   MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN

SOUTH KAZAHSTAN STATE UNIVERSITY

named after M. Auezov

 ““Approved” by

Rector \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Doctor of history science,

Academician

Kozhamzharova D.P .

"\_\_\_" \_\_\_\_\_\_\_\_\_ 20 \_\_\_ y.

**EDUCATIONAL PROGRAM**

6В08130- Plant Protection and Quarantine

|  |  |
| --- | --- |
| Registration number | - |
| Code and classification of the field of education |  6В08 - Agriculture and bioresources |
| Code and classification of training areas |  6В081 - Agronomy |
| Group of educational programs |  B077- Agronomy |
| Type of EP | acting |
| ISQE level | 6 |
| NQF level | 6 |
| IQF level  | 6 |
| Language of instruction | Kazakh, Russian, English |
| Typical Duration | 4 years |
| Form of training | Full-time |
| The complexity of EP | 241 credits |
| Distinctive features of EP | Dual training |
| University partner (JEP) | - |
| University partner (DDEP) | - |
| Social partner ( DE ) | ESPC “Kainar Bulak” , “ Zhas Keshu ” |

Shymkent, 2020y

Developers:

|  |  |  |
| --- | --- | --- |
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| Orazova Sh.N. | Director of "LLP", " Kazagronom " |    |

EP considered by the committee on innovative educational technologies and methodological support of the Agrarian faculty ,

Protocol number \_\_\_\_\_   of « \_\_ » \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2020y

Chairman of the Committee \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Abdullaeva G.A.

Considered and recommended for approval at a meeting of the Training Council of SKSU named after  M. Auezov

Protocol No. \_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2020y

Approved by the decision of the Academic Council of the University

Protocol № \_\_\_\_\_ of "\_\_\_\_" \_\_\_\_\_\_\_\_\_\_2020y

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**Introduction**

1. **Application area**

It is intended for the preparation of bachelors in educational (here in after - EP) 6B0813 0 - "Plant Protection and Quarantine" in the RSE on BEM "South Kazakhstan State University named after M. Auezov” MES RK.

1. **Regulatory documents.**

The Law of the Republic of Kazakhstan “On Education” (with [amendments and additions](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://online.zakon.kz/Document/%3Flink_id%3D1000664096) as of July 4, 2018);

Standard rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 (registered with the Ministry of Justice of the Republic of Kazakhstan October 31, 2018 No. 17657);

State generally binding standards of higher and postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 604;

Rules for the organization of the educational process on credit technology of education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 No. 152 with amendments and additions dated October 12, 2018 No. 563;

Order of the Minister of Agriculture of the Republic of Kazakhstan dated January 21, 2014 No. 20/56. It is registered in the Ministry of Justice of the Republic of Kazakhstan on May 21, 2014 No. 9437.

In accordance with [paragraph 3 of](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://adilet.zan.kz/rus/docs/K070000251_%23z1444#z1444) Article 138-5 of the Labor Code of the Republic of Kazakhstan dated May 15, 2007 and [Decree of the](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://adilet.zan.kz/rus/docs/P1300000406%23z0#z0) Government of the Republic of Kazakhstan dated April 29, 2013 No. 406 “On Approving the Distribution and Rules for Using Funds for the Development of Professional Standards for 2013”. To approve a [professional standard](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://adilet.zan.kz/rus/docs/V1400009437%23z8#z8) in activities in agronomy and agricultural chemistry.

Professional standard “Growing vegetables and potatoes” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 339 dated 12/12/2018.

Professional standard “Horticultural activity” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 339 dated 12/12/2018.

Professional standard “Growing sugar beet and its seeds” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

Professional standard “Production of greenhouse vegetables and berries” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

Professional standard “Viticulture” Order of the Board of the National Chamber of Entrepreneurs of the Republic of Kazakhstan “Atameken” No. 263 dated 12/26/2019.

**3     Educational program concept**

 The purpose of the educational program is consistent with the mission of the university and is aimed at preparing the country's intellectual elite, with advanced knowledge of entrepreneurial skills, fluent in three languages, demonstrating the skills of conceptual, analytical and logical thinking, a creative approach to professional activities, able to work in a national and international team, learn lifelong learning strategy.

The educational program is harmonized with the 6th level of the National Qualifications Framework of the Republic of Kazakhstan, with Dublin descriptors, 1 cycle of the Qualification Framework of the European Higher Education Space. (A Framework for Qualification of the European Higher Education Area), so also with 6 levels European Qualification Framework for education in the course of the whole life (The European Qualification Framework for Lifelong Learning) .

The educational program is focused on professional and social order through the formation of professional competencies related to the necessary types of research, practical and entrepreneurial activities, adjusted to meet the requirements of stake holders.

The uniqueness of this EP is, that carried out the practice-oriented training. EP provides students an expansive education in agricultural sciences with the transition on the dual training system. To implement the EP, the Department of Vegetable growing and animal husbandry is provided with an excellent material and technical base. There are two modern greenhouses at the department, which allows conducting year-round various experiments to protect vegetables from diseases and pests, and in practice, not breaking away from classrooms, to consolidate the material covered. The department also has at its disposal an experimental site “Kaynar Bulak ” with an area of 2.8 ha for growing fruit trees, a vineyard, vegetable crops in the open ground, grain crops, as well as forage crops. On the field, students carry out all agricultural activities, activities to combat pests and diseases.

This educational program is developed taking into account the achievements of modern domestic and world experience in this field, copyright and collective works and educational and methodological developments in the field of specialization, requirements of employers and labor market demands.

The educational program is aimed at achieving learning outcomes through the organization of the educational process using the principles of the Bologna process, student- centered learning, accessibility and inclusiveness.

The learning outcomes of the program are achieved through the following training activities:

- Classroom training: lectures, seminars, practical and laboratory classes - conducted with the use of innovative teaching technologies, the use of the latest achievements of science, technology and information systems;

- Extracurricular activities: independent work of the student, including under the guidance of a teacher, individual consultations;

- conducting professional practices, carrying out term papers and dissertations (projects).

The university has taken measures to maintain academic honesty and academic freedom, to protect against any kind of intolerance and discrimination against students .

The quality of the EP is ensured by the involvement of stakeholders in its development and evaluation, systematic monitoring and review of its content.

 **4. Requirements to incomes**

The Ministry of Education and Science of the Republic of Kazakhstan, Order No. 600 of 10/31/2018, is established in accordance with the Model Rules for admission to training in educational institutions that implement educational programs of higher and postgraduate education

**1. PASSPORT OF THE EDUCATIONAL PROGRAM**

**1.1 The purpose and objectives of the educational program in the specialty**

The purpose of the EP: Preparation of bachelors with theoretical and practical skills in the agricultural field, with methods and tools in the field of quarantine and plant protection.

Objectives of the EP:

**-** formation of socially responsible behavior in society, understanding the importance of professional ethical standards and following these standards;

- providing skills and lifelong learning skills that will allow them to successfully adapt to changing conditions throughout their professional career;

- providing conditions for acquiring a high general intellectual level of development, mastery of a competent and developed speech, a culture of thinking and skills of the scientific organization of labor in the field of agriculture;

- the formation of competitiveness of graduates in the field of production, protection and processing of crop products, to ensure the possibility of their fastest possible employment in the specialty or to continue their education at the next level of study.

**1.2 List of qualifications and positions**

A graduate in this academic degree is awarded the degree of “Bachelor of Agriculture ” in the educational program 6В0813 00 - “ Plant Protection and Quarantine ” .

Bachelors in EP 6V081300 - “ Plant Protection and Quarantine ” can occupy the primary positions of agronomist , managers and specialists of agricultural and commercial enterprises, quarantine and seed inspections, bio-factories , enterprises for storage and processing of crop and fruit and vegetable products , customs institutions, ecology, protection environment, scientific institutions, state and administrative bodies.

**1.3 Qualification characteristics of the graduate of the educational program**

**1.3.1 Scope of professional activity**

The sphere of professional activity is agro-industry first complex:

- republican, regional, district state institutions of agriculture;

- joint - stock companies, production cooperatives, limited liability partnerships, agricultural firms;

- farm, individual, collective farms;

- experimental research institutions in the field of agriculture;

- enterprises for the storage and processing of crop products;

- quarantine services.

**1.3.2 Objects of professional activity**

The objects of professional activity of graduates are:

- scientific and reasonable use of the land 's resources s agricultural destination;

- knowledge and application of innovative technologies cultivation agriculturally crops, their seed and planting material;

- scientifically based calculation of doses and the use of organic- fertilizer first , protection of crops from harmful 's body s: weeds, pests, and diseases of agricultural plants;

- natural forage land and their protection;

- soil and reproduction of its fertility;

- agricultural machinery and equipment used in processing field and garden crops ;

- materials and fuels and lubricants for the operation of agricultural machinery .

**1.3.3 Items of professional activity**

The subjects of professional activity of a bachelor in the specialty 6B08130 - " Plant Protection and Quarantine " are the following systems:

- agricultural land ;

- organic, mineral pesticides;

- Irrigation water;

- the soil;

- pests and diseases of crops;

- weeds;

- agricultural plants and their varieties.

**1.3.4 Types of professional activity**

Bachelor in specialty 6В08130 - " Plant Protection and Quarantine " can perform the following professional activities:

- production and technological;

- organizational and management;

- experimental research;

- educational activities in secondary vocational schools in the specialty profile.

**2. RESULTS OF TRAINING FOR EP**

**ER 1** Free communicate in a professional environment and society on Kazakh, Russian and English language.

**ER 2** Demonstrate natural science, social, socio-economic knowledge and their application in professional activities, methods of mathematical data processing, theoretical and experimental research, regulatory documents and elements of economic analysis.

**ER 3** Possess information, computational and digital literacy, be able to independently determine the goals of the study and choose the ways to achieve it; the ability to generalize, analyze and perceive information, generalize the statistical processing of experimental results, formulate conclusions.

**ER 4** Arguably substantiate the selection of varieties of crops, based on morphological characteristics, physiological state, determining factors for improving growth, the influence of meteorological factors on the development and quality of products for crop production.

**ER 5** Effectively apply innovative tillage systems for crop rotation crops, taking into account the topography of the land, the level of groundwater, fertilizers used and the soil of processing machines.

**ER 6** Effectively conduct a quarantine examination and assess the phytosanitary condition of crops, plantings and apply methods of disinfection of regulated products.

**ER 7** Successfully apply monitoring surveys to diagnose and predict the spread of pests and pathogens.

**ER 8** Develop comprehensive control measures to protect crops from pests, taking into account the weediness of crops by weeds, as well as pests and diseases.

**ER 9** Effectively use the principles of agricultural machinery and the technology of cultivation and harvesting of crops

**ER 10** Develop methods for plant protection using chemical knowledge in professional activities

**ER 11** And use research, entrepreneurial and work skills in the face of uncertainty.

**ER 12** It is effective to work individually and as a member of a team, correctly defend your point of view, adjust your actions and use various methods, maintaining a healthy lifestyle.

**3 EP GRADUATE COMPETENCE**

3.1 Successful completion of training in EP contributing of forming graduates the following competencies :

-key competencies (KC) ;

-professional competencies (PC).

Key competencies:

in the field of native and foreign (English) languages (KC 1 )

- the ability to express and understand concepts, thoughts, feelings, facts in written and oral forms (listening, speaking, reading and writing), creatively in all the variety of social and cultural contexts: during study, at work, at home and at leisure ; skills in mediation and intercultural understanding;

fundamental natural science and scientific preparation (KC 2 )

- the ability and willingness to use the educational potential, experience and personal qualities acquired during the study of natural sciences, technical disciplines at the university, to determine ways to control and evaluate the solution of professional problems, the development of analytical and natural thinking;

to computer (KC 3 )

- the ability to confidently and critically use modern information and digital technologies for work, leisure and communication, mastery of the skills of use, restoration, evaluation, storage, production, presentation and exchange of information by computer, communication and participation in collaborating networks via the Internet in the field of professional activity ;

with social (KC 4 )

- the ability to own socio-ethical values based on public opinion, traditions, customs, norms and navigate them in their professional activities; know the cultures of the peoples of Kazakhstan and observe their traditions; observe the foundations of the legal system and legislation of Kazakhstan, know the trends in the social development of society; be able to adequately navigate in various social situations; be able to find compromises, correlate your opinion with the opinion of the team; own business ethics, ethical and legal norms of behavior; strive for professional and personal growth; work in a team, correctly defend your point of view, propose new solutions; demonstrate tolerance towards other individuals;

economic, managerial and entrepreneurial (KC 5 )

- the ability to know and understand the goals and methods of state regulation of the economy, the role of the public sector in the economy; own the basics of economic knowledge; possess the skills of critical thinking, interpretation, creativity of analysis, drawing conclusions, evaluation; manage projects to achieve professional goals, manage staff, demonstrate entrepreneurial skills ;

cultural training (KC 6 )

- the ability to know and understand the traditions and culture of the peoples of Kazakhstan, is tolerant to the traditions and culture of other peoples of the world, is aware of the attitude of tolerant behavior; not subject to prejudice, has high spiritual qualities, is formed as an intelligent person .

***Professional competencies:***

PC- 1- to have knowledge of the main types of crops, their biological, varietal and economic characteristics, environmental requirements , phyto-sanitary monitoring of pests, diseases and weeds of agricultural lands using modern digital methods and the preparation of an effective plan of protective measures; select a set of crops for crop rotation, taking into account the climatic conditions of the region of cultivation ;

PC- 2- to have the methods of calculating the doses of organic and mineral fertilizers for the planned crop determines the method and technology of their application for crops;

PC- 3- to justify and use crop rotation, soil maintenance systems in field crop cultivation, apply weed protection in plantings and crops of field crops ;

PC-4 - have knowledge of the selection of crop varieties for specific conditions of the region and the level of intensification of agriculture, prepare seeds for sowing; apply technologies for the production of planting material, bookmarks and crop care;

PC-5 - produce development of agro-technical measures to improve the fertility of soil; to have admission s assessment of soil fertility and reproduction .

**3.2 Matrix of correlation of learning outcomes of EP  in general education with formed competences of modules**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **P 1** | **P 2** | **P3** | **P 4** | **P5** | **P 6** | **P 7** | **P8** | **P 9** | **P10** | **P11** | **P12** |
| KC 1 | **+** |  |   | **+** |   |   |   |   |   |   |   |   |
|  KC 2 |  | **+** |   |   |   |   |   |   |   | **+** |   |   |
| KC 3 | **+** |   | **+** |   |   |   |   |   |   |   |   |   |
| KC 4 | + |   |   |   |   |   |   |   |   |   |   | **+** |
| KC 5 |   |   |   | **+** |  |   |   |   |   |   | **+** |   |
| KC 6 | + |   |   |   |   |   |   |   |   |   |   | **+** |
| PC 1 |   |   |   | + |   | + |   |   | + |   |   |   |
| PC 2 |   |   | **+** | + |   |   |   |   |   | + |   |   |
| PC 3 |   |   |   | **+** | + |   |   |   |  | **+** |   |   |
| PC 4 |   |   |   | + |   |   |   | **+** |   | **+** |  |   |
| PC 5 |   |   |   |   | + |   |   | **+** |   |   | **+** |   |

1. **SUMMARY TABLE REFLECTING THE VOLUME OF DEVELOPED LOANS IN THE CONTEXT OF MODULES OF THE EDUCATIONAL PROGRAM**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Course of Study | Semester | The number of mastered modules  | Number of studied disciplines | Amount of credits | Total hours | Amount |
| OC | HSK | EC | Theoretical education | Physicaltraining  | Training practice | Internship Undergraduate practice | final examination | KZ |   | exam | Dif. offset |  |
| 1 | 1 | 3 | 4 | - | 4 | 29 | 2 |  |  |  | 31 | 930 | 6 | 2 |  |
| 2 | 5 | 5 | 2 | 1 | 27 | 2 | 1 |  |  | 30 | 900 | 6 | 2 |  |
| 2 | 3 | 4 | 2 | 3 | 3 | 28 | 2 |  |  |  | 30 | 900 | 6 | 2 |  |
| 4 | 6 | 2 | 3 | 3 | 25 | 2 |  | 3 |  | 30 | 900 | 6 | 2 |  |
| 3 | 5 | 3 | - | 3 | 3 | 30 |  |  |  |  | 30 | 900 | 6 | - |  |
| 6 | 4 | - | 2 | 3 | 24 |  |  | 6 |  | 30 | 900 | 4 | 1 |  |
| 4 | 7 | 4 | - | 2 | 2 | 15 |  |  | 5 |  | 20 | 600 | 3 | 1 |  |
| 8 | 4 | - | - | 5 | 20 |  |  |  |  | 20 | 600 | 5 | - |  |
| 9 | 1 |  | 1 | 1 | - |  |  | 8 | 12 | 20 | 600 | - | 2 |  |
| **Total** |  |  | **13** | **16** | **25** | **198** | **8** | **1** | **22** | **12** | **241** | **7230** | **42** | **12** |  |

1. **Information about disciplines**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Module name** | **Cycle**  | **HSC/EC** | **Component Name** | **Discipline Summary****(30-50 words)** | **Number of credits**  | **Formed ER****(codes)** |
| Module of the social science | GED | OC | Contemporary History of Kazakhsta | It allows you to classify the conceptual foundations of Russian history, to interpret the origins , continuity of Kazakh statehood and the actual problems of the history of modern Kazakhstan. Exposure analysis activities and the national intelligentsia in shaping the ideology of the liberation movement , and e tap s socio-economic modernization of Kazakhstan.Characterize the creation of a    democratic state of law.Assessing the contribution of the First President to the theory and practice of public administration. | 5 | ER 1ER 2 |
| GED | OC | Philosophy | The foundations of the emergence of philosophy are examined, the features of the emergence of a culture of thinking are revealed, the concepts of “philosophy”, “worldview”, the essence and content of the concepts of “being”, “consciousness” are revealed . The correlation of concepts "understand" and "creativity" , reveals the essence and content category philosophy of Freedom , Developing of  skills highlight the essence of philosophical problems, critical thinking, research skills philosophical aspects, problems of practice and knowledge . | 5 | ER 1ER 2 |
| Module of socio-political knowledge  | GED | OC | Social and Political Studies  | Theories of sociology are studied , the social structure and stratification of society, the role and place of politics in society is explained , the main stages of the formation and development of political science, including youth politics , the role of politics in the system of public life are examined , the essence of r statehood is revealed, the relationship r Statehood and civil society. Skills are developed from sociological research , analysis of socio-political information. | 4 | ER 1ER 2 |
| GED | HSC / EC | Ecology and Fundamentals of Life Safety  | We study the relationship of organisms, including humans, with the environment, determining the extent , permissible limits of the impact of human society on the environment, the possibilities of reducing these effects or their complete neutralization. Skills are being developed strategically - this is the science of the survival of mankind , a way out of the ecological crisis that is gaining global proportions - throughout the entire planet of the Earth. | 3 | ER 1ER 2 |
| GED | HSC / EC | Fundamentals of entrepreneurship skills and anti-corruption culture | Generates knowledge about the organization of the company, doing business. Develops the skills of business planning of production and sale of products, market analysis; calculation of profit, income, profitability, solvency, liquidity of the company.Considers the essence, the factors of corruption. Forms an anti-corruption worldview, culture. It develops a civic stand for corruption, realizes the values ​​of moral awareness of anti-corruption. It instills the skills of critical analysis of corruption phenomena. | 3 | ER 1ER 2 |
| GED | HSC / EC | Fundamentals of Economics and Law  | Considers the role of the state in market development, competition, demand, supply. It instills the skills of calculating costs, income, indicators of the circuit and capital turnover. Allows you to critically examine the markets of factors of production, factor income. Forms knowledge of the law. It instills the skills of analyzing the legitimacy of events, the ability to apply to regulatory acts. Raises the level of legal consciousness, legal culture. |  | ER 1ER 2 |
| GED | OC | Cultural Studies and Psychology  | Understanding of the social and ethical values of society as a product of the integration processes in the basic disciplines of knowledge systems, socio- cultural and psychological module; analyze the characteristics of psychological institutions in the context of their role in the modernization of Kazakhstani society; to formulate programs for resolving conflict situations in society, including in professional society; to be able to correctly express and defend their own opinion having social significance. | 4 | ER 1ER 2 |
| Module of communicative mobility   | GED | OC | Kazakh (Russian) language | The development of cognitive and communicative activity in Russian (Kazakh) language in the areas of interpersonal, social, intercultural communication. The inculcation of skills to discuss ethical, cultural, socially significant norms in discussions, the ability to work in a team, teamwork, creativity . Development of practical skills for interpreting text information, explaining their style, genre specifics in various areas of communication. | 10 | ER 1ER 2 |
| GED | OC | Foreign language | The development of cognitive and communicative activities in English in the areas of interpersonal, social, intercultural communication. The development of skills to discuss ethical, cultural, socially significant norms in discussions, the ability to work in a team, teamwork, flexibility, creativity . Development of practical skills for interpreting text information, explaining their style, genre specifics in various areas of communication. | 10 | ER 1ER 2 |
| GED | OC | Physical training/  | Examines the levels of development of essential motor skills and physical ka honors and creates the preconditions for multilateral manifestations of creative activity. Physical [culture](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%259A%25D1%2583%25D0%25BB%25D1%258C%25D1%2582%25D1%2583%25D1%2580%25D0%25B0) promotes education that FIR universal [values](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%25A6%25D0%25B5%25D0%25BD%25D0%25BD%25D0%25BE%25D1%2581%25D1%2582%25D1%258C) as [health](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=http://wikiwhat.ru/%25D0%2597%25D0%25B4%25D0%25BE%25D1%2580%25D0%25BE%25D0%25B2%25D1%258C%25D0%25B5) , physical and mental well-being.    | 8 | ER 12 |
| PD | HSC | Professional Kazakh (Russian) language | Skills development extract from the text of the required information, its Institute interpreting in educational and professional communication. Development of the ability to establish contacts at a professional level, competently build communications based on the goals and situations of communication. The inculcation of creativity, innovation, collegiality in the process of building a program of speech behavior in the Kazakh (Russian) language in the field of professional communication. | 3 | ER 1ER 2 |
| PD | HSC | Professionally-oriented foreign language  | Skills development extract from the text of the required information, its Institute interpreting in educational and professional communication. Development of the ability to establish contacts at a professional level, competently build communications based on the goals and situations of communication.The inculcation of creativity, innovation, collegiality in the process of building a program of speech behavior in a foreign language in the field of professional communication. | 3 | ER 1ER 2 |
| PD | EC | Kazakh alphabet based on latin graphics | The formation of Kazakh sounds taking into account the features of their pronunciation, the study of the phonetic features of Kazakh words and phrases based on Latin graphics. Development of literacy skills based on the Latin alphabet. The ability to read texts in the Kazakh language using Latin graphics. | 3 | ER 1ER 2 |
| PD | EC | Academic writing | Learns linguistic competence, the possession of which allows the researcher to read, understand and write scientific texts. The section contains recommendations for the preparation, writing and publication of scientific texts, reports and publications. |  | ER 1ER 2 |
| PD | EC | Mukhtarology | Exploring the camping life and work M.O.Auezov; analyzes the creative laboratory of the writer, his biography in the context of creativity; as the creator of the science of Abaevology; Researchers of zhira “Manas”. Acquaintance with M. Auezov as a prominent public figure. The skills of analyzing the literary heritage of M. Auezov in world and eastern literature are developing. They instill feelings of patriotism and love for the motherland. |  | ER 1ER 2 |
| PD | EC |  Abay studies  | He is studying a section of world and Kazakh literary criticism that studies the life and work of Abay Kunanbaev , his philosophical, aesthetic and social views. |  | ER 1ER 2 |
| PD | EC | Actual Problems and Modernization of National Awareness | To know that given the importance of the modernization program, the implementation of projects began immediately. By decree of the President of the Republic of Kazakhstan N.A. Nazarbayev created the National Commission for the implementation of the program of modernization of public consciousness, which launched a multifaceted work on all six projects. |  | ER 1ER 2 |
| GED | OC | Information and Communication Technologies (in English)  | Knowledge of computer systems, software. Development of skills in the use and use of information resources for searching and storing information, working with spreadsheets, working with databases. Application of methods and means of information protection; design and creation of websites, multimedia presentations. Skills of using e-government and electronic textbooks, various cloud-based mobile technologies, SMART technology management. | 5 | ER 1ER 2 |
|  Basics of Natural Scienses  | PD | HSC | Agrometeorology | The formation of ideas, knowledge and skills about agro- meteorological factors and their combinations that affect the growth, development and productivity of crops: the study of regulatory agro-meteorological indicators of the needs of crops in the main environmental factors; meteorological phenomena hazardous to agriculture and methods of protection against them; agro-meteorological forecasting methods and agricultural climate assessment. | 4 | ER 3ER 10 |
| PD | EC | Agricultural Microbiology | The formation of knowledge on the basics of general and agricultural microbiology and the ability to use the acquired knowledge to solve the practical problems of agricultural production: to study systematic, morphology, genetics, bacterial reproduction; microorganism metabolism involved microorganisms in the transformations of various compounds; study soil microorganisms and master the methods for determining their composition and activity; the possibility of using microorganisms in agricultural production technologies. | 5 | ER 3ER 10 |
| PD | EC | Microorganism Biotechnology | We consider the fundamental laws of Microbiology, soil microorganisms and methods of their determination, microbiological processes of preparation of organic fertilizers, microbiological development production straight products, biologics agricultural purposes.  The development of skills to prepare preparations of microorganisms, distinguish between the main forms of bacteria, quantify microorganisms in various substrates, obtain accumulative, pure cultures of microorganisms, conduct qualitative reactions to the products of metabolism of microorganisms. |  | ER 3ER 10 |
| PD | HSC | Standardization, Certification and Metrology              | To know and understand the systems of technical regulation, standardization, ensuring the uniformity of measurements, legislative and regulatory documents, types and categories of standards. Apply standardization methods, certification schemes, requirements of technical regulations of the TS/ EvroES. Analyze compliance with standardization, certification, metrological norms and rules by market entities. To evaluate the economic efficiency of work on interstate and international standardization, certification, metrology | 4 | ER 1ER 2ER 3 |
| PD | EC | Integrated Plant Protection  | Know and understand the use of two or more plant protection methods to suppress pests and diseases. The use of pheromones . attractants against plant pests - attracting insects using pheromone traps to determine the period of their appearance, as well as its reduction. The effectiveness of plant protection from pests and diseases is the use of a set of forest protection methods. | 3 | ER 5ER 6 |
| PD | EC | Pesticides and transgenic  cultures | The study of the chemistry of the effects of pesticides, the study of their toxicity and ways to eliminate their harmful effects. Production and use of transgenic plants. Prospects for creating transgenic plants that are resistant to bacterial and fungal diseases , with improved nutritional qualities and presentation, suitable for the production of vaccines and serums from plant material . |  | ER 6ER 7 |
| PD | EC | Inorganic and analytical chemistry | It studies methods and methods for the synthesis of inorganic substances, the skills to describe the properties of substances based on the laws arising from the periodic law and the Periodic system of elements. The ideas about the theoretical foundations of analytical chemistry, about the main types of chemical reactions, about the methods of identification and quantification of substances used | 4 | ER 1ER 2ER 3 |
| PD | EC | Organic  chemistry | He studies the basic principles of modern theoretical organic chemistry; principles of classification of organic compounds; rules of systematic, rational and trivial nomenclature; the main methods for producing organic compounds of various classes, their physical and chemical properties, methods for the isolation, purification and identification of organic compounds; Skills for performing laboratory experiments on the synthesis and study of the physicochemical properties of organic compounds. |  | ER 2ER 2ER 12 |
| Basics of Quarantine of Agricultural Plants  | PD | EC | Introduction to the specialty | The formation of knowledge about biological methods of integrated plant protection, about the main agents of biocontrol of pests, diseases, weeds of crops, as well as familiarity with the practical aspects of bioprotection. | 4 | ER 3ER 10 |
| PD | EC | Content and Language Interated Learning | He studies in the system of higher professional education and analysis of new concepts and approaches of vocationally-oriented training, developed in methodological science, taking into account their influence on the motivation of students to learn a foreign language. Revitalization of educational activities has always been one of the primary tasks of teaching in general and, in particular, teaching students of non-linguistic specialties in foreign languages. |  | ER 3ER 10 |
| PD | HSC | Educational | Educational practice or study practice is one of the types of student activities carried out at a particular stage of training. This format makes it possible to get acquainted with the details of the future profession, observe the work of existing employees and prepare yourself for the main production practice. | 1 | ER 4ER 9 |
| PD | EC | Fundamentals of Plant Protection Research  | Considers the features of the rules for laying down scientific experiments, conduct observations, document studies. Methods of scientific knowledge; Methods of theoretical and empirical research; Organization of scientific research and their stages; Procedures for the development and design of new technical objects. | 5 | ER 3ER 10ER 7 |
| PD | EC | Research Methodology for Plant Protection and Quarantine     | The formation of knowledge and skills on the scientific and practical assessment of the essence, phyto-sanitary efficiency and environmental safety, methods plant protection in accordance with the requirements of modern plant protection systems. Methods of scientific knowledge; Methods of theoretical and empirical research; Organization of scientific research and their stages; Procedures for the development and design of new technical objects. |  | ER 3ER 10 |
| PD | EC |  Fundamentals of Agrobusiness and Business | Considers the features of the content of entrepreneurship in the agricultural - industrial complex. Introduces the features of state regulation of entrepreneurial activity. Forms the skills of creating and registering your own business, developing constituent documents, agribusiness strategies, business plans. It reveals the mechanism for the formation of business ideas, risk management, and research work is carried out individually and as a team. | 3 | ER 8ER 11ER 12 |
| PD | EC | The produce organization and business planing of soil protecting in AFC. | Knowledge and understanding of the laws, principles, forms of organization of production, forms of entrepreneurial activity, business plan, leasing, commercial activity. Skills for calculating the effectiveness of the use of progressive forms of organization and material stimulation of labor; justification of a combination of industries in agricultural enterprises; substantiation of the organization of auxiliary and service industries in agricultural enterprises. |  | ER 8ER 11ER 12 |
| CH.D | EC | Organization of scientific research work | Considers the specifics of science, its goals, functions, types of scientific research; general scientific and special research methods; basic techniques for choosing a relevant topic for research and methods for compiling a program for its implementation; Algorithmic searches of information in documentary sources of information. Skills to draw up a research program; analyze scientific literature on the topic of research. Research work is carried out individually and as a team. | 4 | ER 8ER 12 |
| CH.D | EC |  Conducting research in modern conditions | Considers the specifics of science, its goals, functions, types of scientific research; general scientific and special research methods; basic techniques for choosing a relevant topic for research and methods for compiling a program for its implementation; Algorithmic searches of information in documentary sources of information. Skills to draw up a research program; analyze scientific literature on the topic of research. Research work is carried out individually and as a team. |  | ER 8ER 12 |
| CH.D | EC |  Quarantine inspection and examination of crop products | And he learns the basic principles of quarantine inspection and examination, supervision of compliance by employers with sanitary - hygienic and sanitary anti - epidemiological norms and rules, carried out by a specially authorized executive body. | 4 | ER 7ER 8ER 11 |
| CH.D | EC | Quarantine of agricultural plants | And he learns the nature and origin of viruses, the diseases caused by them. Plant quarantine is aimed at protecting the country's plant resources. |  | ER 7ER 8ER 11 |
| General Biology and Plant Protection | PD | EC | Taxonomy of agricultural plants | Studying the basic laws, taxonomy of agricultural plants   acquire skills in conducting phyto-sanitary monitoring, a set of protective measures for agricultural plants from pests, diseases and weeds, as well as quarantine objects; conducting all stages of quarantine inspection at customs posts.  | 5 | ER 4ER 12 |
| PD | EC | Systematics of flowering plants | Know the classification of flowering plants , their morphological cal characteristics.     To determine the species composition of flowering plants of   agricultural crops, to compile a phyto-calendar of flowering plants of   agricultural crops for various ecological and geographical areas.  He will gain skills in  conducting phyto-sanitary monitoring, a set of protective measures for agricultural plants from pests, diseases and weeds, and in conducting all stages of quarantine inspection at customs posts.  |  | ER 4ER 12 |
| CH.D | HSC | Biological plant protection | The biological protection of plants is one of the major in the preparation of agronomists. Knowledge of these subjects helps to better understand the relationship of pests and pathogens with plants, identify their limiting factors and reasonably carry out biological protective measures. | 5 | ER 8ER 9ER 12 |
| CH.D | HSC |  Protection of agricultural cultures against wreckers | The biological protection of plants is one of the major in the preparation of agronomists. Knowledge of these subjects helps to better understand the relationship of pests and pathogens with plants, identify their limiting factors and reasonably carry out biological protective measures. |  | ER 8ER 9ER 12 |
| CH.D | HSC | Chemical plant protection | The problem of protecting agricultural plants from pests, diseases, weeds can be successfully solved only on the basis of the chemical method. Chemical protection of plants is one of the major in the training of specialists. Rules for handling pesticides, occupational health and public health in connection with the use of chemicals in agriculture. | 5 | ER 8ER 9ER 12 |
| CH.D | HSC | Protection of agricultural cultures against diseases | The problem of protecting agricultural plants from pests, diseases, weeds can be successfully solved only on the basis of the chemical method. Chemical protection of plants is one of the major in the training of specialists. Rules for handling pesticides, occupational health and public health in connection with the use of chemicals in agriculture. |  | ER 8ER 9ER 12 |
| PD | EC | Pests of agricultural plants | Knowledge of dimensions infection, the emergence of foci of pests and diseases; on the morphology and anatomy of pests and measures to protect plants from them;He will gain skills in identifying pest species by the nature of plant damage, by the type of their development, by the ways of their life activity and distribution; draw up a science-based plan for the implementation of measures for the prevention and destruction of pests. | 5 | ER 6ER 9ER 12 |
| PD | EC | Harmful nematodes, ticks and rodents | He will gain knowledge of morphology, physiology, ecology, harmful nematodes, ticks, a large group of vector pathogens and plant damage agents . The skills of independent determination of the nature of injuries by a given group of pests, to determine the structure of their oral apparatus for the further determination of the name and group of the pesticide of contact or systematic action, the determination of the methods, doses and timing of their use. |  | ER 6ER 9ER 12 |
| PD | EC | Diseases of agricultural plants | Knowledge of agricultural th pathologists and ; knowledge of the symptoms of the most common diseases, biology and methods of controlling their pathogens, prediction and nature of distribution in agro-cenosis, as well as biological, chemical, and agro-technical measures to combat them.Acquires skills to study a sick plant, knows how to find the focus and nature of infection; make long-term forecasts of the spread of various diseases. | 5 | ER 6ER 9ER 12 |
| PD | HSC | Technological practice I | To study the experience in the accumulation, storage and use of fertilizers, the organization of land reclamation measures, the labor organization system and the measures developed at the farm to increase its productivity . To gain skills during the spring field work, familiarize yourself with the plan of spring sowing, the structure of sown areas.   | 3 | ER 4ER 11ER 12 |
| Mechanization of  agriculture | PD | EC | Machine use in agriculture | To study the designs, operating principles of various agricultural machinery and equipment, including foreign ones. Combined tillage machines and units. The prospect of developing the design of machines for sowing and planting, fertilizing. Modern trends in the development of fodder harvesting machines, grain harvesting equipment, processing and processing of agricultural crops..   | 4 | ER 5ER 12 |
| PD | EC |  Crop production mechanization | He studies with classification and operating principles of engines of agricultural machines, technologies of mechanized work in animal husbandry and crop production, gain experience in disassembling and assembling and adjusting work, learn to identify malfunctions and eliminate them. Skills technological processes of repair production - carrying out maintenance and preventive maintenance of machines. |  | ER 5ER 12 |
| Soil Science and Agrochemistry | PD | HSC | Soil science | It studies the origin, development, structure, composition and properties of soils, and also develops measures for their protection and rational use. Cognition of the features of the relationship between soil and the terrestrial part of the biota . The role of soil in the transformation of its flora and fauna, Mastering skills in changing environmental factors on soil processes, their dynamism. | 5 | ER 5ER 6 |
| CH.D | HSC | Agrochemistry | The formation of ideas, skills and practical skills on the basics of nutrition of crops that are the scientific basis for the intensification of agricultural production at the expense of economically sound, resource-saving and environmentally friendly application fertilizers. | 5 | ER 4ER 6ER 11 |
| Module agricultural area | PD | HSC | Plant Breeding I | The formation of theoretical knowledge on the peculiarities of the biology of field crops and practical skills in compiling and applying resource-saving technologies for their cultivation in various agro-landscape and environmental conditions. | 5 | ER 4ER 8ER 10 |
| PD | HSC |  Plant Breeding II | It studies species and varietal forms of field crops, biology features, environmental requirements and methods for growing the highest quality crops. Skills in technically perfect and cost-effective cultivation of maximum yields of agricultural products with its high quality and low costs . | 5 | ER 4ER 8ER 10 |
| PD | HSC |  Selection and Seed-breeding of Crop | He studies the theoretical foundations and advanced modern methods and technologies of breeding and seed production of crops, the basics of seed certification. Skills are developed by methods of planning the breeding process, selecting, creating and studying the source material for breeding; organization of primary seed production of a variety; modern technologies for refinement of seed material and varietal control. | 5 | ER 4ER 7ER 10 |
| CH.D | HSC | Agriculture | To form knowledge and skills on the scientific and technological foundations of modern agriculture law; scientific farming; characteristic and features of application in agricultural production. Skills in the use of arable land in order to obtain agricultural products - grain, root crops, hay; on environmental issues arising from the use of intensive chemical-technogenic methods in agriculture and the features of modern methods of farming. | 4 | ER 4ER 5ER 9 |
|   | PD | HSC | Industrial Practice І  | Collection of information on the activities of educational institutions and professional activities of the agronomist . Analysis of regulatory documents determining the content of education according to the updated program. The development of skills to master the practical foundations of a future profession. Development of skills in collecting and accumulating empirical material. Development of skills for  structuring, systematizing knowledge and presenting it in various ways. Development of public speaking skills , presentation of reporting documentation. | 6 | ER 10ER 11ER 12 |
| Quarantine of agricultural plants | CH.D | EC | Quarantine objects and control measures | Learn to acquire skills of particular relevance for agricultural producers , land owners of all purposes is gaining control of especially dangerous quarantine weeds due to the fact that they cause significant damage to the crop. In addition, the emergence of quarantine weeds leads to significant economic losses associated with the introduction of quarantine plants in business entities that restrict, prohibit production, storage, processing. | 4 | ER 7ER 8ER 10 |
| CH.D | EC | Protection against quarantine objects                                                                          | Know and understand the protection of plants from quarantine pests, diseases and weeds. Identification of the reasons determining the nature of geographical distribution, patterns of formation of flora and fauna of quarantine objects under the influence of natural and anthropogenic factors. Forecasts of quarantine crops. |  | ER 7ER 10 |
| PD | HSC | Technology of Storage and Processing of Production of Plant Growing | Learn to acquire skills in developing a set of measures for the post-harvest refinement of the crop products obtained and the organization of cost-effective storage , the scientific principles of storage of crop products , the processes that occur during storage , the characteristics and properties of raw materials and finished products . To acquire skills in developing a set of measures for the post-harvest refinement of the crop products obtained , the organization of cost-effective storage . | 6 | ER 7ER 10 |
| Technology of growing and growing products  | CH.D | EC | Technology of Cultivation of Cultures in the Closed Ground  | To know and understand the technology of growing crops in closed ground as a branch of vegetable growing and a scientific discipline. History, current status and development directions. Place and importance of closed ground in seedling production and year-round supply of fresh vegetables. The technology of growing crops in closed ground as a scientific discipline - a subject and research methods. | 4 | ER 4ER 5ER 6ER 7 |
| CH.D | EC | Production of greenhouse vegetable and berries | The formation of knowledge and skills in biology and technology of cultivation of vegetable and berry plants; the study of the biological characteristics of vegetable and berry crops, technological methods of their cultivation; the latest production technologies using drip irrigation and fertigation . |  | ER 4ER 5ER 7ER 8 |
| CH.D | EC | Technology of cultivation of cultures in the open ground | Knowledge and understanding of fruit and vegetable crops and methods of their cultivation, developing intensive technologies for obtaining planting material and fruit and vegetable products . For year-round and balanced provision of the population with fruits and vegetables, fruits are produced in open ground. Gets skills in the development of agricultural techniques for the cultivation of fruit and vegetable crops. | 4 | ER 4ER 5ER 6ER 7ER 10 |
| CH.D | EC |  Growing of sugar beet and its seeds | To know the cultivation of sugar beets for increasing efficiency of an intensification of the sugar beets sub complex product RK. Mix chemicals in accordance with labor protection instructions for workers working with pesticides and chemicals. To introduce pesticides to destroy weeds in the territory to a certain depth. Map the beet field weed.   |  | ER 6ER 11ER 12 |
|   | CH.D | HSC | Industrial Practice ІІ | Considers the technology, economy, organization and management of agricultural production, the organization of the agronomic service and the working methods of the chief agronomist, agronomists of industries and production units of the economy. Obtaining skills with cards by culture, take part in the development of a spring field work plan and its implementation, as well as in the organization of quality control of work and products. | 5 | ER 8ER 10ER 11 |
| Gardening and Vegetable growing | PD | EC | The basics of phytosanitary systems and technologies | He studies the theoretical principles of accounting for pests, making forecasts of their development and distribution, informative forecasts. Instruments and equipment for phyto-sanitary diagnostics, methods for examining crops and planting, forecasting and signaling the timing of pest and crop disease control are described. | 4 | ER 6ER 7ER 8ER 11ER 12 |
| PD | EC | Phytosanitary monitoring of hazardous pests | Examines t theoretical basis for the development and maintenance of informative forecasts and signaling in plant protection from harmful pests; various methods for recording pests, diseases and weeds of cultivated plants |  | ER 6ER 7ER 8ER 11ER 12 |
| CH.D | EC |  Gardening and Viticulture | To know the variety of melons and viticulture, methods for producing melon and vine growing products, the current state of the industry and the prospects for its development, requirements, developing intensive technologies for producing planting material and products for modern melon and viticulture varieties and hybrids . Gaining skills in the application of intensive technologies in the cultivation of melon growing and viticulture. | 4 | ER 4ER 11ER 12 |
| CH.D | EC | Gardening activities   | The formation of knowledge and skills of agronomic research and development aimed at solving complex problems of organizing and producing, storing and primary processing of fruit, vegetable, medicinal and essential oil products, grapes; design, landscaping and operation of landscape gardening and landscape objects; the creation of new varieties and the development of technologies for growing garden crops. |  | ER 4ER 11ER 12 |
| CH.D | EC | Fruit and vegetable growing  | To form the concept of “Fruit growing” among students, as a science that studies the biology of fruit and berry plants, their role in the ecological system, regular relationships with environmental factors and, on this basis, the theoretical foundations needed to determine the prospects for the development of the industry and create a differentiated technology for growing highly productive plantations; and "Vegetable", the science of vegetable crops and their cultivation. | 4 | ER 4ER 8ER 9ER 11 |
| CH.D | EC | Growing vegetables and potatoes | He will gain knowledge of botany (biological and morphological characteristics of vegetable crops), plant physiology (the ratio of plants to microclimate factors), soil science (soil preparation), agro-chemistry (agrochemical analysis, methods for calculating fertilizer doses), entomology (pest control of vegetable crops), phyto-pathology , agricultural economics (calculation of the economic efficiency of cultivating crops and protective measures), mechanization and other sciences. |  | ER 4ER 7ER 9ER 11 |
| Module acquisition of new professional competencies | PD | EC | Minor program | Additional educational **program Minor**( **Minor**) - a set of disciplines and (or) modules and other types of educational work, defined by the student for study in order to form additional competencies   | 12 | ER 11ER 12 |
|  Module final certification | CH.D | HSC | Predegree or Industrial practice  | He will gain knowledge in the formation of general professional and professional competencies necessary for the development of agricultural cultivation technologies, the acquisition of industrial experience of independent work in the conditions of professional agronomic activity, and the updating of knowledge and skills in the field of agriculture in real conditions of agronomic activity. | 8 | ER 4ER 10ER 11ER 12 |
| CH.D | EC | Writing and defence of degree work (project) or preparing and passing a graded exam/  | Knowledge and understanding of oriented practice, as the final stage of training, are responsible for the formation of the student's independent work skills in the professional field. Successful defense of a diploma project at a meeting of the [State Certification Commission](https://translate.google.com/translate?hl=ru&prev=_t&sl=ru&tl=en&u=https://ru.wikipedia.org/w/index.php%3Ftitle%3D%25D0%2593%25D0%25BE%25D1%2581%25D1%2583%25D0%25B4%25D0%25B0%25D1%2580%25D1%2581%25D1%2582%25D0%25B2%25D0%25B5%25D0%25BD%25D0%25BD%25D0%25B0%25D1%258F_%25D0%25B0%25D1%2582%25D1%2582%25D0%25B5%25D1%2581%25D1%2582%25D0%25B0%25D1%2586%25D0%25B8%25D0%25BE%25D0%25BD%25D0%25BD%25D0%25B0%25D1%258F_%25D0%25BA%25D0%25BE%25D0%25BC%25D0%25B8%25D1%2581%25D1%2581%25D0%25B8%25D1%258F%26action%3Dedit%26redlink%3D1) is the legal basis for assigning a student the appropriate qualifications.   | 12 | ER 4ER 11ER 12 |
| Total for the educational program |   |   |

**AGREEMENT SHEET**

according to the Educational program 6В08130 - " Plant protection and quarantine "

Director of DAV \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Director of NRU \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Director of DNiP \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Annex 1**

**REVIEW**

for a modular educational program in specialty 6B08130 - "Plant Protection and Quarantine" , developed by a team of teachers of the department "Vegetable growing and animal husbandry" of the Agrarian faculty of SKSU

them. M. Auezova

The educational program in the specialty 6B08130 - “Plant Protection and Quarantine” was created on the basis of a request from employers in connection with the increased need for agronomists who are able to assess the prospects for the development of the economy in the market, draw up technological maps for the cultivation of crops and organize field work with phyto-sanitary skills monitoring, a set of protective measures of agricultural plants from pests, diseases and weeds, as well as quarantine objects; conducting all stages of quarantine inspection at customs posts. To carry out work in centers of phyto-sanitary diagnostics and forecasts, centers of plant quarantine and in toxicological control laboratories. The main goal of the program is as follows:

Training of specialists possessing theoretical and practical knowledge in the agricultural field, owning methods and tools in the agronomic field, studying issues related to the protection of plants from harmful organisms (pests, diseases, weeds) of agricultural crops from a scientific and industrial point of view, having deep knowledge by an innovative method of protecting plants from pests, the current state and prospects for the development of plant protection.

The purpose of the program is the direction of preparation for the educational program of the specialty 6B08130 - "Plant Protection and Quarantine" involves a strict orientation to the future, which is manifested in the possibility of building your education, taking into account success in personal and professional activities that meet the requirements of employers.

Programs is aimed at meeting on needs of the Republic of Kazakhstan, the region, district and employers' in the Bachelor of 6V08130 - "Plant Protection and Quarantine," a voiced with a national priorities of development and with strategies increasing the university, directed to the practical use of knowledge on self improvement and getting the education during the hole cycle of choosing specialty.

About the education program in the specialty 6В08130 - “Plant Protection and Quarantine”, it may well be recommended for use in the educational process of higher educational institutions preparing bachelors in this specialty.

Director of "Company", "Kazagronom ": Orazova Sh. N.

**Appendix 2**

**EXPERT CONCLUSION**

to the educational program of higher education in the direction of preparation 6B08130 - "Plant Protection and Quarantine" qualification "Bachelor", developed by a team of teachers of the department "Vegetable growing and animal husbandry" of the Agrarian faculty of South Kazakhstan State University named after M. Auezova .

 The peer-reviewed educational program (hereinafter EP) in the direction of preparation 6B08130 - “Plant Protection and Quarantine” is a document system developed on the basis of SCES in the direction of preparation 6B08130 - “Plant Protection and Quarantine” (undergraduate level), approved by order of the Ministry of Education and Science of the Republic of Kazakhstan .

 The educational program of this specialty is aimed at studying issues related to the protection of plants from harmful organisms (pests, diseases, weeds) that cause economic and economic damage to crop production.

 The peer-reviewed program includes: general characteristics; a characteristic of the professional activity of a bachelor; competencies of the graduate of the EP bachelor's degree , formed as a result of mastering the bachelor's program "Plant Protection and Quarantine" documents governing the content and organization of the educational process during the implementation of the undergraduate program ; actual resource support for the undergraduate program; characterization of the university environment, ensuring the development of general cultural (social and personal) competencies of graduates; assessment funds for conducting intermediate and state final certification and other regulatory and methodological documents and materials ensuring the quality of students' training. The EP regulates the goals, expected results, content, conditions and technologies for the implementation of the educational process, assessing the quality of graduate training in this area of training and includes: the curriculum, work programs of training courses, subjects, disciplines (modules) and other materials ensuring the quality of training students, as well as educational and undergraduate practice programs, a calendar curriculum and teaching materials that ensure the implementation of appropriate educational technology. The strategic goal of the EP is to train highly educated specialists who are able to manage research and development processes and innovation in organizations of any legal form. The education program meets the basic requirements of the standard. State final certification includes the preparation and defense of the bachelor. The content of the EP does not contradict SCES. The calendar training schedule is drawn up in accordance with the requirements. The disciplines of the curriculum for the peer-reviewed educational program form the entire necessary list of general cultural, general professional and professional competencies provided by the AIC. Among the competitive advantages of the program, it should be noted that quite experienced faculty and teaching staff are involved in its implementation , as well as leading specialists in agricultural production. One of the advantages is taking into account the requirements of employers in the formation of the disciplines of the compulsory part, which in their content allow ensuring the competence of the graduate. The quality of the content of the curriculum is not in doubt. Disciplines included in the plan reveal the essence of the current economic problems of the agricultural sector. The structure of the curriculum is generally logical and consistent. Evaluation of the work programs of academic disciplines allows us to conclude that they are of high quality and a sufficient level of methodological support. The content of the disciplines corresponds to the competency model of the graduate. Educational work of students in the EP on the direction of training 6V08130 - "Plant Protection and Quarantine", organized in the course of preparation of bachelors in the following forms: lectures, consultations, seminars, workshops, laboratory work, examinations, colloquiums, independent work, research work, practice. In the educational process of peer-reviewed first EP is expected the use of active and interactive forms of training, including discussions, business games, analysis of case studies, training, project-based learning, work in small groups and others. Teaching practice involves the study of interactive forms of training, to deliver a report on the autopsy meeting of the scientific and methodological conference SKSU them. M. Auezova . The content of the undergraduate practice program testifies to its ability to form students' practical skills. The basis for under graduation practices are AIC "Kaynarbulak" LLP "Kazagronom" LLP " R. S. Agro Group Holding”, “Red waterfall agricultural practical station”, housing and communal services“ SMG GREEN HAUSE PROFIT ”, housing and communal services“ Vegetable protecting and quarantine scientific research institute, Shymken state dendropark, District inspectors in variety testing, LLP "Amankeldi". Research work includes research activities and the preparation of final qualification work (bachelor's thesis). In the course of the research work, it is proposed to use such forms as participation in the scientific seminar of the department with the preparation of their own presentations; reports on the results of scientific research at seminars, conferences, symposiums and scientific schools, publication of materials in relevant final collections and works; participation in the preparation of competitive applications for research, scientific reports; preparation of publications in scientific journals, including those recommended by the Ministry of Education and Science of the Republic of Kazakhstan for publishing the results of diploma studies; search for relevant information on the subject of scientific research; participation in programs of international and within Kazakhstan mobility of bachelors; conducting both independent research and joint research with a sonic leader. In accordance with the requirements of the State Educational Standard for the certification of students for compliance with their personal achievements by the phased requirements of the relevant EP, funds have been created for evaluating funds for conducting ongoing monitoring of performance and intermediate certification.

 These funds include control questions and sample assignments for practical exercises, tests, call-offs, tests and exams; tests and computer testing programs; approximate topics of essays, etc., as well as other forms of control, allowing to assess the degree of formation of students' competencies. The developed EP fully corresponds to the declared level of preparation of the bachelor. The included disciplines form a high level of competencies stipulated by the SCES. Provision of teaching staff with academic staff meets the standards. The material and technical support of the educational process in the field of preparation “Plant Protection and Quarantine” fully complies with the requirements of the SCES.

 The developed EP has a high level of security with educational and methodical documentation and materials. The programs of all declared disciplines, practices (SRW) and final state certification are presented. The quality of the peer-reviewed EP is not in doubt. The program "Plant Protection and Quarantine" can be used to prepare students for the qualification "Bachelor" in the direction of preparation 6B08130 - "Plant Protection and Quarantine".

Chairman of the expert commission:

Dean of the Agrarian Faculty,

Candidate of Biological Sciences: A.K. Zhylkybaev

Members of the expert commission:

 1. Candidate of Agricultural Sciences,

Associate Professor of the Department "VR and VU" N.T. Manabaev

2. Candidate of Veterinary Sciences, Associate Professor

Department of "VCD" I.A. Tutkyshbay