have it.

Having heard this phrase from the translator, the customs officers forced them to take things out of their suitcases and bags, checked everything very carefully and, to top it off, did not allow them to bring in food. Leonid later reproached the Academician many times for his joke.

Taking into account my experience of foreign trips, I want to give advice to those who read this story, especially the young: use all the opportunities that are provided to you and go on a trip to various corners of our vast Motherland, as well as to other countries. Learn all the richness of world culture, and you will look differently not only at current events, but also at all other life situations. Proceed from the wish: “Don’t put off work until tomorrow, and travel until old age.”



TABLE OF CONTENTS

Preface	3
Part 1. My roads	6
1. Family and School	6
2. Agricultural College	8
3. The “Kuban” Collective Farm of Slavyansky District	10
4. Agronomy Faculty of Kuban Agricultural Institute	14
5. Postgraduate Study and the All-Union Rice Research Institute ..	15
6. Head of the Department at Kuban State Agrarian University	17
7. Federal Research Center of Rice	20
Part 2. My travels	26
1. Hungary, 1986	26
2. France, 1990	37
3. India, July 1991	49
4. France, October 1991	65
5. Vietnam, November 1991	76
6. France, 1996	89
7. Australia, March 1997	95



8. England, November 1997.....	127
9. Egypt, 1998.....	138
10. The Philippines, January 1999.....	148
11. Romania, September 1999.....	169
12. France, July 2000	173
13. Türkiye, September 2000	182
14. France, 2001, 2010.....	188
15. Italy, June 2002.....	202
16. Uruguay, 2003	209
17. Italy, 2004	218
18. Italy, January 2006.....	222
19. China, July-August 2006	226
20. Italy, December 2006	238
21. Italy, July 2007	249
22. Türkiye, October 2007	263
23. Kazakhstan, September 2010	272
24. Italy, July 2012	288
25. Türkiye, September 2012.....	308
26. Thailand, November 2014	316



27. Spain, 2016 324

28. Kazakhstan, 2017..... 339

29. Austria, Hungary, August 2019..... 369

30. China, November 2019 388

31. Brazil, 2020..... 418

Conclusion..... 454

Popular Science Publication

Zelensky Grigory Leonidovich

**RICE and more:
across countries and continents**

Monograph

In the Author's edition

EDVI Publishing House.
95/7 Lukyanenko St., Krasnodar, 350012, Russia.
Tel./Fax: (861) 222-01-02, 222-75-55, 220-12-56,
e-mail: edvi_krasnodar@mail.ru

Signed for printing on November 11, 2025. Format: 70×108 1/16.

Printing sheet: 40.25. Offset paper: 80 g/m². Offset printing.

Order No. 250052. Edition: 50 copies.



Zelensky Grigory Leonidovich

A renowned rice breeder, the author of over 20 varieties entered into the State Register of the Russian Federation, Doctor of Agricultural Sciences, Professor, Honored Worker of Higher Education of the Russian Federation, Honored Scientist of Kuban, Laureate of the Russian Federation Government Prize in Science and Technology, author of over 400 publications.