

ABOUT THE UNIVERSITY

— It has been 35 years since you first opened the doors of BSATU. For you, it is a real alma mater, a place of study and the only place of work. So what is BSATU in the eyes of a student, engineer, researcher, teacher, rector?

- At each level, the "eyes" were different, and the view was different too. But one thing always remained unchanged which is professionalism as a principle of university activity. I mean the professionalism of teachers, scientists, graduates. It is about professional attitude to work and studies, that, I am sure, allowed BSATU to become one of the leading educational and research and production centers in Belarus. Five faculties prepare competitive engineers and economists for the national agro-industrial complex, as well as for the agricultural industries of other countries. Skilled teachers, an excellent, without exaggeration, material and technical base that was created and is maintained by the national ministry, the trade union of agro-industrial complex workers and its chairman Vasyl Khvatyk and scientific research - these are the three pillars our university is leaning on.

Each of these pillars is dedicated to one goal that is to prepare an educated, highly qualified and skilled specialist. You know, each educational establishment has its own traditions, its own laws. They are different, some are invented - I mean it in a good way, and some are developed by themselves, over time, they are most often invisible, they are not declared anywhere and are not written down on paper. But it is they who make up what can be called the heart, the soul of the university. We also have such a tradition, and it is formulated simply: "Teaching in such a way that the graduates will be skilled professionals". Therefore, I will add one more to the principle of professionalism that is the principle of quality training.

— In what specialties are students trained at BSATU? Given the agrarian profile, surely among them there are also unique ones that you won't find anywhere else?

— We train specialists in 11 specialties: 9 engineering and 2 economic. The agro-power faculty is the only one in the country that trains specialists for the agro-industrial complex, graduates are trained in the specialties "Energy supply for agriculture" and "Automation of technological processes and production". The farm machinery service faculty provides training of engineers for the service of agricultural machines and in labor protection. In the last specialty, by the way, only in our university you can get education at all levels of higher education, retraining and postgraduate studies. At the agromechanical faculty students are trained in the specialties "Technical support of agricultural products" and "Technical support for the storage and processing of agricultural products", and at the business and management faculty training is conducted in the specialties "Agribusiness" and "Management".

I would like to note that our graduates, despite the "agrarian" profile of the university, are in demand not only in organizations of the agro-industrial complex. Thanks to the high level of theoretical training and extensive practical skills, they can work in almost all areas of the national economy, including highly specialized ones.

ABOUT LEARNING TECHNOLOGIES

- This is a big advantage. By the way, about other industries: today, employers are increasingly interested in specialists who have knowledge and skills at the intersection of fields. Do your graduates own these? And in general, what do you see as the future of interdisciplinary education and does it exist, such future?

— Regarding our graduates, I would like to note that educational training programs in engineering specialties contain a wide range of professional competences not only of the engineer, but also of the technologist and the production organizer... During training, preparation of course and diploma works, and production practice, students master a lot of related skills specialties. It's just not included in the diploma, but in fact our engineers can be, for example, designers. They are always expected at the enterprises of industry, engineering, and the energy complex. These are not empty words - it is enough to look at the specialists composition of even the leading workers of those industries, and you will be surprised at how many of them are our graduates. We are indeed training "universal specialists", so to speak.

As for interdisciplinary education, it certainly has a future. Moreover, I dare to admit that it can become the basis of professional education. Many problems require an integrated approach, which means interaction and interpenetration of different fields of knowledge. Therefore, it is logical that interdisciplinary training will gain more and more popularity. Even today, it is closest to the modern requirements of the business economy. The simplest example of what was mentioned earlier: why keep separate engineers and designers when one person can do it all?

Our environment is changing and requires from students not only specialized knowledge, but also the ability to analyze, synthesize and solve complex interdisciplinary problems.

- If the conversation focused on learning technology, then it is worth mentioning practice-oriented, which is also heard. How do theory and practice combine in the university? And how do you personally feel about the thesis that only practitioners should teach certain disciplines?

- First of all, I would like to note that practice-oriented training is not only the organization of educational, production and pre-diploma practices. This, in addition, is also the introduction of professional-oriented learning technologies, which will form in students significant qualities, knowledge, abilities and skills, professional experience for future professional activities. Simply put, everything that will allow them to perform their duties efficiently while working. The point is that practice-oriented learning as a process cannot be implemented exclusively within the framework of various types of production practices. In order to achieve the biggest effect, it is also necessary to constantly improve the educational and program base, which we are doing.

To be more specific, we have a total duration of industrial practice, depending on the specialty, from 28 to 30 weeks and takes place in three stages. For the first stage of training, the University established the Republican Training and Production Center for practical training in new technologies and the mastering of machine complexes, there are six specialized workshops, one training and research building and three training and production centers in the Minsk region - in the "Dzerzhinsky", "Zhdanovich" and "Snow". Here, students acquire working professions: mechanic, driver, tractor driver. That is, in addition to obtaining a specialty, they also master the professional skills of their future subordinates, which will certainly benefit them in the future.

But let's get back to practice. Its second stage is in basic organizations: at machine-building enterprises - Minsk Automobile Plant JSC, Minsk Tractor Plant JSC, "Amkador" and others, as

well as in 36 branches of university chairs operating in leading enterprises of the agro-industrial complex and scientific and practical centers of the National Academy of Sciences of Belarus. In addition, together with the Ministry of Agriculture and the Agricultural Committees of the Regional Executive Committees, 283 basic agricultural organizations were identified throughout the country, from one to three in each district, for the production practices of target students. Thus, after graduating from the university, they will join an already familiar team. There is also a benefit for the farms - the management can assess the potential of the future young specialist in advance.

The third stage of practical training, pre-diploma practice, is work as a backup for the main employee. It usually takes place at the place of assignment of graduates. Diploma works themselves are carried out taking into account the real problems of this enterprise, which, on the one hand, directs the "diploma" as much as possible into a practical direction, and on the other hand, significantly shortens the adaptation period of young specialists: they already know the general state of affairs in the economy, its strengths and weaknesses.

Thus, we bring students as close as possible to reality, they are constantly connected with production. This is in addition to the fact that in our training and production bases, where the entire park of agricultural machinery, which has received permission for operation in the country, is represented, they constantly "work with their hands". I would like to highlight the role of chair branches. Their creation in combination with production practice allowed us to build a compact and effective system of practice-oriented training, meaningfully and qualitatively connect it with the modern level of technical equipment of agricultural production.

As for who is the best teacher - a practitioner or a theoretician, I will say the following: the one who knows is the best. We cannot ignore the fact that not every practitioner is a good teacher. It happens, and there is nothing so supernatural and strange about it. As in the fact that an excellent scientist may be completely incapable of teaching. It's normal. Today, at BSATU, about 40% of teachers have work experience in production — from engineers to senior managers. In addition, at least once every three years, each of them undergoes advanced training and internship at the country's best enterprises, research institutes, and scientific and practical centers. Thus, we do not let them break away, so to speak, from reality and turn into the pure water of theorists.

ABOUT MANAGERS AND ARTIFICIAL INTELLIGENCE

- And don't you let the practitioners forget the theory?

- Undoubtedly, today's world is extremely fast: new technologies change and appear almost daily. That's why agro-industrial complex workers, especially managers, need to be on top of trends, orient themselves in the development trends of the industry, be able to adapt to new conditions and force them to work for their own benefit.

About 3,000 employees of the industry improve their knowledge at the Professional development and retraining institute of agribusiness specialists. About 400 of them are undergoing retraining, the rest are improving their qualifications and doing internships at the country's leading enterprises. Obviously, special attention is paid to the training of heads of agricultural organizations, including recently appointed ones, who do not yet have sufficient practical experience, and sometimes innovative knowledge on the organization of agricultural production.

— To continue the theme of the fast-paced world: do educational programs keep pace with modern technologies?

— Given the acceleration of the development of technologies, I am forced to state, the threat of such a lag is also increasing. You have to be an ostrich with your head in the sand not to notice this. We notice, that's why we review and update all curricula and programs every year, and sometimes we react more promptly. In general, innovative technologies and digital teaching tools that correspond to modern approaches to managing agricultural processes are commonplace for us.

So, mastering the technologies of digital agriculture, students learn to map the contours of fields, analyze their yield and agrochemical state, the processing system and differentiated application of fertilizers. To build thematic maps of agricultural land, tools of GIS technologies are used, and computerized laboratory stands allow analyzing the received data in real time and projecting them on online maps. We have a software and hardware complex of virtual reality that simulates the assembly of various electrical circuits, we widely use 3D printing. In general, digitalization, the use of drones is the future of agriculture. That is why we are not lagging behind technologies: one class on digital agriculture is already ready, another one will start working soon, in the creation of which we cooperate with "Rostselmash", what is more we plan to organize a "smart farm".

Also, students study the possibilities of applying artificial intelligence in the economy, such as, for example, product safety control, statistical algorithms for determining the probability of future economic results, risk assessment and quality inspection of goods, get acquainted with the elements of machine learning.

- Aren't you afraid that soon the teachers will have to check course and diploma works written by "ChatGPT"? And in general, in your opinion, how will artificial intelligence affect educational processes?

- I think that these fears are a little exaggerated. They resemble the time when the Internet began to spread widely. At that time, they were also afraid that students would, in general, download ready-made works and pass them off as their own. But this, as we see, did not happen. Not the last role in this, among other things, is played by the consciousness of young people. If they came for professional knowledge, and not for "wallpaper degree", then they are interested in independent implementation of projects and self-education in general.

Of course, the uncontrolled spread and use of artificial intelligence can lead to plagiarism, and in the end we will not get a qualified specialist. However, this is unlikely in our country.

First of all, because we don't have "occasional" students. Secondly, the technical orientation of the university significantly limits the possibilities of using artificial intelligence — engineering course and diploma projects involve, in addition to the necessary calculations, a graphic part. That is, in any case, the student will have to work on his own. Well, there is nothing to say about the protection of such works - the lack of knowledge is always seen.

At the same time, artificial intelligence can be a useful and powerful aid in education. But only under the condition of its meaningful, controlled and ethical use. Simply put, it should support student thinking, not replace it: research and critical thinking remain central aspects of educational and scientific activity and cannot be replaced by artificial intelligence.

ABOUT STUDENTS

- You said that you don't actually have "occasional" students. And how many of those who came to study having already decided not only on their profession, but also on their place of work - the so-called contract students? And in general, what is he like, a student of agricultural technology?

- Indeed, practically all our students come to the university knowingly, clearly imagining where and how they will have to work. For the most part, they already know from childhood what it is to work on the land. And they don't shy away from it, and they know what it's like to live in a village where everything is right in front of your eyes, both good and bad. Maybe that's why they differ from students of other universities in their greater modesty, kindness, and willingness to help. Personally, I have only such impressions from our boys and girls. Well, there is a lot to say here, here is a simple fact - the university was founded in August 1954, and in fact classes started only in October. Why? Because the students were working, helping farms to harvest. That's it. Today, when I inquire about the results of production practices from farm managers, I most often hear: "Good and handy guys. Then I'll take it to my place..." This is perhaps the highest assessment of the intern. And of teachers too...

As for students who are studying in targeted directions, they are currently 40% of the total number of state employees. Agreements on targeted training have been concluded with 213 establishments - these are regional and district executive committees, directly with agricultural enterprises.

The last option, by the way, is the most optimal for both households and students. First, the management of the agricultural enterprise knows exactly who it sends to study: no one will spend money on a lazy and irresponsible person. This is also about the fact that the enterprises pay additional money to contact students for good studies - up to 20 base values. Secondly, students also know the company and people. And therefore, adaptation will be much easier. In this sense, I think it is necessary to say: relations with young specialists from the side of the management and other workers in general is a very important thing. How many times it happened that young people left the farm only because of disrespect from their colleagues. It seems that absolutely everyone knows: young people need to be helped, and the mentoring institute exists for a reason. But...

Separately, I would like to draw attention to the fact that a significant part of the contract students are graduates of agricultural classes. Today, there are 900 such classes in the country (since 2017), they are an important part of career guidance work among school students, which brings great results. In this sense, I will also mention our educational-scientific-production association "Agroengineer", which unites 18 agricultural colleges and, among other things, allows building continuity of education.

And in general, I am sure that vocational guidance work should be expanded and work in the village should be popularized in every way. Indeed, no matter how pathetic it sounds, everything begins on the ground, and the work of a grain farmer is the most honorable.

- But students not only study...

- Of course. The university has created all the conditions for them to be able to use their free time and realize their creative abilities. For this purpose, a separate building was built - the Youth Center of BSATU. There are 54 club formations of various directions, we have our own

theater - "Prometheus", art-folk band "Veles", which last year won the Grand Prix of the VII International competition "GRAND FESTIVAL" in Italy...

In short, they don't have to be bored: you can do creativity or sports, they also have everything they need for activities. And our weightlifters, Muay Thai fighters and kickboxers have repeatedly become winners and prize-winners of national and international tournaments.

I will say a few more words about the student trade and volunteer movement. There is also something to be proud of: every third full-time student is a member of the student union movement, which is one of the best indicators in the country. And according to the results of last year, our international student team "Zorka" was generally recognized as the best. Others are volunteers, their association is called "SAVA". They help the elderly, children from orphanages and social shelters. If necessary, city services come to help.

I believe that this is one of the indicators of the patriotism of our students, the education of which is the primary task of our university. Indeed, they are ready to work for the benefit of the motherland and work wherever they can, no matter what. Isn't this true patriotism?

ABOUT SCIENTIFIC ACTIVITY AND INTERNATIONAL COOPERATION

— The university is not only an educational establishment, but also a scientific center of the agricultural industry. To what extent do inventions find their place in production? Are there any difficulties with their implementation?

- Indeed, scientific activity is an important part of the general activity of the university. Scientists, post-graduate students, master's students are successfully working on research works within the framework of five state scientific programs and projects of the Belarusian Republican Fund for Fundamental Research. Only last year, the total number of already used results of such works is more than 30. In order not to be groundless, I will mention the strengthening technology of the working mechanisms of the KDN-210 disk mounted mower, which is produced in Babruyskagramash, developed by us. Thanks to the developed technology, the resource of mower parts is now not inferior to more expensive foreign analogues - an important step on the way to import substitution and reducing the cost of products.

It is gratifying that most heads of agricultural organizations have an understanding of the importance, I would even say, of the need to implement the results of scientific research, including student research, into production. Thanks to this mutual understanding, long-term cooperation has already been established with many enterprises, the result of which is competitive products and development of production.

— The development of scientific experience cannot be imagined without international cooperation. How are relations with foreign educational and scientific establishments?

— International scientific and technical cooperation is one of the main directions of the university's activity, it develops dynamically through joint scientific work with foreign scientists, exchange of research results and training experience of highly qualified specialists. To date, strong partnership contacts have been established with more than 100 foreign educational establishments and scientific organizations. In recent years, the university has carried out joint international scientific and scientific and technical projects with scientific and educational

establishments of France, Sweden, Uzbekistan, Russia and Kazakhstan. The plans include a joint scientific project with Chinese partners.

I would like to add that the university annually organizes internships for foreign agricultural specialists from the Russian Federation, the Republic of Kazakhstan, Uzbekistan, Mongolia and a number of other countries. This year, for example, BSATU and the joint-stock company "Center of International Programs" (Republic of Kazakhstan) agreed on the organization of scientific internships for young scientists and specialists - scholars of the International Scholarship of the President of the Republic of Kazakhstan "Bolashak". Internships will last from 2 weeks to 5 months.

After the President's visit to Equatorial Guinea, we are preparing to receive specialists from the country - we have already received the relevant order from the Ministry of Agriculture and Food. They will study the technologies of aggregating our equipment. I am sure that we will cope with this task successfully, especially since we already have experience working with students from the African continent.

ABOUT PLANS

- The new year is special for the university - BSATU will celebrate its 70th anniversary. Of course, we have to ask about the plans...

- Plans... What can I say, there are a lot of them, but I don't really want to voice them, because, as they say, "if you want to make God laugh..." Yes, don't be surprised, people of science also sometimes believe in whims. And seriously, one of the main priorities is the quality of education, especially since this year has been declared the Year of Quality. We will continue to improve the educational process in accordance with modern requirements - we must maintain the bar raised last year as the winner of the Grand Prix of the International Business Award "Leader of the Year 2022" in the "Education" category.

In addition, I will identify three components of the university's successful activity, which we will pay close attention to: development of the material and technical base, scientific activity and export of educational services. If we successfully cope with the tasks set in these directions, this year will not bring any unpleasant surprises, and the university, as always, will make a worthy contribution to the training of highly qualified specialists for the country's agro-industrial complex.

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