MINISTRY OF AGRICULTURE
OF THE REPUBLIC OF KAZAKHSTAN

S. Seifullin Kazakh Agro Technical University

R E P O R T
about the results of the work for 2020–2021

Nur–Sultan
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CONTENTS

1 PERSONNEL POLICY AND PROFESSIONAL DEVELOPMENT

At the university, much attention is paid to personnel policy and the professional development of the teaching staff.

The teaching staff as of today consists of 826 full–time teachers (excluding the teaching staff of the military department); 73 of them are doctors of sciences, 352 candidates of sciences, and 80 PhD doctors. The percentage of teaching staff is 61%. Four teachers have the title of "Madeniet kairatkeri", and three are honored coaches of the Republic of Kazakhstan.

The average age of teachers is 47 years old, with an academic degree and a title of 52 years.

The teaching staff of the university is formed from experienced teachers with high scientific potential and scientific and pedagogical experience.

The task of personnel renewal in the departments is solved by sending young teachers to master's and doctoral studies.

The quantitative and qualitative composition of teaching staff for the last two academic years is shown in *Table 1*.

Table 1 – Settlement of teaching staff by academic years

Academic year	**Number of full–time teachers, people.**				**The graduate degree (%)**
	Total	**Doctors of Sciences**	**Candidates of Sciences**	**PhD Doctors**	
2019–2020	*770* (–33)*	*80 (–1)*	*343(–11)*	*68 (+9)*	*63.8 (+2.8)*
2020–2021	*832* (+62)*	*72 (–8)*	*346 (+3)*	*72 (+4)*	*59 (–4,8)*
2021–2022	*826* (–6)*	*73 (+1)*	*352 (+6)*	*80 (+8)*	*61 (+2)*
* excluding the teaching staff of the military department					

The professional development of teaching staff is carried out both under general programs and within the framework of individual internships, seminars, and trainings. At the expense of the university's own funds, it is planned to undergo advanced training of teachers within the framework of cooperation agreements with leading universities in the near and far abroad (USA, Germany, Poland, Slovakia, Mongolia, China, Turkey, Russia, Ukraine, and Belarus). Also, professional development is carried out at the expense of other sources of funding, such as scientific grants, the international program "Bolashak," the grant "The Best University Teacher," etc.

To familiarize teachers with modern technologies and technological processes used in production, university teachers are trained at domestic enterprises and scientific centers in the Republic of Kazakhstan.

Creative communication has been established with scientists of research institutes and centers of the Ministry of Agriculture and the Ministry of Education and Science of the Republic of Kazakhstan in the implementation of complex projects within the framework of Republican scientific and technical programs on the basis of mutually beneficial agreements.

At "S. Seifullin KATU" NCJSC, special attention is paid to the number of teachers teaching classes in English. Courses on the study and improvement of foreign language proficiency are held for the teaching staff and staff. As part of the development of multilingual education and the implementation of the Roadmap for the university's entry into the QS world university ranking, professionally–oriented language training for teaching staff is planned annually.

So, for six months, 10 teachers and employees of "S. Seifullin KATU" NCJSC attended Online French language courses with a native speaker, upon completion of which they received certificates. In addition, in the spring of this year, 33 teachers successfully completed courses in professionally–oriented English and preparation for international TOEFL testing.

University teachers have the opportunity to improve their qualifications at advanced training courses on a free basis at the expense of the university's own funds.

Advanced training courses: "Laboratory diagnostics of brucellosis in animals", "Serological diagnostics of viral diseases of horses: rhinopneumonia and influenza", "Laboratory diagnostics of diseases of cattle of viral etiology (leukemia, viral diarrhea, rhinotracheitis, nodular dermatitis)", "Serological methods for the study of infectious diseases (leptospirosis, paratuberculosis, salmonellosis)". 10 people received certificates for each course.

In connection with the modernization of educational programs, changes in the content of fundamental disciplines "Mathematics", "Physics", "Chemistry", "Biology" and "Computer Science", within the framework of a pilot project with AgroParisTech, special courses were organized and conducted for university teaching staff: "Data analysis and visualization in Python" (17 teaching staff of the faculty.ICT); "Methods of teaching the basics of higher mathematics" (15 teaching staff, Faculty of Higher Education.mathematics); "Methodological and methodological foundations for the preparation of bachelors of natural science education under the AGROPARISTECH program" (16 teaching staff, Department of Physics and Chemistry); "Methods of organizing and conducting laboratory work in biology" (4 teaching staff of the Department.Biological sciences). A total of 52 people were injured.

In order to increase the competence of the Faculty of UZRAiD Faculty in the field of land management and cadastre, specialists of the NAO "Government for Citizens" conducted special courses on "Land management and cadastral works in the Republic of Kazakhstan". 31 teachers received certificates.

In order to master the theoretical and methodological foundations of the educational process of higher education and improve their pedagogical skills in 2020–2021, traditional annual courses "Innovations in the Educational Process of Higher Education" were held for 120 hours.

52 teachers have successfully completed the courses and received certificates, including 33 in the Kazakh language.

All students passed the comprehensive exam perfectly.

At the end of the training, a questionnaire was conducted, and the implementation of the acquired knowledge was monitored.

Most students note the necessity, importance, and usefulness of such courses. Many of them apply the knowledge they acquire in the educational process. This is especially true of interactive teaching methods, information technology, and knowledge of psychology, which helps in communicating with students, especially in conflict situations.

In connection with the transfer of training sessions to a remote mode of operation, a regular training seminar on "Remote Educational Technologies and Platforms for the Implementation of Educational Services" was held for all university teaching staff. 294 people received certificates.

The number of teaching staff who have completed advanced training in the last three academic years is shown in Table 2.

Table 2 – Professional development of teaching staff

Forms of professional development	**The number of teaching staff who have passed advanced training, people.**								
	total			**in Kazakhstan**			**abroad**		
	2018 – 2019	**2019 – 2020**	**2020 – 2021**	**2018 – 2019**	**2019 – 2020**	**2020 – 2021**	**2018 – 2019**	**2019 – 2020**	**2020 – 2021**
Seminars	68	195	278	46	140	251	22	55	27
Internships	181	72	72	135	40	34	46	32	38
Courses	130	153	461	120	110	340	10	43	121
Conferences	86	147	155	62	85	101	24	62	54
Total	**465**	**567**	**966**	**363**	**375**	**726**	**102**	**192**	**240**

ACADEMIC WORK

The Department of Academic Affairs in 2020–2021 carried out the implementation of the academic policy of the University in accordance with the Law of the Republic of Kazakhstan "On Education", the NPA of the Ministry of Education of the Republic of Kazakhstan, the Education Development Strategy for 2019–2025, the main indicators of the action plan of the Development Strategy of the "S. Seifullin KATU" NCJSC and the decisions of the Academic Council of the University planned for the 2020–2021 academic year.

Formation of a contingent of undergraduate students (higher education).

Admission of students for the first year of 2021–2022 amounted to 2501 people (Table 1), including 1730 state educational grants, 9 MIO grants, and 762 people on a paid contractual basis.

Table 1 – The number of accepted students for the 1st year of 2021–2022 (educational programs of higher education) as of the time of enrollment on August 25, 2021

Name of indicators	**Full–time department**				
	Full program			Short program	
	On the basis of secondary education			On the basis of TVET	At the base of higher education with DOT
	By state order	MIO grants	On a paid basis	On a paid basis	On a paid basis
Accepted in the context	1730	9	735	10	17
Total by training programs	2474			27	
Total by university	2501				

According to the results of the state educational grants competition in 2021, the number of grants awarded to applicants who chose "S. Seifullin KATU" NCJSC amounted to 1855 grants, of which 1730 people enrolled in the first year, and 125 applicants refused the grants awarded to them or did not contact the University for Enrollment.

A comparative table on admission to bachelor's degrees from 2019 to 2021 is presented in Tables 2 and 3.

Analysis of comparative tables 2 and 3 of undergraduate admissions shows that full–time enrollment in 2021 decreased by 588 people (by 19%) compared to 2019, and the percentage of admission for state educational grants from the Republic of Belarus increased by 13%, from 56% in 2019 to 69% in 2021.

Table 2 – Number of accepted students for the 1st year of a bachelor's degree in 2019–2021

Year	Total by university	Full–time						Full–time with DOT		
		Total	On the basis of secondary education			On the basis of TVET		Total	On the basis of TVET	At the basis of HE
			By state order from the Republican budget	MIO grants	Total	By state order from the Republican budget	On a fee–based basis		On a fee–based basis	On a fee–based basis
2019	**3089**	**2905**	1612	89	1075	31	98	**184**	90	94
2020	**3180**	**3083**	1805	18	1133	26	101	**97**	53	44
2021	**2501**	**2484**	1730	9	735	–	10	**17**	–	17

Table 3 – The number of accepted students on state educational grants from the Republic of Belarus for the 1st year of a bachelor's degree in 2019–2021

Year	Total accepted for full–time	By state order from the Republican budget			
		On the basis of secondary education	On the basis of TVET	**Total**	% of the total number of full–time admissions
2019	**2905**	1612	31	**1643**	56 %
2020	**3083**	1805	26	**1831**	59 %
2021	**2484**	1730	–	**1730**	69 %

Formation of a contingent of students for master’s and doctoral studies (postgraduate education).

Admission to postgraduate education specialties for 2021–2022 amounted to 253 students (Table 4), including 210 people in the master's program, of whom 163 undergraduates on state educational grants and 47 people on a paid contractual basis.

For doctoral studies, 43 people, all by state order

Table 4 – Number of accepted undergraduates and doctoral students for the 1st year of 2019–2021

Name of indicators	Master’s		Doctoral studies	
	Under the state order	On a paid basis	Under the state order	On a paid basis
Total: including targeted training	163	47	43 1	0
Total by level of education	210		43	
Total by university	253			

Table 5 – Number of accepted undergraduates and doctoral students in 2019–2021

Year	Total by university	Master's			Doctoral studies		
		Total	Under the state order	On a paid basis	Total	Under the state order	On a paid basis
2019	**497**	**459**	315	144	**38**	36	2
2020	**505**	**437**	303	134	**68**	67	1
2021	**253**	**210**	163	47	**43**	43	

The analysis of Table 5 of admission for master's and doctoral studies shows that admission to the master's program in 2021 decreased by 227 people (by 56%) compared to 2020, when the admission of undergraduates in 2020 was 437 undergraduates. Admission for state educational grants in 2021 amounted to 163 undergraduates, which is almost two times less than the admission in comparison with 2020. In 2020, the reception for state grants amounted to 303 people.

Admission to doctoral studies in 2021 amounted to 43 doctoral students, which is much less than in 2020 (68 doctoral students).

The admission plan for all 3 levels of education for 2021–2022 was 2703 people. For the current academic year, in fact, 2,754 students were accepted at all 3 levels, which show that the general admission plan has been fulfilled.

Disadvantages and remarks:

1. The number of grants allocated to the direction of "Agricultural Sciences" remains unchanged every year.

2. According to the following educational programs, faculties (less than 15 students) did not accept students or form full–fledged academic groups:

Agronomic faculty:

- Breeding and seed production (kaz): 14 students;
- Breeding and seed production (rus): no admission;
- Soil science and agrochemistry (rus): 10 students;
- Phytosanitary safety (rus): no admission;

Faculty of Land Management, Architecture and Design:

- Land management (rus): no admission;

Faculty of Forestry, Wildlife and Environment:

- Agroecology (kaz): no admission;
- Agroecology (rus): 7 students;
- Protective afforestation (rus) – no admission;
- Hunting and fur farming (rus): 7 students;
- Fisheries (kaz): 7 students;
- Fisheries (rus): 3 students;

Energy Faculty:

- Heat and gas supply, ventilation and eco–engineering in agriculture (kaz): 12 students;

• Heat and gas supply, ventilation and eco–engineering in agriculture (rus)— no admission;

• Radio engineering and electronics (rus): 14 students;

• Energy supply and automation of agriculture (rus): 7 students;

Department of Computer Systems and Vocational Trai:

• Digital agricultural systems and complexes (kaz): 9 students;

Faculty of Veterinary and Animal Husbandry Technology:

• Agricultural Biotechnology (kaz, rus): no admission;

• Biological and Related Sciences (kaz): 8 students;

• Biological and Related Sciences (rus): no admission;

• Animal Husbandry (rus): 5 students;

• Food safety (rus): 8 students;

Technical Faculty:

• Technological machines and equipment (rus): no admission;

• The organization of transportation, movement and transport operation (rus): no admission;

• The organization of transportation, movement and transport operation (kaz): no admission;

• Technology of food products (rus): 11 students;

• Standardization, certification and metrology (rus): 7 students

3) Agronomic faculty and Faculty of Computer Systems and Vocational Education did not fulfill the admission plan.

4) Reduction of admission for master's and doctoral studies

Strengths:

1. An increase in the share of applicants under state educational grants for the 1st year of a bachelor's degree; in 2021, the share of state orders was 69%;

2. According to the number of state educational grants awarded as a result of the competition, "S. Seifullin KATU" NCJSC is in the top 5 annually.

Weaknesses:

1. The cost of the state grant for the master's degree remained at the same level;

2. Increase in the number of applicants who refuse state educational grants;

3. When allocating additional grants for the bachelor's degree, the Ministry of Education and Science of the Republic of Kazakhstan does not take into account the fact that the applicant has received an MIO grant and is already enrolled in a particular university.

Suggestions for improvement:

1. Increase the number of state educational grants for bachelor's and master's degrees in the field of education, "Agriculture and Bioresources";

2. Increase the cost of a state grant for a master's degree;

3. To ensure the formation of full–fledged academic groups in all educational programs.

Contingent of students

The number of students enrolled in bachelor's, master's, and doctoral PhD programs amounted to **12681** at the beginning of 2020–2021. The data is given in Table 6.

Table 6 – The contingent of students by education levels for 2018–2021

Indicators	**Unit of measurement**	**2018–2019**	**2019–2020**	**2020–2021**
The contingent of students in total:	number of people	13150	13081	12681
including by: – bachelor's degree – master's degree – doctoral studies	number of people	11598 1440 112	11815 1141 125	11690 837 154
Total number of students enrolled under the state educational grant:	number of people	6333	7043	7608
including by: – bachelor's degree – master's degree – doctoral studies	number of people	5219 1034 80	6047 896 100	6859 609 140
Number of students on a contractual basis total:	number of people	6817	6038	5073
including by: – bachelor's degree – master's degree – doctoral studies	number of people	6379 406 32	5768 245 25	4831 228 14
The number of students in the direction of "Agriculture and bioresources" and "Veterinary Medicine" in total / including on a grant:	number of people	3616/2898	3277/2703	1065/854
including by: – bachelor's degree – master's degree – doctoral studies	number of people	3138/2454 433/400 45/44	2929/2378 302/280 46/45	929/736 99/82 37/36
Students studying in the Kazakh language (full–time bachelor's degree)	number of people	6210	7009	7349
Contingent of international undergraduate students	number of people	156	119	128

Data analysis shows that the contingent of students at all levels of education (Table 6) has decreased by an average of **3.6% since 2018.** But at the same time, the contingent of students under the educational grant increased by **16.8%.**

In terms of education levels:

The contingent of undergraduate students has remained almost unchanged for **3** years (11598/11690). The number of undergraduate students studying under state educational grants has increased by an average of **24% compared to last**

year. The share of students studying in the state language has increased by **15.4% since 2018 in full–time education.**

The contingent of students studying for a master's degree has decreased by **42%** over the past 3 years. But there has been an increase in the number of doctoral students by **27.3%.** The number of students enrolled in state educational grants for postgraduate education increased by an average of **32.8%.**

The contingent of students in the directions of "Agriculture and Bioresources" and "Veterinary Medicine" is **1065** people, which is **8.4%** of the total contingent of students. The analysis for 3 years indicates a 70.5% decrease in the number of students in these areas**.**

The contingent as of September 16, 2021, is **11882** people including: undergraduate: 11,159 people, including 7936 on a grant; master's: 573 people, including 448 on a grant; doctoral: 150 people, including 144 on a grant.

Information about the contingent of students on October 1 of each year is posted on the University's website in the section "LPP": "Contingent".

The management of personal files of students, acceptance of applications from students, registration and registration of orders for all levels of education, provision of services to students, issuance of strict reporting documents, and personal and static accounting of all categories of students according to established forms are carried out in the Student Service Center. The entire contingent of students and information on the movement of students during the academic year are entered and processed in AIS "Platonus" and AIS "NOBD".

The movement of the contingent is caused by the expulsion, transfer, restoration, leaving for a second year of study, and giving of academic leave in accordance with the QMS 02.2040–2020 "Procedure for the expulsion, transfer, restoration, and giving of academic leave to students of "S. Seifullin KATU" NCJSC 485–N as of September 21, 2020, Academic Policy at "S. Seifullin KATU" NCJSC, on the basis of regulatory documents approved by the orders of the Ministry of Education and Science of the Republic of Kazakhstan: Standard Rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education as of October 30, 2018 No. 595; Rules for the organization of the educational process on credit technology of education as of April 20, 2011 No. 152.

On all issues related to deduction, transfer, and restoration, the student can get advice at the Student Service Center. The student can also get information about the transfer, restoration, deduction, provision or return from academic leave, re–course of study, and procedure for transferring credits mastered at other universities on the university's website in the Academic Policy of "S. Seifullin KATU" NCJSC.

The movement of the contingent is reflected in monthly reports within the university and in statistical forms 3 (NC) and 1 (NC) approved by the Ministry of Education and Science of the Republic of Kazakhstan, as well as in the daily report of the NED (National Educational Database) MES RK.

The number of people transferred from other universities in 2020–2021 and restored is **191**, 32 of them under a state educational grant. At the request of the students, **50** people were left for the second course.

The share of expelled students is much higher than that of those transferred and reinstated to our university (**80%**).

The number of students expelled at three levels of education for reasons of expulsion for three years is shown in Table 7. The number of students expelled at three levels of education in the context of faculties for 2020–2021 is shown in Table 8.

Table 7 – The number of students expelled at three levels of education for reasons of expulsion

Academic year	Reasons for deduction							**total**
	By s/w	For failure to succeed, for failure to appear for protection, for failure to fly. assessment on defense, conditionally enrolled, who did not pass the UNT	For violation of academic discipline, internal regulations and the Charter of the university	Transfer to another university	For non–fulfillment of the terms of the contract	For absenteeism with the academic leave	For other reasons (including death)	
2018–2019	446	33	360	135	33	3	25	**1035**
2019–2020	312	217	172	60	21	3	12	**797**
2020–2021	469	260	16	83	88	6	8	**930**

For 2020–2021, 363 students dropped out of the university on a free basis and 567 on a contractual basis. Total: 930 people.

Table 8 – The percentage of those expelled at three levels of education for 2020–2021 by faculty

Faculty	Grant		Contract		Total	
	Number of students on 01.10.2020	Quantity/%	Number of students on 01.10.2020	Quantity/%	Number of students on 01.10.2020	Quantity/%
Agronomic faculty	866	42/4.8	174	16/9.2	1040	58/5.6
Faculty of Forestry, Wildlife and Environment	306	36/11.8	176	28/16	482	64/13.3
Faculty of Veterinary and Animal Husbandry Technology	1401	70/5	308	48/15.6	1709	118/6,9
Faculty of	467	21/4.5	775	104/13.4	1242	125/10.1

Computer Systems and Vocational Education (CSaVE)						
Faculty of Land Management, Architecture and Design	1278	46/3.6	959	72/7.5	2237	118/5.3
Technical faculty	2079	116/5.6	592	98/16.6	2671	214/8
Faculty of Economics	110	3/2.7	1389	107/7.7	1499	110/7.3
Energy faculty	1101	29/2.6	700	94/13.4	1801	123/6.8
TOTAL:	**7608**	**363/5.1**	**5073**	**567/12**	**12681**	**930/7.9**

According to the university, about **7.9% of the total number of students was expelled** at the beginning of the academic year.

A large percentage of expelled students at the Faculty of Forestry, Wildlife, and Environment (13.3%), at the Faculty of CSaVE (10.1%), and at the Technical Faculty (8%).

Of the **930** expelled students in postgraduate education, 121 people (13%).

Table 9 – The number of students expelled by faculties for reasons of expulsion for 2020–2021

pp no.	Faculty, including PE (postgraduate education)	**Reasons for deduction**							
		Total/in % of the total number of deductions	At your own request	Transfer to another university	For violation of academic discipline, internal regulations and the charter	For failure to succeed, for failure to appear for protection, for failure to fly. assessment on defense, conditionally enrolled, who did not pass the UNT	For not leaving the academic leave	For non–fulfillment of the terms of the contract	For other reasons (including death)
1	Agronomic faculty	**58/5.6**	30	6		21			1
	including PE	**19/15.7**	18			1			
2	Faculty of Forestry, Wildlife and Environment	**64/13.3**	32	5	1	17		9	
	including PE	**3/2.5**	2			1			
3	Faculty of Veterinary and Animal Husbandry Technology	**118/6,9**	55	14	14	23	4	6	2
	including	**14/11.6**	7	3	1	2	1		

	PE								
4	Faculty of Computer Systems and Vocational Education (CSaVE)	**125/10.1**	73	10		29		12	1
	including PE	**19/15.7**	14			1		4	
5	Technical	**214/8**	105	16		76	2	12	3
	including PE	**24/19.8**	9	1		11		3	
6	Faculty of Land Management, Architecture and Design	**118/5.3**	58	7	1	41		10	1
	including PE	**10/8.3**	8			2			
7	Faculty of Economics	**110/7.3**	52	15		24		19	
	including PE	**18/14.9**	9	1		5		3	
8	Energy faculty	**123/6.8**	64	10		29		20	
	including PE	**14/11.6**	5	1		4		4	
	TOTAL:	**930**	**469**	**83**	**16**	**260**	**6**	**88**	**8**
	including PE*	**121**	**72**	**6**	**1**	**27**	**1**	**14**	**0**

Footnote: PE – postgraduate education*

The number of expelled students in the last year of study is **93**, of whom **37** are on an educational grant. All of them studied undergrad.

During 2020–2021, **25** people took academic leave, 18 of them for bachelor's degrees, 4 for master's degrees, and 3 for doctoral studies.

24 people arrived from academic leave during this period, 16 of them with bachelor's degrees and 8 with master's degrees.

Transfer of students on a contractual basis ***to a vacant place of a state educational grant*** is carried out in accordance with QMS 02.2040–2020 "Regulations on the Procedure for Awarding vacant Educational Grants Released in the Process of Obtaining Higher Education.".

Over the past **3 years**, **731** students have received a state educational grant on a contractual basis.

According to the results of the examination sessions, students received information about available vacant educational grants by means of announcements through the university's website, curators of supervising groups, deans, and heads of departments, as well as announcements sent via AIS to the student's personal account.

In addition to information about available free grants on the website in the section "SSC" (Vacant Grant)," students can get information about applicants for

released state educational grants, get acquainted with the Order of the Minister of Education and Science of the Republic of Kazakhstan on awarding grants, and get acquainted with the list of students who are holders of vacant educational grants released in the process of obtaining higher education.

According to the results of the winter examination session of 2020–2021, **123** vacant places were filled for the vacant educational grants (Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 172 as of April 20, 2021). Following the results of the summer examination session of 2020–2021, **67** applicants were approved by the Academic Council of the University for the Vacated State Grants and submitted to the Ministry of Education and Science of the Republic of Kazakhstan.

Consideration of candidates for the ***Presidential Scholarship was carried out in accordance*** with QMS 02.2031–2019, "Regulations on the Procedure for Appointing Presidential Scholarships to Students at the "S. Seifullin KATU" NCJSC.

"National Agrarian Scientific and Educational Center" (NASEC), on the basis of the Order of the Ministry of Education and Science of the Republic of Kazakhstan for distribution among three agrarian universities of Kazakhstan for 2021, allocated **17** scholarships to our University, established by the President of the Republic of Kazakhstan. The results of the competition are posted on the University's website in the section "SSC" (Presidential Scholarship).

According to the grant of the akim of Nur–Sultan, including other cities, **164** students were enrolled in 2020–2021. Data on undergraduate and graduate students for 3 years are shown in Table 10.

Table 10 – Data on undergraduate and graduate students for the period from 2018–2021

Name	**2018–2019**	**2019–2020 uch.g**	**2020–2021 уч.г**
The number of contract students transferred to further education under the state grant.	**277**	**264**	**190**
Number of Presidential/Nominal Scholarship recipients.	**27**	**16**	**17**
The number of students studying under the grant of the Akim of Astana (including from other cities: Aktobe, Almaty, Atyrau, Karaganda, Kyzylorda, Mangystau, Pavlodar, North Kazakhstan, Turkestan).	**101**	**159**	**164**
The number of students studying at the expense of enterprises (Kazenergi, Kazakhtelecom, etc.).	**40**	**27**	**67**

Internal academic mobility of students. One of the tasks in providing educational services to students is the implementation of the principles of accessibility in education, financial independence, a strong material and technical base, highly qualified personnel, and the introduction of distance learning technologies. The Department of Academic Affairs sets itself the task of constantly

improving the quality of its activities, closer interaction with employers, increasing competitiveness, and increasing the level of internal academic mobility.

The number of contracts concluded with Kazakh universities was 35. The dynamics of internal academic mobility among students are shown in Table 11.

Students can find information about training opportunities within the framework of the internal academic mobility program and a list of mandatory documents in the information package on the website of the "S. Seifullin KATU" NCJSC in the section "SSC": "Internal Academic Mobility."

Table 11 – Dynamics of internal academic mobility of students for 2019–2021

Types of mobility	2019–2020		2020–2021		**Total**
	fall semester	spring semester	fall semester	spring semester	
Outgoing academic mobility	9	10	75	14	**108**
Incoming academic mobility	10	12	59	28	**109**

Release. For **64** years of its activity, the university has trained and graduated **76727** specialists and bachelors for agriculture and other sectors of the economy. Since the opening of postgraduate education programs, **3,900** people have received a master's degree. The total graduation rate at the University Bachelor's, specialists, and master's degree programs is **80627** people.

In 2020–2021, **2,443** students graduated in **36** bachelor's and specialist specialties (**2,221** of them in full–time education, including **245** with honors; **222** in correspondence education, including **1** with honors). Graduation in postgraduate education is **380** master's degrees in **30** educational programs of specialized and scientific–pedagogical directions. The graduation rate from the doctoral contingent in the current year was **47** people. **Seven** people received a certificate for a master's degree in 2020–2021.

Of those who graduated from the university, **246** bachelors and specialists (**8.6%**) received diplomas with honors. The largest percentage of diplomas with honors was awarded to students of the faculties: agronomy, **6.1%;** Faculty of Land Management, architecture, and design, **2.2%**.

The expanded issue of 2020–2021 in the context of the field of education is reflected in Table 12.

Table 12 – Graduation by Field of Education

No.	Field of education	Bachelor's degree and Specialty	Share of the total number	Graduate degree	Share of the total number

		graduation (people)	of issues (%)	(people)	of issues (%)
1	Education	45	1.8	12	3.2
2	Arts and Humanities	35	1.4	7	1.8
3	Business Management and Law	472	19.3	59	15.5
4	Natural sciences, mathematics and statistics	105	4.3	21	5.5
5	Information and communication technologies	341	14.1	57	15
6	Engineering, manufacturing and construction industries	829	33.9	153	40.4
7	Agriculture and bioresources	372	15.2	45	11.8
8	Services	50	2.1	0	0
9	Veterinary	194	7.9	26	6.8
	TOTAL:	**2443**	**100**	**380**	**100**

The largest percentage of graduates in the field of education is "Engineering, manufacturing, and construction industries": **33.9%** of the total number of graduates in bachelor's degrees and **40.4%** in master's degrees.

Table 13 shows the output over the past three years for educational programs at all levels of education.

Table 13 – Graduation according to educational programs at all levels of education from 2018–2021

pp no.	**Academic year**	**TOTAL, including with distinction (%)**	**Specialists**		**Bachelors**		**Masters**		**Doctoral candidates**
			total	**including with distinction**	**total**	**including with distinction**	**Number of diplomas.**	**A certificate to the basic diploma**	
1	2018–2019	2903/232 (10.3%)	150	22	2109	210	622	41	22
2	2019–2020	3261/270 (10.3%)	128	28	2503	242	598	42	32
3	2020–2021	2870/246 (8.6%)	194	29	2249	217	380	7	47

The analysis of graduation over the past 3 years indicates a decrease in the number of graduates: bachelors by **6.2%;** masters by **39%;** master's degree certificates by **16.7%.** But there is an increase in the output of specialists by **22.7%** and that of doctoral students by **53.2%.**

Information on the current year's graduation is posted on the University's website in the section "SSC": "Graduation". There is also a list of graduates with an indication of the series and number of diplomas issued to them. Students can also get acquainted with the graduation requirements here.

Male students of the university are required to register ***for military service in the*** military enlistment offices of Saryarka, Almaty, and Yesil districts. **5031** students have been registered for military service. Electronic Certificate No. 3 with a QR code is issued to students on their application through the AIS "Platonus".

Table 14 – Statistics of the contingent of students placed on military registration in 2020–2021

No.	course	Saryarka		Almaty		Yesil		Total
		bachelor's	master's tour	bachelor's	master's tour	bachelor's	master's tour	
1	1	120	78	145	50	34	20	447
2	2	898	134	413	109	138	25	1717
3	3	900		534		121		1555
4	4	688		414		77		1179
5	5	59		64		10		133
6	**Total**	**2665**	**212**	**1570**	**159**	**380**	**45**	**5031**

Information on military registration is posted on the University's website in the section "SSC": "Military registration."

The Student Service Center for 2020–2021 provided the following ***services***: about **1,700** applications from students were accepted; 13,867 certificates of training were issued to students; about **1,500** transcripts were issued; **2830** diplomas and appendices to them were printed and issued to graduates of the university; **122** duplicates of diplomas and appendices to them were printed and issued (due to loss); and the SSC processed **576** requests from students about the services of the SSC. All the necessary information with instructions on the following services is posted on the University's website in the "SSC" section: "Submit an application;" "Get a certificate." Here, students can also get acquainted with the main functions of the Student Service Center, including the work schedule and contact details of the SSC.

Strengths:

1. An increase in the number of students studying for doctoral studies by an average of **27%.**

2. An increase in the number of students enrolled in the state educational grant at all three levels by **16.8%** and full–time education by **15.5%.**

3. Increase in the number of students who participated in internal academic mobility:

- outgoing academic mobility: by **40%**;
- incoming academic mobility by **30%.**

4. There is an increase in the output of specialists by **22.7%** and that of doctoral students by **53.2%.**

5. The largest percentage of graduates in the field of education is "Engineering, manufacturing, and construction industries": **33.9%** of the total number of graduates in bachelor's degrees and **40.4%** in master's degrees.

6. Automation:

- issuance of electronic certificates with a QR code;
- automatic issuance of a certificate at the place of request with a QR code;
- automatic issuance of transcripts with QR codes;
- automatic formation of orders for the movement of students in AIS "Platonus" and their printing in templates;
- Work is underway to accept applications from students through the AIS Platonus."
- Work is underway on the modules "Academic Mobility" and "Extract from Orders."

Weaknesses:

1. Reduction of the total contingent of students at all levels of education by **6%,** including the number of graduate students by **42%.**
2. Reduction of the contingent of students on a contractual basis by **3%;**
3. Decrease in the number of students in the direction of "Agriculture and Bioresources" and "Veterinary Medicine" by **5%.**
4. Decrease in the number of graduates (bachelors by**2%;** masters – by**39%;** certificates for the diploma of masters by**16.7%.**

Planning and organization of the educational process

In 2019, due to changes in the NLA MES RK, all educational programs were updated, taking into account the labor market and employers, and entered into the Register of MES RK. Accordingly, the share of updated educational programs in the total number of EP, according to the needs of the labor market and the employer, was 100%.

In 2020, work will continue on updating the EP. Work was carried out to launch a pilot two–degree master's degree program jointly with AgroParisTech, France. On the recommendation of AgroParisTech, a new model for training agricultural specialties was created.

To prepare a two–degree master's degree program, work is underway at the bachelor's level; the emphasis is on the in–depth study of fundamental disciplines in 1–2 courses and on the formation of competencies in specialization, with the basic component of digitalization in 3–4 courses. In this regard, in 2020, new educational programs were introduced in 7 EP (6B05202 "Agroecology," 6B08303 "Protective Afforestation," 6B08104 "Phytosanitary Safety," 6B08101 "Agronomy," 6B08102 "Breeding and Seed Production," 6B08103 "Soil Science and Agrochemistry," 6B05103 "Biology").

These programs were entered into the Register of MES RK. In 2021, another bachelor's degree program, "Animal Husbandry," was developed in this direction, which was also sent for updating to the Register of MES RK.

In connection with the update of the Order of the Ministry of Education and Science of the Republic of Kazakhstan as of October 31, 2018 No. 604, with amendments as of May 5, 2020 No. 182 "On approval of state mandatory standards of education at all levels of education" in 2020, the EP of doctoral studies was updated, disciplines were added to the cycle of basic disciplines (BD): 1)

Academic writing and 2) Methods of scientific research, and are included for updating in the Register of MES RK.

In the Bachelor's degree program, in the section "General education competencies," competencies were reflected according to paragraphs 6 and 35, where the student must know the methods of scientific research and academic writing and apply them in the field under study.

Within the framework of the EU Erasmus+1 project, it was created jointly with the main partner universities (University of Heuenheim (Germany), Higher School of Angers (France), and others) a Master's educational program called "SARUD: Sustainable Agriculture and Rural Development."

The university has 61 disciplines through the use of dual education, including 48 bachelor's degree disciplines, 8 master's degree disciplines, and 5 doctoral disciplines. In connection with the quarantine measures taken in 2020, dual training was transferred to a distance format.

In order to promote the principles of academic honesty and the formation of a culture of academic honesty, the university has established work on assessing the degree of borrowing in the completion of graduate theses, master's, and doctoral dissertations by students. The university has an "Antiplagiat.VUZ" system, which is integrated with the automated system for submitting written papers by students at UniHUB. The UniHUB platform is designed to check the quality of written works according to the norms of International Education Standards based on academic transparency and decency. The system checks written works according to the following indicators: the uniqueness of the work (the percentage of plagiarism); the number of pages or words in the text; deadlines for the completion of works; and also systematizes the verification of the work by the teacher.

In 2021, the University, together with JSC "International University of Information Technologies," developed an educational program "Digital agricultural systems and complexes" in the field of Animal Husbandry, which trains highly motivated personnel for innovative and knowledge–intensive areas of agriculture with theoretical and practical knowledge, skills, and abilities necessary for their implementation in professional activities that meet the needs of domestic and world intellectual labor markets, ready to make a qualitative breakthrough in the agricultural sector of the economy of Kazakhstan. A specialist in the digitalization of agriculture will use the tools of the programming language when solving production tasks, performing data analysis, and identifying trends. And also, this educational program will allow you to develop mobile applications for the needs of the agricultural sector. The purpose of the EP is to train a specialist in the field of digitalization of agriculture to improve the efficiency of the industry and provide additional opportunities to consumers through the use of ICT technologies for processing, storing, exchanging, and managing information.

Updates for 2020–2021 in the Provisions of the QMS were recorded in the Academic Policy on the university's website.

Digital transformation

Since June 1, 2021, 308 video lectures have been recorded by the digital studio.

Online courses (webinars) were held with the university teaching staff on the pedagogical design of video lectures and familiarization with the rules of recording video lectures in a digital studio.

An online student employment service has been developed. kazatu.kz, and work is underway to develop a technical specification for creating a university's own distance learning platform.

By June 30, 2021, the process of automated verification of written texts for plagiarism using the Unihab system had been completed. More than 3000 student works were checked, and analytical work was carried out. Based on the results, some changes and adjustments were made to the algorithm of the program to increase its effectiveness. The new version is ready for work for 2021–2022. In order to improve the quality of checking written works for anti–plagiarism, the functionality and capabilities of the "StrikePlagiarism" and "Antiplagiat.VUZ" systems were studied and compared.

Organizational and advisory assistance was provided to heads of departments and students in working with the UniHUB program through Zoom, WhatsApp, and AnyDesk.

In August, agreements were signed on the establishment of the 1C Certified Training Center, and certified training programs will be included in the educational process of 2021–2022. Currently, teachers in the faculty of CSaVE Sharipov Ye.B., Esentemirova A.K., Nauryzbayeva S.A., and Bupezhanova A.K. successfully completed an online course with a certificate "Teacher of the SSC."

Information and methodological support of the educational process

As part of the work on the introduction and improvement of forms and methods of teaching and the use of new educational technologies in the educational process, nine open educational and methodological seminars were held for 2020–2021. Seminars are devoted to topical issues of the use of innovative educational technologies in the educational process, for example, the methodology of conducting classes in the application of distance learning technology, interactive teaching methods in distance learning, etc. (Table 15). The director of the Department of DAA, PhD, Professor Sarbasova K.A., conducted a training webinar using an interactive teaching method on the topic "Flipped learning in the educational process of the university."

In order to improve the quality of teaching staff, 29 video lectures were created and introduced into the educational process in the current academic year (Table 16).

Since June 1, 2021, the digital studio that prepares and conducts professional shooting of the video lectures of the teaching staff has recorded 308 video lectures. At the moment, they are undergoing an internal examination for further use in the educational process of the "S. Seifullin KATU" NCJSC.

Table 16 – The number of video lectures created and implemented in the educational process by faculties for 2020–2021

No.	Faculty	Number of video lectures
1.	Humanities	1
2.	CSaVE	15
3.	Agronomic	4
4.	Technical	5
5.	Economics	4
Total:		**19**

For the exchange of experience by university teachers using innovative technologies and teaching methods, **137** open classes (lectures) were planned and conducted for 2020–2021.

Cooperation is successfully developing with managers and leading specialists from production and highly qualified specialists from ministries, departments, and agencies lecturing students at our university. For 2020–2021, 80 lectures on current and modern topics were read by leading specialists of the production, and 61 open lectures were held for 2019–2020 (Table 17).

The analysis of Table 17 shows that in 2020–2021, the number of open classes held by university teaching staff increased by 84 and lectures conducted by leading specialists from production increased by 19. All open classes were held online on the Zoom platform.

Table 17 – Number of open classes and lectures delivered in 2019–2021

Academic year	Number of open teaching staff classes conducted using innovative technologies and teaching methods	Number of lectures delivered by managers and leading specialists from the production
2019–2020	53	61
2020–2021	137	80
Total	190	141

Due to changes in the organizational structure of "S. Seifullin KATU" NCJSC, the Regulations "On the Academic Council" (PASSMC02.2068–2021) and the Regulations on the Faculty Council on Academic Quality (PSFAC QMS 02.2069–2021) were developed and included in the QMS. In this regard, the activities of the educational and methodological Council were canceled, its functions were transferred to the Academic council, and the methodological commission of the faculty was liquidated, whose functions were transferred to the Faculty Council for Academic quality.

One of the most important tasks in the organization of the educational process is the educational and methodological support of disciplines, as well as their periodic updating. When forming the Publication Plan of the EML of the University for 2020–2021, the publication of literature in English and the state languages remained a priority.

An analysis of the implementation of the publication plan over the past two years shows that, in general, the EML publication plan for the university has been fulfilled in 2019–2020 by 92% and in 2020–2021 by 96% (Table 18).

Table 18 – Implementation of the Plan for the Publication of EML in the "S. Seifullin KATU" NCJSC for 2019–2021

No.	**Faculty**	**2019–2020**			**2020–2021**		
		plan	**fact**	**%**	**plan**	**fact**	**%**
1	Agronomic	16	16	**100%**	15	15	**100%**
2	VAHT	25	19	**76%**	13	11	**84%**
3	Humanities + FL Department	19 1	18 1	**95%** **100%**	16	14	**88%**
4	CSaVE	51	45	**88%**	52	50	**96%**
5	Land Management, A and D	35	32	**91%**	10	8	**80%**
6	Technical	77	73	**93%**	51	51	**100%**
7	Economics	41	45	**110%**	36	36	**100%**
8	Energy	15	15	**100%**	17	17	**100%**
9	Military Department	7	1	**14%**	8	8	**100%**
11	The Department of physical training	9	8	**89%**	2	2	**100%**
12	Department of Biological Sciences	3	1	**33%**	3	3	**100%**
Total		**299**	**274**	**92%**	**223**	**215**	**96%**

The analysis of the provision of EML specialties by education levels in the context of languages showed that there was a positive trend in the provision of the state language in 2019–2020, which was 90%, and in 2020–2021, it increased to 99% (Table 19).

Table 19 – Implementation of the EML publication plan in the state language for 2019–2021

No.	**Faculty**	**2019–2020**			**2020–2021**		
		plan	**fact**	**%**	**plan**	**fact**	**%**
1	Agronomic	4	6	**150 %**	5	5	**100%**
3	VAHT	12	12	**100%**	8	8	**100%**
4	Faculty of Humanities	11	12	**110 %**	5	5	**100%**
5	CSaVE	26	22	**85%**	32	31	**97%**
6	Land Management, A and D	13	13	**100%**	7	7	**100%**

7	Technical	39	32	**82%**	24	24	**100%**
8	Economics	17	18	**105%**	18	18	**100%**
9	Energy	2	1	**50%**	8	8	**100%**
10	Military department	3	–	**0%**	8	8	**100%**
11	Department of Biological Sciences	3	2	**66%**	2	2	**100%**
12	The Department of Physical Education	1	–	**0%**	1	1	**100%**
Total		**131**	**118**	**90%**	**118**	**117**	**99%**

Table 20 – Implementation of the EML publication plan in English for 2020–2021

No.	**Faculty**	**2019–2020**			**2020–2021**		
		plan	**fact**	**%**	**plan**	**fact**	**%**
1	Agronomic	**1**	**–**	**0%**	1	1	**100%**
2	VAHT	**3**	**3**	**100%**	3	3	**100%**
3	Humanities + The Department of Foreign Languages + The Department of Biological Sciences	**1** **1**	**1** **–**	**100%** **0%**	2	1	**50%**
3	CSaVE	**6**	**5**	**83 %**	5	5	**100%**
4	Technical	**7**	**6**	**85%**	6	6	**100%**
5	Economics	**4**	**8**	**200%**	4	2	**50%**
6	Energy	**1**	**–**	**0%**	2	2	**100%**
7	Land Management, A and D	**1**	**1**	**100%**	2	1	**50%**
	Total	**25**	**24**	**96%**	**25**	**20**	**80%**

The analysis of Table 20 showed that the implementation of the EML publication plan in English in 2020–2021 decreased by 16%. In 2019–2020, 96% were fulfilled, and in 2020–2021, the EML publication plan was fulfilled by 80%. Nevertheless, the table shows that good work has been done at the faculties, such as CSaVE agronomic, technical, and energy.

In accordance with the University's Development Program, 100% of students have access to the use of scientific electronic publications in the Thomson Reuters, Scopus, and Springer databases. 43 electronic resources are available on the website of the scientific library for university users; 9 of them are licensed access, and 34 are open access.

Through the electronic library of the university, through the range of IP addresses of the university, access is gained to remote information resources, advanced electronic libraries of the world, such as Web of Science, Springerlink, CabiAbstract, and Scopus, and the Russian databases "Lan Publishing House," eLibrary.ru, and "University Library Online."

An Institutional Repository has been opened at the scientific library of the University, where the teaching staff of the university downloads educational and methodological literature, electronic publications, and multimedia material**.** The Institutional Repository is an electronic archive for long–term storage, accumulation, and provision of long–term and reliable storage of materials. All teaching and methodological literature of teaching staff, images, audio and video files, and scientific publications of teaching staff are uploaded to the Repository and are publicly available. The University's Institutional Repository has 1332 pieces of educational and methodological literature uploaded, of which 701 are in Russian, 531 are in the state language, and 100 are in English.

Strengths:

- Nine training seminars were held on the issues of using innovative educational technologies in the educational process with the use of DLT.
- 137 open classes and lectures by teaching staff using innovative technologies and teaching methods were held.
- Managers and leading specialists from the production read 80 lectures for students;
- The teaching staff plan for the EML has been completed for 96%;
- The provision of EML in the state language has increased by 99%;
- 29 lectures were recorded and implemented in the educational process.
- A digital studio has been opened to record a video lecture by the teaching staff.
- An Institutional Repository has been opened at the University's scientific library.

Weaknesses:

There is a low percentage of EML provision in English. In order to increase the percentage of educational programs with teaching and methodological literature, the following is proposed:

1. Increase in the volume of public procurement by EML.
2. Organization of author collectives with partner universities for the development of textbooks and teaching aids in the state and English languages
3. To stimulate the authors' collectives publishing literature in the state and English languages.
4. Organization of a translation bureau for the translation into the state and English languages of the most severely deficient literature.
5. Use of available electronic resources.

There is a low percentage of the book fund for updated EP. In this regard, it is necessary to include in the publication plan educational and methodological literature on the updated EP courses.

Organization and monitoring of educational achievements of students

During the reporting period, the Registar's Office (RO) was engaged in the formation of groups and streams and the distribution of the classroom fund for scheduling training sessions, exams, and HES and SAC bachelor's, master's, and doctoral studies.

In 2020–2021, at the university, the number of groups and students in the context of all five courses is presented below:

- in the 1st year: 3152 students, 155 groups: Kazakh groups: 102, Russian groups: 53;
- in the 2nd year: 2934 students, 145 groups: Kazakh groups: 83, Russian groups: 55, multilingual groups: 7;
- in the 3rd year: 3008 students, 160 groups: Kazakh groups: 92; Russian groups: 56; multilingual groups: 12;
- in the 4th year: 2264 students, 110 groups: Kazakh groups: 62, Russian groups: 38, multilingual groups: 10;
- in the 5th year: 318 students, 14 groups: Kazakh groups: 9, Russian groups: 5,

Thus, the total number of undergraduate groups is 584, and there are 11676 full–time students. The average number of students in the group is 19.6.

On May 16, 2019, issued an order No. 364–N "On the appointment of advisors" for 2019–2020, which contains a list of exempt advisors for all specialties of the university—32 advisors.

When analyzing the qualitative composition of advisors, it was found that experienced teachers who have been engaged in advisory activities for several years in a row were appointed as advisors. With young advisors who do not have practical work experience and who do not know enough about the structure of the curriculum/EP and the theoretical content of specialties, the Registrar's office conducted training sessions and consultations on a regular basis.

The main duty of advisors during the academic year is to keep an eye on students' academic progress. At the beginning of the academic year, under the guidance of advisors, the IEP of students was adjusted in accordance with the WC of specialties. A reconciliation of graduation rates was also carried out.

In order to improve the quality of work, videoconferencing meetings were held with the heads of departments, advisors, and teaching staff on the modules of AIS "Platonus:" on the consolidation of disciplines, on the formation of the staff schedule and IEP of teaching staff, on the registration of students, on the module "Testing," on the module Reports," and other issues of the work of the modules of AIS "Platonus."

The schedule of classes, along with the working curriculum and academic calendar of the educational process, is the main document regulating the organization of the educational process at the university.

The schedule is drawn up in accordance with the regulations on the procedure for scheduling classes and exams based on work plans and also in accordance with information from departments about the disciplines taught and leading teachers,

taking into account the number of students in groups, seats in classrooms, the appointment of classrooms, etc.

According to the academic calendar, the schedule of classes for the 1st, 2nd, and 3rd trimesters of full–time and distance learning bachelor's degrees and full–time departments of master's and doctoral studies was compiled. There was also a schedule of exams for the winter, spring, and summer examination sessions. All the above schedules were posted in advance on the university's website and on the educational portal for all students.

In the first and second trimesters of 2019–2021, a schedule of classes and exams was compiled for 584 groups of full–time bachelor's degrees, 83 groups of master's degrees, and 26 groups of doctoral studies; in the third trimester, 460 groups of full–time bachelor's degrees and 47 groups of master's degrees The schedule for full–time distance learning students was compiled during the academic year in accordance with the terms of the sessions for distance learning students. For those who study remotely, a schedule has been compiled for the types of academic periods, such as a theoretical course, exams for distance learning, introductory lectures, and an examination session for distance learning. A schedule of review lectures, state examinations, and defense of theses (projects) has been compiled for students of the final courses; the audiences of the HES and SAC have been approved.

All types of controls were carried out according to academic calendars within the established deadlines. Special attention was paid to the organization and conduct of examination sessions (winter, spring, and summer). In due time, an Order was issued (2020.10.27 No. 551–N) for the appeal commission for 2020–2021. During the examination sessions, the examination sheets were printed, and the output of the sheets was recorded according to the exam schedule.

Work has been carried out on the organization of the summer trimester: applications of students have been processed, eight orders for admission to the summer trimester have been issued, registration of students has been carried out, and statements for storage have been printed.

Work has been carried out on the reconciliation of the Summary statements of graduation groups for Applications to graduates in 2020.

During the academic year, control over the filling of electronic journals by teaching staff was carried out: the "Instructions for filling in the electronic journal of current academic performance in the AIS "Platonus" were updated, reports on filling in electronic journals were analyzed, and relevant reports were repeatedly sent to the heads of departments.

Analytical reports on the results of the autumn, spring, winter, and summer examination sessions were presented at Academic Councils. The results of academic performance for the reporting year are presented in Table 21 in comparison with the previous academic year.

Table 21 – Results of examination sessions from 2019–2021

Academic years	Number of students, people	Admitted, people	Grade, %	GPA, score
2019–2020	11758	10029	75%	2.95
2020–2021	12058	10780	82.3%	3.17

In the reporting academic year, training using the DLT form of the final control of the intermediate certification was conducted in a written format and through computer testing. Table 22 shows statistics on the use of these forms by trimester.

Table 22 – Forms of final control for 2020–2021

trimester	The FORM of final control is a written final qualifying exam (FQE)	FORM of final control – testing in AIS "Platonus"
1st trimester	619	2783
2nd trimester	448	2540
3rd trimester	387	2016
total by university:	**1454**	**7339**

During the examination sessions, the "Examus" proctoring system was used. The examination session using proctoring was carried out by students of 1–4 courses. Table 23 shows the number of connection sessions and the total number of hours of proctoring usage.

Table 23 – Statistics on the Use of the "Examus" Proctoring System for 2020–2021

No. pp	Months of using proctoring	Total number of sessions – connections	Total number of hours	Number of students, people
1	March	34761	7897	8862
2	April–May	29754	6979	8258

According to the results of checking asynchronous proctoring videos, 63 exam results in the 2nd trimester and 20 exam results in the 3rd trimester were canceled.

The results of the final certification: the defense of diploma projects (works) and comprehensive exams were organized and conducted online (in accordance with the QMS "Knowledge Control and Final Certification of Students").

Table 24 – Results of the defense of theses (projects) for 2020–2021

Academic	Number of	Of them passed on (in	Average	Percentage of

year	applicants	%)		score	quality
		Excellent	Good		
2020–2021	2244	854	1155	83.0	3.1

Table 25 – Results of complex exams for 2020–2021

Academic year	Number of applicants	Of them passed on (in %)		Average score	Percentage of quality
		Excellent	Good		
2020–2021	384	153	163	85	3.2

Table 26 – Results of the defense of master's theses for 2020–2021

Academic year	Number of applicants	Of them passed on (in %)		Average score	Percentage of quality
		Excellent	Good		
2020–2021	351	213	130	88.3	3.4

Table 27 – General results of the final certification

Academic year	Graduation	Percentage of quality	Average score
2020–2021	2787	85.4	3.2

Analysis of the reports of the SAC showed that the level of bachelor's degree training at the "S. Seifullin KATU" NCJSC meets the requirements of the State Educational Standard of the Republic of Kazakhstan. In general, the quality of graduation papers (projects) meets the general requirements for the design of graduation projects. The technical requirements and standards required for writing theses have been met. The defense of graduate theses was conducted online with the use of DLT (FQE) Zoom. These were mainly carried out on the basis of basic farming, according to the research topics of the department. The topics of diploma projects and the level of their development meet the qualified requirements and directions of the EP. These are made from the materials of specific economic entities in different industries.

Based on https://moodle.kazatu.kz/login/index.php The university has created a structured repository of final certification materials for the Moodle LMS platform.

In order to evaluate the activities of the teaching staff, from June 1 to June 4, 2021, a questionnaire titled "Teacher through the eyes of Students" was conducted on the AIS "Platonus" platform. The survey covered 728 university teachers. According to the results of the work carried out, an average score of 4.7 points was obtained at the university, which is an indicator of the competence of teachers in

their work as well as the high–quality performance of their functional duties by teaching staff.

Strengths:

- During the reporting period, certain work was carried out to improve the quality of registration and certification procedures for students (seminars were held, QMS documents, Instructions, etc. were updated).
- Constant monitoring of filling in electronic journals, printing of statements, etc. was carried out.
- The use of the proctoring system has made it possible to increase the responsibility of students to prepare for intermediate certification

Weaknesses:

In the reporting period, issues related to students' understanding of the choice of educational trajectory, knowledge of the participants in the educational process of normative legal documents regulating the requirements for the development of the educational program (on the part of students and teaching staff), and the quality of evaluation of educational achievements of students (on the part of teaching staff) were insufficiently worked out.

The use of the proctoring system showed an insufficient level of provision of students with an Internet connection as well as the presence of violations of academic integrity.

Practical training and employment of graduates

Types of professional practices provided by the educational programs of the university: academic, industrial, and pre–graduate.

The organization and conduct of professional practices in subsidiaries are regulated by the regulation "On the organization and passage of professional practices by students on the territory of subsidiaries (A.I. Barayev, SPC GF LLP, "KazRI Les household and agglomeration" JSC, SC SHS).

All practices are organized on the basis of Contracts for professional practice. In February 2021, the form of the Contract was revised; it became 3–sided, and additions were made in terms of the responsibility of the students themselves during the internship as well as issues of compliance with sanitary and epidemiological requirements in the places of practice.

The bases of practices are enterprises (organizations) of various industries, various forms of ownership and organizational and legal forms, structural divisions of the university, laboratories, research centers with the necessary qualification personnel and scientific and technical potential, corresponding to their material and technical and information bases, and other conditions for the implementation of the internship program for students who have concluded with the university of the contract (including Strategic partnership memoranda).

When concluding Contracts for professional practice, the priority of the university is large enterprises with modern equipment and technologies (there are more than 90 enterprises in various sectors of the economy).

The list of some large enterprises and organizations that are the basis of practices **with** which contracts were concluded in 2020–2021 is indicated in Table 28.

Table 28 – List of large enterprises and organizations that are based on practices

No.	List of large enterprises	
1.	South–Western Scientific Research Institute of Animal Husbandry and Plant Growing LLP	Karaganda Research Institute of Plant Growing and Breeding
2.	Kazakh Research Institute of Fruit and Vegetable Growing Kaynar LLP	East Kazakhstan Research Institute of Agriculture LLP
3.	Kazakh Scientific Research Institute of Agriculture and Crop Production LLP	"Karabalykhsky SHS" JSC
4.	Kazakh Research Institute of Potato and Vegetable Growing LLP	KSU Veterinary Department under Akimat of the North Kazakhstan region
5.	"Kazhydromet" PSE on the REM	"Astana Vetservice" PSE on the REM of the Akimat of Nur–Sultan
6.	State Institution "Republican Plant Quarantine Center"	State Institution "Department of Veterinary Medicine of Karaganda region
7.	RSU "Republican Methodological Center for Phytosanitary Diagnostics and Prognoses"	KazAgroFinance JSC
8.	RSE "Zhasyl Aimak"	TSESNA–ASTYK Concern LLP
9.	NCJSC "State Corporation Government for Citizens"	JSC "Akmola Car Repair Plant"
10.	State Institution "Republican Plant Quarantine Center"	JSC "Zhusanbank"
11.	RSU "Republican Methodological Center for Phytosanitary Diagnostics and Prognoses"	JSC "BankCentrCredit"
12.	JSC "Passenger transportation"	JSC "NIT"
13.	JSC "KTZh–Cargo transportation"	JSC "NAT"
14.	RSE "Kazakhstan Institute of Standardization and Certification"	JSC "Holding "Zerde"
15.	JSC "National Center for Expertise and Certification"	Kazakhtelecom JSC Central Regional Directorate of Telecommunications
16.	JSC "Astana–Teplotransit"	Kazpost JSC, Astana branch "Astana Post Office"
17.	Astana Elektr technikalyk zauyty LLP	JSC "Republican TV and Radio Corporation "Kazakhstan" Qazaqstan TV channel
18.	LLP "Research Institute of standard and experimental design"	LLP "Television of Astana" Astana TV Channel
19.	NGO "Republican Chamber of the Kazakh white–headed breed"	JSC "BI Group" Nur–Sultan

The following laboratories are equipped for conducting educational practices at the university:

- Research platform for agricultural biotechnology;
- System research;

- Information technology;
- Soil Research Laboratory

Training practices for students of 1–2 year are also organized by BIO–KATU LLP.

When distributing students of the corresponding course to practice, independent individual internships are allowed on the basis of a signed Contract on the organization of internships.

According to the instruction of the Chairman of the Board of Aituganov K.K. and in accordance with the Roadmap for the Implementation of the Decision of the Academic Council of the "S. Seifullin KATU" NCJSC as of December 15, 2020, the Department for Academic Affairs compiled and approved at a meeting of the University Board a Regulation on the Organization of Professional Practice of Students of the "S. Seifullin KATU" NCJSC, on the basis of subsidiaries of Barayev Scientific and Production Center of Grain Farming LLP, Bukeikhan Kazakh Research Institute of Forestry and Agroforestry LLP, and North Kazakhstan Agricultural Experimental Station LLP.

According to the applications from affiliated organizations, together with the departments, the specialties of 3–4 courses, the periods of practical training, the number of students at the levels of study with the indication of the surname, and the GPA (not less than 3.0) were determined. A contract has been drawn up and signed for the passage of professional practices.

Information about internships in subsidiaries for 2020–2021 is provided in tables 29, 30, and 31.

Table 29 – A.I. Barayev Grain Research and Production Center LLP (Agronomic Faculty)

Specialty/educational program	Total number of students	Period	Average GPA
Agriculture and Plant Growing	11	04.05.–25.06.2021 16.08.–24.09.2021	3.2
Soil Science and Agrochemistry	18	04.05.–09.07.2021 09.08–11.09.2021	3.33
Plant Protection and Quarantine	3	04.05–02.07.2021	3.2
Phytosanitary Monitoring	1	10.05–11.06. 2021 30.08–08.10.2021	3.51
Agro–Technology	1	10.05–11.06.2021	3.81
Selection of Field Crops	3	10.05–11.06.2021	3.51
Crop Production	3	10.05– 04.06.2021	3.71

Table 30 – Bukeikhan Kazakh Research Institute of Forestry and Agroforestry LLP

Faculty	Speciality	Total number of students	Periods	Average GPA
Bachelor's, 3rd year				
Agronomic	Forest Resources and	17	11.05 –	3.1

	Forestry		02.07.2021 30.08–10.09.2021	
	Soil Science and Agrochemistry	1	11.05.–16.07.2021 09.08–11.09 2021	3.05
VAHT	Biotechnology	13	02.08.–08.10.2021	3.3

Table 31 – North Kazakhstan Agricultural Experimental Station LLP

Faculty	Speciality	Year	Total number of students	Periods	Average GPA
Bachelor's					
Agronomic	Agriculture and Plant Growing	3	7	17.05.–09.07.2021 16.08.–24.09.2021	3.0
Technical	Agroengineering	3	1	17.05.–13.06.2021 31.08–27.09.2021	3.24
Magistracy					
Agronomic	M131 Agrotechnology	1	2	10.05–11.06.2021	3.79
Doctoral studies					
Agronomic	D131 Crop production	1	1	10.05–04.06.2021	3.67

On the basis of the agreement No. 2017–P431, signed between the management of TNK Agrofirma LLP and "S. Seifullin KATU" NCJSC as of May 10, 2017, for conducting professional practice and on the basis of Order No. 560B as of May 18, 2021, from May 17 to June 20, 2021, students of the 2nd year of EP left for production practice 6B08702 "Agroengineering" in the number of 29 people. On the basis of two orders No. 559B as of May 18, 2021, and No. 560B as of May 18, 2021, from May 17 to June 13, 2021, 3rd–year students of the specialty 5B08600 "Agricultural Machinery and Technology," left for practical training in the number of 27. All expenses for the organization of the practice are borne by TNK Agrofirma LLP.

Table 32 – General characteristics of all types of practices in the context of faculties for 2020–2021

Faculty	**Educational (1–2 year)**	**Production (3–4 year)**	**Pre–graduate (4–5 year)**	**Number of signed contracts**	**Form of the event D–distantly B–blended**	**Number of students**
	Duration (trimester)					

Technical	3	1.3	3	891	1–2 year – D 3–4 year – B	2409
Land Management, A and D	3	3	3	1011	1–2 year – D 3–4 year – B	2085
Energy	3	3	3	789	1–2 year – D 3–4 year – B	1715
Economics	2	2	3	458	1–2 year – D 3–4 year – B	1260
Agronomic	3	1.3	3	420	1–2 year – D 3–4 year – B	631
CSaVE	3	3	3	389	1–2 year – D 3–4 year – B	1096
VAHT	3	3	3	489	1–2 year – D 3–4 year – B	940
LHDPiOP	3	3	3	298	1–2 year – D 3–4 year – B	781
Total:				**4745**		**10917**

According to the results of the practices for 2020–2021, students were protected by reports on the passage of the internship, and appropriate assessments were issued.

Table 33 – Results of the average GPA of students in all types of practices for 2020–2021

Faculty	Bachelor's			Master's		Doctoral studies	
	Educational (1–2 year)	Production (3–4 year)	Pre–graduate (4–5 year)	Research	Pedagogical	Research	Pedagogical
Technical	3.45	3.33	3.2	3.67	3,8	3,8	3,72
Land Management, A and D	3.67	3.4	3.33	3,8	3,65	3.67	3,8

Energy	3.45	3.33	3.2	3.67	3,72	3,85	3.67
Economics	3.67	3,5	3.67	3,8	3.8	3.68	3,8
Agronomic	3,5	3.33	3.33	3,55	3.65	3.63	3,55
CSaVE	3.33	3.45	3.45	3,8	3,72	3,76	3,8
VAHT	3.33	3.4	3,5	3.67	3.8	3.8	3.67
ЛХДПиОП	3.67	3.4	3.5	3,55	3.67	3.67	3,55
Average GPA	**3,5**	**3,39**	**3.4**	**3,68**	**3,72**	**3,73**	**3,7**

Employment of graduates

To determine the level of employment of graduates in 2020, an official request was made to the state center for payment of pensions (GTsVP) for all levels of education. Information on the employment of graduates according to the GTsVP is given in tables 34, 35, 36.

Table 34–Bachelor's

No.	Specialty, code	Name of specialty	No. of students	Employed according to the data of the SEWRC	
				Кол-во	%
1	5B060800	Ecology	57	47	82
2	5B080100	Agronomy	92	75	82
3	5B080700	Forest resources and forestry	33	29	88
4	5B080800	Soil science and agrochemistry	56	48	86
5	5B081100	Plant protection and quarantine	90	73	81
6		Distance learning	22	19	86
		Total, Agronomic faculty	**350**	**291**	**83**
7	5B070100	Biotechnology	72	68	94
8	5B080200	Technology of animal products processing	68	62	91
9	5B080300	Hunting and animal husbandry	19	17	89
10	5B080400	Fisheries and industrial fishery	15	14	93
11	5B120100	Veterinary medicine	66	54	82
12	5B120200	Veterinary sanitation	62	60	97
13		Distance learning	8	8	100
		Total, VAHT	**310**	**283**	**91**
14	5B071100	Geodesy and cartography	50	42	84
15	5B042000	Architecture	53	50	94
16	5B042100	Design	31	29	93
17	5B090300	Land management	52	47	90
18	5B090700	Cadastre	56	44	78
19	5B090800	Evaluation	42	40	95
20		Distance learning	7	7	100
		Total, Land Management, A and D	**291**	**259**	**89**
21	5B012000	Vocational training	48	42	87,5
22	5B070300	Information technology	92	87	95
23	5B070400	Computational techniques and software support	87	77	88
		Total, CSaVE	**227**	**206**	**91**
24	5B071300	Transportation, transport equipment and technologies	69	52	75
25	5B072800	Technology of processing industries	51	47	92
26	5B072700	Food technology	72	63	87
27	5B072400	Technological machinery and equipment	177	148	84
28	5B073200	Standardization, certification and metrology	45	35	78
29	5B080600	Agricultural machinery and technology	129	125	97
30	5B090100	Organization of transportation, traffic and operation of transport	53	39	74
31		Distance learning	28	28	100
		Total, Technical faculty	**624**	**537**	**86**
32	5B050600	Economy	70	65	93
33	5B050700	Management	60	58	97
34	5B050800	Accounting and Audit	124	118	95
35	5B050900	Finance	92	86	93
36	5B051100	Marketing	91	84	92
		Total, Faculty of Economics	**437**	**411**	**94**
37	5B071700	Thermal power	50	49	98
38	5B071800	Electricity industry	96	84	87
39	5B071900	Radio engineering, electronics and telecommunications	136	132	97
40	5B081200	Energy supply to agriculture	57	53	93
41		Distance learning	53	53	100
		Total, Faculty of Energy	**392**	**371**	**95**
		Total by university	**2631**	**2358**	**90**

Table 35–MASTER'S

No.	Specialty, code	Name of the specialty	Number of graduates	Employed according to GTsVP	
				Number of graduates	%
1	6M080100	Agronomy	32	30	94
2	6M080700	Forest resources and forestry	3	3	100
3	6M080800	Soil science and agrochemistry	40	38	95
4	6M081100	Plant protection and quarantine	10	9	90
		Total for the Agronomic Faculty	**85**	**80**	**94**
5	6M070100	Biotechnology	46	46	100
6	6M080200	Technology of processing livestock products	42	40	95
7	6M080300	Hunting and animal husbandry	2	2	100
8	6M080400	Fisheries and industrial fishing	3	3	100
9	6M120100	Veterinary medicine	31	31	100
10	6M120200	Veterinary sanitation	6	6	100
		Total for the VAHT faculty	**130**	**128**	**98**
11	6M042000	Architecture	30	29	97
12	6M042100	Design	29	28	96
13	6M090300	Land management	9	8	89
14	6M090700	Cadastre	8	8	100
		Total for the Faculty of Land Management, A and D	**76**	**73**	**96**
15	6M012000	Professional training	10	9	90
16	6M070300	Information technology	25	24	96
17	6M070400	Computing equipment and software support	8	8	100
		Total for CSaVE Faculty	**43**	**41**	**95**
18	6M071300	Transport, transport equipment and technologies	14	14	100
19	6M072400	Technological machines and equipment	14	14	100
20	6M072700	Technology of food products	52	51	98
21	6M072800	Technology of processing products	26	16	61
22	6M073200	Standardization, certification and metrology	13	12	92
23	6M080600	Agricultural machinery and technology	9	9	100
		Total for the technical faculty	**128**	**116**	**91**
24	6M050600	Economy	10	8	80
25	6M050700	Management	10	10	100
26	6M050800	Accounting and auditing	9	9	100
27	6M050900	Finance	5	4	80
28	6M051100	Marketing	9	9	100
29	7M04103	Agrarian sector of the economy	10	10	100
30	7M04112	Marketing and brand management	2	2	100

		of goods and services			
31	7M04109	Accounting and commercial law	6	5	83
32	7M04110	State and cash sector finance	1	1	100
33	7M04108	Agrarian management	5	5	100
		Total for the Faculty of Economics	**67**	**63**	**94**
34	6M071700	Thermal power engineering	20	18	90
35	6M071800	Electric power industry	25	25	100
36	6M071900	Radio engineering, electronics and telecommunications	24	23	96
		Total for the Faculty of Energy	**69**	**66**	**96**
		Total by university	**598**	**571**	**95**

Table 36 – DOCTORAL STUDIES

No.	Specialty, code	Name of the specialty	Number of graduates	Employed according to GTsVP	
				Number of graduates	%
1	6D080100	Agronomy	2	2	100
2	6D080800	Soil science and agrochemistry	1	1	100
3	6D081100	Plant protection and quarantine	2	2	100
4	6D080700	Forest resources and forestry	2	2	100
		Total for the Agronomic Faculty	**7**	**7**	**100**
5	6D080200	Technology of processing livestock products	2	2	100
6	6D120100	Veterinary medicine	2	2	100
7	6D120200	Veterinary sanitation	1	1	100
		Total for the VAHT faculty	**5**	**5**	**100**
8	6D042000	Architecture	2	2	100
		Total for the Faculty of Land Management, A and D	**2**	**2**	**100**
9	6D012000	Professional training	4	4	100
		Total for CSaVE Faculty	**4**	**4**	**100**
10	6D073200	Standardization, certification and metrology	4	4	100
11	6D080600	Agricultural machinery and technology	1	1	100
12	6D072400	Technological machines and equipment	1	1	100
		Total for the technical faculty	**6**	**6**	**100**
13	6D050600	Economy	2	2	100
14	6D050800	Accounting and auditing	2	2	100
15	6D050700	Management	2	2	100
16	6D050900	Finance	2	2	100
		Total for the Faculty of Economics	8	8	100

		Total by university	**32**	**32**	**100**

Every year in March–April, all faculties in "S. Seifullin KATU" NCJSC hold a "Job Fair" for their graduates, in all educational programs. The event aims to further employ graduates after completing their studies at the university.

The peculiarity of this event in 2021 is that it was held in a remote format, which made it possible for many employers from the regions to participate, a total of 188 potential employers took part in the faculties

Table 37 – Number of employers who participated in the Graduate Employment Event in 2020–2021

	Faculty	Number of employers who participated in the event	Total number of vacancies offered
1	Agronomic	42	142
2	Land Management, A and D	9	11
3	CSaVE	28	42
4	VAHT	31	69
5	Energy	29	44
6	Economics	15	23
7	Technical	34	37

MULTILINGUAL EDUCATION

Since 2012, "S. SEIFULLIN KATU» NCJSC has been implementing the program of multilingual education along with the first **20** universities in RK.

An important indicator of the effectiveness of the implementation of the Multilingual Education Program at the university is the increase in educational programs and the contingent of students of multilingual groups.

According to the programs of higher and postgraduate education, training in multilingual groups is currently conducted at 6 faculties in 66 specialties, which is 8.3 times more in comparison with 2012.

An important indicator of the effectiveness of the Program at the University is the increase in the number of students of multilingual groups. In 2012, the share of students in these groups (according to planned and actual indicators) amounted to 5% or 153 people, in 2021, the contingent of students in multilingual groups amounted to 1935 people or 17.11%, which is 13 times more than in 2012.

1. 6M070300 – Information systems
2. 6M012000 – Professional training
3. 6M070100 – Biotechnology
4. 6M080100 – Agronomy
5. 6D120100 – Veterinary medicine

Since 2021, it is planned to enroll in the EP "Marketing", which will be implemented entirely in English. Information on the natural science subjects in English:

1. The discipline "Information and Communication Technologies" is conducted in English in all 43 bachelor's degree specialties.

2. The discipline "Mathematics" is taught in English at the bachelor's degree in the specialty "Technological machines and equipment."

3. The discipline "Chemistry" is taught in English at the bachelor's degree in the areas of technical sciences and technologies.

4. The discipline "Biology" is planned from the new academic year in English at the bachelor's degree.

Multilingual education according to the educational programs of the university is introduced into the educational process in stages, depending on the availability of trained teachers and students with language competencies, thus selection is made among 1st–year students according to the levels of language competencies for the formation of academic multilingual groups in the second year of study.

In total, 124 teachers are involved in multilingual groups, teaching classes in English (14.7% of the total number of teaching staff). In 2020, native speaker Augustine Nwaka (Nigeria) conducted English classes, as well as professional English for teaching staff and students of "S. SEIFULLIN KATU» NCJSC. In 2021, Jennifer Despres, a French language teacher from the University of Artois (France), was engaged to conduct online courses among teaching staff and students. In addition, teachers attend DynEd courses for online English language learning, as well as English language courses and TOEFL preparation within the framework of the program with Imperial English (Great Britain).

Table 1 – Implementation of the Multilingual Education Program in "S. SEIFULLIN KATU» NCJSC

No.	Name of positions	2019	2020	2021
1	Contingent of teaching staff (people)	151	120*	124*
2	Contingent of students (people)	2223	1782	1935*
3	Number of specialties (units)	66	68	68
4	Number of disciplines in English (units)	205	161	193
5	Attracting native speakers (people)	3	1	1

**To date, "S. Seifullin KATU" NCJSC focuses on the quality of multilingual educational programs, in connection with which, multilingual groups are formed from the 2nd year.*

An important component of ensuring the quality of education is the implementation of double-degree and joint educational programs with foreign partner universities. It is important to note that university students have the opportunity to study and receive diplomas at leading foreign universities in the following specialties:

- The dual Master's degree program "Agricultural Management," in cooperation with the University of Applied Sciences Weienstephan (Germany), ranks 170th in the ranking of German universities in 2020. In 2016, the Master's

course "Agricultural Management" successfully passed the international accreditation procedure. Experts of the accreditation agency "AQQUIN" highly appreciated the quality of education and the level of material equipment of "S. SEIFULLIN KATU" NCJSC, as well as the compliance of the conditions for the implementation of this educational program with the requirements of the German Ministry of Education. The number of 2019 graduates enrolled in the dual degree program is 10.

- The double Master's degree program "Information Systems" and "Computer Engineering and Software" at the University of Milan, Italy, ranks 320th and is in the Top 400 according to the QS rating in 2020. In 2018, in "S. SEIFULLIN KATU" NCJSC for the first time held the first graduation in a two-degree program with the University of Milan (Italy) in the master's degree 6M070300 "Information Systems", so four undergraduates of the specialty 6M070300 "Information Systems" received a double diploma. The number of 2019 graduates enrolled in the dual degree program is five.
- Work is underway to develop joint master's degree programs in "Soil Science", "Plant Protection," and "Animal Husbandry" together with AgroParisTech (France), an institute that ranks 4th in the thematic rating in the field of agriculture and forestry in QSWorldUniversitiesRanking; in the future, a joint project of a double diploma program will be developed;
- joint Master's degree program 7M04102 SARUD Sustainable Agriculture and Rural Development within the framework of Erasmus+ with the University of Hohenheim (Germany), the University of Natural Sciences of the Czech Republic, and the University of Natural Sciences of Poland

Completion of the double degree program significantly increases the opportunities for employment for these undergraduates, providing them with better job opportunities and prospects for a successful career, both in Kazakhstan and abroad.

It is important to note that "S. Seifulin KATU" NCJSC provides preparatory courses for the study of Russian and Kazakh languages for foreign students for further admission to universities in the Republic of Kazakhstan in their chosen specialty. Currently, six students from Sri Lanka and Nigeria have studied and are completing Russian language courses. As of today, 1 student enters "S. SEIFULLIN KATU" NCJSC for the Master's degree program, 1 student at Satpayev KNITU for the bachelor's degree, 1 student at Narikbayev KAZGUU, as well as 3 students who are returning to their country due to the pandemic.

Thus, the above information testifies to the built system and successful implementation of multilingual education in "S. SEIFULLIN KATU" NCJSC.

4 INFORMATION RESOURCES OF THE LIBRARY

As of January 1, 2021, the Scientific Library has a fund of 929267 units, of which 275040 is a fund of literature in the state language, 1418 are publications on electronic media, 1332 publications of teaching staff (Repository), 43 electronic resources. Through the electronic library of the university, according to the range of IP addresses of the university, access to remote information resources is provided: the domestic resource of the RMEB, advanced electronic libraries of the world: Clarivate InCites, EBSCO, Elsevier SciVal, CAB Direct, Web of Science, Scopus and Russian databases "Lan Publishing House", "eLibrary.ru "(RUNEB), EBS IPRbooks.

The volume of the fund of educational, methodical and scientific literature grows and is updated annually, corresponds to the contingent of students (*Table 1*).

Table 1 – Updating of the library fund for 2016–2020

Indicators by year	**as of January 01, 2017**	**as of January 01, 2018**	**as of January 01, 2019**	**as of January 01, 2020**	**as of January 01, 2021**
General Library Fund, total	846641	868151	873239	856685	929267
New arrivals	16365	12311	13464	20468	4476
Electronic resources	75000	90000	90100	65000	126511
Updating the fund, %	10.7	11.7	11.8	9.9	14.0

Table 2 – Library book fund for 2016–2020

Indicators by year	**as of January 01, 2017**	**as of January 01, 2018**	**as of January 01, 2019**	**as of January 01, 2020**	**as of January 01, 2021**
Total fund total, units	778151	782354	791199	802391	804713
including in Kazakh language	129131	132077	137587	144915	145438
Educational literature total, units	621027	619131	626384	638789	640112
including in Kazakh language	92734	95412	100320	107893	109080
including in English	1754	2194	2834	5130	5215
Scientific literature total, units	128285	129248	130216	129198	129682
books on electronic media	981	1165	1208	1408	1418
including in	14998	15230	15775	15965	16182

Kazakh language					
Literary art total, units.	34672	34760	35085	34769	34919
including in Kazakh language	4081	4117	4175	4263	4340

Table 3 – The amount of funds allocated for the renewal of the library fund

Years	Total, million tenge	Books, million tenge	Periodicals and electronic resources million tenge
2018	45.4	25	20.40
2019	40.3	15	25.32
2020	41.6	15	26.6
2021	55.1	15	40.1

43 electronic resources are available on the website of the scientific library, including 9 resources based on license agreements, 34 resources in open access (Table 4).

Table 4 – Electronic library

No.	Names	Resource Information
Abstract databases		
1	Scopus	The largest database containing annotations and information on the citation of peer–reviewed literature with built–in capabilities for tracking, analyzing and visualizing query results. The database contains more than 21900 publications from 5000 international publishers, in the field of fundamental, social and humanitarian sciences, technology, medicine and art
2	Web of Science	This is a search platform that combines abstract databases of publications in scientific journals and patents, including databases that take into account mutual citation of publications.
Analytical database		
3	SciVal	It is an integrated modular platform that combines four key elements that underlie any fact–based research tools: data, technology, metrics and visualization. SciVal offers quick and easy access to the research developments of 4600 scientific institutions and 220 countries around the world.
4	InCites	InCites is an analytical tool based on Web of Science data and using an expanded set of bibliographic indicators that allows analyzing scientific activity in various aspects. InCites makes it possible to analyze scientific activity by countries, organizations, scientists, subject areas and visualize the results obtained.
Full–text electronic resources		

5	The Republican inter–university electronic Library (ROIE)	This is a unified information system to provide the teaching staff, undergraduate and graduate students with modern information educational resources in the Republic of Kazakhstan.
6	Учет.kz	This is an electronic database of official texts of legislative and other regulatory legal acts of the Republic of Kazakhstan in the field of taxation, labor relations, finance, customs legislation, regulation of migration processes, banking and money transfers, and other spheres of activity regulated at the Republican and local levels.
7	Russian Universal Scientific Electronic Library (RUSEL)	RUSEL is integrated with the Russian Science Citation Index (RSCI) – a free public tool for measuring and analyzing the publication activity of scientists and organizations. Every year, readers receive more than 7 million full–text articles from the library and view more than 22 million annotations.
8	Electronic library system (EBS) of the «LAN» publishing house	This electronic resource includes electronic versions of books by the publishing house "Lan", collections of full–text files of other publishers and is constantly updated with new editions.
9	CAB Direct	The most thorough and extensive source of reference information in applied life sciences, including the leading bibliographic databases of CAB Abstracts and World Health. More than 11780000 records are available.
10	E–books of the publishing house "Elsevier"	On the basis of an agreement between our university and the Elsevier company, 200 e–books were purchased.
11	EBSCO	EBSCO (licensed Access) is a leading global supplier of e–books with 70 years of experience in building relationships with publishers. The library has access to the collections "eBook Academic Collection" and "eBook EngineeringCore Collection".
Open access electronic resources		
12	Kazakhstan National Electronic Library (KazNEL)	Contains collections of electronic copies of books of libraries of Kazakhstan, including: The National Library of the Republic of Kazakhstan in Almaty, the Scientific Center of the Gumilev Eurasian National University "Otyrar kitapkhanasy", regional libraries, university libraries and personally from the authors: famous scientists, writers, public figures.
13	Adilet	Information and legal system of regulatory legal acts of the Republic of Kazakhstan. ILS "Adilet" carries out the official publication of regulatory legal orders of ministers of the Republic of Kazakhstan, regulatory legal resolutions of central government agencies, and regulatory legal acts of maslikhats, akimats, and akims.
14	Springer Open	The largest collection of open access resources from around the world—more than 560 journals and more than 120 books
15	BioMed Central	An open access platform for reading and publishing scientific articles and journals. More than 400 scientific journals are available.
16	Directory of Open Accenss Journals	An interactive online catalog that indexes and provides access to high–quality, open–access, peer–reviewed journals. It contains

		9922 journals and 2579455 articles, and 122 countries in the world use this online catalog. Open access journals cover all fields of science, technology, medicine, the social sciences, and the humanities.
17	Directory of Open Accenss Books	An online catalog of peer–reviewed educational materials presented in the public domain by libraries and publishers. It contains 8860 academic peer–reviewed books and book chapters from 225 publishers around the world.
18	Wiley Open Access	Publishes authoritative and peer–reviewed open access journals in many disciplines. All scientific articles published in open access journals in "Wiley" immediately go into open access for reading and downloading.
19	Cambridge University Press	Publishes a number of scientific journals and open–access books, working with publishing partners. More than 3,000 articles in scientific journals are available.
20	Cyberleninka	This is a scientific electronic library built on the open science paradigm (OpenScience), whose main tasks are the popularization of science and scientific activity, public quality control of scientific publications, the development of interdisciplinary research, the modern institute of scientific review, and increasing the citation of science.
21	Arxiv.org	The largest free archive of electronic publications of scientific and reprinted articles with changes and additions in physics, mathematics, astronomy, computer science, and biology
22	AGRIS International system of rural science and technology	A global public–domain database with more than 8 million structured bibliographic records on agricultural science and technology.
23	InTechOpen	3208 books with open access have been published; this collection is the largest in the world and consists of 45621 scientific chapters.
24	OAPEN Library	Contains academic books of free access in the fields of the humanities and social sciences. OAPEN works with publishers to create an open access, quality–controlled collection of books, provides services for publishers, libraries, and research funds, and also ensures the quality of distribution and preservation of digital data.
25	The ADB Data Library	is the central repository of open data for all Asian Development Banks. Data sets and visual materials are available for readers.
26	ADB Publications	Provides open access to publications: books, conference materials, articles, manuals, references, reports, and many other publications.
27	Astana Civil Service Hub E–Library	A collection of case studies, discussion papers, innovative solutions, and the bulletin of Astana Civil Service Hub (ACSH).
28	BCcampus Open Textbooks	A collection of more than 200 thematic textbooks with an open license. The Ministry of Higher Education of British Columbia (Canada) funds and oversees BCcampus Open Textbooks.
29	Bentham Open	Bentham Open publishes a number of peer–reviewed open–access journals. These free–to–view online journals cover all major disciplines of science, medicine, technology, and the social

		sciences. BENTHAM Open provides researchers with a platform to quickly publish their research in a high–quality peer–reviewed journal.
30	Chemistry Library	The Chemistry Library primarily supports four areas of the faculty's core research: Biological Chemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry
31	Green Tea Press	Free access to downloadable books in the Think series for computer science and statistics Computer science professor Allen Downey wrote the books in the series.
32	IEEE Xplore	IEEE Xplore is an electronic library of the IEEE Publishing House. It is the largest technical electronic library in the world and contains more than 5 million full–text documents. The source of more than 30% of the world's literature on electrical engineering, electronics, and computer science
33	Open Culture	Catalog of 200 open textbooks on various topics.
34	Open Research Library	Includes more than 14000 open–access books from around the world on one platform for easy search.
35	Open Textbook Library	Textbooks that have been funded, published, licensed, adapted, and distributed for free use These books can be downloaded for free or printed at a low price. Currently, the library includes 643 textbooks, and new ones are being added all the time.
36	OpenStax	Freely available, peer–reviewed textbooks on technical and social sciences, humanities, and the Advanced Study Program in the United States and Canada (AP)
37	Oxford University	Oxford University Press contains 44 fully open access journals on medicine, natural sciences, and technical sciences.
38	Patentscope	PATENTSCOPE helps find about 72 million patent documents, including 3.5 million published International Patent Applications (PCT).
39	PhET Interactive Simulations for Science and Mathematics	PhET provides access to free and interactive, research–based content in the fields of science and mathematical modeling. Written in Java, Flash, or HTML5, they can be run online or downloaded to your computer.
40	Saylor Academy	Saylor Academy is a non–profit initiative that has been operating since 2008 and offers free and open online courses for anyone who wants to study. Almost 100 complete college and professional–level courses are available right now—at your pace, according to your schedule, and for free.
41	World Bank Data Bank	The new World Bank website provides a huge library of data on global development.
42	Kazakhstan patent database	The database provides information about patents registered in Kazakhstan. Information about the authors, publication dates, and descriptions of inventions is available for viewing and familiarization. Some archives are available in full–text form.
43	National Scientific Portal of the Republic of Kazakhstan	The National Scientific Portal of the Republic of Kazakhstan provides access to abstract databases of R&D reports and dissertations defended in the Republic of Kazakhstan (candidate, doctoral, and PhD)
44	The repository of "S. SEIFULLIN KATU» NCJSC	The repository of "S. SEIFULLIN KATU" NCJSC is an institutional electronic archive for long–term storage, accumulation, and provision of long–term and reliable open

		access to the results of scientific research and related intellectual products of the academic community of the university.
45	Kazakhstan Ashyk University	The Open University of Kazakhstan is an educational platform offering free access to online courses from leading universities and teachers in the country for everyone without restrictions.

Table 5 – The number of e–books and journals available on the website of the scientific library of "S. SEIFULLIN KATU» NCJSC on September 01, 2021

No.	**Name of the resource**	**Books**			**Journals**		
		in Kazakh	**in Russian**	**in English**	**in Kazakh**	**in Russian**	**in English**
1	ROIE	16484	25578	1057	10325	16532	994
2	RUNEB					Open access: 7281	
3	ELS "Lan"		50961			689	
4	ELS "IPR BOOKS"	1443	39499			782	
5	EBSCO Host			210205			
6	Scopus						42180
7	Web of Science						20932
8	E–books of the publishing house "Elsevier"			316			
9	The repository of "S. SEIFULLIN KATU» NCJSC	531	701	100			
	Total	**18458**	**116739**	**211678**	**10325**	**25284**	**64106**
		346896			**99715**		

In accordance with the tasks set for the organization of management and use of information resources for 2018–2019, the EZ-proxy tool was purchased to provide secure remote access to full-text electronic resources through the website of the scientific library. Firstly, this tool provides open and fast access to electronic information resources of the library, which contributes to improving the quality of information services, and secondly, the use of this server speeds up the user's work with electronic multimedia resources.

To implement this tool, the library staff carefully studied the functionality of EZ-proxy and created an additional section on the library's website through which users can gain remote access to all full-text resources using an individual login and password generated by the server. An individual 12-digit code for remote access will appear on the new samples of the users' library cards; each user will be able to download the material of interest from any point where he is and at any time. EZ-proxy allows you to get 100% access to all electronic resources of the scientific library of "S. SEIFULLIN KATU" NCJSC without any restrictions.

Fig.1. Statistics on the use of the website of the scientific library of "S. SEIFULLIN KATU» NCJSC for 2015–2021

In order to improve the information literacy of users, BID librarians regularly conduct trainings on the use of library electronic resources, where they explain and demonstrate working with reliable Internet resources for use in the educational process and scientific activities. It is worth noting that librarians responsible for training regularly improve and update their knowledge.

One of the key sections of the annual monitoring of universities' report is the section "Results of scientific, scientific, technical, and innovative activities of the organization (publishing, publishing activities)", in which there are several items for filling in the universities' bibliometric indexes. The staff of the Library of the Scientific and Information Department provides the Department of Science and Innovation with bibliometric information about the scientific and publication activities of the authors of "S. SEIFULLIN KATU" NCJSC with abstract databases Web of Science, Scopus, and RSCI for the Department of Science and Innovation, as well as to the authors of "S. SEIFULLIN KATU» NCJSC.

✓ The number of publications for the reporting year, for 5 years, in the international databases Scopus, Web of Science, RSCI, etc.

✓ Information on the number of publications by the authors of the university, the number of articles in scientific fields, and the availability of the Hirsch index of the authors.

✓ Consulting assistance to scientists, undergraduates, and doctoral students is carried out according to:

✓ Correction of author profiles in the Scopus and RSCI databases.

✓ Collecting information about publications and citations, the Hirsch index in international databases, and the RSCI database for specific authors (on request).

To date (September 2021), the total number of publications in the Scopus database is 688. In the Web of Science database, the total number of articles is 314.

Every year, the number of publications by authors and scientists from "S. SEIFULLIN KATU" NCJSC in these databases increases, and along with this, the citation of articles increases. The number of publications by the authors "S. SEIFULLIN KATU at the NCJSC has grown from 86 (2017) to 132 (2020) documents.

Year	Documents
2021	86

2020	132
2019	114
2018	124
2017	86
2016	77
2015	25
2014	34
2013	7
2012	3

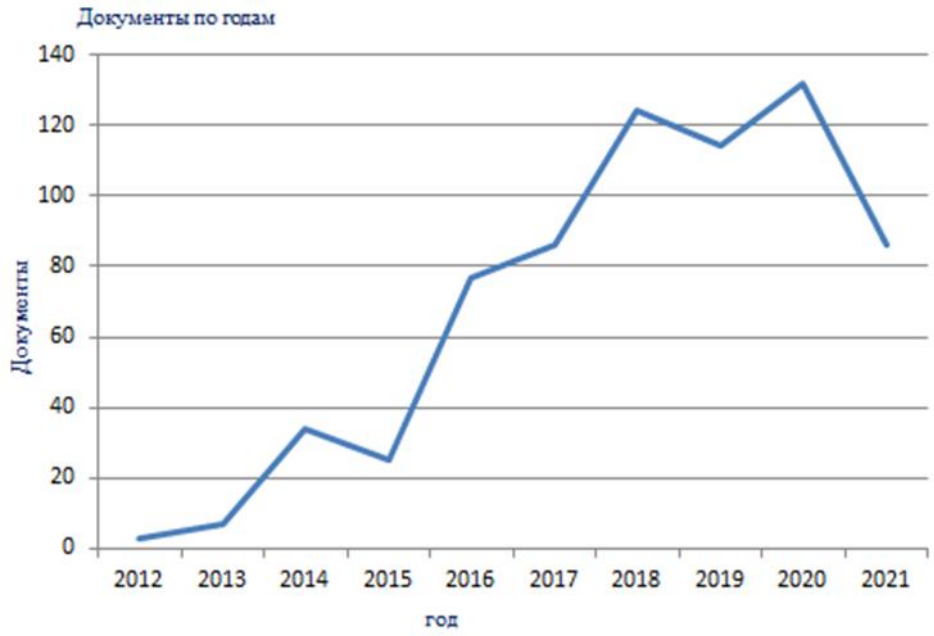

Fig.2. The number of publications of the authors from "S. SEIFULLIN KATU" NCJSC for 2012–2021 (September) in the Scopus database

Year	Documents
2021	39
2020	62
2019	62
2018	45
2017	42
2016	31
2015	17
2014	10
2013	2
2012	4

At the same time, a significant increase in the number of articles by scientists from "S. SEIFULLIN KATU" NCJSC is noted in the Scopus database. If in 2017 the number of documents was 86, in 2020 132 articles would have already been

indexed. (Fig. 2) In the Web of Science database in 2017, the number of documents was 42; in 2020, 62 articles were also indexed (Fig.3).

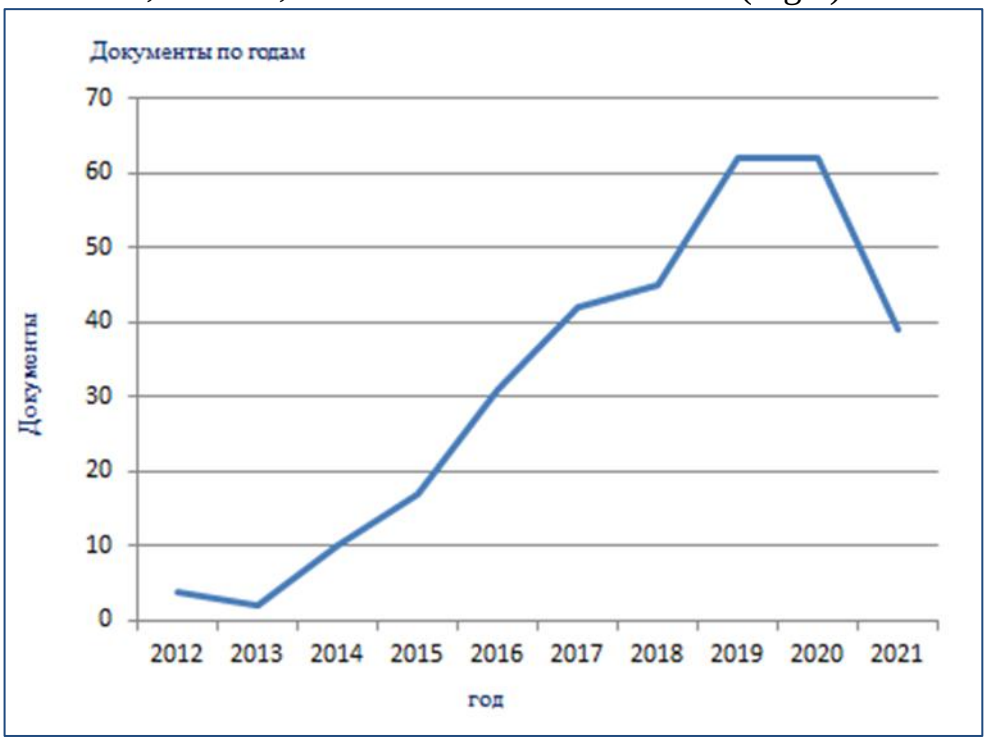

Fig. 3. The number of publications of the authors from "S. SEIFULLIN KATU" NCJSC 2012–2021 (September) in the Web of Science database

Providing assistance to authors and scientists from "S. SEIFULLIN KATU" NCJSC to work and navigate scientific citation databases, the scientific library of "S. SEIFULLIN KATU" NCJSC performs an important task related to the citation and indexing of scientific works of authors and is a base platform for the promotion of the intellectual resources of its university in the scientific and educational information environment.

And in general, developing areas of activity while maintaining the basic functions of the university library related to the information support of the scientific and educational process of "S. SEIFULLIN KATU" NCJSC will strengthen the role of the scientific library in solving the problems facing the university at the present stage.

In February 2021, a new electronic resource was introduced on the library's website: the Institutional Repository of "S. SEIFULLIN KATU" NCJSC, which is an electronic archive of publications of the Faculty of the University as well as scientific articles of undergraduates, doctoral students, and researchers. To date, 1332 books by the University teaching staff have been placed. In the future, it is planned to replenish the Repository with collections of articles and scientific materials.

The planned measures for 2020–2021 to improve them have been generally implemented:

1. purchased new items in the amount of 4314 copies in the amount of 15 million tenge.

2. increased the replenishment of the electronic library to 43 items;

3. increased the number of thematic manuals on the use of electronic resources on the library's website to 31 items;

6. Purchased a scanner for digitizing books in the amount of 15 million tenge.

7. Work has begun on digitizing the book collections of the Research Institute

Tasks for 2021–2022:

1. Continue to work to ensure the maximum use of electronic resources in scientific research and the educational process;

2. Purchase new literature on public procurement in the amount of 15 million tenge.

3. Organize remote access for employees of the Research Institute to electronic resources and databases of "S. SEIFULLIN KATU» NCJSC.

4. Organize trainings for employees of the Research Institute on the use of electronic resources and databases of "S. SEIFULLIN KATU» NCJSC

5 INFORMATION TECHNOLOGY AND TELECOMMUNICATION SERVICES

There are now 2848 computers at the campus. Comparing 2018-2019 to 2019-2020, the overall number of computers increased by 10%. Comparing the same time to the current one, the number of laptops increased by 11% (Table 16). Thirteen laptops and 28 monoblocks were purchased during the reporting period (2020). Also purchased were contemporary, high-performance servers for Platonus and 1C accounting.

The delivery of the majority of the computers will take place over the course of the following one to two months due to some limitations on the public procurement portal's method of procurement. Therefore, a gradual delivery of 230 monoblocks and 28 computers is anticipated in accordance with the computer upgrade plan at two faculties: Veterinary and Animal Husbandry Technology and Humanities.

Table 16 – Computer equipment

Indicator	**2018–2019**	**2019–2020**	**2020–2021**
Computers, total	2590	2833	2848
Including:			
– laptops	353	367	392

There are 80 computer classes with 912 computers (Table 17).

Table 17 – Availability of computer classes

Indicator	**2018–2019**	**2019–2020**	**2020–2021**
Number of computer classes	78	82	80
Number of computers in computer classes	942	973	912

The number of multimedia equipment has decreased slightly; operational replacement of faulty projectors is carried out at the expense of the reserve fund (Table 18).

Table 18 – Multimedia equipment

Indicator	**2018–2019**	**2019–2020**	**2020–2021**
Multimedia projectors	352	355	351
Interactive projectors	49	49	45
Interactive whiteboards	37	38	37

The speed of broadband Internet access has remained at the same level and is now 1000 Mbit/s (Table 19).

Table 19 – Broadband Internet access

Indicator	**2018**	**2019**	**2020**
Internet access speed, Mbit/s	575	1000	1000
VPN channel speed (International), Mbit/s	80	80	80

Every automated information system received ongoing technical support throughout the academic year. The AIS "Dorm" module "Residents" was created to enable the assignment of students to rooms. Applications were also grouped according to academic degree, and the coordination role of the Deputy Chairman of the Board for Scientific and Innovative Activities was added. The script was changed for AIS "Business Trips" to get the exchange rate from the National Bank of the Republic of Kazakhstan website. On the basis of samples from the reporting academic year, the programs for printing bachelor's, master's, and specialist diplomas have been revised.

The Platonus DLS was transferred to the newly prepared and set up server, Platonus was launched there, and backup was set up.

The educational platform provided video recordings of dissertations as well as class and exam dates. The layout of the educational portal's pages and software module editing were done as necessary.

Electronic educational publications from the electronic library of the educational portal were transferred in connection with the establishment of an institutional repository at the university's scientific library.

Server and software performance is continuously tracked, and in the event of a failure, quick action is taken to reestablish functioning. The University's main website is updated promptly with new information. The use of tools such as Zoom, Webex meetings, OBS Studio, and others was covered in training courses. Teaching personnel and university staff received remote consultation and help.

Videos for the educational department's events and exhibitions as well as other activities were installed and prepared.

All events held at the Agronomic Faculty's conference hall, small conference hall, and assembly hall received technical support during the academic year.

Online conferences, video conferences, webinars, the work of dissertation councils online and their videography, as well as student, undergraduate, and doctoral interviews with representatives of foreign universities were all made available throughout the academic year.

More than fifty computers connected to the university network were set up and prepared for technical secretaries and applicants in the gym and auditorium 1221 during the admissions campaign. The electronic queue's functionality has been guaranteed. Additionally, the UNT was captured on camera, with an online broadcast made available.

During the reporting period, the Department monitored personnel's use of information systems, trained and advised personnel on working with automated information systems, password and antivirus protection, and backups of information resources in an effort to lower the level of risk in information processes.

6 RESEARCH ACTIVITIES

In 2020, the total amount of funding under the budget program 217 "Development of Science" of MES RK and the Ministry of Agriculture of the Republic of Kazakhstan, contracts with business entities, as well as other sources of funding for science, amounted to **1386.0 million tenge**. The amount of grant financing of the MES RK Science Committee in 2020 amounted to **383,212,952 tenge,** including **30 grant financing projects** for 2018–2020, including 3 projects for 2020–2022 with a duration of 27 months and 2 projects with a duration of 12 months (**243390814 thousand tenge)**, as well as **8 grant financing projects for** young scientists (**139822138 thousand tenge)**.

Under subprogram 101, "Program-targeted financing of subjects of scientific and/or scientific and technical activities" (MES RK), there is one scientific and technical program of the PCF, "Application of achievements of molecular genetics to create new highly productive breeding lines of soft wheat, barley, and chickpeas adapted to the climatic conditions of Northern and Central Kazakhstan," headed by Jataev S.A. The amount is 131000 tenge.

1 project, "Serological diagnosis of brucellosis based on combined recombinant antigen," under the direction of Bulashev A.K., within the framework of the PCF STP RSE "National Center of Biotechnology," for 15 500.0 thousand tenge.

There are 3 programs for PCF of the Ministry of Agriculture of the Republic of Kazakhstan; two of them are mega-interdisciplinary programs where 7 faculties are involved: agronomic, VAHT, technical, economic, energy, CS and PO, UZR and AD, and 1 program of the Ministry of Ecology, Geology, and Natural Resources of the Republic of Kazakhstan, for a total of 510572.6 thousand tenge.

1. Kurishbayev A.K. is in charge of the 350 572.6 thousand tenge "transfer and adaptation of technologies for point farming in the production of crop

production on the principle of "demonstration farms" (landfills) in the North Kazakhstan region;"

2. For 128 000.0 thousand tenge, Alimzhanova L.V. will oversee the "Transfer and adaptation of innovative technologies to optimize technological processes on dairy farms in Northern Kazakhstan."

3. "Scientific and technological support of processing enterprises of the agro-industrial complex in order to increase their efficiency and competitiveness," headed by Ospankulova G.H., in the amount of 17000,0 thousand tenge;

4. Sarsekova D.N. is in charge of the 15,000,000 tenge contract called "Mycorrhizal macromycetes of the main forest-forming rocks of Central and Northeastern Kazakhstan and their use for artificial mycorrhization of seedlings of forest tree species."

According to program 267 "Increasing the availability of knowledge and scientific research", PCF of the Ministry of Agriculture of the Republic of Kazakhstan, our University is a co-executor of 12 projects. The administrators of the programs are KazRIEAPKiRST (1 project); KazRIZhik (4 projects); KazRIKO (1 project); KazRIRiZ (1 project); SPC ZH (1 project); KazNIVI (2 projects); ZKTU (1 project); and Research Institute RH (1 project), totaling 98,475,743 tenge, including the accrual of all taxes and other mandatory payments to the budget.

On December 28, 2020, the Ministry of Agriculture of the Republic of Kazakhstan announced a competition for conducting applied scientific research within the framework of program-targeted financing for 2021–2023 in the priority direction of science development "Sustainable development of the agro-industrial complex and safety of agricultural products" and nine specialized scientific directions.

16 applications were submitted for this competition in the following specialized directions: "Ensuring veterinary safety" (2 applications); "Development of animal husbandry based on intensive technologies" (5 applications); "Sustainable development of rural areas" (2 applications); "Processing and storage of agricultural products and raw materials" (3 applications); "Organic agriculture" (2 applications); "Intensive agriculture and crop production (cereals, oilseeds, legumes, fodder, fruit, and vegetable crops)" (1 application); "Mechanization of agricultural and technological processes" (1 application).

7 STP on the priority "Sustainable development of agriculture and safety of agricultural products:"

1. BR10764944 "Development of methods of analytical control and monitoring of food safety" (head: Bulashev A.K.) for a total amount of 540 000,0 thousand tenge for 3 years;

2. BR10764998: "Development of technologies using new strains of beneficial microorganisms, enzymes, nutrients, and other kits in the production of special dietary foods" (head: Tultabayeva T.Ch.) for a total amount of 626,562 thousand tenge for 3 years;

3. BR10765062 "Development of technology to ensure the safety of the quality of agricultural raw materials and processed products in order to reduce

losses in various storage methods" (head: Tultabayeva T.Ch.) for a total amount of KZT 265,277 thousand for 3 years;

4. BR10764965 "Development of technologies for keeping, feeding, growing, and reproduction in dairy cattle breeding based on the use of adapted resource-saving and digital technologies for various natural and climatic zones of Kazakhstan" (head: S.K. Bostanova) for a total amount of 584,827 thousand tenge for 3 years;

5. BR10764919 "Study of the Impact of State Policy in the Agricultural Sector on the Development of Cooperative Processes in the Agro-industrial Complex, Sustainable Development of Rural Areas, and Food Security" (head: Alipbeki O.A.) for a total of 249,437 thousand tenge for 3 years;

6. BR10765064 "Regulatory and methodological support for the development of organic production in the Republic of Kazakhstan in line with international and foreign standards and requirements and priority sales markets" (head: R.A. Karabasov) for a total of 212,372 thousand tenge over 3 years;

7. BR10765056: "Creation of highly productive varieties and hybrids of grain crops based on the achievements of biotechnology, genetics, physiology, and biochemistry of plants for their sustainable production in different soil and climate zones of Kazakhstan" (head: Savin T.V.), for a total of 1,206,514 thousand tenge for 3 years;

2 STP in the scientific direction of "Smart Agriculture":

1. BR10865103: "Development and creation of scientifically-based Smart farms (herd horse breeding, beef cattle breeding) with the use of various at least 3 digital solutions for each area of digitalization implementation for the actual production tasks of agro-industrial entities and the formation of the necessary reference database for training farm and peasant farm employees and the transfer of digital knowledge to students" (head: S.K. Bostanova) for a total amount of 705,306 thousand tenge for 3 years;

2. BR10865099: "Building a decision-making system for the production of basic types of agricultural crops based on the adaptation of the DSSAT model for the growth and development of agricultural crops, an integrated management system for the production of livestock products based on Smart technologies, with the formation of an information base of scientific and technical documentation on agro-technologies for agro-industrial entities in order to create Smart systems in agriculture farms" (head: Kurishbayev A.K.) for a total amount of 649,873 thousand tenge for 3 years.

In total, for 9 scientific and technical programs, the amount of funding for 3 years is 5,040,173,820 tenge.

A total of 469 people are participating in the STP for 2021, of which 265 employees work for "S. SEIFULLIN KATU" NCJSC, with 117 employees from the NANOC Research Institute. The STP attracted 3 foreign scientists, 33 doctoral students, 32 undergraduates, and 19 students.

The University is also a co-executor within the framework of the STP for 2021–2023 on six projects: five on the STP of the Ministry of Agriculture of the Republic of Kazakhstan and one on the STP of the Ministry of Agriculture of the

Republic of Kazakhstan. The administrators of the programs are: Zhangirkhan WKTU, 2 projects; KazRI of Water Management, 1 project; KazRIZiR, 2 projects; KazRIZiKR, 1 project; and KazRIRH, 1 project (STP MAGiPR RK).

The teaching staff of the University submitted 41 applications for the grant funding competition for 2020-2021, of which:

With a 12-month implementation period, 5 applications and 2 applications for a total amount of 10 000.0 thousand tenge were approved in the priority direction "Sustainable development of the agro-industrial complex and safety of agricultural products":

1. AP08956527 "Adaptation of Kazakhstani phyto-luminaries with automated spectrum change control for the cultivation of vegetables on protected soil in various light zones of Kazakhstan" (head: A.S. Turbekova) in the amount of 5,000,0 thousand tenge

2. AP08956241, "Indicators of the usefulness of dairy cow feeding rations" (head: S.K. Bostanova), in the amount of 5,000.0 thousand tenge.

With a 27-month implementation period in the priority areas "Sustainable development of the agro-industrial complex and the safety of agricultural products" and "Scientific foundations of "Mangilik el" (education of the XXI century, fundamental and applied research in the humanities)," three applications were approved for a total amount of 146,445,942 tenge:

1. AP08857439 "Development of new biodegradable film materials based on starch" (head: Ospankulova G.H.) in the amount of 58,445,072 thousand tenge;

2. AP08856407 "Development of a wide-reach seed drill for sowing seeds and differentiated application of mineral fertilizers to different specified depths of embedding" (head: Aduov M.A.) in the amount of 61,600.00 thousand tenge;

3. AP08855487 "State-confessional relations in Kazakhstan: the beginning of the XX century—the end of the 1930s" (head: Alpyspaeva G.A.) in the amount of 26,400,870 thousand tenge.

98 applications were submitted for the grant funding competition for 2021–2023, of which:

With an implementation period of 36 months, the decision of the NSC approved 8 applications for a total amount of 411,261,717 tenge for 3 years.

With a 12-month implementation period, six applications were approved, with the amount of funding for 2021 being 41,387,31 thousand tenge.

In 2021, the implementation of eight scientific projects under grant funding with a 12-month implementation period will be completed.

By the decisions of the national scientific councils for 2020–2022, 8 projects were approved by the competition of young scientists, including 1 project in the direction of "Life and Health Science" in the amount of 69 million tenge for three years and 7 projects in the direction of "Sustainable Development of the Agro-industrial Complex and Safety of Agricultural Products" in the total amount of 422,811,479 million tenge for three years.

29 applications were submitted for the grant funding competition for young scientists for 2021–2023 in the scientific areas "Sustainable development of the agro-industrial complex and safety of agricultural products" (14 projects); energy

and mechanical engineering" (5 projects); research in the field of social and humanitarian sciences" (3 projects); rational use of water resources, animals, and flora, ecology" (2 projects); research in the field of education and science" (2 projects); life and health science" (1 project); information, communication, and space technologies" (2 projects). The decisions of the NSC approved 7 projects totaling 343,480,782 tenge for 3 years.

International projects with China increased in 2020 to 36,886,02 thousand tenge:

1. "Joint technical study on the creation of environmental protection in developing cities of the Silk Road Economic Belt of China and the Republic of Kazakhstan" (Xinjiang Institute of Ecology and Geography of the Academy of Sciences of the People's Republic of China) in the amount of 16,687,020 thousand tenge;

2. "Transfer of highly productive foreign potato varieties for virus-free seed production in Northern and Central Kazakhstan" (Shisen company) in the amount of 8,000,0 thousand tenge

3. "Variety testing of flax (six varieties) in Kazakhstan" (Institute of Technical Cultures, Chinese Academy of Agricultural Sciences) in the amount of 2,199,0 thousand tenge;

4. "Creation of promising potato lines based on genetic resources of China and the Republic of Kazakhstan" (Shisen company) in the amount of 10 000,0 thousand tenge

5. In 2021, two international projects are being implemented in the amount of 30,2 thousand tenge:

6. "Joint technical study on the creation of environmental protection in developing cities of the Silk Road Economic Belt of China and Kazakhstan" (Xinjiang Institute of Ecology and Geography of the Academy of Sciences of the People's Republic of China) in the amount of 15,246.0 thousand tenge;

7. "Creation of promising potato lines based on genetic resources of China and the Republic of Kazakhstan" (Shisen company) in the amount of 15 000,0 thousand tenge

According to contracts with business entities, 41 contracts for the implementation of scientific research and development in the amount of 210.7 million tenge were concluded in 2020; 31 contracts were concluded in 2021, for which 85.2 million tenge were received as of October 1, 2021.

The total income of the University in 2020 amounted to 8,347.4 million tenge, including 1,386.0 million tenge from research, which is 16.6% of the total income of the university. As of October 1, 2021, the total income was 9,868.4 million tenge, including 2,424.5 million tenge from research and development. The share of income from scientific activities amounted to 24.6% of the total income of "S. SEIFULLIN KATU» NCJSC.

The share of income in 2020 from the introduction of scientific results in the total income of "S. SEIFULLIN KATU" NCJSC was 2.35%. Total income of "S. SEIFULLIN KATU" NCJSC: 8 347 400 000 tenge. The income from the implementation is 196221867 tenge.

The share of income in 2021 from the introduction of scientific results in the total income of "S. SEIFULLIN KATU" NCJSC was -0.86%. Total income of "S. SEIFULLIN KATU" NCJSC: 9,868,400,000 tenge. The income from the implementation is 85,295,974 tenge.

The indicator in % decreases due to an increase in total income of "S. SEIFULLIN KATU" NCJSC due to an increase in income from research, but the actual value exceeds the planned by 55,295,974 tenge.

As of 2020, the amount of financing for 1 PPP amounted to 1,657.8 thousand tenge, with a staff of 836 people and research funding of 1,386.0 thousand tenge; in 2021, the amount of financing for 1 PPP amounted to 2,914 thousand tenge, with a staff of 832 people.

Published recommendations, monographs, articles, and other works serve as indicators of research effectiveness. Thus, in 2020, 194 articles were published in foreign databases, of which Scopus had 132 and Web of Science had 62. As of October 1, 2021, 127 articles had been published, 86 from Scopus and 41 from the Web of Science.

In 2020, 525 teaching staff had the Hirsch index; as of October 1, 2021, 679 teaching staff had the Hirsch index, including Scopus (459) and Web of Science (220).

In 2021, 16 applications for protection documents were filed, and 9 protection documents were received, including 2 Eurasian patents, 5 patents for the invention of the Republic of Kazakhstan, and 2 patents for a utility model of the Republic of Kazakhstan.

Awarding employees for publishing articles in journals included in the Scopus and WoS databases:

✓ In 2019, in the amount of 8 million tenge,

✓ in 2020, in the amount of 9.9 million tenge.

In 2021, the Regulation on the Procedure for Internal Grant Financing of the Research of Young Scientists of the "S. Seifullin KATU" NCJSC was updated.

According to the results of the competition, the Expert Commission approved five projects for financing for a total of 24,646.53 thousand tenge for 2021.

1. "Development of biotechnology for the production of the domestic biofungicide Trichodermin-KZ to protect crops from diseases" (head: Erpasheva D. M.);

2. "Screening of the varietal gene pool and promising lines of millet (Panicum miliaceum L.) on the basis of salt and cold resistance using physiological and biochemical methods" (head: I. Zhirnova);

3. "Development of technology for meat products with a reduced content of trans fats" (head: Amirkhanov Sh.);

According to the priority "Rational use of water resources, flora and fauna, ecology":

1. "The influence of various biological products on the physiological growth of seedlings Pinus L., Lonicera L., and Rubusidaeus L. in the conditions of ordinary chernozem of Northern Kazakhstan" (head: Oserkhan B.);

According to the priority "Energy and mechanical Engineering":

1. "The impact of agricultural waste on energy regeneration: A case study of pyrolysis of straw biomass for the production of crude bio–oil" (head: Mukhambet E.).

According to doctoral students who have completed their studies, in recent years there has been a low level of access to the defense of a dissertation. For example, out of 32 doctoral students who completed their studies in 2020, 6 carried out defense work; 2 of them defended; 3 are preparing for defense; and 1 passed pre-defense.

The analysis shows that the main reason for not being able to enter the defense is that regulations for doctoral students' publications keep changing and getting stricter, and there aren't any publications in foreign scientific journals that are indexed in the WoS and Scopus databases because peer review takes too long or costs too much.

In 2021–2023, it is planned to carry out dissertation research within the framework of scientific and technical programs and projects funded from budgetary (GF, PTF) and other sources.

KATU–EXTENSION Knowledge Dissemination Office for 2021

In order to spread the results of R&D as well as the introduction of highly efficient technologies in agricultural production, **12 seminars and 1 Field Day were held in 2021 with the participation of 444 agro-industrial entities.**

The first seminar on the topic "Technology of Corn Cultivation for Silage and its Use for Cattle Feed" was held online on April 27, 2021, with the participation of 74 people. The lecturer at this seminar was made up of French experts as well as representatives of the Lima-Grain company, experts who reported on many years of experience in growing corn on silage in relation to the conditions of Kazakhstan.

The following two seminars, in connection with the global Pandemic COVED-19 and the ongoing quarantine, were also held online via the Zoom Internet platform.

Within the framework of BP 100 "Information support of agribusiness entities on a gratuitous basis", two field seminars were held with the training of 63 agribusiness entities.

At seminars, the industry scientists from "S. SEIFULLIN KATU" NCJSC reported on the basic principles and technologies of cultivation of cereals, oilseeds, and forage crops, as well as methods of increasing soil fertility and crop productivity and the use of GIS and remote sensing in precision agriculture.

To summarize the results of the PTF project on precision agriculture, an online "FIELD DAY" was held on the basis of the SK SHS on the topic "Precision farming technologies in the conditions of the North Kazakhstan region." This event was held with the participation of the Head of Staff of the Ministry of Agriculture of the Republic of Kazakhstan, M.A. Orazaev, Akim of the NKR, K.I. Aksakalov, and the Chairman of the Board of our University, K.K. Aituganov. In total, over 200 agribusiness entities from all over Kazakhstan participated in the online Field Day (Heads of agriculture of regions, districts, research institutes, large LLPs, and agricultural producers).

On the production crops of SC SHS, the scientists from "S. SEIFULLIN KATU" NCJSC introduced the results of the use of digital technologies and elements of precision agriculture, such as: remote sensing of the earth (GIS systems, remote sensing), targeted management of soil fertility and plant productivity, creation of electronic soil maps of fields, accurate accounting and analysis of meteorological data using sensors and sensors, space monitoring, aerial photography using various UAVs, the use of parallel driving systems, and differentiated fertilization in the cultivation of basic and promising crops (spring wheat, barley, triticale, soybeans, and corn).

If you look at the results of the last 3 years, the University's knowledge dissemination system in the period 2019–2021 covered 1,850 subjects in the agro-industrial complex.

Raised questions.

1. To increase the amount of research funding to 25% of the total income of the University;

2. To increase to 40% the share of teaching staff (of the total number of teaching staff) participating in funded research;

3. To ensure the submission of applications, at least 10 from each faculty are needed for the MES-RK grant funding competition for 2022–2024, including the grant funding competition for projects by young scientists.

7 STRATEGIC DEVELOPMENT

The implemented policy of the Republic of Kazakhstan in the field of higher education and science is aimed at improving the quality of scientific results and the competence of specialists, adapting and applying best international practices, and integrating into the global scientific and educational space. The state program for the development of the agro-industrial complex for 2017–2021 provides for the development of the potential of agricultural universities, including the "S. Seifullin KATU" NCJSC with its transformation into a research university. In accordance with the State Program for the Development of the Agro-industrial Complex, a program for the Development of the "S. SEIFULLIN KATU» NCJSC The program was introduced through the IPSA and coordinated with four state bodies: the Ministry of Justice, the Ministry of Agriculture, the Ministry of National Economy, and the Ministry of Finance. As a result, on September 1, 2020, the Decree of the Government of the Republic of Kazakhstan No. 545 "On awarding the status of a research university" was published. "S. SEIFULLIN KATU" NCJSC with the approval of its Program." In accordance with the Development Program, an action Plan for the implementation of the Development Program was developed and approved by the Chairman of the Management Board of "S. SEIFULLIN KATU" NCJSC for 2020-2024.

Within the framework of the Program, it is planned to implement a set of measures for the deep modernization and development of the research, educational, and innovation infrastructure and institutional environment of "S. Seifullin Katu" NCJSC with the aim of creating a modern research university in the field of

agriculture on its basis.

For these purposes, by the Decision of the Board of Directors of NAO "NANOC" No. 5/20 as of May 28, 2020 and No. 13/20 as of October 8, 2020, 100% of the participation in the LLP "Scientific and Production Center of Grain Farming named after A. Baraev" (village Scientific, Shortandy district, Akmola region), LLP "North Kazakhstan Experimental Station" (North Kazakhstan region, Akkain district, Shagalaly village), and LLP "KazRI Forestry and Agroforestry" Shchuchinsk, Akmola region) were transferred to the trust management of "S. SEIFULLIN KATU» NCJSC. The University, together with its subsidiaries, has developed Programs for the development of subsidiaries, which are approved by the Board of "S. SEIFULLIN KATU» NCJSC as of March 9, 2021.

Within the framework of the Development Program, "S. SEIFULLIN KATU" NCJSC plans the following infrastructure development activities for 2020–2024:

1) Development of the SE "Production of Crop Production", by:

✓ creation of the laboratory "Plant Protection and Quarantine";

✓ construction of a scientific and experimental greenhouse for conducting scientific research, training specialists in the operation of greenhouse facilities, and carrying out activities for the dissemination of knowledge.

2) The development of the SE "Production of Livestock Products", by equipping the educational and scientific livestock complex on the territory of the Scientific and Experimental Campus of field work and transferring part of the equipment to its base, laying a hospital for lake-commercial fish farming on the basis of the Dudarai campus.

3) Creation of SE "Applied Information Systems", consisting of:

✓ laboratories of statistics and forecasting;

✓ laboratories of mathematical modeling and biomathematics

4) Creation of a veterinary clinical and diagnostic center as part of the Kazakh-Chinese Veterinary Research Laboratory;

5) Creation of the central laboratory of applied physics and chemistry in order to strengthen the training of students in the field of fundamental sciences during the transition to new educational programs;

6) Creation of SE "Agricultural Engineering, "Digital Industry," and a laboratory of materials science (new materials and structures).

Due to the fact that the Development Program of "S. SEIFULLIN KATU" NCJSC for 2020–2024 was approved without financial support, the main measures of the university are aimed at attracting budget funds from various state sources. In particular, in order to modernize and create this infrastructure, the university is working on the development of state investment projects with an increase in the authorized capital of the organization.

A state investment project is a set of measures aimed at achieving the strategic goals of the state through the implementation of budget investments, in connection with which it is necessary that measures for the implementation of investment projects be included in the Action Plan for the implementation of the State Program of Agriculture for the relevant years.

For these purposes, in accordance with the Rules (approved by the Order of

the Minister of National Economy of the Republic of Kazakhstan as of December 5, 2014, No. 129), "S. SEIFULLIN KATU" NCJSC has been fully developed, calculations have been carried out, financial models have been prepared for the following 4 state investment projects. Currently, they have been coordinated with the authorized bodies and included in the budget program 269 to increase the authorized capital of five investment proposals of "S. Seifullin KATU" NCJSC for the creation of new scientific and production units (letter of NCJSC "NANOC" as of May 27, 2021 No.30–09–08/865):

1. Veterinary clinical and diagnostic Center:

2. Scientific and Educational Center of Agricultural Engineering "Digital Industry" and Laboratory of Materials Science (new materials and structures);

3. Laboratory of Mathematical Modeling and Biomathematics:

4. Livestock laboratory – smart farm based on the North Kazakhstan experimental station;

5. Scientific and experimental greenhouse (phytotronic complex) on the basis of the A.Barayev Research Institute of Grain Farming.

The total amount of project financing is 5.6 billion tenge.

As you know, "S. SEIFULLIN KATU" NCJSC has a certificate according to which its management system in relation to the Development and presentation of educational services for the training of personnel with higher professional education (bachelor, master, PhD) in accordance with the state mandatory standards of higher professional education in specialties and areas in accordance with the licensing area meets the requirements of the RK 9001-2016 Quality Management System. Requirements.

The transition of the QMS "S. SEIFULLIN KATU" NCJSC from the old version of the standard to the new version was successfully implemented on November 16, 2020. An internal audit of the QMS processes is currently being conducted, followed by an external inspection of the QMS by the conformity assessment body.

Since April 1, 2021, changes have been made to the organizational structure of the university in accordance with the decision of the Board meeting as of March 12, 2021, No. 19, in connection with which new Regulations on divisions and other QMS documents have been developed and approved.

"S. SEIFULLIN KATU" NCJSC ensures the passage of accreditation in order to:

- ✓ demonstrate their commitment to the quality of educational services provided;
- ✓ ensure competitiveness in the Kazakh and international markets of educational services;
- ✓ receive an independent assessment and recommendations on improving the implementation of educational programs at the university.

Currently, post-monitoring of accredited educational programs is being carried out. In particular, 24 educational programs at the university have successfully passed post-accreditation monitoring. Work is underway to prepare the post-monitoring of educational programs for 2–3 stages of accreditation.

In 2020–2021, 12 educational programs were accredited, 10 of them for 5 years and 2 for 3 years.

The participation of the university's educational programs in the NAAR national rating and the QS agency rating was ensured by filling out the online platforms of the agencies and providing supporting documents. Based on the results of participation:

In the QS Global World Rankings 2022, the university entered the top +1001 ranking of world universities among 14 universities in the Republic of Kazakhstan.

"S. SEIFULLIN KATU" NCJSC took 3rd place in the National ranking of demand for universities in the Republic of Kazakhstan for 2020.

"S. SEIFULLIN KATU" NCJSC entered the top 250+ ranking of universities in Eastern Europe and Central Asia. QS University Rankings: EECA 2021

The participation of "S. SEIFULLIN KATU" NCJSC in the Atameken rating demonstrated an improvement in positions compared to previous years based on the results of the following educational programs:

Four educational programs were awarded first place in the rating:

✓ Soil science and agrochemistry,
✓ Forest resources and forestry,
✓ Cadastre
✓ Agricultural machinery and technology

Three educational programs, 2nd place:

✓ Fisheries and industrial fishing,
✓ Evaluation,
✓ Land management

Three educational programs (3rd place):

✓ Veterinary sanitation;
✓ Veterinary medicine
✓ Technology for the production of animal products;

In 2021, the participation of "S. SEIFULLIN KATU" NCJSC and in the national ranking of demand for universities in the Republic of Kazakhstan The national ranking of the demand for universities in the Republic of Kazakhstan is based on compliance with the Berlin Principles: transparency, objectivity, verifiability, and accessibility of information sources. It is focused on determining the quality of educational programs in areas and levels of training, taking into account the peculiarities of universities in the Republic of Kazakhstan as well as their diversity. In total, more than 85 universities in the Republic of Kazakhstan and more than 2000 educational programs participated in the rating.

In the institutional ranking of universities **in the direction of "Bachelor's degree programs,"** the results are as follows:

✓ Agriculture and bioresources, 2nd place;
✓ Veterinary medicine, 2nd place;
✓ Engineering, manufacturing, and construction industries: 3rd place

In the direction of "Master's degree programs":

✓ Agriculture and bioresources, 1st place;
✓ Veterinary medicine, 1st place;

✓ Engineering, manufacturing, and construction industries: 1st place;
✓ Information and communication technologies, 1st place;
✓ Natural sciences, mathematics, and statistics: 3rd place

In the direction of "Doctoral Studies Programs":

✓ Agriculture and bioresources, 2nd place;
✓ Veterinary medicine, 1st place;
✓ Engineering, manufacturing, and construction industries: 1st place;
✓ Information and communication technologies, 3rd place

In the general rating of educational programs of universities, out of 63 educational programs of "S. SEIFULLIN KATU," NCJSC awarded prizes:

✓ 32 educational programs, 1st place;
✓ 20 educational programs, 2nd place;
✓ 11 educational programs, 3rd place.

Problematic issues

1. The following infrastructure facilities were not previously included in the National Agro-Industrial Complex Project for 2021–2025: "S. SEIFULLIN KATU» NCJSC

(1) Building a new educational and laboratory complex in Nur-Sultan that complies with international standards, with space for production and experimental workshops as well as research labs outfitted to GLP and BSL standards (the amount previously requested is 2.0 billion tenge).

(2) Building a sports complex that includes a swimming pool, a gym, boxing and wrestling rings, and areas for game sports (the price previously proposed is KZT 950.0 million).

(3) Establishing a center for the physical and chemical study of functional materials (481 million tenge is the project budget).

Given that the implementation of the "S. Seifullin KATU" NCJSC Development Program for 2020-2024 is otherwise impossible, it is necessary to advise the NCJSC NANOC to consider the possibility of finding additional financial resources for the creation of the aforementioned missing infrastructure and to include their implementation in the draft State Program of the Agro-industrial Complex for 2021–2025.

8 INTERNATIONAL COOPERATION

On the basis of international agreements signed by "S. SEIFULLIN KATU" NCJSC with foreign scientific and educational institutions and organizations, "S. SEIFULLIN KATU" NCJSC conducts international cooperation in the fields of science and education.

Currently, "S. SEIFULLIN KATU" NCJSC has 132 existing cooperation agreements with foreign universities and research organizations from 40 countries, 21 of which were concluded in 2021. In the context of countries: 62 agreements fall on universities of CIS countries (Russia, Belarus, Tajikistan, Azerbaijan), 39 on universities of the European Union (France, Germany, Italy, Norway, Switzerland, Finland, Baltic countries, etc.), 9 agreements with universities of

China, 8 USA, 6 agreements with universities in Turkey, 2 agreements with universities in Malaysia, 1 in South Korea, 1 in Canada, 1 in Ecuador, 1 in Iran, 1 in Australia, and 1 in Israel.

Moreover, our partners are more than 45 international foundations and organizations for the implementation of international relations, as well as 18 Embassies from countries such as Germany, the USA, Canada, the Kingdom of the Netherlands, Italy, the Czech Republic, China, France, the Islamic Republic of Afghanistan, Turkey, Poland, Malaysia, Mongolia, Turkmenistan, Tajikistan, Ukraine, The Republic of Belarus, Israel, and the Russian Federation.

In order to deepen integration into the global scientific and educational space and the development of advanced knowledge and technologies within certain areas, systematic work is being carried out to expand cooperation with the world's leading research universities and scientific organizations of agricultural profile from the USA, France, Australia, Canada, Germany, the Netherlands, and China.

Cooperation with AgroParisTech and Agreenium

In 2018, "S. SEIFULLIN KATU" NCJSC signed a trilateral memorandum with the Agreenium consortium and AgroParisTech Agricultural University, world leaders in agricultural science and education, and the cooperation agreement reached with them is a major breakthrough for "S. SEIFULLIN KATU" NCJSC and has no analogues in the CIS countries. Since the signing of the memorandum, "S. SEIFULLIN KATU" NCJSC has carried out a number of measures to modernize educational programs and conditions for the implementation of double-degree education, as well as to develop massive open online courses (hereinafter MOOCs).

In April 2019, a delegation from France led by the President of the Agreenium consortium, Ms. Marion Guillou, and the Rector of the AgroParisTech Agricultural University, Mr. Gilles Tristram, visited "S. SEIFULLIN KATU" NCJSC to learn about the university's activities and educational process, discuss double-degree education, and discuss MOOC development.

Within the framework of the agreements reached regarding the fulfillment of the terms of the memorandum "S. SEIFULLIN KATU" NCJSC, 10 scientists and professors from AgroParisTech and Agreenium visited the University. In particular: INRA scientific information management expert, Professor Dian le Henaff, on bibliometry, scientometry, and improving the quality of foreign publications; scientists-professors in fundamental sciences, Mr. Bruno Anselm and Mr. Francis Dorra, on harmonizing the content of basic disciplines (mathematics, physics, chemistry, biology, and information systems) for the 1st and 2nd courses of bachelor's degree and advanced teacher training (TT). Key areas of cooperation on the transfer of innovative technologies and information were discovered during the promotion of the knowledge dissemination center by the professor of economics at AgroParisTech, Ms. Marilyn Pilippi.

In June 2019, a group of four employees from "S. SEIFULLIN KATU" NCJSC made a working visit to AgroParisTech and Agreenium in order to get acquainted with the scientific, innovative, and academic activities of the university in two areas: soil science and animal husbandry. Within the framework of this

visit, work has begun on the formation of educational and integrated scientific programs in these areas.

Four professors from the Lycée Fénelon University visited in the first quarter of 2020. As part of their visit, recommendations for conducting practical and theoretical classes in the disciplines of "Biology," "Mathematics," "Physics," and "Computer Science," which are among the core subjects of the upcoming double degree program, together with AgroParisTech on three priority areas of animal husbandry, plant protection and quarantine, and soil science, were made.

As a result, 7 educational programs and 1 educational program were opened at the Faculty of Veterinary Medicine and Animal Husbandry Technology within the framework of the Roadmap jointly with AgroParisTech and Agreenium, which were included in the register of MES RK: "Agronomy", "Breeding and seed production", "Protective afforestation", "Soil science and agrochemistry", "Phytosanitary safety", "Agroecology" and "Biology".

Also, on the recommendation of French partners, five modules in fundamental disciplines such as computer science (12 credits), biology (22 credits), mathematics (15 credits), chemistry (12 credits), and physics (13 credits) are integrated into the above educational programs.

These educational programs have been introduced into the educational process since the new 2020–2021 academic year at the Agronomic Faculty in a pilot mode. The modules are made up of the disciplines of the basic component, and syllabuses (curricula) are compiled for each discipline, where the topics are interconnected with each other while maintaining an interdisciplinary connection with the core disciplines.

In general, during the period of cooperation with French colleagues, "S. SEIFULLIN KATU" NCJSC, AgroParisTech, and Agreenium have identified three priority areas (soil science, plant protection and quarantine, and animal husbandry) for the development of a joint two-degree master's degree program. Activities have been implemented within the framework of 3 seminars: contracts for scientific and educational activities with the Adherentium Agreenium, including visits to S. Seifullina Kanu" NCJSC by 14 French representatives and professors from AgroParisTech. In addition, two teachers from "S. SEIFULLIN KATU" NCJSC have completed internships in Adgoragistesh for 1.5 months.

The main joint activity of "S. SEIFULLIN KATU" NCJSC with AgroParisTech and Agreenium is the training of specialists in the fields of plant protection, soil science, and animal husbandry. A draft roadmap for "S. SEIFULLIN KATU» NCJSC" has been developed for these areas of activity for 5 years (2020–2024).

Moreover, on December 23, 2019, the Head of State, K.Zh. Tokayev, visited "S. SEIFULLIN KATU" NCJSC, got acquainted with the educational and research activities of the university, and held a conversation with teachers and students. During the visit, it was noted that one of the key areas of international cooperation between "S. SEIFULLIN KATU" NCJSC, AgroParisTech, and Agreenium became the implementation of a joint roadmap, which allows transferring to a double–

degree education. As a result, I received approval of the planned strategic direction of development of "S. SEIFULLIN KATU» NCJSC..

Attracting foreign scientists

Integration of the university into the world scientific and educational space An important component of ensuring the quality of education is the involvement of foreign scientists in teaching activities at the university.

For the reporting period, in accordance with a memorandum between the universities, eight professors from AgroParisTech and Agreenium visited the "S. SEIFULLIN KATU" NCJSC at the expense of the university to update the curriculum. Additionally, Dr. Christian Bauer of Giessen University spoke on the topic of "Laboratory Science" at the Faculty of VAHT as part of the DAAD program, the German Academic Exchange Service.

In 2020, the financing of programs to attract foreign scientists and top managers has been suspended according to letter No. 16-4/388 as of March 4, 2020, of the Department of Higher and Postgraduate Education of MES RK due to the pandemic. In 2021, MES RK did not support the program data of "S. SEIFULLIN KATU" NCJSC.

External academic mobility

An important stage in the development of international cooperation is participation in academic mobility programs.

Thus, within the framework of the academic mobility agreement with the Warsaw University of Natural Sciences, a 3rd-year student of the Faculty of Economics studied for 1 semester at this university. The 4th year student of the specialty electric power engineering studied in the period from September 24, 2019 to February 28, 2020, at the Czech University of Natural Sciences, Czech Republic, at the Faculty of Electric Engineering at her own expense.

Along with studying under the program of external academic mobility in the countries of the European Union, students of our university also go to study in the CIS countries. So, in 2019–2020, 57 students completed semester training at CIS universities: 50 students of the specialty of the technical faculty were trained at the Belarusian State Agrarian Technical University (Republic of Belarus), 4 students of the Faculty of VAHT were trained at the Irkutsk State Agrarian University named after A.A. Yezhevsky (IrSAU), and 1 student of the Faculty of VAHT was trained at the Novosibirsk State Agrarian University (Novosibirsk State Agrarian University). 4 students from IrSAU came to study at the faculty of VAHT at "S. SEIFULLIN KATU" NCJSC. Two 1st-year undergraduates majoring in power supply and operation of electrical equipment were trained during the semester under the contract at Tomsk Polytechnic University.

Unfortunately, as stated in letter No. 16-4/388 of the Department of Higher and Postgraduate Education of MES RK as of March 4, 2020, due to the worldwide declaration of the COVID-19 pandemic, the referral of students within the framework of academic mobility to all foreign countries was suspended in order to prevent the spread of the coronavirus in 2020–2021.

However, a way out was found in this situation, and 2020–2021 marked the beginning of online academic mobility in "S. SEIFULLIN KATU» NCJSC. Thus,

12 students from the faculties of VAHT and Energy participated in the student exchange program at the Irkutsk State Agrarian University named after A.A. Ezhevsky (RF), and 30 undergraduate and bachelor students from the Faculty of Economics studied under the CASCADE program (International School of Economics and Management, 15 countries). Additionally, 15 students from the faculties of agrarian, technical, and energy graduated from the Buryat State Agricultural Academy (RF) under the Erasmus+ program.

Due to the improvement of the epidemiological situation, for 2021–2022, the restriction on departure for external academic mobility programs was lifted. So, in the first trimester of this year, 1 student of the Faculty of Energy began his studies at the University of Valladolid (Spain), and 3 undergraduates of the Faculty of Forestry, Wildlife, and Environment will study at the Karadeniz Technical University (Turkey). Another five students from the faculties of VAHT, CSaVE, and Forestry, Wildlife, and Environment are waiting for a visa to study at the Warsaw University of Natural Sciences (Poland).

Agricultural practice of students

In order to receive practical training on top farms affiliated with the Weinstephan-Triesdorf University of Applied Sciences, the LOGO Farmers' Union, the DEULA Center for Advanced Training in Nienburg (Germany), and the Angers Higher Agricultural School (France), 15 university students competed during the 2019–2020 academic year. However, due to the COVID pandemic of 2019, their departure was postponed for nearly two years.

However, in the summer of 2021, permission was obtained for four students from the faculties of technical and energy to travel to farms in cooperation with the University of Applied Sciences Weinstephan-Triesdorf through the Union of Farmers LOGO program, as well as for two bachelors and two undergraduates from the faculties of technical, economic, and Land Management, A and D. These students are completing their studies and should arrive in Kazakhstan in October of this year.

International Summer/Winter School

The Department of "Forest Resources and Forestry" organized the Sixth International Summer School "Priorities of Forest Science and Innovation for Youth" from June 18 to June 30, 2019, at the ESPC "Saryarka" in Shchuchinsk. 29 undergraduates and doctoral students participated in it. They came from Turkey, Russia, Kyrgyzstan, Uzbekistan, and Kazakhstan universities: M. Kozybayev NKU, S. Toraighyrov PSU, Shacarim Semey State University, Zhangirkhan WKU, and invited lecturers Menshikov S.L., Doctor of Agricultural Sciences (Yekaterinburg, Russia), and Sultangaziev O. (graduate of VOKU University, Austria, Kyrgyz State University named after K. Skryabin) with the support of the leadership of our university and the TIKA Agency (Turkey). The main forms of work within the framework of the International Summer School were lectures, presentations, master classes, research, and practical exercises in the forests of the Burabai State Scientific and Industrial Enterprise, the arboretum of LLP KazSRIFA, the northern branch of the Republican Forest Seed and Breeding

Center, and the arboretum of the College of Ecology and Forestry. Following the results of the Summer School, the students were awarded certificates.

From December 3 to December 12, 2019, "S. SEIFULLIN KATU" NCJSC held the First Winter School for the first time, with the participation of professors of the Institute of Soil Science of Leibniz University (Hanover, Germany): Olga Shibistova, Associate Professor; Michael Klatt, Engineer; and Ann Gerwig, Engineer. The Winter School aimed to train the teaching staff of the Department of Soil Science and Agrochemistry to perform soil analyses in the Kazakh-German Soil Laboratory according to European standards. Specialists of Leibniz University conducted practical exercises to determine the granulometric composition of the soil, the pH of the soil solution, the electrical conductivity of the soil, the capacity of cation exchange, mobile phosphorus by the Melhlich 3 method, and mineral nitrogen. During the two weeks of the Winter School, the teachers of the department mastered the methods of conducting analyses according to European standards and learned how to work on modern laboratory equipment. In parallel, for 2nd-year undergraduates, Associate Professor O.B. Shibistova gave lectures on the diversity of soil functions and the role of soil organic carbon in the geochemical and biological processes of the biosphere. Following the results of the Winter School, the students were awarded certificates.

Advanced training of teaching staff

One of the most important forms of international cooperation is foreign internships for the teaching staff.

During the 2019–2020 academic year, 136 internships were completed, 106 of them as short-term internships and 30 as long-term internships at universities and agricultural organizations in 16 countries: Germany, Hungary, Poland, Ireland, Spain, USA, Canada, Turkey, UAE, Mongolia, South Korea, Russia, RB, Azerbaijan, Uzbekistan, and Ukraine. Compared to 2018–2019, the number of teaching staff who have upgraded their qualifications is 83 fewer, due to the fact that 4 EU Erasmus+ projects have been completed as well as the COVID–19 pandemic.

Within the framework of the EU Erasmus+ SUSDEV, PAWER, and DIREKT projects, 10 university teachers underwent advanced training in universities in Ireland, Poland, Spain, and Germany.

With the beginning of the quarantine, lectures were delivered online. "S. SEIFULLIN KATU" NCJSC and Tashkent State Agrarian University continue their work on the basis of a memorandum of international cooperation. "S. SEIFULLIN KATU" NCJSC is the main training base for highly qualified specialists, aimed at the exchange of experience between students and staff. As part of the exchange of experience, Ph.D., Associate Professor A.S. Tleulesova, and Ph.D., Associate Professor A.S. Albekova gave a lecture for teachers and students on the topic "Intercultural Communication." And also, a master class was held at a high level. Uzbek colleagues shared their views on the development of academic mobility and joint practical activities. During the meeting, the staff of teachers in the department shared their experience in methodological and scientific work. Business relations between departments have been established for joint

scientific and educational activities. Thus, the academic mobility program was successful within the framework of international cooperation.

International projects

The Erasmus+ program of the European Union, which aims to promote the modernization of the higher education system in Eastern Europe, Central Asia, the Western Balkans, and the Mediterranean through the distribution of funds to foster interaction and cooperation between universities of partner countries and the European Union, counts "S. SEIFULLIN KATU" NCJSC as a participant in seven of its projects.

"Lifelong Learning on Sustainable Development," "Paving the way for interregional mobility and ensuring compliance, quality, and equality of access," "Development of trans-regional information literacy for lifelong learning and the Knowledge Economy," "Modernization of training modules on deep processing raw materials in biofuels for bachelor's and master's degree programs," and "New and innovative technologies for sustainable development" are some of the EU Erasmus+ SUSDEV projects.

In Germany, Poland, the Russian Federation, Spain, and Azerbaijan, 20 staff participated in international seminars and trainings.

According to the outcomes of the sixth competition for the Erasmus+ program's "Capacity Building in Higher Education" component, the Executive Agency for Education, Audiovisual Media, and Culture chose 11 new projects involving universities from Kazakhstan for the European Commission to fund. In "S. SEIFULLIN KATU," NCJSC UnWaste's "Development of Circular Economy (Closed-Loop Economy) in Partner Countries Based on the Development and Implementation of the Master's Program "Waste Management," one of them is being attended. The project will be carried out at the Agronomic Faculty's Department of Ecology.

Seven grants were given to US colleges in 2020 to create collaborations between faculty members and administrators from US universities and Kazakhstani universities, thanks to financing from the American Council for International Education and help from the US Embassy in Nur-Sultan. In accordance with the program's guidelines, "S. SEIFULLIN KATU" NCJSC submitted applications for five projects, and two of them were approved as a result of a competitive selection process.

The first project will be carried out in collaboration with Michigan State University (USA) and is titled "Creating Educational and Research Capacity on Renewable Resources and Utilization in Kazakhstan (Establishing Teaching and Research Capacity on Renewable Resources and Utilization in Kazakhstan). May 2020 through April 2021: the implementation timeframe The staff of "S. SEIFULLIN KATU" NCJSC will apply the expertise of Michigan State University (USA) on the integrated use of renewable resources within the project's framework.

The second project, which will be carried out in collaboration with Monroe Community College (USA), aims to continue international collaboration between Monroe College and "S. SEIFULLIN KATU" NCJSC by virtual student exchange

and by conducting research to gauge the spread of wheat diseases in Kazakhstan using GIS technologies. 2020 implementation timeframe: January through September Through virtual internships and collaboration in the field of GIS (Virtual GIST Internships and Collaboration) between Monroe Community College (USA) and "S. SEIFULLIN KATU" NCJSC, the employees of "S. SEIFULLIN KATU" NCJSC will adopt the knowledge and experience of Monroe Community College (USA).

Since "S. SEIFULLIN KATU" NCJSC became the grandholder of the EU Erasmus+ NICOPA 597985-EPP project 1-2018-1-KZ-EPPKA2-CBHE-JP (New and Innovative Courses in Precision Agriculture 2018-2021), which sought to modernize current and create new curricula and modules in the field of precision agriculture using new GIS technologies, big data, and remote sensing, "S. SEIFULLIN KATU" NCJ The NICOPA Consortium is made up of 16 partners and 4 associate partners, all of which have years of expertise, advanced degrees, and professional networks. A global summer school was scheduled as part of the project at the Czech University of Natural Sciences; however it was postponed until 2021 owing to the COVID-2019 pandemic. A global summer school is also scheduled for the "S. SEIFULLIN KATU" NCJSC in 2021.

At "S. SEIFULLIN KATU" NCJSC, we operate the following jointly established international competence centers:

1. Kazakh-Belarusian Center for Training and Retraining of Engineering Personnel
2. Kazakh-Chinese Center of Science and Education
3. Kazakh-Chinese Agricultural Mechanization Center
4. CLAAS and John Deere Precision Farming Center
5. Gis Technology Center
6. Biosafety Laboratory
7. Kazakh-German soil laboratory according to European standards
8. BigData Center
9. Harbin Research Laboratory

International students

One of the key signs of the "S. SEIFULLIN KATU" NCJSC's internationalization in the world of higher education is its ability to draw in foreign students.

105 international students from 12 nations were accepted at the "S. SEIFULLIN KATU" NCJSC for the 2019–2020 academic year: China, Russia, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan, Ukraine, Turkmenistan, Germany, Georgia, and Turkey.

In 2020–2021, 152 foreign students from 14 different nations—China, Russia, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan, Ukraine, Turkmenistan, Germany, Georgia, Turkey, Azerbaijan, and Armenia—taught themselves English.

According to data from September 2021, the "S. SEIFULLIN KATU" NCJSC accepted 139 foreign students in 2021–2022, coming from 14 different nations, including China, Russia, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan,

Afghanistan, Ukraine, Turkmenistan, Germany, Georgia, Turkey, Azerbaijan, and Armenia.

Six students from Sri Lanka and Nigeria also enrolled in the university's preparatory Russian language classes in 2019-2020. Due of the uncertain epidemiological condition around the world, just two students from the Republic of Kazakhstan chose to attend university. These preparatory courses were no longer offered for 2020–2021 for the same reason.

Cooperation with China

Currently, "S. SEIFULLIN KATU" NCJSC cooperates with more than 10 leading universities and organizations in China.

As a result of fruitful work with Chinese partners on the territory of the scientific and experimental campus of field work, "S. SEIFULLIN KATU" NCJSC, together with the Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences, laid a botanical garden with the aim of introducing woody and shrubby plants into the dry steppe zone of Northern Kazakhstan for their subsequent use in landscaping Astana and creating a "green belt" of the capital. This project has been extended for the next four years.

In 2019, within the framework of cooperation with Debont Corporation, 1,700 tons of early-ripe soybean seeds were delivered and planted on the campus of "S. SEIFULLIN KATU» NCJSC.

As a result of successful negotiations on the basis of "S. SEIFULLIN KATU" NCJSC, the Chinese-Kazakh Center for Modern Agriculture and Veterinary Medicine, together with Henan Agrarian University, China, has opened.

Moreover, every year the partner universities of the PRC, in particular the SZUSLH and XIEG, allocate grants for the training of students and teaching staff of "S. SEIFULLIN KATU" NCJSC in Master's and Doctoral studies. Thus, there are currently 32 students and teaching staff of "S. SEIFULLIN KATU" NCJSC trained in China. In 2019, 7 people (6 for doctoral studies and 1 for a master's degree) won a grant to study at the SZUSLH and Henan Agricultural University (China).

International events, meetings, and visits

For 2019–2021, "S. SEIFULLIN KATU" NCJSC has held more than 50 international events, meetings, and visits, of which the most significant events were:

- The visit of Professor Tiffany McCarry of the University of Pennsylvania and Alan Peslak in the framework of the joint project Experimental Digital Global Engagement, co-financed by the American Consulate of the United States, from July 1 to July 3, 2019 Purpose of the visit: discussion of the work plan for the Experimental Digital Global Engagement project, aimed at international exchange of experience through Internet technologies between universities;
- The Mongolian delegation of the German-Mongolian Cooperation Project "Sustainable Agriculture visited Mongolia on July 1, 2019. The purpose of the visit was to discuss Kazakhstan's strategies for adapting agriculture to climate change and protecting agricultural land, legal requirements for promoting the seed sector and agricultural insurance, exchange of experience on reserve tillage, prevention of

black steam, diversification of agricultural structures, cultivation of new crops, and crop rotation;

- The visit of the delegation of Texas A&M University headed by International Coordinator of Training George Michael Mcwhorte on July 3, 2019 as part of the official visit of the delegation of Texas A&M University to the Republic of Kazakhstan to create an export multi-protein roadmap for Kazakhstan for 2019–2044;
- The Meeting "Innovations in the Development of Sustainable Agricultural Environmental Management Techniques in a Changing Climate in the Dry Steppes of Kazakhstan and Southwest Siberia (ReKKS)" with the financial support of the Ministry of Education and Science of Germany within the framework of the program "CLIENT II: International Cooperation and Innovation" The Scientific Curator of the Department of Environmental and Climate Protection Technologies of the DLR, Bonn, Germany, Mr. Roland Kyle, expressed confidence in the successful cooperation between the parties and said that MES of Germany transmits "S. SEIFULLIN KATU" NCJSC, modern equipment for the organization of a soil laboratory in the amount of 250 thousand euros;
- Meeting with a delegation from the USA headed by the President and CEO of Valmont, Mr. Steve Kanevski, on July 9, 2019. Valmont Company and "S. SEIFULLIN KATU" NCJSC agreed to work out a project to open a Valmont classroom on the basis of our university, as well as to jointly implement training programs for specialists in the field of management of modern irrigation technologies;
- The visit of a delegation from Henan Agricultural University (HAU), China, headed by the President, as well as an academician of the Chinese Academy of Engineering, Mr. Zhang Gaiping, on July 12, 2019 The purpose of the visit was the opening of the Sino-Kazakh Institute of Modern Agriculture and Veterinary Medicine together with the Research Center for Ecology and Environment of Central Asia, the Chinese Academy of Sciences (CAS), and Henan Agricultural University, as well as discussion of personnel training for agriculture and further cooperation in the fields of education and science;
- The visit of a delegation from Argentina headed by Ambassador Extraordinary and Plenipotentiary of the Argentine Republic to the Russian Federation, Mr. Ricardo Ernesto Lagorio, on July 18, 2019 The purpose of the visit is to discuss possible cooperation with "S. SEIFULLIN KATU" NCJSC;
- The visit of the rector of the Yakut State Agricultural Academy, Sakha Republic, RF Sleptsov Ivan Ivanovich, on July 26, 2019. The purpose of the visit is to discuss further ways of cooperating in the fields of science and education within the framework of the signed agreement between universities.
- The visit of the Chinese delegation from the potato company "Xisen Potato Industry Group Co. Ltd." headed by the President, Mr. Liang Shisen, on August 10, 2019. During the meeting, the results of potato variety testing and breeding within the framework of ongoing projects in these areas were discussed, as were further strategic issues on international cooperation between the potato companies "Xisen" and "S. SEIFULLIN KATU" NCJSC;

- The visit of the Chinese Academy of Sciences delegation under the leadership of Professor Chen Shi on September 23–24, 2019, for the Big Data Center's opening ceremony in "S. SEIFULLIN KATU" NCJSC;
- Opening of the first laboratory of soil research according to the European standard together with the University of Leibniz, Hanover, Germany, on October 25, 2019. The National Accreditation Center of Kazakhstan has accredited the soil laboratory. The event was attended by Vice Minister of Agriculture of the Republic of Kazakhstan Kurmanov R.Zh., German Ambassador to Kazakhstan Tillo Klinner, and Director of the Institute of Soil Science. Leibniz University of Hanover, Georg Guggenberger, Director of the Department of Foreign Economic Activity of the Ministry of Foreign Affairs of the Republic of Kazakhstan, Bolat Nusipov;
- The visit of the delegation of the Embassy of the French Republic to the Republic of Kazakhstan, headed by Ambassador Extraordinary and Plenipotentiary Mr. Philippe Martinet, on November 13, 2019. The delegation includes Ms. Laura Kastin, Adviser on Cooperation and Cultural Activities. Following the meeting, high rates of development of bilateral relations between the countries were noted, and an agreement was reached on all possible support of the Embassy of the Republic of France in Kazakhstan in the implementation of a joint program with the AgroParisTech University (Paris) to modernize the curriculum and scientific activities in "S. SEIFULLIN KATU" NCJSC in accordance with the best world practices;
- The visit of the UN FAO specialist on locust pests, A.V. Lachininsky, on November 27, 2019 to deliver a lecture "Locust and We" for employees and students of the Department of Plant Protection and Quarantine of the Faculty of Agronomy. The expert also presented modern biological and chemical measures to combat locusts.
- The visit of a delegation from the Institute of Soil Science of Leibniz University (Hanover, Germany), which included Olga Shibistova, associate Professor, Michael Klatt, engineer, and Anne Gerwig, engineer, from December 3 to 12, 2019. The purpose of the visit was to train the teaching staff of the Department of Soil Science and Agrochemistry to perform soil analyses in the Kazakh-German Soil Laboratory according to European standards.
- The training on February 4, 2020, on the topic "The need and importance of intellectual development of the individual in practice in South Korea" with the director of the International Institute of Intellectual Development, developer of innovative educational programs of local self-government of the Republic of Korea, and journalist of the international magazine MIND "Tomorrow," Professor Jo Gyu Yun;
- The visit of professors of Lycée Fénelon University (Paris, France), Bruno Anselm, Michel Aubert, Francis Dorra, and Denis Monas, from February 8 to March 13, 2020. During this period, professors gave lectures, conducted master classes, and taught practical classes in biology, computer science, mathematics, physics, and chemistry devoted to the reform of the bachelor's degree program for teachers of the relevant departments of "S. SEIFULLIN KATU» NCJSC. The

purpose of the visit is to give recommendations on conducting practical, laboratory, and theoretical classes in the disciplines that are among the fundamental subjects of the upcoming double degree program, together with the AgroParisTech in the three priority areas of animal husbandry, plant protection and quarantine, and soil science;

- The courtesy visit, on February 5, 2021: Ambassador Extraordinary and Plenipotentiary Ufuk Ekiji and Consul Abdulmutallib Cetin of the Embassy of Turkey in Kazakhstan visited "S. SEIFULLIN KATU" NCJSC.
- On April 27, 2021, the ceremony of handing over the "Valuable cargo" (first aid items, sanitary, and epidemiological assistance) of "S. SEIFULLIN KATU" NCJSC by the Embassy of the People's Republic of China;
- The official signing ceremony of the memorandum of understanding between "S. SEIFULLIN KATU" NCJSC and Holon Institute of Technology in the presence of Ambassador Extraordinary and Plenipotentiary of Israel to the Republic of Kazakhstan Liat Vekselman, Ambassador Extraordinary and Plenipotentiary of the Republic of Kazakhstan to Israel Satybalda Burshakov and Head of the Agency for the Development of International Cooperation at the Israeli Foreign Ministry Einat Shlein;
- The visit of the Vice-Rector for International Relations from the Khorog State University named after Moensho Nazarshoev and representatives of the Ministry of Education and Science of the Republic of Tajikistan on September 14, 2021, to discuss the results achieved in joint work and plans for further cooperation;
- The official ceremony of signing a memorandum of understanding and a memorandum of cooperation on the student exchange program with the University of Pertamin (Indonesia) was held in the presence of Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to the Republic of Kazakhstan, Rakhmat Pramono, and Ambassador Extraordinary and Plenipotentiary of the Republic of Kazakhstan to Indonesia, Daniyar Sarekenov.

The University conducts systematic work on the implementation of risk management measures in the field of international relations. The vector of further international cooperation is aimed at the development of education and science and involves scientific internships for scientists, doctoral students, and undergraduates in leading foreign scientific centers and universities.

9 EDUCATIONAL WORK

During the reporting period, out of 11416 students, 4942 (43%) were residents of Nur-Sultan. 6348 students (i.e., 55%) arrived from other regions, of which 3472 (30%) were from rural areas and 2876 (25%) from small towns. 125 students (1%) are young people with foreign citizenship studying in another state.

In 2020–2021, 3488 students out of 11416 formed a social support group. The University has 87 orphans, 59 disabled students, 1124 from low-income families, 2042 from large families, and 167 students with families. In general, 6887 students study under state educational grants and 4554 on a contractual basis.

Number of students entering the social category in 2020–2021

No.	Faculty	The total number of students at the University	Disabled students	Orphan students	Students from low–income families	Students from large families	Students with families	Total number of students from the social category
1	Agronomic	1258	10	10	34	284	25	363
2	VAHT	1687	12	22	52	485	63	634
3	Land Management, A and D	2090	6	12	68	338	21	445
4	Energy	1589	6	10	32	211	9	268
5	Economics	1311	7	10	143	150	16	326
6	Technical	2399	11	13	592	467	25	1108
7	CSaVE	1066	7	10	199	105	8	329
8	The Dep of Biological Sciences	16	–	–	4	2	–	6
	Barlygy	11416	59	87	1124	2042	167	3479
	Payyzdyk korsetkishi	100%	0.5%	0.7%	9.8%	18%	1.5%	30.5%

In working with young people, special attention was paid to creative development. 135 events were organized in this direction during the year.

- In the legal direction: 24.
- Civil-patriotic direction: 27.
- Cultural and intellectual direction: 7.
- Spiritual and moral direction: 34
- In the direction of promoting a healthy lifestyle, 38
- In the direction of labor training, 5

The educational institution has formed the work of student organizations and clubs in the direction of self-government.

Today, the creative activity of students is at 53%.

Student activity indicator

P/S	Structural units that develop students' activity	2018–2019	2019–2020	2020–2021
		Number of students 10363	Number of students 10935	Number of students 11416
1	Organizations under the Youth Affairs Committee	1598	1552	1550
2	Sports Club	530	611	520
3	Subject circles at faculties	897	1025	1323
4	Military Department	494	429	427
5	Creative clubs	3128	2415	2208
	Total	6647/64%	6032/56%	6028/53%

In 2020–2021, systematic work was carried out with an emphasis on psychological and pedagogical support for students in distance learning.

Psychologists provided timely psychological support in the direction of the formation of a socio–psychologically favorable environment that provides psychological comfort and success for all students involved in the educational process.

Teachers–psychologists are specialists in three areas:

1. psychodiagnostic orientation for 3749 students;
2. correctional and developmental orientation for 8910 students;
3. the advisory direction of 1438 students;
4. conducted special work with 480 students on psychological activity.

In the preventive direction, a specialist theologian worked with students, conducted lectures with 3608 students, and did individual work with 34 students.

During the reporting period, special attention was paid to the preparation of buildings and student dormitories according to sanitary requirements.

Classrooms and student dormitories are equipped with 763 quartz lamps.

Faculties for equipping quartz lamps and recirculators:

- Faculty of Agronomy – 30;
- Faculty of Veterinary and Animal Husbandry Technology – 69;
- Faculty of Orbszhd – 39;
- Faculty of Energy – 32;
- Faculty of Economics – 17;
- Technical Faculty – 101;
- Faculty of OKPO – 22;

- Faculty of Osstu – 10;
- Faculty of Humanities – 12;
- Military Department – 5;
- In experimental production workshops – 10

✓ In accordance with the requirements of the time, the "Ashyk" system was put into operation.

✓ An inclusive infrastructure has been created.

✓ In order to form an inclusive infrastructure, plates with the tactile Braille alphabet were made for people with disabilities and installed in educational buildings and dormitories.

✓ Call mechanisms for people with disabilities have been established.

✓ A wheelchair lift was purchased in two copies.

✓ Mini–football fields near dormitories No. 7 and No. 6 have been updated and put into operation.

✓ Fairs were organized for university staff.

✓ The social project "Medical Insurance" for teachers and trade union staff has been implemented. According to the university, 1080 employees are insured.

✓ 904 teaching staff was given free travel tickets.

Recommendations:

1. Opening of medical care offices in the educational building of the educational and scientific production complex "Saryarka" in the city of Shortandy, Faculty of Agronomy, new technical, old technical, Ospz.
2. Carrying out major repairs, updating furniture in dormitories No. 5, No. 2B.
3. Creating rooms in 8 dormitories for the independent training of students.
4. Installation of turnstiles in dormitories that work in conjunction with the Face–ID device.
5. Transition to digitalization of all services.
6. Automation of activities between the department and dormitories, student council, medical staff, and dormitory commandants

10 STRENGTHENING THE MATERIAL AND TECHNICAL BASE

The infrastructure and life of the university are two of its main structures, which, by virtue of their capabilities, create favorable conditions for full–fledged study, leisure, and everyday life.

The main activity of the department is the maintenance and development of infrastructure and the production environment in "S. Seifullin KATU" NCJSC, the creation of safe and comfortable conditions for educational and scientific processes, as well as ensuring compliance with the requirements of sanitary, fire, civil, etc. requirements for buildings and structures by type of University activities. Due to the name change, the job descriptions and Regulations for the department have been revised and are under consideration.

The objects of service are traditionally: academic buildings, dormitories, boiler rooms, educational and production laboratories and workshops, equipment, etc. (Fig. 1).

Figure 1. Main service facilities

Maintaining all existing facilities of the university in working order, ensuring the operability of all life support systems is the primary task of all services of the department.

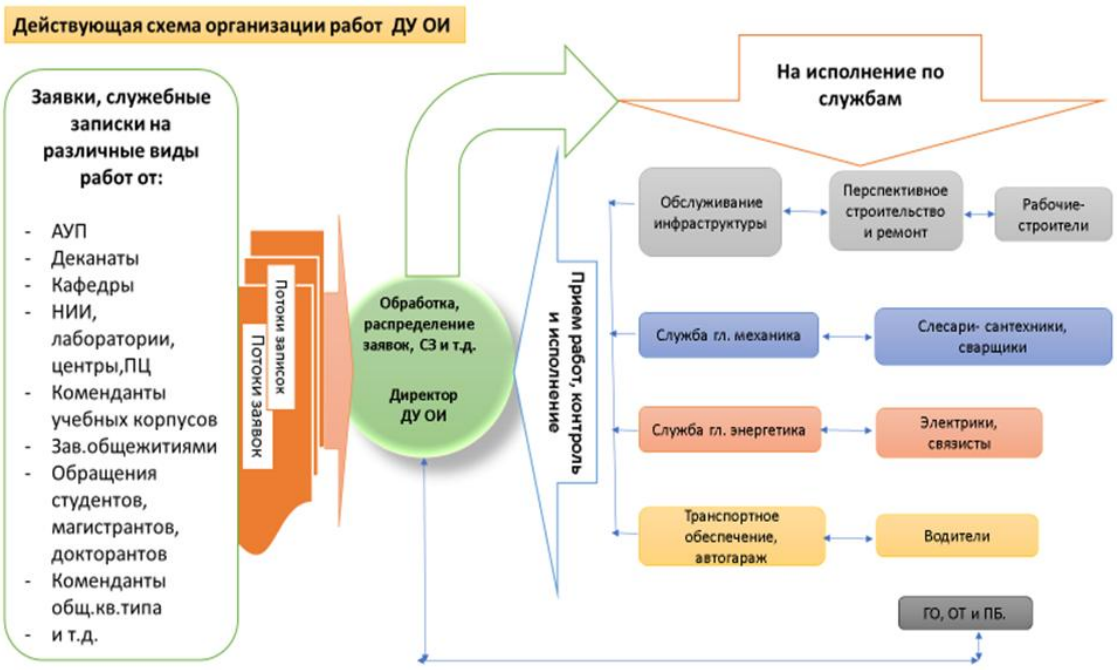

Figure 2. Scheme of organization of work

Depending on the complexity, situation and type of work, a comprehensive approach of interaction of services is provided.

1. Personnel

As of September 1, 2021, the Department has only 272 main staff units and 23 additional rates (0.25, 0.75, and 0.5).

In the current year, in comparison with 2020, staff turnover is insignificant; they left on their own and for various reasons:

- Manager (instrumentation engineer) 1 unit (vacancy)
- Manager (communications engineer) 1 ed. (vacancy 0.5 rates)
- Chief Manager for repair and prospective construction, 1 unit; at the moment, a specialist has been accepted for the vacant place.
- Electricians: 2 units (vacancy: 1.5 rates)
- Laundress (pieceworkers): 1 unit (vacancy)
- Construction worker (pieceworker): 1 unit (vacancy)
- Head of hostel: 1 unit

A specialist is accepted into the staff.

The number of employees in the pre–retirement age group is 21.

New appointments to vacant positions in 2021:

- Director of the Infrastructure Management Department, on a competitive basis, 1 unit (May 2021)
- Manager for current repairs and prospective construction of one unit (July 2021)
- Manager–clerk–1 unit (August 2021)
- General manager for current repairs and prospective construction of 1 unit (September 2021)
- Head Warehouse: 1 Unit (September 2021)

In the context of departments and services, the situation is as follows:

Table 1 – Staffing units and number of part–timers (specialists and workers)

Службы, специалисты, рабочие	ИТР Специал.	Электрики	Слесари-сантехники +ГЭС	Строители (сдельщики)	Прачки (сдельщики)	Плотники	ТБ и Би ОТ	Учхоз – хоз.часть	Автогараж	Всего:
	1	2	3	4	5	6	7	8	9	
Штатные ед./совместители	18/05	5/2,5	7/3,5	10/-	2/-	6/-	2/-	8/1	15/05	73/8
ИТОГО:	**18,5**	**7,5**	**10,5**	**10**	**2**	**6**	**2**	**9**	**15,5**	**81**

Table 2 – Staffing units and the number of part–timers (academic buildings)

Учебные корпуса	Главный корпус	Агрономический	Биокорпус	Ветеринарный	Военная кафедра	Технический факультет	Технический факультет	УНПК Сарыарка Щучинск	УЗРА и Д + ЦРТ	Всего
	1	2	3	4	5	6	7	8	9	
Штатные ед./совместители	18/2	20/05	21/-	11/-	7/-	18/-	14/05	12/1,5	17/1,25	138/5,75
Итого:	20	20,5	21	11	7	18	14,5	13,5	18,25	**143,75**

As can be seen from Table 2, the total number of units is 143.75, allocated for auxiliary personnel of educational buildings, in the list of positions and jobs: commandants, cleaners, toilet girls, cloakroom attendants, janitors, janitors.

Table 3 – Staffing units and number of part–timers (student and family dormitories)

Общежития студенческие	**№2б**	**№5**	**№6**	**№7**	**№8**	**УНПК Сарыарка Щучинск**	**Всего:**
Штатные ед./совместители	**8/0,5**	**8/-**	**8/2,5**	**10/-**	**7/0,5**	**12/1,5**	**53/5**
Итого:	8,5	8,0	10,5	10	7,5	13,5	**55,75**
Общежития семейные	**№1а**	**№2а**	**№4**	**Кв.типа**			
Штатные ед./совместители	**8/05**	**9/1,5**	**1/1**	**2/-**			**20/3**
Итого:	**8,5**	**10,5**	**2**	**2**			**23**

The specified number of units, 53.75 for student dormitories according to the tariff list, includes the heads of dormitories, cleaners, toilet girls, janitors, and night commandants from among the student assets.

In family dormitories, there are fewer units: 23 managers, cleaners, and janitors provide the process; janitors, plumbers, electricians, and carpenters work for 0.25 or 0.5 combinations.

Quantitative assessment of commandants and technical staff:

- Commandants and managers of dormitories (18 units);
- Watchmen (65 **units**, of which **36 units** (13.2%) work in 9 academic buildings, respectively, and 29 units in dormitories);
- Cleaners: (98 full–time units) (36% of the total) and an additional 8 rates of 0.5 units.
- Watchmen in the state: (4 units)

- Wipers: (14 units)
- Carpenters: (6 units).

In general, the structure and personnel policy of the department require revision and restructuring in order to optimize and improve the efficiency of work in all services (see Appendix 1).

2. Production of works by the services of the department

2.1 Chief Mechanic's Service (engineering systems and networks) – the main tasks of the service. This includes carrying out preventive measures in order to maintain the entire heating system, water supply and sewerage, elevator units, hot water boilers, HVAC, ensuring the appropriate temperature regime in all rooms, flushing and crimping of thermal systems, obtaining a passport of readiness for the heating season, and monitoring the rational use of thermal resources.

Maintained and operated:

- underground and aboveground communications on the territory of the university;
- underground water supply lines with a length of 1.7 km;
- underground sewers with a length of more than 2.5 km;
- thermal networks at the boundaries of operation, with a length of more than 1000 m;
- 26 elevator units, 42 hot water boilers, more than 3000 heating devices, and 44 heat metering devices are in operation.

During the reporting period, this service carried out scheduled and off–schedule (emergency) work.

Table 4 – Works performed by the chief mechanic during the reporting period

No.	Types of work performed (planned)	University facilities	Works (unscheduled)
Preparatory work to the heating season of the thermal nodes of the hot water, HVAC systems			
1	Inspection, revision of thermal units, and metering devices of automation. Verification of heat metering devices.	Small–family dormitory on the street "Kerey Zhanibek Khandar," 14A, B, and C	As applications are received – installation of toilets in the bathrooms of dormitories and academic buildings
		All academic buildings and dormitories	
2	Inspection, revision of water supply and sewerage systems, the condition of metering devices.	All academic buildings and dormitories	
Trials internal fire–fighting water supply systems for operability			
3	Internal fire–fighting water supply systems for operability	Dormitories No.1a, 2a,2b, 5,7, UNPC "Saryarka", all buildings	Repair of chairs and beds of dormitories and academic buildings
Cleaning of sewers and cleaning of wells			

4	Sewerage, wells	Dormitories No.4,2B, 2A,7,1A,5, main building, biofac, agrofac, military department, sports complex, old technical faculty, new technical faculty, all objects without exception.	Replacement of cast–iron radiators at the Military Department, the Dep. of Biological Sciences, dormitories No. 2B, No. 4, No. 5, No. 7
REPLACEMENT			
5	Welded ball valves in water supply wells	The territory of the university	Welding of handrails of staircases in the Department of Biological Sciences building
6	Taps on urinals	Main building, the Department of Biological Sciences, Technical Faculty, New technical Faculty, the Department of Soil Science and Agrochemistry, Military Department	Painting heating pipelines, elevator units, and boilers with thermal insulation mastic
7	PVC valves on water supply risers	Dormitories and academic buildings	Installation of a fire hydrant in a well on the territory of the auto garage
8	Sewer pipes Ø 50, 100	Dormitories and academic buildings	As applications are received
9	Heating pipes Ø 20, 32, 50, 89, 108 mm	Dormitories and academic buildings	As applications are received
10	Toilets, PVC valves, cold and hot water pipes, ball valves, heating pipelines	UNPC Saryarka Shchuchinsk	As applications are received
11	Cranes of fire extinguishing systems	Dormitories and academic buildings	As applications are received
REPAIR			
12	Hot water supply systems, boilers	Technical Faculty (new.old), dormitories No. 5, 7, 2a, 2b, Agronomic faculty, Biological Sciences Department.	Installation of faucets in kitchen rooms, bathrooms and showers of dormitories and academic buildings
13	Fire Hydrant	Technical Faculty (new)	As applications are received
14	Monoblock and hot water supply systems	Sports complex	As applications are received
15	Setting up heat control systems	A small–family dormitory on the street "Kerey Zhanibek Khandar,", 14A, B, C, Zemfaka, a 9–storey dormitory for 592 places, on Moldagulova S.	As applications are received
16	Maintenance of water pressure boosting stations	Small–family dormitory on the street "Kerey Zhanibek Khandar," 14A, B, and C	As applications are received

17	Maintenance of water pressure boosting stations	9–storey dormitory with 592 beds, on Moldagulova St.	As applications are received

This year, taking into account the general unsatisfactory condition of engineering systems due to long–term operation, physical wear, and temperature fluctuations in the systems, it was possible to carry out a large amount of preparatory, repair, and restoration work on its own. Timely certificates of the readiness of facilities for connection to heating networks were received. It is impossible not to note the qualifications and dedication of the employees and specialists of this service.

Currently, a plan has been drawn up and work is underway to gradually eliminate the comments of the independent controller from JSC Teplotransit.

This year, due to the expected decrease in temperature, by the decision of the Akimat, the connection to heating was made on September 23, 2021; previously, the generally accepted schedule was October 15, 2021. In response, letters were submitted in advance from the university administration for approval of the commissioning of internal heating networks and nodes. On September 24, 2021, all buildings, dormitories, and academic buildings were connected to heating.

The duty groups of locksmiths and specialists carry out constant monitoring of heat transfer devices, compliance with temperature indicators and standards in the premises, de–airing of systems, and adjustment. Round–the–clock duty for the service is organized. As they arise, pre–emergency and emergency malfunctions of systems and networks belonging to the operational boundaries of responsibility are promptly eliminated.

2.2 The service of the chief power engineer.

During the reporting period, this service carried out scheduled and off–schedule (emergency) work (see Table 5, Appendices 2).

2.3 Operational and Technical Service (ETS)DU and OIv of the International Settlement:

It provides maintenance of the boiler room of the veterinary clinic and the sewage pumping station in the International Settlement. The service consists of a mechanic for the maintenance and repair of boiler equipment, a boiler room machinist, a fitter, and a tractor driver. The ETS manager is responsible for providing the general guidance service.

Availability of specialists and workers as of September 1, 2021:

- ETS manager: 1 unit;
- construction workers: 3 units;
- plumbing fitters: 2 units;
- boiler room mechanic: 1 unit;
- fitter: 1 unit;
- boiler room machinists: 8 units,

For a total of **16 units.**

Availability of used equipment:

- tractor–MTZ 82–1ed: 3 units;
- tractor–DDT–75–1ed: 3 units;

- mini–tractor–MKSM 800–1ed: 3 units.

Since September 01, 2020, work was carried out *to prepare for the heating season*:

- coal of the Bogatyr brand was delivered in the amount of 1000 tons;
- explosive valves were inspected;
- walls were whitewashed and painted inside and outside the boiler house;
- 5 boilers of the KVR–1.6 brand, 2 network pumps, and 2 make–up pumps were installed inside the boiler room;
- 5 blown fans were installed.

The heating season began on October 1, 2020, and will end on April 30, 2021. The boiler room machinists have been trained as stokers and have been granted access to work with hot water boilers.

The issue of connecting gas supply remains relevant; the necessary geometric parameters of all buildings of the veterinary faculty and documents regarding the consumption of the amount of heat for calculating the need for gas heating have been transferred to the Akimat.

Landscaping of the territory

25 pieces of pine seedlings were planted, and trees were pruned from dead wood. From June to August, repairs were carried out in the veterinary clinic of the vivarium for breeding sheep.

Table 6 – Production of works from September 01, 2020 to September 01, 2021

11 FINANCIAL AND ECONOMIC ACTIVITIES

In accordance with the University's Development Plan for 2020, during the reporting period it was expected to receive revenues in the amount of 8,347.4 million tenge and make expenses in the amount of 8,248.3 million tenge. The estimated net income of the Company in 2020 was to amount to 99 million tenge.

However, due to the pandemic of the new coronavirus COVID-19, the University's Development Plan for 2020 had to be significantly adjusted several times during the year. These planned indicators were approved based on the results of the last refinement of the Plan.

As a result, according to the results of its activities in 2020, the University actually received income of 8,325.1 million tenge, or 99.7% of the planned amount, including for core activities in the amount of 8,039.9 million tenge (101.1%) and for non-core activities in the amount of 285.1 million tenge (73%).

Actual expenses in the reporting period amounted to KZT 7929.8 million, which is 96.1% of the planned amount, including cost: KZT 7,450.1 million (97.4% of the plan), administrative expenses: KZT 403.9 million (81.4% of the plan), and other expenses: KZT 75.8 million (74.7% of the plan).

Net income for the year amounted to 395.3 million tenge.

Table 56 – **Financial indicators of the company**, **million tenge**

Name of indicator	2018	2019	2020
Income	6370.7	7427.6	8325.1
Expenses	6363.4	7315.1	7929.8
Profit (loss)	7.3	112.5	395.3

The income structure of the Company consists of two components: main activity and non-main activity.

Among the income from core activities for 2020, a significant share is occupied by income from educational and scientific activities (7,835.5 million tenge). In addition, in 2020, the Company received income from production and provision of services of 7.7 million tenge and income from related activities of 196.8 million tenge. In total, the Company received 8,040 million tenge of income from its core activities in 2020, which is more than the planned amount by 83.2 million tenge, or 1%.

In the context of the Company's activities and the source of financing, the distribution of income is indicated in Table 57:

Table 57–**Income from core activities, million tenge**

Name	**2019**			**2020**			Deviation (+increased; - reduced)
	Extra-budgetary financing	Budgetary financing	Total	Extra-budgetary financing	Budgetary financing	Total	
Educational activities of all, including	**2 500.1**	**3 127.5**	**5 627.5**	**2 307.5**	**4 016.9**	**6 324.4**	**+696.9**
Bachelor's	2 358.4	2 693.2	**5 051.6**	2 202.2	3 548.0	**5 750.2**	**+698.6**
Master's	26.1	115.7	**141.8**	72.6	299.3	**371.9**	**+230.1**
Doctoral studies	95.4	318.6	**413.9**	17.9	169.6	**187.5**	**-226.4**
Advanced training courses	20.2		**20.2**	14.8		**14.8**	**-5.4**
Science	259.2	966.1	**1 225.3**	215.8	1 222.3	**1 438.1**	**+212.8**
Income from international activities	8.6	17.2	**26**				**-26**
Income from related activities	238.8		**238.8**	269.7		**269.7**	**+31**
Sales of products and services	**2.6**		**2.6**	7.7		**7.7**	**+5**
Total	**3 009.3**	**4 110.9**	**7 120.2**	**2 800.7**	**5 239.2**	**8 039.9**	**+919.7**
Income from non-core activities							
Income from the movement of assets	45.2		**45.2**	40.5		**40.5**	**-4.7**
Reimbursement of utilities	29.4		**29.4**	23.4		**23.4**	**-6**
Deposit fees and	104.1		**104.1**	120.8		**120.8**	**+16.7**

finance leases							
Operating leases	34.2		**34.2**	8.9		**8.9**	**-25.3**
Exchange rate difference	44.5		**44.5**	5.6		**5.6**	**-38.9**
Others	50.0		**50.0**	86.0		**86.0**	**+36**
Total	**307.4**		**307.4**	**285.2**		**285.2**	**-22.2**
Total	**3 316.7**	**4 110.9**	**7 427.6**	**3 085.9**	**5 239.2**	**8 325.1**	**+897.5**

The University's income from core activities due to budget financing totaled 5,239.3 million tenge, or 65% of the total amount of income, while off-budget income amounted to only 2,800.7 million tenge, or 35%. This ratio is projected based on the specific weight of funding sources for undergraduate educational programs. For other items of income from educational activities, the impact on the overall ratio of funding sources is not significant.

In comparison with 2019, there was a significant increase in income from core activities, the total value of which amounted to 919.7 million tenge, or 13%.

The achievement of this growth was made possible due to an increase in income from educational activities in the amount of 696.9 million tenge, received due to an increase in the total contingent of students under the state grant from 7,095 people in 2019 to 7,610 people in 2020 and an increase in the cost of educational grants in agricultural specialties from 635 thousand tenge to 742 thousand tenge and in veterinary medicine from 349 thousand tenge to 955 thousand tenge.

Additionally, a gain in income from research activities of 212.8 million tenge, achieved mostly through grant funding of young scientists managed by the Ministry of Education and Science of the Republic of Kazakhstan, contributed to income growth in comparison to 2019.

It should be noted that, with generally positive results from the execution of the revenue part of the University's budget in 2020 for its core activities, the Company, in comparison with the original plan, allowed a forced loss of income for certain income items due to the coronavirus pandemic.

This, first of all, concerns income from related educational activities in the form of providing places in dormitories to students, where, with an initial plan in the amount of 240 million tenge, only 120 million tenge was actually received. In addition, in comparison with the initial plan, no income was received from raising funds from the state budget for the invitation of foreign scientists and academic mobility in the total amount of 145 million tenge.

For non-core activities, the university planned to receive income in the amount of 390.6 million tenge in 2020.

In fact, at the end of the year, only 285.2 million tenge or 73% was received from non-core activities.

The main reason for the loss of income from non-core activities is a decrease in activity in certain areas of international activity in connection with the pandemic, as well as the revision of the terms of implementation of contracts for the provision of assets free of charge.

Among the income from non-core activities, the main items are income from the placement of temporarily available funds on deposits in second-tier banks in the amount of 120.8 million tenge, income from the rental of office and residential premises in the amount of 8.9 million tenge and reimbursement by residents of utilities in the amount of 23.4 million tenge, income from exchange rate difference in the amount of 5.6 million tenge, as well as income from gratuitously received assets in the amount of 40.5 million tenge.

As already noted, in 2020, a total of 8,248.3 million tenge was planned for the implementation of the tasks set, including 7,650.8 million tenge attributed to cost, administrative expenses (496 million tenge), and other expenses (101.5 million tenge).

In fact, the total amount of expenses amounted to 7929.8 million tenge, which is 96.1% of the planned amount, including costs of 7,450.1 million tenge (97.4% of the plan), administrative expenses of 403.9 million tenge (81.4% of the plan), and other expenses of 75.8 million tenge (74.7% of the plan).

Table 58 - **Expenses for 2018-2020, million tenge**

Name of indicator	2018	2019	2020
Cost of products sold and services rendered	5 582.5	6 764.6	7 450.1
Administrative expenses	401.3	427.7	403.9
Other expenses	133.6	122.8	75.8
TOTAL:	**6363.4**	**7315.1**	**7929.8**

The main share of expenses is labor costs (5,021 million tenge), which is 63% of the total amount of expenses. In comparison with 2019, the wage fund increased by 571 million tenge, which is primarily due to an increase in the size of the official salaries of teaching staff to an average of 30%, as a result of which the average monthly profitability of the Company's employees, taking into account all payments, amounted to 278.8 thousand tenge.

Table 59- **Dynamics of labor costs, million tenge**

Name	2019	2020	Deviation
AUP	309.6	309.5	**-0.1**
Teaching staff	2 827.7	3 076.9	**+249.2**
Serving Staff	407.4	581.2	**+173.8**
Academic and educational staff	260.2	363.6	**+103.4**
Science	645.2	689.6	**+44.4**
Total:	**4 450.2**	**5 020.9**	**+570.7**

A significant part of the expenses also falls on the payment of taxes and other mandatory payments to the budget and contributions to funds, the total amount of which in 2020 amounted to 555 million tenge, including such basic taxes as:

Social contributions: 119 million tenge;
Social tax: 351 million tenge;
CSHI deductions: 70 million tenge.

Table 60 - **Expenses on taxes and other mandatory payments to the budget, million tenge**

No. p/p	Name	2018	2019	2020
1	Social contributions	88.0	96.0	119.0
2	Social tax	248.0	303.0	351.0
3	Others	28.0	45.0	85.0
	Total:	**364.0**	**463.0**	**555.0**

In addition, the main group of expenses for the Company in 2020 includes expenses for utilities (180 million tenge), travel expenses (82 million tenge), purchase of scientific services (95 million tenge), purchase of raw materials (326 million tenge), purchase of fuel and lubricants (21.5 million tenge), maintenance of fixed assets (103 million tenge), and others.

A significant reduction in the Company's expenses is also associated with the transfer of the educational process to a remote format due to the pandemic, which, in comparison with the Plan, significantly reduced the cost of utilities (66.1 million tenge), the cost of staff training (18.5 million tenge), travel expenses (25 million tenge), the purchase of stocks (129.3 million tenge), works and services (19.9 million tenge), other expenses (45 million tenge), and others.

Table 61 - **Utilities and travel expenses, million tenge**

No. p/p	Name	2018	2019	2020
1	Utilities	215.0	222.0	180.0
2	Travel expenses	118.0	142.0	82.0
	Total:	**333.0**	**364.0**	**262.0**

In addition, in 2020, capital investments were made in the material and technical base of the university.

This primarily relates to the acquisition of fixed assets totaling 294 million tenge *Table 62.*

Table 62 – **Expenses for the purchase of fixed assets million tenge**

Name	**2019**	**2020**	**Deviation**
Buildings and structures			
Machinery and equipment	412.4	131.4	**-281.0**
Transportation	17.3	13.0	**-4.3**
Computers and peripherals	123.2	77.8	**-45.4**
Library Fund	15	11.6	**-3.4**

Other fixed assets	113.4	59.9	**-53.5**
Total:	**681.3**	**293.7**	**-387.6**

Also, in 2020, repairs were carried out in academic buildings and dormitories for a total amount of 281 million tenge.

Information on repair work is given in *Table 63*.

Table 63 – **Repair costs million tenge**

No. p/p	**Name**	**2019**	**2020**	**Deviation**
1	Academic buildings	150.9	219.2	**+68.3**
2	Dormitories	32.0	48.0	**+16.0**
3	Others	10.0	13.8	**+3.8**
	Total:	**192.9**	**281.0**	**+88.1**

At the end of the reporting period, accounts receivable in the Company amounted to **71.5 million tenge,** this debt is short-term.

Short-term accounts receivable include students' and undergraduates' debts for training on orders and applications, employees' and students' debts for travel expenses, advances issued, and debts for renting apartments with subsequent redemption.

Out of the total amount of accounts receivable, the problem is the debt in the amount of 21 million tenge, of which 7.3 million tenge were formed before 2012. Procedural work is being carried out on the entire amount of debt in this category. (Bank of Astana: 8 million; PTI "Pisheprom": 2 million; students: 1 million; former employees: 660 thousand)

Accounts payable as of January 1, 2021, amounted to KZT 4,401 million; this debt is fully current.

The main share of accounts payable is:

- Short-term accounts payable to suppliers and contractors: 430 million tenge (67 suppliers, 25 communes, 2 wages, 4 internships, reserve 329);
- Short-term advances received for training: 1 109 million tenge;
- Other long-term obligations (KZT 2 781 million) are obligations to the state for the trust management of the building of the new technical faculty in the amount of KZT 1 825 million and Dormitory No. 8 (KZT 843 million).

In general, according to the results of the financial and economic activities of the Company in 2020, as already mentioned, net income in the amount of 395.3 million tenge was received.

Based on the results of the Company's activities in 2020, an independent audit was conducted, according to the results of which a positive conclusion was obtained.

The results of the financial year are shown in *Table 64.*

Table 64 – **Economic indicators**

No. p/p	Years	Income, thousand tenge	Expenses, thousand tenge	Result, thousand tenge	Average monthly salary, tenge
1.	2012	3 865 211	3 483 387	+ 381 8264	113 477
2.	2013	4 585 867	4 579 999	+ 5 868	142 506 *(+25%)*
3.	2014	5 234 370	5 228 123	+ 6 247	163 397*(+15%)*
4.	2015	5 958 558	5 955 137	+ 3 421	176 698(+8%)
5.	2016	4 960 579	4 956 798	+ 3 781	161 602
6	2017	5 257 861	5 252 888	+ 4 973	154 529
7.	2018	6 370 754	6 363 474	+7 280	201 551
8.	2019	7 427 559	7 315 083	+112 479	252 451
9.	2020	8 325 062	7 929 775	+395 287	278 751
10.	2021	9 868 432	9 570 282	+298 150	290,124

In 2020, the University, like many companies in Kazakhstan, faced big economic problems due to the pandemic of the new coronavirus COVID-19. Due to the transfer of the educational process to a distance format, the University lost some sources of income, and additional costs for quarantine measures appeared.

Despite this, the indicators of financial and economic activity in 2020 have a positive trend. In general, this was achieved through the diversification of income from educational and research activities. Thus, at the end of the year, the total income of the University amounted to 8.3 billion tenge, including income from educational services in the amount of 6.3 billion tenge and income from science in the amount of 1.4 billion tenge. Revenue growth over the past three years has been more than 30 percent.

At the end of the year, the University received net income in the amount of 395.3 million tenge.

This allowed the University to increase the average monthly salary of employees to 290 thousand tenge already in the current year 2021, while the official salaries of the teaching staff of the University will be further increased from January 1, 2022, and will amount to 200–350 thousand tenge.

Activities of the Asset Management Department and subsidiaries transferred to "S. Seifullin KATU" NCJSC

In accordance with the decision of the Board of Directors of NCJSC "National Agrarian Scientific and Educational Center" as of May 28, 2020, No.05/20, 100% of the participation shares of A.I. Barayev Scientific and Production Center of Grain Farming LLP, Kazakh Scientific Research Institute of Forestry and Agroforestry LLP, and LLP "North Kazakhstan Agricultural Experimental Station" to "S. Seifullin KATU" NCJSC.

Brief information about the progress of field work in subsidiaries and plans for further development

North Kazakhstan Agricultural Experimental Station LLP (hereinafter referred to as NK AES)

On the sown areas of NK AES, there are nurseries for industrial reproduction

of promising varieties of agricultural crops, seed breeding nurseries, polygons of advanced farming systems, soil research technologies, breeding nurseries, and demonstration plots.

The diversification of acreage continues systematically, which involves an increase in the acreage under priority agricultural crops such as oilseeds, legumes, and fodder.

The total land area is 26,001.4 hectares, of which agricultural land occupies 24,639 hectares (94.7%), gardens, 63 hectares (0.4%), buildings and structures, 41.4 hectares (0.1%), and other, 1258 hectares (4.8%).

The area of arable land in the structure of agricultural land is **20,704 hectares** (83.8%), and pastures are **3,935 hectares** (16%).

The structure of acreage in 2021 was: total acreage: 15 743.5 hectares; cereals: 11 920.5 hectares; legumes: 396 hectares; oilseeds: 1696 hectares; fodder crops: 1,621 hectares; potatoes: 110 hectares. Including nurseries for reproduction of original seeds (2891 hectares) and scientific hospitals (210 hectares),

(Wheat: 190.5 ha (including winter: 60 ha), barley: 1 525 ha, oats: 200 ha, triticale: 5 ha, peas: 396 ha, flax: 1696 ha, potatoes: 110 ha, herbs: 670 ha, many herbs: 951 ha.).

Table - Data on acreage, ha

No.	Name	2019		2020		2021	
		Squares	%	Squares	%	Squares	%
1	Total sown areas	14 530	100	16 350	100	15 743 5	100
2	Cereals	10 795	74.3	12 156	74.3	11 920.5	75.7
3	Legumes	275	1.9	612	3.7	396	2.5
4	Oilseeds	1 919	13.2	2 042	12.5	1 696	10.8
5	Forage crops	1 442	9.9	1 448	8.9	1 621	10.3
6	Potato	99	0.7	78	0.5	110	0.7
	Couples	6 174	30.0	4 354	21.0	4 960.5	24

On August 6 of this year, Together with Astana NAS LLP, "Field Day 2021" was held online with the participation of the northern regions of the republic on the basis of the NK AES and at the invitation of the agricultural producers of the region, where joint work of science, production, promising varieties of domestic breeding, and plant protection systems were demonstrated. More than three hundred participants took part in the event, and in general, more than one and a half thousand people viewed it.

The seeds were etched at three production sites at NK AES. All available agricultural equipment was involved in the VPR, including five sowing complexes equipped with GPS. All agrotechnical measures have been observed; 310 hectares of steam fields have been processed in 4 traces; fertilizers have been applied; and an agrochemical analysis of all steam fields has been carried out (a fertilizer application plan has been drawn up).

Harvesting works are carried out according to the approved plan, and as of September 30, 2021, the harvesting of grain and leguminous crops has been completed. According to preliminary data, a total of 11 920.5 hectares of grain and

396 leguminous crops were harvested; the average yield was 20.2 quintals per hectare, and 24 869 tons were harvested. A record harvest has been obtained over the past 15 years.

(Wheat: 10 190.5 ha, threshed: 19 575 tons, yield: 19.2 kg/ha (including winter: 60 ha, 97 tons, 16.2 kg/ha), barley: 1525 ha, 3924 tons, yield: 25.7 kg/ha, oats: 200 ha, 480 tons, 24 kg/ha, triticale: 5 ha, 19 tons, 38 kg/ha, peas: 396 ha, 871 tons, 21.9 kg/ha).

The harvesting of flax and potatoes continues. Work is underway on plowing the finches; it is planned to carry out plowing on all areas of sowing.

So, it is planned to plant more than 8,000 tons of high-reproduction seeds of promising domestic varieties like Shortandy-2012, Astana, Karabaly-20, Aina, Semenovna, Damsinskaya amber-solid, barley-SSabir, oats-Mirny, flax-Kostanay amber, and peas-Aksai Usatii-55. All seeds have been processed on a modern seed cleaning machine "Petkus", which was launched this year, and the farm is ready to sell these seeds to agricultural producers in the country.

At present, the NK AES is working on the acquisition of agricultural machinery (sowing, harvesting, and servicing) for the complete renovation of Department No. 1 in order to create an "intensive work collective." Before the beginning of the next season, it is planned to purchase all equipment on lease. As well as the NK AES, work has begun on the cultivation of spring triticale for irrigation in order to accelerate seed production. For these purposes, a sprinkler machine was transferred from KATU, a reservoir was identified to provide water, and work is underway on drilling wells and wiring irrigation systems.

LLP "SPC of grain farming named A.I. Barayev" (hereinafter referred to as Baraev SPC)

Barayev SPC is a leading institution in the republic engaged in applied research on the development of technologies for the cultivation of cereals, legumes, oilseeds, forage crops, and the creation of new varieties for the northern and central regions of Kazakhstan.

The total land area is 5,961.9 hectares, of which agricultural land occupies 5,836 hectares (97.7%), buildings and structures 20.5 hectares (0.3%), and other land 127.5 hectares (2%).

The area of arable land in the structure of agricultural land is **5486 ha** (0%); pastures are 328 ha (0%).

The structure of acreage in 2021 was: total acreage: 4 236 hectares; cereals: 2 709.3 hectares; legumes: 127.6 hectares; oilseeds: 362.2 hectares; forage crops: 1 036.9 hectares. Including nurseries for reproduction of original seeds (3,927.8 hectares) and scientific hospitals (340.14 hectares),

(Wheat-2456.04 ha, barley-122.1 ha, oats-72.2 ha, peas-23.9 ha, flax-309.1 ha, sunflower-41 ha, rapeseed-2.9 ha, millet-1.5 ha, soybeans-1.1 ha, buckwheat-57.5 ha, lentils-102.6 ha, mustard-9.2 ha, one grass-19.1 ha, many grass-1017.8 ha.)

Table - Data on acreage, ha

No.	Name	2019		2020		2021	
		Squares	%	Squares	%	Squares	%

1	Total acreage	4 236	100.0	4 129.9	100.0	4 236.0	100
2	Cereals	3 441	81.2	3 126	75.7	2 709.3	64.0
3	Legumes	110	2.6	105	2.5	127.6	3.0
4	Oilseeds	335	7.9	363.9	8.8	362.2	8.6
5	Forage crops	350	8.3	535	13.0	1 036.9	24.5
6	Potato	0		0		0	
	Couples	1250	22.8	1356.1	24.7	1250	22.8

This year, together with partners, several seminars were held for agricultural producers in the region, during which the joint work of science, production, promising varieties of domestic breeding, and plant protection systems were demonstrated.

On September 16, 2021, the **harvesting of grain and leguminous crops was completed**. According to preliminary data, a total of 2709.3 hectares of grain and 126.5 hectares of leguminous crops were harvested; the average yield was 13.5 quintals per hectare, and 3 657 tons were harvested.

The work on harvesting flax and sunflowers continues. Work is underway on plowing the finches; it is planned to carry out plowing on all areas of sowing.

As a result, it is planned to lay about 3 thousand tons of high-reproduction seeds of promising varieties of domestic breeding; currently, the seed material is undergoing procedures for processing and cleaning seeds on modern equipment.

Next year, SPC Barayev plans to purchase combines and machinery in order to upgrade agricultural machinery and strengthen the machine-tractor fleet. And also to provide for employees and students, the design of the construction of a 190-bed dormitory has begun; construction is scheduled to begin in the 1st quarter of 2022 and be completed by the end of next year. Together with the American company Valmont, it is planned to install sprinkler systems next year.

Ongoing projects and initiatives of KATU

1. Creation of a honey-bearing conveyor. This year, an apiary was organized on the basis of the Barayev SPC, where the scientific staff of KATU tested additives for feeding bees, as a result, 478 tons of honey were obtained, which were sold to KATU employees at cost at the fair. On August 3, 2021, a lease agreement was signed with Zhasyl-Aimak LLP for a land plot with an area of 620.5 hectares, this plot will be used to create a honey conveyor. It is planned to sow honey crops (perennial plantings, perennial forage crops) on this site in order to provide bees with a feed base from early spring to late autumn. The main goal of this project is the development of beekeeping in the northern regions and the development of different variants of the honey conveyor, as well as the effective use of the lands of the Green Belt of Astana.

2. Creation of a breeding center for obtaining seed from sheep producers. In order to create a breeding center for artificial insemination of sheep, 12 sheep producers of the Edilbai breed were purchased, the vivarium was overhauled and a place for pumping out the seed was carried out. Currently, the laboratory is being renovated to determine the quality of the seed. For practical testing of the obtained seed, KazSteppSheep LLP has signed an agreement with a partner for this project, which will provide sheep for insemination. The purpose of this project is to study the quality of the seed, taking into account different feeding diets and testing of

extruded compound feeds and additives produced according to the recipe of scientists according to the recipe of KATU scientists. This project will create the basis for the creation of a breeding center for sheep insemination in the northern region of Kazakhstan.

KATU employees are also working on other projects in different directions, which will be implemented next year.

NGO "LOCAL TRADE UNION OF "S. SEIFULLIN KATU" NCJSC

To the first slide on the trade union

Social support of teachers and staff at "S. SEIFULLIN KATU" NCJSC is one of the priorities.

Currently, the social support system at the university is developing in the following areas:

1) in the field of health protection, provision of continuous medical care, provision of travel tickets for free travel on urban and suburban routes;

2) financial support, including free spa treatment;

3) providing quality food products at lower market prices.

These social support tools are implemented through the Local Trade Union of "S. SEIFULLIN KATU" NCJSC.

The local trade union consists of 1 805 people from 18 primary trade union organizations.

To the second slide on the trade union

The directions of material support for the employees of "S. SEIFULLIN KATU" NCJSC are indicated in detail on this slide. During the reporting period, 1 person received financial support in connection with the first marriage, 31 people in connection with the birth of a child, 35 people in connection with the anniversary date, 35 people in connection with the death of close relatives, 4 people in connection with the death of an employee, financial assistance for Victory Day and the Day of the elderly (veterans of the university) – 142 people.

1 080 university employees received free medical insurance. 923 people received travel tickets for urban and suburban routes.

To the third slide on the trade union

Another measure aimed at improving the health of the team has already gained wide popularity in the team. These are vouchers to the health resorts of the country, fully, 100 percent paid by the "S. SEIFULLIN KATU" NCJSC. Since the beginning of this year, they have been sent to sanatoriums, and today 126 people have improved their health. Of these, 74 people were treated and rested in the sanatorium "Mankent" in the Turkestan region, 12 people - in the "Pine forest" in the Kostanay region, 33 people - in the sanatorium "Moyyldy" in the Pavlodar region, 7 people – in the Shchuchinsk resort area. It should be emphasized that round-trip travel to the sanatorium is also paid by the trade union.

To the fourth slide on the trade union

I would like to focus separately on the activities of the trade union to provide high-quality food. The well-known bird project from the yard to the table. This

year, the university staff sold 5.3 tons of high-quality chicken meat at a price of 1 600 tenge per kg.

An event to provide apples and natural 3-liter apple juices. 27.4 tons of apples were sold at an average price of 325 tenge per kg. 2 000 packs of 3-liter natural juice were sold at a price of 1 600 tenge.

The next event is the provision of potatoes. 100 tons of potatoes were sold at a price of 80 tenge per kg.

12 PROBLEMATIC ISSUES THAT REQUIRE THEIR OWN DECISIONS IN 2021-2022

1. To ensure the implementation of the Action Plan for 2022 for the implementation of the Development Program of the "S. SEIFULLIN KATU" NCJSC 2020-2024 for transformation into a research university;

2. Ensure entry into the QS University Rankings world ranking among the TOP 901+ best universities in the world;

3. To increase the degree of the teaching staff and bring it to 65%;

4. To ensure the share of income from scientific activities in the total income of KATU, at the level of at least 24.3%;

5. To bring the average salary of the teaching staff of KATU to 270 thousand tenge by January 1, 2022;

6. To ensure the passage of post-accreditation monitoring of 51 educational programs, 4-5 stages of accreditation;

7. To ensure the implementation of projects financed from the budget of KATU: - construction of a 60-apartment house for a dormitory (Nauchny village); - reconstruction of the laboratory complex No. 2 for the academic building (Shchuchinsk); - major repairs of the building for a hostel (hotel) in NK AES LLP (Shagalaly village);

8. Subsidiaries should create the necessary conditions for internships, internships of students and teaching staff of KATU;

9. Develop an action plan to celebrate the 65th anniversary of the University and ensure its implementation;

10. To carry out measures to optimize the costs of the university on an ongoing basis.