

Ministry of Agriculture of the Republic of Kazakhstan  
S.Seifullin Kazakh Agrotechnical Research University

Considered  
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of the Faculty Council  
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«APPROVED»  
Acting Dean Faculty of Agronomy  
NISC «S.Seifullina Kazakh Agrotechnical  
Research University»



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**DEVELOPMENT PLAN  
EDUCATIONAL PROGRAM  
6B08101 «AGRONOMY»  
for 2024 - 2028 years**

Reviewed at the extended meeting of the Department of Agriculture and Plant Growing  
Protocol No. 7 dated "08" 4 2024

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### 1 Passport for the development plan of the "Agronomy" EP

Passport for the development plan of the educational program 6B08101 «Agronomy» for the period of 2024 - 2028

1	Reasons for developing an EP plan	The development of the educational program is based on new regulations for the implementation of the Law of the Republic of Kazakhstan dated July 4, 2018 No. 171-VI "On Amendments and Additions to Some Legislative acts of the Republic of Kazakhstan on the expansion of academic and managerial independence of higher educational institutions", and in accordance with professional standards
2	Main developers of the EP development plan	Academic Committee (Order No. 374-N dated 10/18/2023) - Stybaev G.Zh., Shestakova N.A., Kipshakbayeva A.A., Nogaev A.A., Mukhanov N.K., Amantaev B.O., Saurov S. (3rd year doctoral student OP 8D08102-"Organic farming"). Invited: Irina Alexandrovna Zhirnova, M.S., Head of the Department of breeding of cereals, legumes, forage and oilseeds of A.I.Baraev NPTSCH LLP; Pavel Vasilyevich Lushchak, Director of Naydorovskoye LLP.
3	Time frame for implementing the EP development plan	2024 - 2028
4	Volume and sources of financing	The state budget
5	Expected final results of the implementation of the EP development plan	training of specialists with in-depth knowledge in accordance with the requirements of employers in the field of agriculture and related industries in the field of "Crop production", taking into account professional standards.

## **2 Analytical justification for the “Agronomy” program**

### **2.1 Information about the educational program**

The Department of Agriculture and Crop Production of the Faculty of Agronomy of the Kazakh Agrotechnical University named after S.Seifullin is a graduate. Training of specialists in agronomy has been conducted since 1958, and according to the educational program 6B08101 "Agronomy" since 2019 in the state and Russian languages in full-time and part-time forms of education on the basis of general, secondary and higher education.

The bachelor's degree educational program "Agronomy" was created on the basis of a request from employers in connection with the increased need for specialists who have general cultural, professional and specialized competencies in the field of crop production, contributing to its social mobility and demand in the labor market.

The features of the implemented program are the formation and development of socio-professional, practice-oriented competence, which allows combining socio-personal, professional competencies to solve problems in the field of agriculture and crop production.

The educational program is focused on providing comprehensive and high-quality training of competitive, highly qualified specialists capable of solving theoretical and practical tasks of professional activity in modern conditions based on the development of skills and abilities necessary for a future specialist in combination with the requirements of advanced technologies.

The uniqueness of the educational program is its practical orientation in teaching.

### **2.2 Information about students**

The Department of Agriculture and Crop Production of the Faculty of Agronomy of the Kazakh Agrotechnical Research University named after S.Seifullin is graduating in the field of training 6B081- Agronomy.

The total number of students for the current academic year is 285, of which 223 are a grant from the Ministry of Education and Science of the Republic of Kazakhstan, 61 students study on a contractual basis.

In the 2023-2024 academic year, 19 people enrolled in OP 6B08101 - Agronomy in the Kazakh language of instruction, a total of 138 students are enrolled in the educational program.

### **2.3 Internal conditions for the development of the «Agronomy» educational program**

Non-profit Joint Stock Company "Kazakh Agrotechnical Research University named after S.Seifullin" (hereinafter - S.Seifullin KATIU) is a subject of higher professional education of the Republic of Kazakhstan and operates on the basis of the Charter approved by the decision of the sole shareholder of the non-profit joint Stock Company and the National Agrarian Scientific and Educational Center No. 2 dated 05.02.2018, certificate of state registration re-registration of a legal entity No.27738-1901-AK dated 07/10/2007

Today, KATIU is a multidisciplinary university with its own established scientific schools, thanks to which the basis of the current teaching staff has been created.

The research activities of the students of the Department of Agriculture and Crop Production are carried out continuously within the framework of scientific programs and projects. As a result, the quality of training of specialists with higher education that meets their needs in a market economy is improving; the skills of creative professional thinking are formed through the development of scientific methods of cognition and research, as well as the unity of education (study and upbringing), scientific and practical process is ensured; conditions (legal, economic, organizational, resource, etc.) are created and developed, providing an opportunity for each student to realize his right to creative personal development, to participate in scientific research and scientific and technical creativity. At the republican competition of students' research works organized by the Ministry of Internal Affairs of the Republic of Kazakhstan, a

2nd-year student, OP 6B080102-"Breeding and seed production" Perdebek S. distinguished herself among the other participants by receiving the second place (scientific supervisor Rysbekova A.B.). On September 22, 2023, an International scientific and practical conference "Problems of desertification of the Territory of the Republic of Kazakhstan and ways to solve them", dedicated to the 80th anniversary of the Candidate of Biological Sciences of Al-Farabi Kazakh National University, associate professor. Professor Ametov Abibulla Ametovich, "Breeding and seeds" of the Faculty of Agronomy of the Department of Agriculture and Crop Production Samal Askharkvina, 3rd year student of the BBB group 01-077-21-02, made a presentation on "Features of the development of the first root system of wheat varieties in drought conditions" and took 1st place. On March 14, 2024, the S.Seifullin KAZATIU "ZHIGIT SULTANY-2024" competition was held, where our 1st year student Ergesh Danial, surprising the jury members with his talent, took 1st place.

Over the years of its existence, over 60 thousand highly qualified specialists have been trained from the walls of the university for various branches of the agro-industrial complex of the country, who have made and continue to make a worthy contribution to the development of the state's economy with their selfless work. The University is rightfully proud of its graduates, among them employees of the Presidential Administration and the Office of the Prime Minister, deputies of the Senate and Mazhilis of the Parliament of the Republic of Kazakhstan, ambassadors, prominent scientists, candidates and doctors of sciences, Akims of regions, cities and districts, heads of large enterprises and agricultural formations, specialists in various fields of the national economy.

#### **2.4 Characteristics of the surrounding society**

The priority direction in the development of the educational program is education focused on the personality of the student, revealing his individual abilities, turning the student into an active and interested participant in the educational process.

The educational environment in which the formation of future specialists in the field of soil science and agrochemistry takes place is the interconnection of conditions that ensure the formation of a personality capable of active creativity in various fields of fundamental and applied sciences.

The basis of the educational environment is its social component, in relation to educational programs in the field of "Agronomy" – it is more than 65 years of tradition and image of the Kazakh Agrotechnical Research University named after S.Seifullin, mutual responsibility, moral and emotional climate; social support for students, extracurricular activities (creative teams, sports sections, scientific communities, etc.). One of the key components is also an intellectually developing environment: modern technologies of developmental learning (interactive teaching methods), a system of electives (business games, excursions), a system of elective courses in various areas of educational programs to acquire knowledge on a particular topic, a system of intellectual competitions of various levels (subject and interdisciplinary Olympiads, contests, tournaments, intellectual marathons, games, etc.), a support system for gifted students.

All components of the structure of the educational environment are open, there is an opportunity to realize oneself, which leads to increased motivation for learning activities, and develops communication skills.

#### **2.5 Information about teaching staff implementing the educational program**

The total number of teaching staff conducting training sessions at the department is: 2023-2024 - 29. Including academic degrees and titles: 2023-2027 - 75.0% (including teachers of the OOD cycle). 24 teachers teach classes in the state language. The average age of teaching staff is 48 years, including 1 teacher under 35 years old, 15 35-50 years old, 8 teachers over 50 years old. The average age of full-time teaching staff with academic degrees and titles was 52 years over the same period.

Staffing of the teaching staff of the department according to the staffing table is 100%. The settlement rate of the PPP is 87.0%.

The availability of basic education for teaching staff in the profile of the department is 100%.

The teaching staff of the department is constantly improving, raising its scientific and pedagogical level through a professional development system. During the reporting period, the department has been constantly working to improve the skills of its young employees - through master's and doctoral studies. In the 2023-2024 academic year, the Doctor of Philosophy (PhD) in the specialty "Agronomy", the teacher of the department, A.A. Nogaev, was awarded the title of associate professor, and he was the winner of the competition "The best University teacher" in 2023.

Of the teaching staff conducting classes for students of the specialty, 5 people are holders of the state grant "The best university teacher" (professors Stybaev G.Zh., Musynov K.M., Khasanov V.T., senior lecturer Baitelenova A.A., Nogaev A.A.).

The analysis of the personnel potential of the department showed its high professional level with its desire to improve.

## **2.6 Characteristics of the achievements of the "Agronomy" EP**

The educational program "Agronomy" was created on the basis of a request from employers in connection with the increased need for specialists who have general cultural, professional and specialized competencies in the field of crop production, contributing to its social mobility and demand in the labor market.

The features of the implemented program are the formation and development of socio-professional, practice-oriented competence, which allows combining socio-personal, professional competencies to solve problems in the field of agriculture and crop production.

The educational program "Agronomy" was developed in accordance with the classifier of areas of training with higher and postgraduate education (Approved by Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 569 dated October 13, 2018) and agreed with the Dublin descriptors and the European Qualifications Framework.

The educational program is focused on providing comprehensive and high-quality training of competitive, highly qualified specialists capable of solving theoretical and practical tasks of professional activity in modern conditions based on the development of skills and abilities necessary for a future specialist in combination with the requirements of advanced technologies.

The achievements of the program include the number of contracts concluded with specialized research institutes for students to complete an internship. In recent years, agreements have been concluded at the Department of Agriculture and Crop Production with Karaganda Research Institute of Crop Production and Breeding LLP, Kazakh Research Institute of Agricultural Products Processing LLP, Southwestern Research Institute of Livestock and Crop Production LLP, Kaz Research Institute of Rice Farming LLP, Southwestern Research Institute of Livestock and Crop Production LLP, LLP Atameken-Agro", LLP "Agrofirma TNK", JSC "Akmola-Phoenix", LLP "Research Institute of Potato and vegetable growing", LLP "Greenhouse Technologies of Kazakhstan", LLP "Kazakh Research Institute of Agriculture and Crop Production, LLP "Kazakh Scientific - Research Institute of Animal Husbandry and Feed Production", Izet green house LLP, Astana Eco Standard LLP, Kazakh Research Institute of Plant Protection and Quarantine named after Zh.Zhienbayev LLP, Baymyrza Agro LLP, En Dana LLP.

For the training of practice-oriented specialists, dual training is important. In the 2023-2024 academic year, students in the specialty took practical classes on the basis of LLP "Kazakh Research Institute for Processing Plant products", LLP "Led System media", LLP "Scientific and Production Center of grain farming named after A.I. Baraev".

### **3 Characteristics of the problems that the development plan of the "Agronomy" EP is aimed at solving, and justification for the need to solve them**

- harmonization of the content of educational programs with the educational programs of leading foreign and Kazakhstani universities and improvement of the quality of education through the introduction of effective pedagogical technologies, integration of educational and scientific-industrial environment, attracting highly qualified practitioners;

- a competence-based approach to education that ensures the variability and multilevel nature of the offered curricula and educational services;

- focus on meeting the needs of the state, stakeholders and students and consistency with national development priorities and the university's development strategy.

- transparency of the educational program management system and participation of representatives of interested parties (employers, teaching staff, students) as part of the collegial educational program management bodies.

- to ensure equal opportunities for students, including, regardless of the language of instruction, the formation of an individual educational program aimed at the formation of professional competence. providing students with the opportunity to receive a wide range of additional education and additional educational services, including paid ones;

- ensuring a high level of social and professional competence and education of graduates, as a result of the traditionally high quality of education;

- reforming the educational process in accordance with the practice of the world's leading agricultural research universities and strengthening the material and technical base.

Students of the OP "Agronomy" have the opportunity to undergo educational practice in many specialized disciplines, the organization of educational practice should be conducted in and the acquired skills are very important when studying disciplines in practice, including within the framework of dual training, in this regard, it is necessary to organize visits to production bases for visual educational practice.

### **4 The main goals and objectives of the development plan of the "Agronomy" EP indicating the timing and stages of its implementation**

The purpose of the educational program "Agronomy" is to train specialists with in-depth knowledge in accordance with the requirements of employers in the field of agriculture and related industries in the field of "Crop production".

Objectives of the educational program:

- providing conditions for obtaining a full-fledged high-quality professional education;

- formation of universal and socio-personal values of the graduate, as well as environmental, physical, ethical, legal culture, culture of thinking;

- education in the spirit of patriotism, friendship of the peoples of the Republic of Kazakhstan, respect for different cultures, traditions and customs;

- formation of basic knowledge necessary for the development of professional disciplines;

- creating conditions for the assimilation of agronomic concepts and principles, developing skills for analyzing organizational and technological situations and practical application of acquired knowledge, allowing graduates to successfully work in the field of crop production in various forms of ownership;

- prepare graduates for professional activity, mobility, continuous professional and moral improvement and growth throughout their lives;

- formation of graduates' competitiveness in the labor market to ensure the possibility of the fastest possible employment in the specialty.

The purpose of the Agronomy development plan is to develop various types of activities aimed at creating conditions for the successful development of the educational program.

### 5 Measures to reduce the impact of risks for the "Agronomy" EP

The successful implementation of educational programs can be influenced by various types of risks, which is why it is necessary to develop preventive measures to reduce them.

№	Possible risk	Measures to reduce risks
1	Social (dismissal of leading teachers, industrial conflicts)	1. Creation of an employee motivation system. 2. Their inclusion in the work on the development program of the institution 3. Motivation 4. Creating a favorable moral and psychological climate 5. Social support
2	Financial and economic risks (an increase in the number of alternative services, a decrease in consumer solvency, an increase in taxes, utility prices, etc.)	1. Strengthening the image activity of the university and the OP 2. Management selection activities
3	Production and technological risks (deterioration of equipment, novelty of technologies)	1 Updating of the material and technical base 2 Improvement of pedagogical skills, language and professional qualifications of teaching staff 3 Introduction of modern learning technologies 4 Informatization of the educational process and, accordingly, the cost of projects
4	Force majeure (threats of terrorist acts, natural and man-made disasters)	The allocation of a block of activities in the plan, the cancellation of which will not significantly affect the receipt of new educational results

### 6 Action plan for the development of the "Agronomy" EP

№	Name of the activities	Term of realization	Responsible persons	Expected results	Resource provision
1	Improving the baccalaureate EP, taking into account the opinions of potential employers	2024-2028	Head of the Department, working group on EP	Taking into account the changes in the NPA, the proposals of stakeholders	-
2	Development of new UML in the state and Russian languages, computer programs	2026-2028	Head of the Department, faculty staff	A new UML will be developed	-
3	An increase in the number of scientific projects and contracts with business entities	2024-2028	Head of the department, teachers of the department	Project applications for competitions will be submitted	project financing
4	Conducting a dual form of training at the country's manufacturing enterprises	2024-2028	Head of the department, teachers of the department	Conducting disciplines within the framework of dual education	
5	Academic mobility of teaching staff students	2024-2028	Head of the Department, responsible for academic mobility	Academic mobility of students	at the expense of the Ministry of Science of Higher Education of the RK, the university's own funds, etc.



6	Attracting leading scientists from near and far abroad to give lectures, conduct seminars, etc. to students	2024-2028	Head of the Department, heads of scientific projects	Lectures by foreign scientists	at the expense of the Ministry of Science of Higher Education of the Republic of Kazakhstan, international programs, the university's own funds, etc.
7	Passing an independent national specialized accreditation			completed in 2023 (accreditation for 5 years)	
8	International and republican scientific and industrial internships of teaching staff, including young scientists of the department	2024-2028	Head of the Department, responsible for MS	internships for heads of scientific projects, teaching staff	through international programs, the university's own funds etc.
9	Призовые места в национальном рейтинге специальностей среди вузов РК	2024-2028	Head of the Department	annually	
10	Students' prizes in republican subject Olympiads, competitions of the Ministry of Education and Science of the Republic of Kazakhstan for the best student works	2024-2028	Head of the Department	annually	the university's own funds
11	Monitoring the employment of graduates	2024-2028	Head of the Department, responsible for the employment of graduates	employment of graduates	
12	Conclusion of contracts for the passage of students' practical training	2024-2028	Head of the department, responsible for the practice	practical training	the base of practice, the university's own funds

### 7 Mechanism for implementing the development plan of the "Agronomy" EP

1. Message of the President of the Republic of Kazakhstan - Leader of the Nation Nursultan Nazarbayev to the people of Kazakhstan "Strategy "Kazakhstan-2050"

2. Legislative and regulatory acts in accordance with which KazATIU named after S.Seifullin carries out its activities: The Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III

3. The development program of the NAO "Kazakh Agrotechnical Research University named after Saken Seifullin" for 2024-2029

4. License for the right to conduct educational activities of KazATIU named after S.Seifullin

5. Regulatory documentation developed by the S.Seifullin St. Petersburg State University of Economics
6. Students' mastering of the basic educational program in accordance with the RUP.
7. Providing students with the opportunity to test themselves in various directions: socio-moral, artistic and aesthetic, research, scientific, cognitive in interrelation.
8. Creation of an appropriate educational environment: educational, creative, social, etc.
9. Ensuring a favorable moral and psychological climate.

### **8 Assessment of the socio-economic efficiency of the implementation of the development plan of the "Agronomy" EP**

As a result of the implementation of the OP development plan, it is expected to ensure socio-economic effects:

- improving the quality of professional education and, as a result, the competitiveness of specialists in the field of soil science and agrochemistry;
- improving the professional literacy of graduates and better meeting the needs of potential employers;
- increasing the role of employers in the training of professional personnel;
- increasing the demand for qualified personnel, optimizing their age structure;
- improvement of the system of training specialists at all levels;
- increasing the number of educational services;
- expanding the opportunities for professional self-realization of young people;
- increasing the income level of education workers;
- preventing the outflow of promising teaching staff to other industries;
- an increase in the number of young people employed in the economy (an increase in the number of employed or graduates who have moved to the next stage of education);
- the growth of academic mobility of students, academic and administrative;
- growth in the export of educational services (an increase in the number of citizens of other countries studying in institutions of higher professional and postgraduate education of the Republic of Kazakhstan);
- updating of the educational and material base (educational, laboratory, computer and technological base that meets modern requirements and standards).

### **9 Model of EP graduate by level of training**

The graduate model of the Bachelor's degree program includes competencies: general education competencies, basic competencies and professional competencies.

Graduates who have completed their studies within the framework of the educational program "Agronomy" can work at enterprises and organizations of the agro-industrial complex; agricultural firms; organizations for assessing the quality of crop production; quarantine services; plant protection stations; research institutions in the field of agriculture; secondary specialized educational institutions, regardless of ownership in the field of training, institutions for variety testing agricultural crops; institutions of the agrochemical service, in the offices of local, district, regional, and republican structures.

Graduates of the Agronomy educational program can work at enterprises and organizations of the agro-industrial complex; Agricultural structures, state-owned enterprises and organizations, representatives of scientific institutions and local executive bodies and regional and city departments of agriculture in the Republic of Kazakhstan, research institutes, pilot farms and agricultural pilot stations and private limited liability companies and farms producing agricultural products, in addition, additional knowledge and skills according to IT, they will allow graduates to work with modern programs, equipment and equipment.

Head of Department  
Agriculture and Plant Growing



A.A. Baitelenova