DEVELOPMENT PLAN EDUCATIONAL PROGRAMME AGRONOMY (6B08101; 7M08101; 8D08101) FOR THE YEARS 2024-2028

Recommended by the Academic Committee of the Faculty of Agrobiology Protocol No. 10 dated 24.05.2024 Rewiewed at the extended meeting of the Department of Agronomy, breeding and biotechnology Protocol No. 11 dated 15.05.2024

CONTENT

N⁰	Name of component	Page		
1	Passport of the development plan of the educational programme (EP)			
2	Analytical rationale of the programme	3		
3	Characteristics of the problems that the plan is aimed at solving	9		
	educational programme development plan			
4	Main goals and objectives of the EP development plan			
5	Expected final results of the implementation of the EP development plan			
6	Measures to mitigate the impact of risks for the EP			
7	List of activities of the EP implementation plan			
8	Mechanism of implementation of the EP development plan	14		
9	Assessment of the socio-economic efficiency of the implementation of			
	the EP development plan			
10	Graduate model for the educational programme «Agronomy»	15		

1 Passport development plan of the educational programme

«Agronomy» for 2024-2028 years

Table 1

1		Strate and toning of the OD development alon is
1	ED development alon	strategy and topics of the OP development plan is
	EP development plan	accordance with the educational policy of the
		Republic of Kazakhstan, strategic development plan
		of the department of the speciality "A gronomy"
		of the department of the speciality Agronomy.
2	Main developers of the	Head of the Department Associate Professor
	EP development plan	E. Zhanbyrbaev;
		1. professor K. Zholamanov
		2. assistant, A. Yeshengaliyeva.
		Employers: Chairman of the Board of LLP
		KazSRIFaPG - candidate of agricultural sciences,
		Sh.O. Bastaubaeva;
		General Director of IBBP Dr.B.Sc., Academician of
		the National Academy of Sciences of the Republic
		of Kazakhstan K.J. Zhambakin.
3	Timeframe for	2024-2028 years
	the implementation of the	
	EP development plan	
4	Amount and sources	State budget and contractual work
	funding sources	
5	Expected end results of	-Improvement and improvement of conditions for
	the implementation of	obtaining full-fledged, high-quality professional
	the EP development plan	education;
		-Renewal of the content of the educational
		programme, forming the basic professional
		competences of future agricultural specialists;
		- Creation of prerequisites for independent search
		research activity of the learner within the framework
		of the experiment at all stages of training;
		- Updating and improving the content of the EP,
		including the title of disciplines that determine the
		modern professional competences of a specialist;
		-Introduction of innovative teaching technologies
		into the educational process.

2 Analytical substantiation of the programme

2.1 Information about the educational programme

Educational programmes are implemented through curricula and programmes.

In the bachelor's educational programme 6B08101- 'Agronomy' - 11 modules, 7M08101- Agronomy educational programme scientific and pedagogical (2 years) direction: consists of 6 modules 8D08101- Agronomy educational programme leads

scientific and pedagogical and profile direction - 2 modules.

Information about students

The contingent of bachelor's students in 2024-2025 academic year is 42 students, including 26 students at the kazakh section, 23 students are studying under the state grant, 3 students are studying on a paid-contractual basis (1 student is studying at the expense of the fund 'To the People of Kazakhstan'), 16 students are studying at the russian section, including 12 students are studying under the state grant, 4 students are studying on a paid-contractual basis (2 students are citizens of the Russian Federation).

The contingent of master's students in 2024-2025 academic year is 5 master's students studying under the state grant.

The contingent of doctoral students in the academic year 2024-2025 is 4 doctoral students

studying under the state grant.

Table 2 - Contingent of students

year	EP 6B08101- Agronomy				EP 7M08101- Agronomy				EP 8D08102-Agronomy						
nic		including				including			including						
Acader	total	kaz	rus	grant	contrctual	total	kaz	pyc	polylingu	grant	total	kaz	rus	polylingu	grant
2022-2023															
2023-2024															
2024-2025	42	26	16	35	7	5		-	5	5	4	-	-	4	4

Internal conditions for the development of the educational programme

For the implementation of the above mentioned educational programme the faculty has appropriate material and technical support.

There are 6 laboratories at the department: laboratory for determination of waterphysical properties of soil, laboratory for determination of weed plants, laboratory of field crops, laboratory of crop breeding, laboratory of genetics and ontogenesis of plants and laboratory of biotechnology.

There is an interactive whiteboard in classroom N_{2} 446. Sanitary and aesthetic condition of laboratories and classrooms is good. Each classroom has a passport. The department has fire-fighting equipment.

Besides in the above mentioned laboratories are conducted with other departments of the university (Kazakh-Japanese Innovation Centre, Institute of agricultural machines and new technologies, laboratory of agrochemical researches) analyses on complex programs of scientific researches. All these laboratories meet the requirements of the educational process and state standards.

The listed laboratories are equipped with modern and necessary equipment for carrying out educational classes and research works.

There are 3 lecture halls with the total area of 250 m^2 for 300 seats, educational laboratories with the area of more than 600 m^2 for 150 seats, 1 computer class for 20 seats with 20 computers, 9 specialized scientific and educational laboratories for conducting educational classes and scientific research.

Monitoring of the laboratories' activity is carried out through annual verification of measuring devices, during inventory, by the commission of the relevant structures of the

university, as well as by the commission of the ministry and departments, under the programmes of which scientific research is carried out.

Practical training in the implementation of educational programmes 'Agronomy' is aimed at the formation, consolidation, development of practical skills and competence in the profile of the educational programme by expanding the components (parts) of the educational programme, providing simulation of real conditions or simulated production processes directly related to the future professional activity.

Educational activities in the form of practical training:

- realised during practical and laboratory classes, performance of Independent work of the student, IWM, IWD;

- lectures, practical and laboratory classes, scientific seminars, which provide for the transfer of educational information to students, necessary for the subsequent performance of work related to future professional activity.

Educational activity in the form of practical training is carried out in all courses of study, covering disciplines, professional modules, all types of practice, provided by the curriculum of the educational programme 'Agronomy'.

To conduct practical training, research studies of bachelors, masters and doctoral students in Yenbekshikazakh district of Almaty region there is a training and experimental farm 'Saimasai' KazNAIU, with a total area of 480 hectares of land.

During the last four years, scientists from abroad have been involved in lecturing on the educational programme: Professor of Agrarian University, PhD, Anna Nikolova (Agrarian University, Plovdiv, Bulgaria); Professor of the Institute of Vegetable and Forage Production, PhD, Djura Karagic (Novi Sad, Serbia); Doctor of Biological Sciences, professor Morgunov A.I. (CYMMIT Turkey).

Heads of regional and district departments of agriculture, specialised organisations, leading specialists in the field of agriculture will be involved in lectures and seminars and workshops. Involvement of agricultural practitioners will bring theory closer to practice and help graduates to adapt quickly to the professional environment.

For the last academic years were organised and conducted lectures with the invitation of leading specialists of KazNII of agriculture and plant growing: Kenebaev S.B., Meirman G.T., Abugalieva A.I., Kokhmetov A.M.

Guest lectures:

- 'Peculiarities of agriculture and organic farming in Austria';

- 'Methodology and methods of scientific research in agronomy';

-Consultations for faculty members, masters and doctoral students of the faculty

'Agrobiology' on the topic: "Features of publishing articles in journals with high impact factor" Professor of the Institute of Plant Industry, Dr. R. Neungschwandtner. Neungschwandtner, University of Natural Resources and Natural Sciences (BOCU University), (Vienna, Austria);

Dual learning

Dual learning (DL) provides not only theoretical knowledge in the process of mastering educational programmes in an educational institution, but also practical knowledge, skills and abilities in the real workplace.

-dual education with 4th year students (pre-diploma practice);

-inclusive education provides equal access to education for all students, taking into account the diversity of special educational needs and individual capabilities. Inclusive

education assumes that the diversity of needs of students with disabilities and persons with disabilities corresponds to the educational environment most favourable for them;

-Professional development of teachers of the department 'Agronomy, breeding and biotechnology' on the disciplines taught;

-conducting seminars and round tables on topical problems of farming, crop production, fodder production, breeding, seed production, plant biotechnology.

Coursera

Nowadays distance learning is quite popular and offers opportunities to receive education, both basic and additional, anywhere in the world. Distance learning allows you to choose your own time for learning, make your own schedule and complete assignments in a comfortable environment, which provides individualisation of learning, learner autonomy, openness and continuity of education.

The Coursera platform offers a number of opportunities for professional development of education professionals, from preschool teachers to university professors.

Currently, Coursera is an educational platform that connects many universities around the world and offers a wide range of free courses on a variety of topics.

After completing all course requirements, you will receive a Certificate of Completion (Statement of Accomplishment or Statement of Accomplishment with Distinction). A Verified Certificate is available.

A verified certificate indicates that the individual has completed the course and fulfilled all requirements. In some cases, the number of hours completed may be indicated.

Characteristics of the surrounding society

For the successful implementation of educational programmes 'Agronomy', of great importance is the surrounding society, i.e. people, conditions and environment in which the implementation of the potential of the individual.

For mastering the educational programme 'Agronomy' the classrooms of the department are located in the building of the faculty 'Agrobiology', a separate four-storey building on Abaya Avenue, 8. Also classes are held in laboratories of AgroHub, Biotechnology Centre, Japan-Kazakhstan Centre of KazNARU. Educational and industrial practices of students, scientific research of master's and doctoral students in the educational and experimental farm 'Agrotechnopark'.

The priority direction in the development of the educational programme is the education focused on the student's personality, revealing his/her individual abilities, forming the student into an active and interested participant of the educational process. Active and interested participant of the educational process.

All components of the educational environment structure are open, there is an opportunity to realise oneself, which leads to an increase in motivation for learning activities, and develops communicative skills.

The educational process is provided by qualified teaching staff. The organisation of leisure time is supported by student clubs, sports sections The basis of educational and upbringing processes is a common goal - to create conditions conducive to the mental, moral, emotional, physical development of personality, the development of creative abilities of students.

The educational environment of the students of the educational programme 'Agronomy' is formed with the help of a set of measures, assuming:

- creation of optimal socio-cultural 6and educational conditions for social and

professional formation of personality socially active, viable, humanistically oriented, highly qualified specialist;

- creation of conditions to meet the needs of the individual in intellectual, cultural, moral and physical development;

- imparting the skills of team management in various forms of student self-governance.

Professional-creative and labour component of the educational environment is a specially organised and controlled process of introducing students to professional work in the course of their formation as subjects of labour activity, linked to the acquisition of qualifications and education of professional ethics.

In the field of education, the aim of EP 'Agronomy' is the formation of universal, professional competencies that allow graduates to work successfully in their chosen field of activity and be in demand in the labour market.

In the field of education, the aim of EP 'Agronomy' is the development of personal qualities in students, contributing to their creative activity, cultural growth and social mobility: determination, organisation, diligence, responsibility, independence, citizenship, commitment to ethical values, tolerance, perseverance in achieving goals.

In accordance with the requests of interested employers, graduates of EP 'Agronomy' are prepared for the introduction and mastering of modern technologies of cultivation of agricultural crops, the organisation of testing and implementation of breeding achievements contributing, increasing the quantity and quality of products with reduced costs of production in accordance with the requirements of regulatory and legislative framework, conducting research.

After graduation graduates will be employed in all economic entities, regional universities, research institutes in different regions of the Republic of Kazakhstan regions of the Republic of Kazakhstan, the activity of which is related to crop production on the basis of effective and rational use of agricultural land.

Employers are: KazSRI of agriculture and crop production, KazSRI of cotton growing, KazSRI of rice growing named by Y.Zhakaev, KazSRI of livestock and fodder production, LLP 'Baiserke-Agro', LLP 'Budan', LLP 'Baltabay 2030', etc. To date, bilateral agreements have been drawn up with business entities on industrial and pre-graduation internships with subsequent employment.

Information on teaching staff implementing the educational programme

Implementation of the educational programme 'Agronomy' is provided by scientific and pedagogical staff, who have, as a rule, basic education, corresponding to the profile of the specialty, and are systematically engaged in educational and methodological and (or) scientific activities.

Education of students, masters, doctoral students is conducted by experienced teachers: professors, doctors of sciences, associate professors, candidates of sciences, PhD, senior lecturers, assistant lecturers.

The qualification of teachers of the department 'Agronomy', their quantitative and qualitative composition correspond to the directions of training of students, meet the licensing requirements and testify to the staffing of the educational activity of the University.

The order of competition for vacant positions is regulated by normative documents of MES RK and internal documents (Instruction on the order of internship, pre-training, instruction and testing of knowledge on safety and labour protection).

The existing mechanism allows to get a holistic view of the professional competence

of a teacher, to determine his/her suitability for the desired position.

The competition committee conducts a qualitative analysis of the indicators of teaching, methodological and research activity of the teacher, studies the characteristic from the last place of work, the motivated conclusion of the department on the applicant, the voting results of the members of the host department. Long-term practice shows that there is a steady tendency to give competitive preference to masters, candidates and doctors of sciences, who are able to contribute to the improvement of the human resources potential of the university.

When hiring faculty members, a mandatory condition is that the applicant for a vacant position has a higher professional education, an academic degree of Master's degree, an academic degree of candidate or doctor of sciences, PhD, correspondence of education to the profile of the university specialities, etc.

Staff selection on the basis of the recruiting system is realised in the following order:

-the staff schedule of the teaching staff is formed;

-determines the number of vacant positions for the training of students in various educational programmes;

- a competition for vacant positions is announced through the KazNARU website with the indication of qualification requirements;

-The competition for filling vacant positions is held and recommendations on recruitment of teaching staff are submitted to the rector of the university.

The KazNARU website (https://www.kaznaru.edu.kz/department/81) has information about teachers on the educational programme: - list of teachers, - brief list of achievements.

This information includes curriculum vitae, specialisation of the teacher, scientific projects, patents, methodological recommendations, publication of articles in periodical collections (COCSEN MES RK), as well as in journals with impact factor, Web of Science and Scopus, etc., professional development, contact information.

At the chair 'Agronomy, breeding and biotechnology' there are 23 teachers, including 3 doctors of sciences, 13 candidates of sciences and 5 PhDs. Residency of the department is 91%, the average age of faculty - 53 years, 100% of teachers conduct classes in the state language and the language of interethnic communication, in English - 1, the number of masters admitted to conduct classes - 2.

Currently, the teachers of the department, carrying out the implementation of bachelor's, master's and doctoral educational programmes in agronomy, use new information technologies and multimedia learning tools in the educational process. At the training classes are shown video presentations, educational films, interactive teaching methods, which allow students to better assimilate the educational material and consolidate knowledge.

Characterisation of achievements of the EP

The results of mastering the educational programme 'Agronomy' are determined by the competences acquired by graduates, their ability to apply knowledge, skills and abilities in accordance with the tasks of professional activity.

In the aggregate, the learning outcomes and competences formed in the learning process represent the graduate model. The graduate model of an EP is the expected result of what a specialist should be suitable for, what functions he/she should be prepared to fulfil and what qualities he/she possesses. The construction of the graduate model for OP 'Agronomy' is based on the use of the main criteria of the basic model of graduate of

KazNARU.

Competences of the graduate. Competences are acquired by students on the basis of learning outcomes and practical experience. As a result of mastering the educational programme, the graduate should possess the following competences:

Professional competences

know and understand: laws of farming and crop production; system of crop rotations, systems of soil cultivation for crop rotation taking into account fertility; main types of agricultural crops, their economic values, morphological and biological features; modern technology of cultivation of agricultural crops; seed production and basics of crop breeding; crop varieties and their selection for specific conditions of the region according to the level of intensification of farming, preparation of seeds for sowing, methods of sowing, methods of cultivation of agricultural crops and their selection for specific conditions of the region according to the level of intensification of farming.

be able to: to develop, implement, control, evaluate and correct components of technological process in crop production; to draw up technological maps of cultivation and organize field work in accordance with them; to calculate the needs of the farm in seeds, fertilizers, pesticides, fuels and lubricants, agricultural machinery, tools and equipment, labour resources; to document and keep records in the framework of professional activity;

have the skills to: in solving organisational and economic issues; application of modern technology of cultivation of agricultural crops; on making adjustments in agrotechnical methods and development of recommendations for effective and rational use of land, bioclimatic resources of the zone; to distribute labour resources, to give clear and effective instructions, observing the progress of work in crop production.

The purpose of the Master's degree programme is to train competent, competitive specialists and researchers of higher qualification in the field of agriculture, as well as teaching staff for higher education institutions and colleges.

The aim of the educational programme of doctoral studies is to prepare PhD doctors with a high level of professional education capable of solving modern, scientific and practical problems in science and production to carry out scientific-research, pedagogical and managerial activities in the field of agronomy.

The scientific researches conducted by the chair are included in the Republican programmes on priority directions of development of agrarian science and have both theoretical and practical significance. The degree of participation of teaching staff in the implementation of the above-mentioned topics -100%.

The achievements of the educational programme include the number of agreements concluded with relevant research institutes and agricultural formations on cooperation in the field of training specialists, scientific and pedagogical staff and conducting scientific research, as well as on the students' practical training.

3 Characteristics of the problems that the educational program development plan is aimed at solving

To date, there are a number of problems that the OP development plan is aimed at solving:

-the content of the basic disciplines is not sufficiently focused on a specific upcoming field of activity;

-insufficient use of student-centered learning by teachers;

-low proportion of international students;

-insufficient level of involvement of foreign professors in the educational process

-low level of interest of practitioners in the implementation of the educational process; -lack of teachers teaching in the disciplines of the OP in English;

-low level of student participation in research activities of students;

-insufficient amount of educational and methodical literature in English;

-insufficient level of potential realization in research work (participation in competitions, tenders, funded projects);

-disunity of actions (activities) with students from various departments of the university;

-passivity of teaching staff in terms of publications in rating publications with a non-zero impact factor;

-insufficiently high level of information and technical base;

-lack of joint educational programs with foreign universities;

-self-control and the process of self-knowledge in educational and professional activities, both students and teachers;

-the need to improve the skills of teaching staff in the field of innovative learning technologies at the national and international levels.

4 The main goals and objectives of the educational program development plan

The goals and objectives of the educational program are formulated taking into account the requirements and demands of the labor market, and based on the assessment of the relevance of the educational program, which are determined by the interests of potential employers, applicants, the potential of the university, the requirements of the state and society as a whole.

Educational programs "Agronomy" are focused on the formation of professional and personal qualities, general cultural, professional competencies among graduates in accordance with the requirements of training specialists in the field of "Crop production" and satisfying the requirements of employers, educational institutions and scientific organizations based on the integration of education, research and production.

The main purpose of the educational activity development plan is to improve the content of the educational program with the formation of professional competencies of personnel in the field of agriculture.

Educational programs are based on the principles of:

-the principle of continuity;

-the principle of continuity of bachelor's, master's and doctoral degree programs;

-the principle of student-centered educational process means "reorientation of the educational process from "input" indicators (terms of study; content; goals formulated for the university and the teacher) to "output" parameters - competencies and educational outcomes;

-the principle of continuity as a principle of designing the educational process is considered as a risk insurance tool;

-the principle of result-centricity is related to the realization of the goal of education;

-the principle of team building, the process of purposefully "building" a special way for people to interact in a group;

-the principle of gradualness, the possibility of adjustment and step-by-step adaptation

of the EP to the results of the implementation of the competence approach at the university;

-the principle of conjugacy ensures the maintenance of interconnection and

coordination not only of all elements of the EP, but also the interface within the elements of the EP.

Objectives of the EP development plan:

-improvement and improvement of conditions for obtaining a full-fledged, high-quality professional education;

-updating the content of the EP, which forms the main professional competencies of future agricultural specialists;

-creation of prerequisites for independent research activities of the student within the framework of the experiment at all stages of training;

-development of measures for mastering the work with scientific information using domestic and foreign experience in professional activities.

• To achieve the goal, it is necessary to solve the following tasks:

• Creation of an innovative educational environment;

• Expansion of the educational space;

• Attracting talented young people to scientific work;

• Development of multilingual education in order to expand the range of languages studied;

• Development of human resources;

• Development of a professional development system for teaching staff

• Expansion of international cooperation between the University and universities of the far and near abroad in the framework of scientific projects and academic mobility of students and teaching staff;

• Ensuring the demand for graduates in the labor market.

5 Expected final results of the implementation of the EP development plan

The expected final results of the educational program imply a clear orientation towards the future, which is manifested in the possibility for students to build their education, taking into account success in personal and professional activities that meet the requirements of employers.

The educational programs "Agronomy" will allow students to gain in-depth theoretical knowledge and practical skills in the field of vocational education.

The plan for the development of educational programs includes various types of activities aimed at creating conditions for the successful implementation of educational programs:

- improving the quality of education;

-improving the effectiveness of the education system, continuous professional growth of the teaching staff of the department;

-modernization of human resources, information resources, material and technical potential;

-the demand for graduates of educational programs in the labor market.

-development of joint international educational programs;

-recruitment of teaching staff who have received master's and doctoral degrees at foreign universities;

-development of educational and methodical literature in English;

-submission of applications for participation in contests, tenders and projects;

-development and operation of events with students through various departments of the university;

- the activity of the teachers in terms of publications in rating publications with a non-zero impact factor;

-improving the level of the information and technical base;

-development and operation of joint educational programs with foreign universities;

-improvement of educational and professional activities of students and teaching staff;

-professional development of teaching staff in the field of innovative learning technologies.

The implementation of these measures will contribute to the successful implementation of the Educational Program Development Plan aimed at the realization of the main mission - the training of highly qualified specialists with a competitive level of knowledge and practical skills related to the performance of various functions in the implementation of industrial,

teaching, scientific activities.

6 Measures to reduce the impact of risks on the educational program

Table 3

No	Name of possible risks	Measures to eliminate them		
1	Low number of students enrolled in the	It is necessary to actively work on the		
	EP "Agronomy"	attractiveness of these educational programs in		
		order to attract a contingent of students on		
		grants and on a fee-based basis		
2	Low contingent of undergraduates in the	formation of the list and preparation of 4th		
	EP "Agronomy"	year bachelors for admission to the master's		
		program		
3	Low number of doctoral students in the EP	conclusion of contracts with leading research		
	"Agronomy"	institutes and research centers for the targeted		
		training of doctoral students		
4	Low level of attractiveness of the master's	improvement of the master's degree program		
	degree program	taking into account modern requirements		
5	Low level of attractiveness of the doctoral	improvement of the master's degree program		
	degree program	taking into account modern requirements		
6	Low availability of advastional and	To plan the appual release of scientific and		
0	Low availability of educational and	To plan the annual release of scientific and advectional literature by the teaching staff of the		
	disciplings in the state language and the	department according to the working curricula of		
	language of international communication	disciplines and their acquisition from the outside		
7	Lack of teaching staff implementing the FD	Training of qualified scientific personnel through		
/	Lack of teaching start implementing the EF	master's and doctoral studies at the level of modern		
		requirements		
8	Traditional way of conducting classes	To improve and introduce innovative learning		
0	Traditional way of conducting classes	technologies into the educational process		
		teennologies into the educational process		

The following measures are used in the implementation of educational programs to reduce risks:

9	Practice bases	Conclusion of contracts with agricultural companies that have the necessary material base for practical training and further employment of graduates of the specialty
10	Weak motivation of teaching staff to publish scientific papers in journals with a high citation index	To make a plan for teachers' publications in foreign publications with a non-zero impact factor
11	Insufficient use of student-centered learning by teachers	Definite change in the teaching/learning paradigm, where methods centered on the student and his ability to learn are becoming increasingly important, shifting the emphasis from teaching (active academic activity of the teaching staff) to learning (active educational activity of the student).
12	Low proportion of international students	development of double-degree or joint educational programs in cooperation with foreign universities
13	Insufficient level of involvement of foreign professors in the educational process	invitation of foreign scientists to give lectures on the specialty "Agronomy"
14	Low external and internal academic mobility of teachers and students	development of a plan for academic mobility of teaching staff of the department and students; improvement of the developed educational programs for the development of internal academic mobility in the EP "Agronomy"
15	Low level of international scientific cooperation	Expanding scientific cooperation and partnerships with leading foreign universities and research centers, attracting leading foreign scientists to carry out scientific research;
16	Low level of international activity	Study by teachers of the english language department. Participation of faculty of the department in international educational exhibitions and fairs held by KazNARU

7 List of activities of the EP implementation plan

_	· ·	Table 4
No	Events	Terms of
		implementation
1	Formation of a commission to develop an educational program development plan	October-november 2024
2	Development of the goals and objectives of the educational program development plan	October-november 2024
3	Consideration of the EP development plan at a meeting of the department with the participation of employers	October-november 2024
4	Updating and improving the content of the EP, including the name of the disciplines that define the modern professional competencies of a specialist	2024-2028
5	Introduction of innovative learning technologies into the educational process	2024-2028
6	Creation of modern educational and research laboratories	2024-2028
7	Release of educational and methodological literature in English and Kazakh for students of all levels of education according to the working curriculum of the EP	2024-2028
8	Targeted training of scientific and pedagogical personnel in universities of the near and far abroad	2024-2028
9	Invitation of teachers from partner universities of the near and far abroad	2024-2028

8 The mechanism of implementation of the development plan of the EP

Annual updating of the content of educational programs "Agronomy" based on the generalization of modern domestic and international experience of training in this field, the requirements of employers and the demands of the labor market. Improving the Catologist of Elective Disciplines, taking into account the proposals of interested parties, and primarily taking into account the opinions of employers.

Activation of scientific work at the department by attracting Teachers studying for initiative, state-funded research and publication of scientific results in journals with a high impact factor.

Qualitative updating of the teaching staff should be carried out on the basis of continuity by attracting talented young people to teaching and scientific activities, as well as training their own staff through PhD doctoral studies.

The development of international academic mobility of students and teachers by building their individual learning trajectory and choosing educational programs from various universities around the world, including internships for students and teachers at leading foreign universities.

Organization of professional practices on the basis of leading agricultural companies.

Ensuring a high proportion of employed graduates of the educational program by organizing and holding an annual "Graduate Fair" with the involvement of employers of the agricultural sector of various forms of economic entities of the regions of Kazakhstan.

Carrying out purposeful work for the implementation of educational programs, for which the staff of the department will develop catalogs of elective disciplines with the direct participation of employers.

Conducting lectures and practical classes by invited leading scientists from near and far abroad.

Creation of branches of the department on the bases of specialized research institutes.

9 Assessment of the socio-economic effectiveness of the implementation of the development plan

The content of the educational program "Agronomy" for 2024-2028 is aimed at training specialists in the field of agronomy, at developing students' activity, entrepreneurship, professionalism, mastering the principles and methods of industrial, teaching, scientific activities.

This OP was developed, on the one hand, based on the requirements of the legislation of the Republic of Kazakhstan in the educational sphere, the Law "On Education" of the Republic of Kazakhstan dated July 27, 2007 № 319-III, and on the other hand, aims to implement the Strategic objectives of the development of KazNARU.

The socio-economic effectiveness of the implementation of the Educational Program Plan is determined by such criteria as: a sufficient amount of theoretical knowledge and competencies, a high level of proficiency in applied skills and abilities, excellent professional suitability, an increase in graduate employment rates, employer feedback on the professional suitability of graduates, etc.

The generalizing criteria for assessing the socio-economic effectiveness of the

implementation of this educational program is to increase the rating of KazNARU and the formation of an effective image, the maintenance of which affects the strengthening of positions in the educational services market, and indicates the level of education development in the country, which will significantly affect the image of domestic education.

As a result of the implementation of the EP 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 agronomy;

- training graduates who meet the needs of potential employers in the agricultural sector;

- increasing the role of employers in the training of professional personnel;

- increasing the demand for qualified personnel, optimizing their age structure;

- expanding the opportunities for professional self-realization of young people;

- updating of the educational and material base (educational, laboratory, computer and technological base that meets modern requirements and standards).

The socio-economic effect of the implementation of the EP development plan will reflect the definition of stimulating parameters leading to an increase in the percentage of the department's settlement, the creation of motivation systems.

As a result of the implementation of the educational program, scientific developments and recommendations of the scientists of the department will be introduced into the educational process.

10 Graduate model for the educational program "Agronomy"

Employment of university graduates has become a key indicator of the work of universities in recent years from the standpoint of assessing the effectiveness of their functioning. At the same time, the state of the graduate employment process accumulates a whole range of issues that require solutions, including the demand for graduates in the labor market, the compliance of the level of training of specialists in higher education with the needs of the labor market, determining the directions of development of higher education and the formation of more effective mechanisms for its partnership with employers in order to improve the quality of training of specialists.

The solution of these issues is directly related to increasing the efficiency of employment of university graduates, ensuring their adaptation in the labor market, which should be based on the interaction of the higher education system and employers within the framework of further development and improvement of the labor market infrastructure, which should be aimed at comprehensive support of graduates on issues of assistance in employment and professional navigation. In this regard, the relevance of issues of increasing the efficiency of employment of KazNARU graduates increases in order to ensure the level of compliance of their training with the requirements of the agricultural sector of the economy.

One of the important factors influencing the professional training of personnel is the rapidly changing professional competencies under the influence of digitalization, which are introduced into educational standards and programs for the professional training of specialists with some delay. As a result, there is a gap in the level of competence of graduates and the requirements of employers, which characterizes the main problem of the system for training specialists with higher education: its low correlation with the requests

and needs of employers.

In recent years, the percentage of employment in the OP "Agronomy" was:

Code and names of educational programs	Release	by specialty	not in specialty	Continues studies in master's or doctoral studies	% Total employ- ment	% by specialty	% not in specialty
6B08101-«Agronomy»	23	11	8	1	87%	61%	26%
7M08101-«Agronomy»	6	2	3	-	83%	50%	33%

Table 5. Employment of graduates of the EP Agronomy 2024

The formation of the graduate model begins to take shape during the training of students, taking into account the following factors: the effectiveness of the selection of applicants; the potential of KazNARU; the content and organization of the educational process; the degree of use of advanced learning technologies; the professionally significant environment of the university, etc.

The model of a university graduate embodies the idea of a student who has completed the educational process and is a fully formed personality with not only certain competencies, but also the necessary professionally and socially significant personal qualities.

One of the fundamental approaches to creating a graduate model is the competence approach, in which competence/competence becomes the main element of the graduate's personality model.

The graduate model should serve as a basis for the organization of professional training of students at the university on an equal basis, taking into account the requirements of state standards, the possibilities and limitations of the education system, as well as the "entrance characteristics" of applicants.

Such a model should be dynamic with the constant possibility of adjustment in accordance with changes in economic sectors. To ensure the relevance of the model, the update rate of the model should not be less than the rate of change of the factors determining it.

The graduate model of a university is a rather capacious and diverse concept.

It can be defined in different ways – as:

1) a set of defining knowledge and skills acquired in the learning process;

2) an information array, the active assimilation of which is necessary for effective work in production;

3) a training system that allows graduates to successfully implement all types of business (production) contacts with the environment (information, technological, personnel, etc.):

4) a detailed description of all professional and socio-psychological qualities of a university graduate;

5) a formalized list of all job functions and responsibilities;

6) a system of skills that allow you to solve standard and non-standard situations that arise during production activities;

7) description of the personality qualities of a successful professional; his age, gender, education, work experience in the specialty, knowledge of modern information technologies, knowledge of foreign languages, etc.;

8) display of the process of interaction of certain types of trainees with a professionally significant environment.

The learning process should be structured in such a way that, given the existing characteristics of applicants, the characteristics of a university graduate are as appropriate as possible to the professional model, reflecting the current requirements for specialist training.

	Bachelor's degree	Master's degree	Philosophy Doctor degree
	6B08101-«Agronomy» FP	7M08101-«Agronomy» FP	8D08101-«Agronomy» FP
	- conducting visual observations and	- study of modern methods of	- identifying and formulating
	records of the growth and	teaching disciplines in	current scientific problems and
	development of agricultural crops;	agronomy;	research programs in agronomy;
	- accounting and control over the	- use of innovative teaching	- laying down experiments,
	agroecological safety of agricultural	technologies in the process of	processing, analyzing and
	products when using herbicides,	scientific and pedagogical	systematizing information on the
	fungicides and insecticides;	activity;	topics of the research being
	- accounting and analysis, their	- development of scientifically	conducted;
	sequences, timing and duration;	based guidelines;	-preparing reports,
	- rationally and effectively use land,	- laying down experiments,	publications on current issues in
	other resources:	systematization of information	the agro-industrial complex:
	- have skills in applying knowledge	on the topics of the conducted	- planning training sessions in
	of the economic, political, national	research;	accordance with the curriculum
	and cultural characteristics of	- identification and formulation	and based on its strategy;
	countries and regions, foreign	of current scientific problems	- evaluating pedagogical results;
	partners of agricultural activities in	and programs of scientific	- defining specific pedagogical
	the Republic of Kazakhstan and	research in agronomy;	tasks, anticipating learning
	international law, compliance with	- preparation of reports,	outcomes;
_	formalities and prescribed	recommendations and scientific	- selecting and using appropriate
and	sending agricultural products:	the agro-industrial complex:	technology
rst	- develop schemes of modern crop	- organization and conduct of	teennology.
apı	rotation for farms and other	agrochemical analyses of plant-	
l uī	enterprises, taking into account the	based feed;	
anc	specialization of farms, land and	- organization and conduct of	
M	soil-climatic resources;	laboratory quality control of soils	
kno	- draw up technological maps for the	and grounds;	
1	cultivation of agricultural crops with	- development of optimal sowing	
	the introduction of elements of	patterns, taking into account the	
	- calculate the need of farms for	and plant crops to maximize	
	seeds fertilizers pesticides fuels	vields and resource efficiency.	
	and lubricants, agricultural	- work with advanced methods	
	machinery and tools; - adjust	and technologies in the field of	
	agricultural machinery and	agriculture, such as	
	equipment, set seeding rates for	digitalization, the use of drones,	
	agricultural crops, fertilizers,	sensors and automated control	
	pesticides, irrigation rates, etc.;	systems to optimize production	
	- organize proper and timely post-	processes;	
	other agricultural products in	- development of business plans,	
	storage facilities:	product market optimization of	
	- organize biotechnological	logistics and supplies to increase	
	processes in crop production;	the competitiveness of	
	- organize the use of	agricultural enterprises.	
	biotechnological methods in the	_	
	selection and seed production of		
	agricultural crops;		
	- ensure the development of		
	biotechnological processes and the		

	production of biotechnological		
	products for plant purposes:		
	- be able to conduct marketing		
	research in order to improve the		
	afficiency of the enterprise		
	(organization) attract investment		
	(organization), attract investment,		
	expand the scope of services, etc.,		
	- plan, organize and control the		
	activities of the enterprise, including		
	having the skills to manage the		
	information flow, as well as time		
	and other resources;		
	- assess the prospects for the		
	development of the economy in a		
	market environment, determine the		
	optimal ratio of crop production and		
	livestock farming in order to		
	continuously maintain production		
	and improve the efficiency of the		
	economy.		
	- have the skills to organize and	- in the analysis of information	- plan classes in accordance with
	develop an environmental,	materials in the field of	the curriculum and based on its
	ecologically safe system of	agriculture and use them in their	strategy;
	farming, conduct an examination	professional activities;	- evaluate pedagogical results;
	of plant products for the presence	- on issues of organizing and	- define specific pedagogical
	of hazardous harmful substances:	managing the production	tasks, anticipate learning
	have the skills to apply	process;	outcomes;
	- have the skins to apply	- solving production problems	- select and use appropriate
	knowledge of the economic,	within the framework of the	teaching aids to build a teaching
	political, national and cultural	implementation of work to	technology;
	characteristics of countries and	improve the productivity of	- develop students' skills in
	regions, foreign partners of	agricultural crops and their	working with educational,
,	agricultural activities in the	qualities;	specialized, scientific literature,
ten	Republic of Kazakhstan and	- in the correct solution of	manuals;
pei	international law, compliance	agronomic and other issues in	- teach students to independently
m	with formalities and prescribed	extreme situations;	conduct experiments and
Ŭ Ŭ	procedures when receiving and	- planning and organizing the	generalize the results obtained.
þe	sending agricultural products:	work of the nursery;	
	have the skills to use the state	- performing basic and auxiliary	
	- have the skins to use the state,	work on irrigation of field crops	
	Russian, English and one more	in the territory assigned to them;	
	European or Asian language in	- regulation of the water regime	
	professional activities, including	of the soil during irrigation and	
	fluency in special agricultural	cultivation of crop products in	
	terms;	accordance with the needs of the	
	- have a solid knowledge of the	crops being grown;	
	code of corporate ethics	- safety of farm equipment in the	
	negotiation techniques as well as	nursery, uniform distribution of	
	the basics of business	resources, management of	
	une basics of busiliess	agrotechnical measures.	
	communication.	~	

Head of the department

«Agronomy, breeding and biotechnology»

Dean of the Faculty of «Agrobiology»

Alyof Y.Zhanbyrbaev E.Abildaev