



ARMENIAN NATIONAL AGRARIAN UNIVERSITY



ANNUAL REPORT 2020



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NATIONAL
AGRARIAN
UNIVERSITY



ANNUAL
REPORT

2020

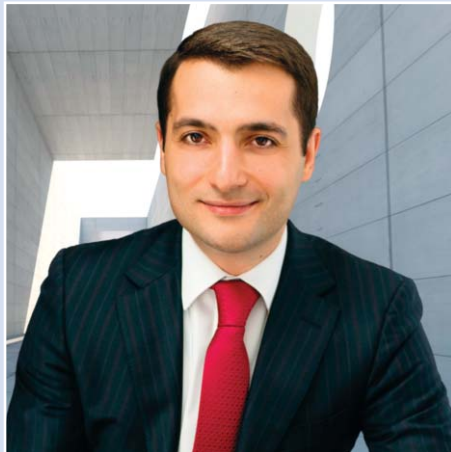
YEREVAN
2021



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**ARMEN
HARUTYUNYAN**

CHAIR OF THE ANAU BOARD
OF TRUSTEES

Dear Colleagues,

In 2020, the whole world faced the coronavirus pandemic, which was a turning point in the organization of work, risk management and the formation of sustainable economic systems.

Similar crises have highlighted the vulnerabilities in public life and the need to review economic and business management models. In this context, rapid growth of the use of technology and digital solutions is more remarkable.

In the context of the Fourth Industrial Revolution, the development of human capital assets and the promotion of innovation are more important. Therefore, we are at a crucial time in our history, and it is not the availability of natural resources or volumes of capital that dictate the direction of economic and social development but rather the humankind. In these conditions, we must be faster, more flexible and more innovative, in order to use the Armenian creative mind, talent and diligence to assemble an exemplary state and economy in the region.

Today, the development of agriculture and agribusiness is undergoing a period of transformation. Through innovative solutions, we can reduce the negative impact on the environment while increasing productivity and optimizing production costs. Therefore, the development of the sector plays a vital role in ensuring security not only in the economic but also in the geopolitical context.

I consider the projects implemented by the University and the competitions held among the youth, which are aimed at the development of innovation and precision agriculture, extremely important. Furthermore, I also give credit to the development of the University infrastructure, including the re-equipment of laboratories, the modernization of the Greenhouse and Water and Soil Resource Management Center, the establishment of an Agri-Tech Incubator and a number of other activities carried out under state

funding and with the support of partner organizations. These partners include the Center for Agribusiness and Rural Development (CARD) Foundation, the Green Lane NGO, USAID, UNDP, the Government of Japan, and others. We observe global changes and develop new projects that will provide new opportunities for students. One such program is the development of organic agriculture, which is growing dynamically in developed countries.

We still have a lot of work to do and the road we are taking will be a tough one; nevertheless, every year the students themselves will notice the changes and get better education.

During these hard times for our homeland, we will spare no effort and energy to provide the most important field of our economy, agriculture and agribusiness, with qualified specialists.

I am confident that development of human capital asset and promotion of innovation will become a key driving force in the agri-food sector, by virtue of which Armenia will become exemplary for the whole region.





VARDAN URUTYAN

ANAU Rector

Dear colleagues of the Armenian National Agrarian University:

Despite the grave national and international challenges, 2020 was still a year of achievements for our university.

Due to the Second Artsakh War and the coronavirus pandemic, we were forced not to properly celebrate the 90th anniversary of the founding of the university, as well as not to perform opening ceremonies for many new infrastructures put into operation throughout the year. The most memorable, as well as symbolic celebration event was *Tour de Artsakh*.

Last year's milestones allowed significant progress to be made in 2020 in modernizing curricula and syllabi, commissioning key infrastructure for research and development. Simply put, the University has strengthened its role as a leading force and personnel bank in the field of agricultural education, science and extension services.

In the extent of intensifying the transformation process of the Center for Excellence in Agritech Education, the emergence of infrastructures equipped with the latest technologies, such as the open-space campus-styled AgriTech Incubator, the Study-Discussion Hall, the Research Center for Water and Soil resources, the Innovative Greenhouse equipped with Farmbot systems, outputs of which we with pleasure and gratitude provide to the Homeland Defender's Rehabilitation Center, and a number of other institutions were of high importance.

The modernization process is continuous: at minimum, next year is going to be a "similar one" to 2020 in terms of improvement of the technological and educational content. The Biotechnology Incubator, intensive orchards and vegetable gardens will be established in Akunk and Voskehat farms with

their own irrigation basins and drip irrigation systems, hail nettings and own weather stations, the Agri Camp and a number of other infrastructures will be founded. Supported by competitive new professional curricula, they will greatly contribute to the process of building a new face for the University.

At this moment, with a clear conscience, we can commit to saying that in the context of dramatic developments, uncertainty and crisis progressions, in 2020 the Agrarian University more clearly showcased its new face and new, conspicuous handwriting in the country and in the international educational area and among the institutions responsible for the development of the agri-food system.

The enthusiasm of the university students, the staff of all the educational departments of the university system, the sense of responsibility and the willingness to be part of the changes, full understanding and mutual trust with the executive staff, as well as the valued support of the Board of Trustees will grant us the confidence to remain at the forefront of reforms and to serve the best example for others.





MISSION

Our mission is to train agritech specialists who will possess the professional skills capable of developing the country's agri-food system, in cooperation with stakeholders of the sphere.

The University will enhance its scientific potential by offering the best solutions for progress, will introduce modern technologies, utilizing and demonstrating the results of the knowledge-based economy.



VISION

The vision of the University is to become an agritech academic and research excellence center guided by creativity and innovations, promoting the harmonious collaboration between the agricultural education, research, extension and industry.



ARMENIAN NATIONAL AGRARIAN UNIVERSITY

90



IMPORTANT DESTINATIONS WITHOUT PARADES

2020 was a jubilee year for the Armenian National Agrarian University: ANAU saw its 90th anniversary.

In 1930 the Medical and Agricultural Institutes were separated from the alma mater, the Yerevan State University as unique institutions having no parallels in Armenia in preparing specialists for these two critical fields.

It has been 90 years now that we remain unique with our mission, nature, philosophy, and the unconfutable feature and “handwriting” of organization of the education process. And this, in addition to flattering our ego, is really obliging.

Ninety long years we have been forging a solid and glorious phalanx of specialists for agriculture and related fields, who never let the farmers alone with their problems and who are the reason why the Agrarian University is considered a reliable and worthy partner in Armenia and worldwide.

We had planned a rich program of celebrations and different events on the occasion of the 90th anniversary; however, we were unable to implement it due to the pandemic. We had the feeling of festivity, though, in addition to the potential of setting and achieving new standards thus safeguarding ANAU’s firm place among the “map” of universities that have adopted policies of modern technologies and digital progress.





In the 2020-2024 strategic plan, the ANAU, adopting a new mission and vision, set itself the task of not only supporting the realization of national priorities, but also to contributing to the achievement of the UN Sustainable Development Goals (SDG) for the sake of well-being of the mankind. The university, adopting 10 of the 17 SDGs and combining the efforts of its team, will strive to:



Contribute to the preservation and development of sustainable food safety mechanisms in Armenia by collaborating with all possible stakeholders.



Reduce the growth of deaths and diseases due to pollution and poisoning from hazardous chemicals, air, water and soil.



Provide quality education.



Contribute to the efficient use of water resources in Armenia and solution of scientific-practical problems.



Promote the use of energy sources and contribute to solution of the climate change and energy efficiency issues.



Provide professional potential that can support the establishment, management and development of vertical agriculture in urban and suburban settings.



Utilize resources in a responsible way by improving infrastructures.



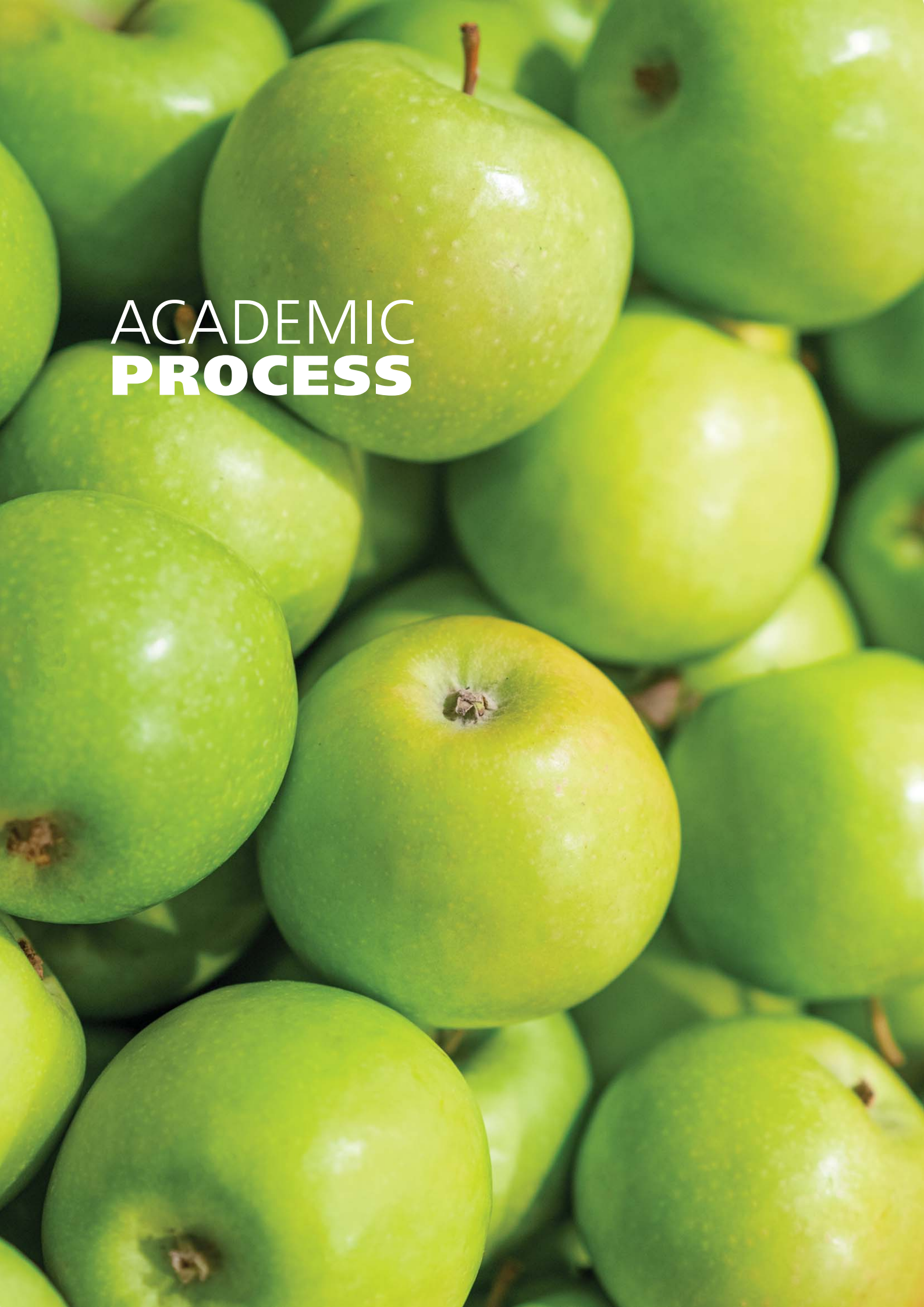
Carry out research to study and assess the environmental situation in the country, as well as to develop technologies for producing safe food from lands contaminated for man-made reasons.



Develop and introduce modern technologies in the field of management of water and land resources. Establish bio- and agrotechnology startup incubators and promote innovative ideas for sustainable development.



Conduct research on sustainable use of terrestrial ecosystems, support and participate in reforestation activities, conserve biodiversity.



ACADEMIC
PROCESS

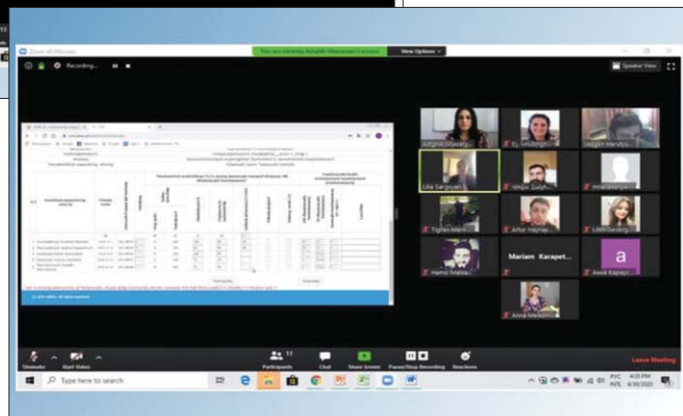
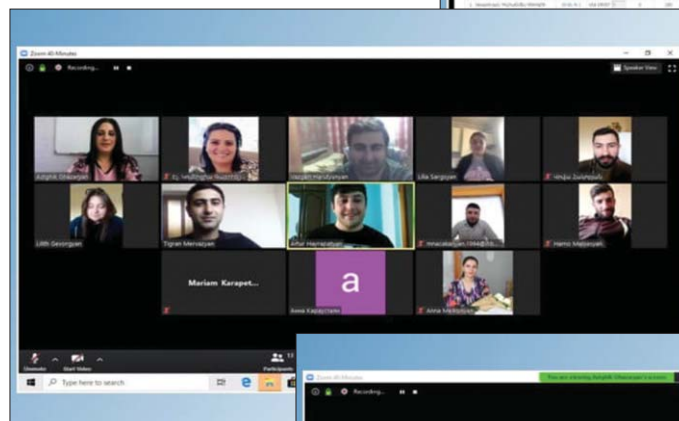
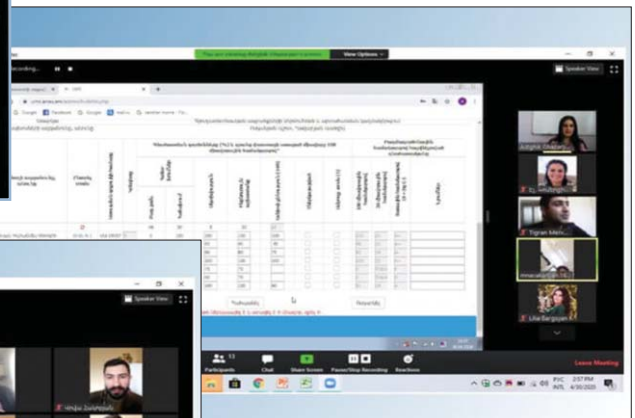


ACADEMIC PROCESS

In 2020, due to the restrictions caused by the COVID-19 pandemic, the task of rapid reorganization of the educational process was set at the ANAU and its branches. Both hybrid and full-time, as well as e-learning models were applied.

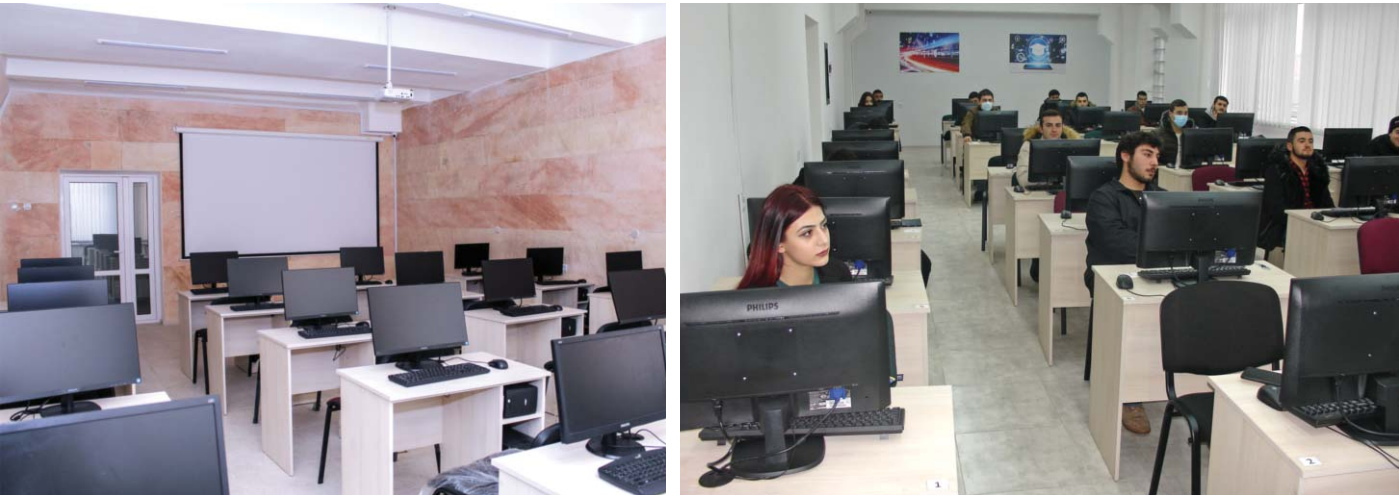
The integration of the university's online course went smoothly, as online training was provided in respective departments to master the set of tools for distance education, methodological guidelines were developed, the

scope of use and application possibilities for e-Buh management system and the Moodle e-learning platform were expanded.





The Test System is Justified: Students and Lecturers Confirm



The examinations for almost all freshman and sophomore classes were conducted in the computer classrooms of the Assessment and Testing Center of the Chair of Data Science, which is satisfactory for both teachers and students. The center has all the conditions for conducting impartial examinations: only non-specialists can enter the examination room and follow the examination process, as well as IT Division's staff members - for solving technical issues. Before entering the classroom, the student uses a computer to select the subject, picks up a receipt, the number of which indicates which computer to use. When in the room, student enters the identification code, student's photo and the questionnaire appear on the computer screen, and it is possible to follow the whole examination process through the monitor installed in the entrance hall.

New Academic Programs

A number of master programs were launched at the university in 2020, the initiation imperative of which is the need for specialists with up-to-date knowledge and skills in the labor market.



Within the the ABIONET project, the **Food Safety master's degree program** was launched, which our specialists had been preparing for two years within the framework of ERASMUS+.

The program includes 12 mandatory (Professional English, Food Chemistry, Biostatistics and Data Analysis, Food Law, Food Microbiology, Toxicology and Allergology, Risk Analysis, etc.) and 5 optional (Food Borne Diseases, Food Fraud and Prevention, Agribusiness Management, Project Management, etc.) modules.

Equipped with state-of-the-art food quality control student laboratory, the project will serve to provide students with hands-on professional knowledge and skills, and will promote the release of up-to-date food quality control professionals and practitioners.

The best undergraduate students, who will fluently master English, will have the opportunity to carry out thesis research laboratory work at foreign partner universities.

The **Organic Agriculture master's program**, an exceptional one in the country and the region, was launched in September 2020, which is a continuous outcome of the “Building Organic Agriculture in Armenia” project jointly implemented with the University of Natural Resources and Applied Life Sciences, Vienna (BOKU).

There are all favorable conditions for the success of the project: growing demand for sector specialists, curriculum developed with the active participation of a wide range of stakeholders (including organic producers), lecturing



staff equipped with the most up-to-date knowledge, an existent and emerging teaching and research infrastructure. Within the framework of the project, the Organic Agriculture Laboratory established at ANAU conducts soil, plant and water research using the latest equipment and methodology.

The Experimental Organic Agriculture Training Center, located in Akunk community, Kotayk marz and occupying an area of more than 6 hectares, will be used for the practical education and training of graduate students.

The **Sustainable Agriculture master's program** introduced at the Agrarian University will also be essential in meeting the challenge of food security in the country.

The aim of the program is to qualify specialists who are prepared to find innovative and inclusive solutions to make agriculture more resilient and thus overcome food security, climate change and similar ongoing challenges. In addition to topical in-depth research, participants are also involved in university partner projects to supplement the knowledge gained with hands-on experience.

The program is based on a benchmarking study of similar educational programs of 10 leading international universities.

Structure of **Sustainable Agriculture** Master's program

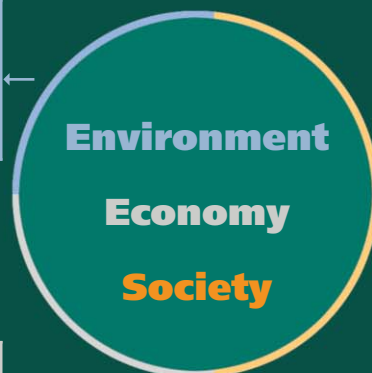
7 main thematic groups (TEGs)

TEG 1. Sustainable Agrosystems

TEG 2. Sustainable Management of Natural Resources and Climate

TEG-7. Circular Economy and Science-Based Agriculture

TEG-8. Inclusive Value Chains and Sustainable Regional Institutions



TEG-3. Rural Sociology, Inclusiveness and Sustainable Development

TEG-4. Sustainable Food and Agriculture Systems

TEG-6. Agrosociology

2 Additional TEGs

TEG-5. Basics of Agricultural Research

TEG-9. Innovative and Advisory Agricultural Systems. Digitization



The main component of the program is the compilation of master's thesis, with its topic to be selected based on addressing specific issues of sustainable agriculture. The program consists of groups of 7 main topics related to sustainable agriculture, each of which will be presented as a separate set of seminars, lectures and trainings. Main topics correspond to the three directions of sustainable development - healthy environment, sustainable economic growth, social solidarity. The curricula of environment-themed groups are developed and implemented with the support of the Green Lane NGO, and the thematic groups on social solidarity - with the support of the Chair of Sociology of Yerevan State University and the German Friedrich Ebert Foundation.

In order to develop agriculture, increase its competitiveness and efficiency, it is essential to make a transition from conventional to innovative technologies, and therein, the upgraded Agrarian Engineering profession will play a role in this process, with the **Machinery Engineering, Soil and Water Resource Engineering, Agro-Industry Technologies and Precision Agriculture** master's degree programs.

The Precision Agriculture Master's degree program will be developed within the framework of a memorandum of understanding signed between the ANAU and the EU-funded Green Agriculture Initiative (EU-GAIA) project, according to which the latest technologies will be introduced, including agricultural drones.

Agricultural engineers will integrate technology with agriculture by designing new and enhanced equipment that can operate more efficiently or perform new tasks. The introduction of new smart agricultural technologies is of great significance in the technological development of the agri-food sector in Armenia, which is in line with the vision of the university development, the medium term strategy key point of which is the restructuring of the university from agrarian to agro-technological one.



INTERNATIONAL **EDUCATION** **PROGRAMS**





Agribusiness Teaching Center

2020 marked the 20th anniversary of the **Agribusiness Teaching Center (ATC)**, a joint educational program between ANAU and Texas A&M University. The ATC is a unique and successful synthesis of principles of western-style teaching and learning and the Armenian environment. The 2-year Bachelor's and 18-month Master of Agribusiness (MAB) programs are based on corresponding agricultural economics program of Texas A&M. Key subjects are Management, Marketing and Finance. Founded in 2010, MAB is the only English-language master's program in agricultural economics in the region.



Over the years, the ATC has had more than 600 alumni with up-to-date economics, marketing and management skills, contemporary communication abilities and excellent proficiency in English, who have been awarded ANAU diplomas and Texas A&M certificates. All of the ATC graduates are building successful professional careers in the field of agribusiness, financial-banking system, international agencies, and, in recent years, also in their own businesses both in Armenia and abroad.



ATC graduates in the labor market

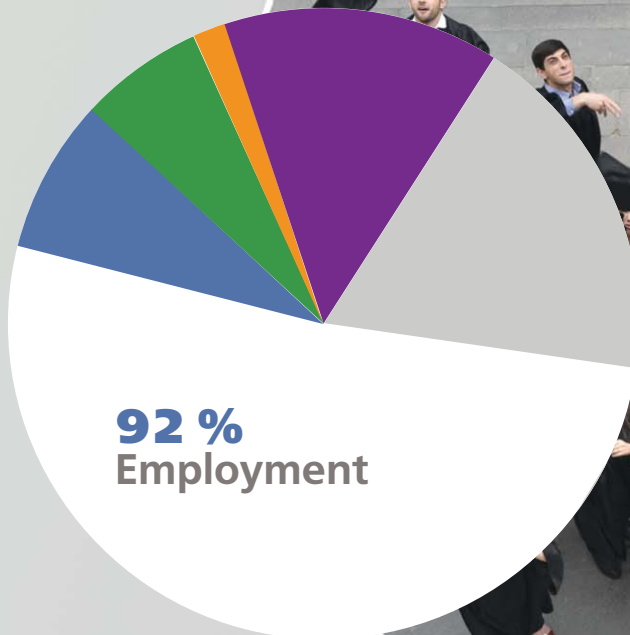
16 %
Education and research

14 %
Other

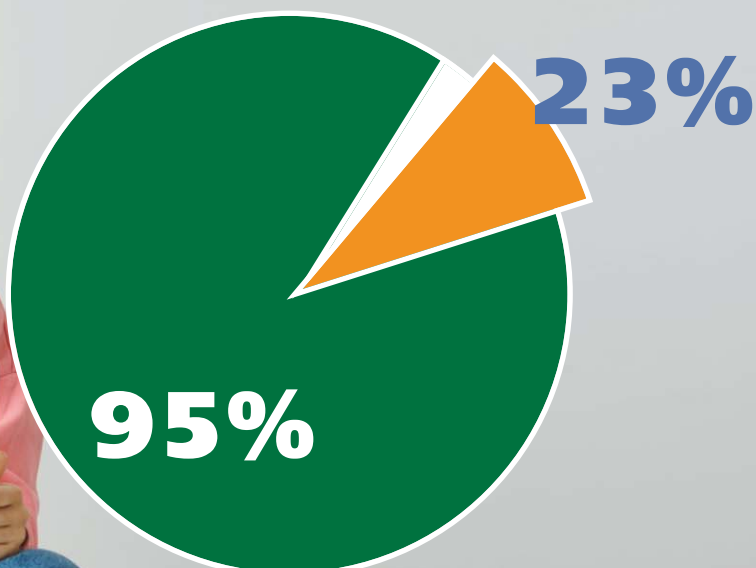
6 %
Entrepreneurs

30 %
Agribusiness

34 %
Financial institutions



More than **23 %** of working graduates of ATC occupy managerial positions.



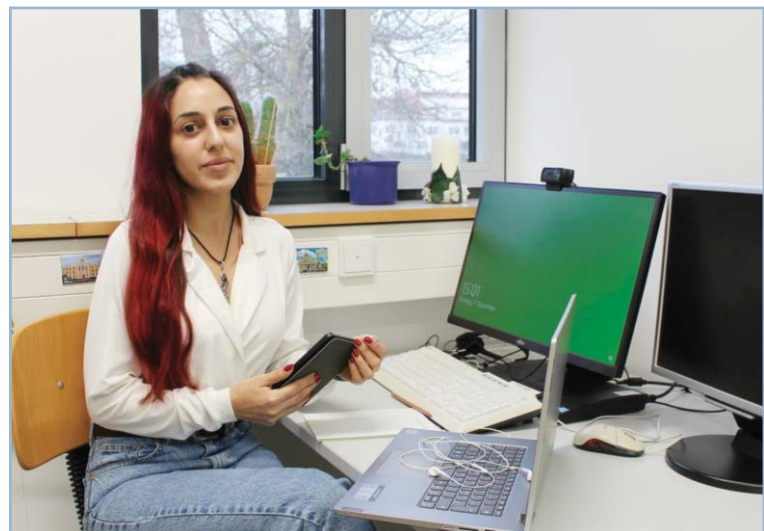
95 % of graduates find professional jobs within **1-3** months after graduating the university.

The ANAU student teaches her peers at the Weihenstephan University



As of December 2020, within the framework of the partnership between ANAU and the Weihenstephan-Triesdorf University of Applied Sciences, Germany, 12 students of the ANAU International Master's Program in Agrarian Management, who excelled in their performance, continued their studies at that university.

Svetlana Avagyan, as the best student of her course in the Agrarian Management international master's program of the Weihenstephan University, was hired as an assistant in that institution, as well as was appointed as a trainer: Svetlana teaches Business Management and Agricultural Economics to Armenian students of the aforementioned educational program.



GRANT **PROJECTS**



The FRUTENIA mega-project has entered a practical phase

The FRUTENIA joint project of the International Center for Agribusiness Research and Education (ICARE) and ANAU plans to enter its practical phase. The educational component of this project which is aimed at the development of horticulture in Armenia will modernize the courses and introduce new teaching methods in the Department of Agronomy. The project is funded by the Austrian Development Agency.



Issues and needs in the field of horticulture were identified through a study; requirements for horticulturists, the existing potential for training specialists for the Agrarian University, the need for short-term courses and topics, methodology of working with applicants and other associated issues were validated.

Based on the outcomes of the initial evaluation, packages related to the improvement of the curriculum of the "Agronomy, Selection and Genetics" professional educational program, the development of short-term professional training courses, the training of trainers, and the establishment of an informational horticulture website were developed.





As part of the three-year FRUTENIA mega-project, the establishment of an intensive orchard equipped with the latest technologies on a 1.5-hectare plot of land at the ANAU Voskehat Experimental Farm has begun.



An innovative experimental-demonstrative area was established in Voskehat

According to the agreement signed between ANAU and Tierras de Armenia, an innovative experimental-demonstrative area was established in Voskehat community. In 2020, an irrigation reservoir was constructed in the area, a drip irrigation system was installed and experimental cucumber cultivation was implemented. In 2021, other types of vegetables will be tested, as well as anti-hail nets will be installed.

The project is supported by the Argentine Embassy in Armenia and funded by the Buenos Aires Office of the Armenian General Benevolent





Union. In addition to students, farmers will also have the opportunity to get acquainted with the efficiency of innovative technologies, as well as receive practical consultancy.



AGRI CAMP

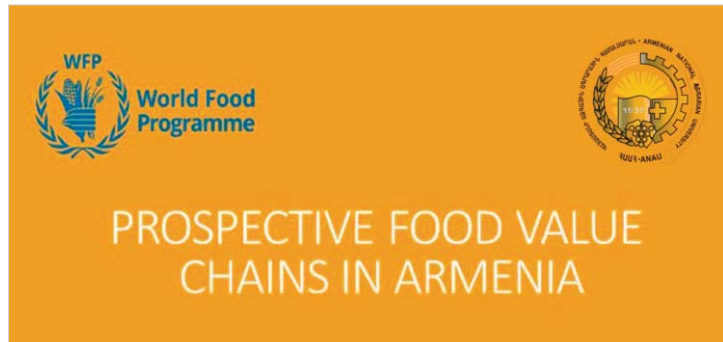
The USAID-funded Innovative Agriculture Teaching and Training Camp (AGRI) project, implemented by the ICARE Foundation, was launched on



May 1. Within the framework of the project, it is planned to create an innovative training and education camp in ANAU Zartonk rest house in Aghavnadzor, Kotayk marz, aimed at developing the skills of students, young specialists and farmers. Demonstration training centers, including small fruit and berry orchards, a center for agricultural equipment, a smart poultry farm will be established in AGRI CAMP, which will all be an integrated part of circular economy. The renovation of the rest house, as well as the reconstruction of the exhibition centers will be co-funded by USAID and ANAU.

Cooperation Between ANAU and UNWFP

Within the framework of the cooperation with the United Nations World Food Programme, in the second quarter of 2020, by the efforts of ANAU specialists, a study and comparison of researches on prospective food value chains conducted in Armenia during the last decade was carried out. The ANAU research team conducted research on main agricultural product types produced in Armenia: cereals, legumes, vegetables, fruits and berries, meat, milk, eggs, beekeeping and fish products. The published materials on related inclusive sustainable value chains were studied and summarized and conclusions were drawn. One of the goals of the study was to identify issues regarding food loss and wastes.



Recommendations from the study include prioritizing the items of cooperatives when purchasing agricultural products, forming appropriate groups of experts to regulate prices, supporting the existing potential for expanding milk production, involvement of the donor community to support and invest in agriculture, creation of professional training and consulting opportunities for target groups.

Assessment Project for Forest Landscape Restoration Opportunities



Within the framework of the partnership agreement between World Bank and ANAU, "Opportunities for Restoration of Forest Landscapes in Armenia" project was launched in September 2020, in the framework of which two researches are currently being carried out: "(Agricultural) Biodiversity Study for Forest Landscape Restoration" and "Study of Private Sector Involvement Opportunities".



The process is coordinated by the ANAU Rector and by the specialists of the Chair of Forestry and Agroecology and will conclude in September 2021.



WE ARE BUILDING
OUR FUTURE

ANAU INFRASTRUCTURE DEVELOPMENT

On June 9, the ANAU AgriTech Accelerator Program was officially launched, which aims to support the best startup teams and startups offering innovative solutions in the field of agriculture. The program is launched by UNDP ImpactAIM Accelerator and implemented jointly with



Armenian National Agrarian University (ANAU), International Center for Agribusiness Research and Education (ICARE) Foundation, Foundation for Armenian Science and Technology (FAST), Nation in Action platform and supported by Armenian National Innovation SDG Lab and ADB Ventures Facility.



ANAU AgriTech Incubator was launched in **September**. Before that, two startup competitions were held. In 2020 more than 100 individual applicants and 26 teams applied for the contest, 13 of which were given the opportunity to present their startup projects. The 4 teams - Agrosoko, Foodhub, Green Star, Smarterev - were declared the winners and shared the prize fund of 16,000 euros. In November, it was announced that the third contest, to be held in February next year, will have a prize fund of 35,000 euros.





On **September 24**, an innovative greenhouse equipped with a Farmbot robotic systems was opened, the construction of which was carried out with the financial support of the Embassy of Japan in Armenia. The grand opening was made by the Ambassador of Japan to Armenia Jun Yamada and the ANAU Rector Vardan Urutyanyan.



The beneficiaries of the innovative greenhouse are not only the students, but also researchers and farmers, as well as the soldiers being treated at the Homeland Defender's Rehabilitation Center who are regularly provided with the products grown in the greenhouse.



In **October**, the Water and Land Resources Management Technology Research Center was put into operation and will work, which will operate for educational, research, specialist training purposes, as well as provide expert commercial services in the field.

Loft-Style Open Spaces in ANAU

Reconstruction and renovation of a loft-style student space in the main building started in July with the funding from Ardshinbank CJSC. Construction of another similar space began in the second building of the



University. The open spaces will provide a comfortable environment for students and faculty to organize discussions, debates, presentations, team building and other activities, as well as receive guests and partners.

Center for Veterinary Educational and Scientific Excellence

Within the framework of grant projects of Competitive Innovation Fund, reconstruction-renovation works of the Center for Veterinary Educational and Scientific Excellence in Aresh branch of the ANAU have begun. Part of advanced veterinary simulation equipment, moulages, tools and furniture were received. The center will be equipped with the latest equipment and will contribute to the training and retraining of specialists in the field and the modernization of the overall development process of the field. With the establishment of the center, a new method for veterinary education - simulation training and a new approach - bioethical education, will be introduced in the ANAU educational system. In addition to training competitive personnel, the center will also provide training services to practicing veterinarians and farmers.





A woman with long dark hair, wearing a red and white plaid shirt, is shown from the chest up. She is holding a large green leaf in her right hand and an open notebook in her left hand. The background is a lush green field of plants, possibly a farm or research station, with mountains visible in the distance under a bright sky. The word "SCIENCE" is overlaid in white, bold, uppercase letters on the left side of the image.

SCIENCE



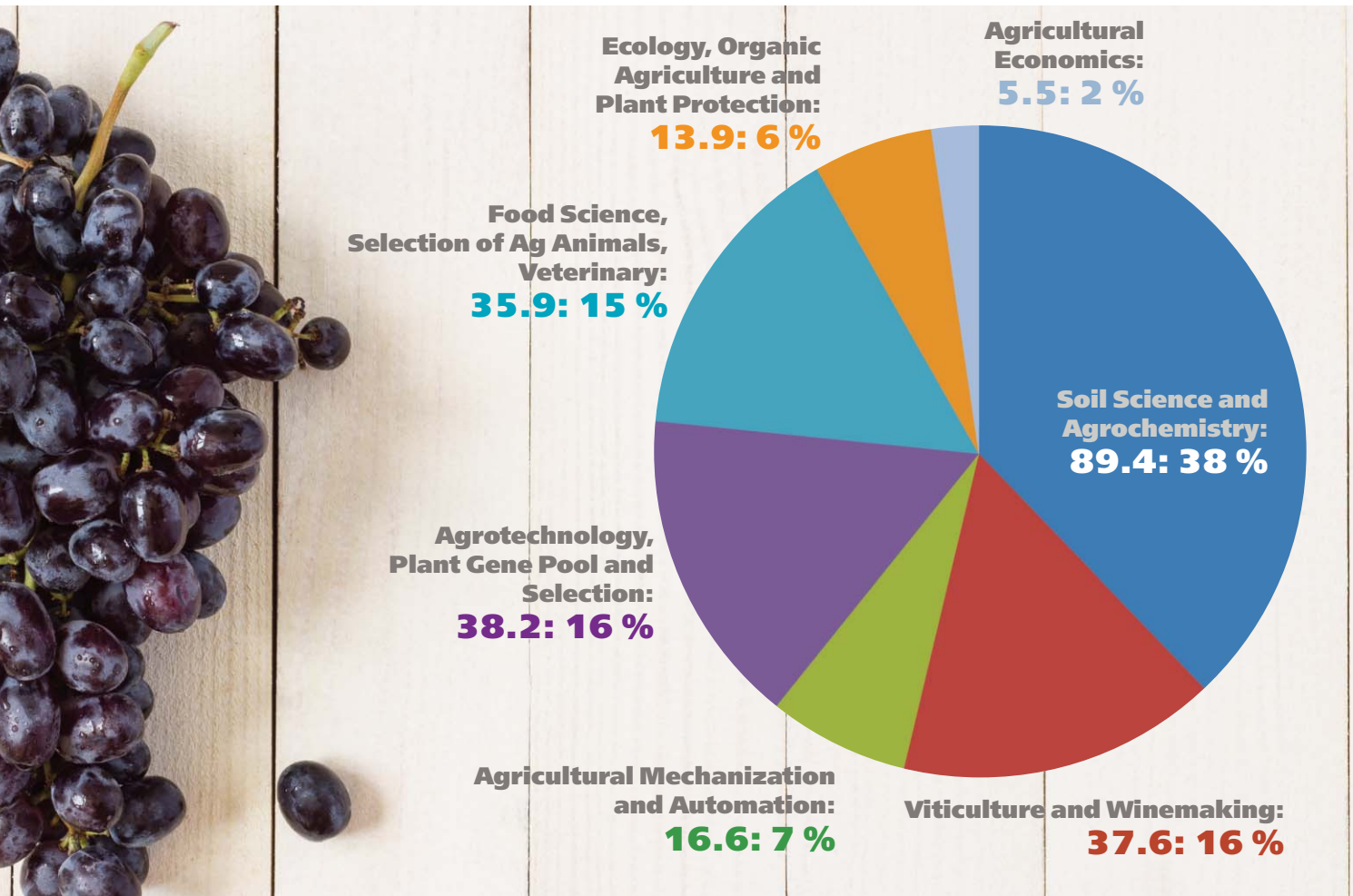
12 infrastructure maintenance and development programs have been implemented with the core funding of scientific and technical activities, which mainly included **16** scientific directions in the agri-food sector of utmost importance.

The financing for the scientific institutes and subdivisions of the University from the State Budget was **236.4** million drams.

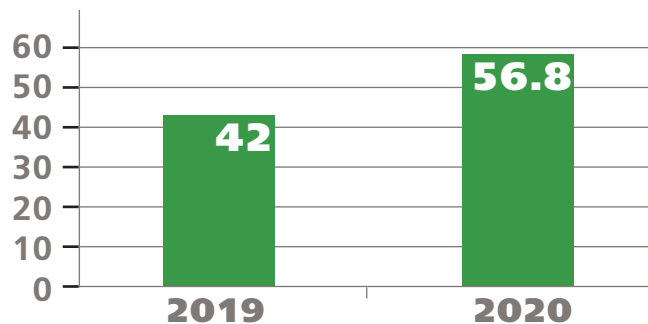
Fundings were distributed between research institutes and research and scientific centers with the following proportions: (million drams)



Distribution of Funding by Sectors (million AMD)

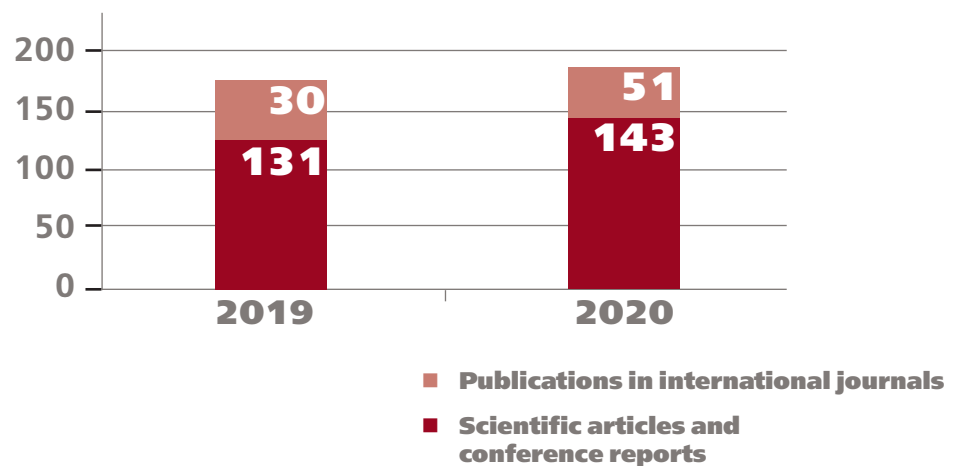


Extrabudgetary Inflows of Scientific Centers (million AMD)



- ▶ Extrabudgetary inflow funds of scientific centers amounted to **56.8** million drams, which was by **14.8** million more than in 2019, of which **10.95** million are from joint research activities with farmers, and **5.5** million are from extension services provided to farms.
- ▶ **11** scientific topics of scientific and scientific-technical (thematic) research were conducted, which were guaranteed by the State Budget of RA, as well as **2** programs to support the research of young scientists with a total amount of about **46.8** million drams.

Scientific Publications



Encouragement for the Scientific Activities of the Academic Staff

In **2020**, **115** scientific works were accepted and **81** authors were paid a supplement of **2.867** million drams, which is about **2.4** times more than the **1.223** million drams paid to **38** beneficiaries for **57** articles in **2019**.



With the funding from the Volkswagen Foundation, the grant project titled "Methanogenesis in Sulfide and Nitrate Containing Sedimentary Environments" (AZ93573) will be

implemented in 2021-2023, with a budget of more than 100,000 euros. The aim of the project is to observe methanogenetic phenomena in sedimentary environments, of which too little is known thus far. Within the framework of the project, an environmental biochemistry laboratory will be established at the University, which will complete the list of modern infrastructures already put into operation in the University - in turn, contributing to the accomplishment of goals of agricultural and environmental science, as well as those of practical education and training (not only for students). Chief Project Researcher is Natella Mirzoyan who has implemented various scientific projects in Israel, USA and Armenia, and within this project will collaborate with professor Hans-Peter Grossart of Leibniz Institute of Freshwater Ecology and Inland Fisheries in Berlin.



Two international projects have been implemented in 2020 within the framework of the agreements signed with the UN FAO and the ANAU Hrant Petrosyan Scientific Center of Soil

Science, Melioration and Agrochemistry: 1. Project for creation of land information systems and digitization of land maps of Armenia; 2. "Developing new methods of amelioration for secondary saline-alkaline soils using local waste". The first one refers to the creation of land information systems and implementation of the land map digitization program in Armenia, while the second one is about the integrated solution of environmental issues. Both projects are important from the environmental standpoint.



TRAINING COURSES

- ▶ 124 participants in the "Veterinary Development in the South of Armenia" training course for veterinary experts, funded by the Swiss Agency for Development and Cooperation;
- ▶ 16 participants in the certification course for the heads of agricultural cooperatives within the framework of the 2nd measure for neutralization of the Coronavirus-driven economic impact, implemented jointly with the Ministry of Economy of the Republic of Armenia;
- ▶ 175 participants in the trainings implemented within the framework of the "Construction or reconstruction of small and medium "smart" barns and state assistance for technology provision" project;
- ▶ A total of 244 beneficiaries participated in 7 different trainings, 182 were certified;





▶ 4 webinar-discussions titled "Armenia-Artsakh ZOOM Bridge" with the participation of the President and the Minister of Agriculture of the Republic of Artsakh, the rectors of ANAU and Shushi University of Technology, and sector specialists;

- ▶ 12 webinars titled "Agricultural Consulting" with the participation of ANAU faculty, 70-80 participants in each;
- ▶ 22 researchers participated in a two-week training course at the International Summer School 2020 organized by the Kazakh National Agrarian University;
- ▶ 10 students participated in the "Encouraging young specialists to power the agri-food value chains and building sustainable business models" 16-week course;
- ▶ 20 students were trained within the framework of the "Youth Development" program implemented by Coca Cola HBC.



INTERNATIONAL **COOPERATION**



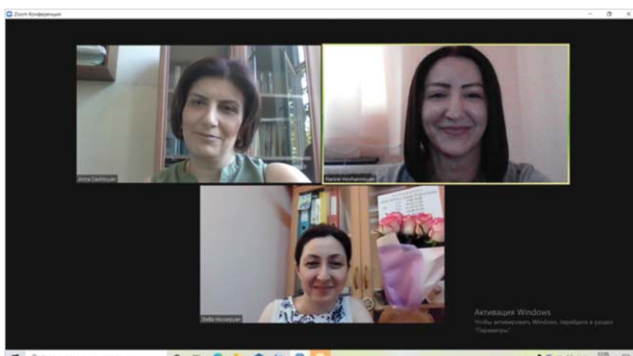


Food Security International Conference



Narine Hovhannisyanyan, Associate Professor of the ANAU Chair of Plant Product Processing Technologies, lecturer Stella Hovsepyan, and Anna Dashtoyan, Associate Professor of the ANAU Chair of Animal Product Processing Technologies, were also among the representatives of 15 countries at the “Food Biotechnology: Innovative Solutions and Personnel Training for Industry 4.0” international Research-to-Practice Conference organized by the K.G. Razumovsky Moscow State University of Technology and Management.

The aim of the conference was to discuss and elaborate new quality characteristics, recipes, energy-efficient approaches in the production of



mobile technologies, genetic engineering, as well as animal and plant products.

Ms. Hovhannisyanyan presented her work referring to the possibilities of utilizing secondary raw materials and proposing a possible solution to one of the most important problems in the bread sector. By virtue of the developed technology,

it became possible to obtain bread with better quality and lighter weight, without any use of bread improvers and a sharp reduction in the amounts of yeast used, as well as to shorten the production process.

Ms. Dashtoyan presented a new technology and a recipe for production of convenience food, the introduction of which in the production will contribute to the product line extension, the improvement of the quality of the finished product and cutting of production costs. Partial replacement of meat raw materials with plant-based raw materials is quite relevant today and is of strategic importance.

The research work presented by Stella Hovsepyan refers to the practicability of using linseed oil as a food supplement in specialized confectionery. The use of flax seeds allows to change the physicochemical parameters of confectionery, making it more dietary.

After this broad-scale conference, our faculty members expect further cooperation with stakeholders.

Cooperation of Regional Agrarian Universities: CASCADE

On July 13, 2020, a convention dedicated to the 10th anniversary of the Central Asia and South Caucasus Consortium of Agricultural universities for Development (CASCADE) took place. Vice-Rector Hrachya Zakoyan, Head of the Department of International Relations Garegin Hambardzumyan and Head of the Quality Assessment and Assurance Center Mariam Movsisyan participated in the meeting on behalf of ANAU as a fully-fledged member of CASCADE.

Vice-Rector Hrachya Zakoyan in his speech presented the development prospects, areas of academic cooperation in international platforms and international programs for ANAU, as well as expectations regarding the development vision of the University. During the meeting, a number of issues related to the promotion of cooperation in the fields of education, science and consultancy within the framework of CASCADE were discussed. All the participating universities expressed their desire to significantly deepen the academic cooperation, rationalizing that there are full-scale, however not yet used, resources in that direction. The participants of the meeting especially emphasized the need to develop and implement long-distance and online courses.



Discussion of IFPRI's 2020 Global Food Policy Report for the Eurasian Region

ANAU Rector Vardan Urutyanyan participated in the online discussion of the results of the International Food Policy Research Institute (IFPRI) "World Food Policy Report on Eurasia 2020" and the impact of COVID-19 on the agri-food systems of the Eurasian region. It was co-organized by IFPRI, Eurasian Center for Food Security, Westminster International University in Tashkent and the World Bank Group.



Recognizing the enormous long-term negative impact of the pandemic on poverty, food security and malnutrition levels, especially in developing countries, participants expressed their willingness to work together to accelerate the elaboration of an inclusive food system and come up with mechanisms to alleviate the current situation as much as achievable.

Rector Urutyanyan's main message to the implementers of agricultural policy for our country and the whole region was to invest in the formation of human capital assets, education, inclusive food systems, promote the establishment of producers' organizations and agricultural cooperatives and, needless to say, the development of digital technologies and innovation.

In **2020, 5** memorandums of cooperation were signed or reaffirmed with the Belarusian State Agrarian Technical University, Nikolaev State Agrarian University (Ukraine), Omsk State Agrarian University (Russia), CASCADE, Moscow State University of Technologies and Management (Russia), as well as with LOGO company coordinating an internship for ANAU students in Germany.

In **2020**, ANAU signed **38** contracts within the framework of Erasmus +, **25** of which were from the previous year, and **13** were new. Altogether, ANAU cooperates with **32** universities through this program, which is an unprecedented number.



NEW INITIATIVES TO BE IMPLEMENTED IN 2021

- ▶ Drip irrigation system, hail nettings and 200 square meter greenhouse in the Akunk Organic Agriculture Experimental Farm;
- ▶ "Scientific Research Methodology and Science Commercialization" module within the Creative Spark project of FAST Foundation;
- ▶ Establishment of a Biotech Incubator within the framework of cooperation between the FAST Foundation, the Ministry of Education, Science, Culture and Sports and the ANAU;



- ▶ Smart and efficient solutions: Agridrone Laboratory with DJI AGRAS T20 and Phantom 4rtk Agricultural UAVs;

- ▶ Milk and Dairy Technology Educational-Experimental Laboratory at the ANAU College in Shirak, in collaboration with People in Need charitable NGO, Ashotsk Cheese Factory LLC and ANAU;
- ▶ Establishment of the Innovative Rural Knowledge Center (Hub) at the ANAU Vanadzor Branch within the framework of the "EU4Youth: Social Entrepreneurship Ecosystem Development (SEED) Programme for Green Growth in Borderline Communities" in partnership with Green Lane NGO;
- ▶ Dairy Master School in Balahovit Educational-Experimental Farm in partnership with Strategic Development Agency NGO;
- ▶ Establishment of 2 short-term training courses and an online agri-consulting platform (including an app version) in cooperation with Strategic Development Agency NGO.

Tour de Artsakh

2020 marked the 90th anniversary of the ANAU, and various events were scheduled, however, due to the unprecedented hardships that befell Armenia, only particular ones were held. The most notable one was the visit of a large delegation of the University to the Republic of Artsakh in August, also known as *Tour de Artsakh*.

For several highly indulging and insightful days, the delegation led by the ANAU Rector, visited Shushi University of Technology and was hosted at the Ministry of Education, Science and Culture and the Ministry of Agriculture of the Republic of Artsakh. A number of directions for deepening cooperation were discussed, taking into account the innovative approaches and the latest and prospective technological solutions.



Visits to agribusiness companies, in particular the visit to the Domaine Avetissyan ("Kataro") winery in the village of Togh, were an important part of the *Tour de Artsakh*. On one of the barrels of the winery, the aggies left an inscription "Happy 90th anniversary of ANAU and long live Kataro". That barrel, Kataro wine, which had become a brand of Armenia and Artsakh, the Avetissyans' cozy gardens, Togh village, which was the location for the annual Artsakh Wine Festival and had become known on the international wine map with its rich history, as well as Shushi University of Technology, unfortunately, passed under the control of the enemy.

A Challenge That We Must Face Nationally

The 44-day Artsakh war that struck in the fall of 2020 was one of the tragic turning points in the history of Armenian people, of which the Agrarian University was not left out. The year will be remembered with irreparable and painful losses. About 1.600 ANAU students took part in the war, 42 of whom were immortalized, and twice as many were wounded. Our heroes were crowned with glory on the battlefield, performing unparalleled acts of bravery in the unequal struggle for the salvation of the Homeland.



Simultaneously, two groups of volunteers from the staff went to Artsakh to supply food and attend to other logistics matters during the war.

Several shipments of nonperishable food, clothing, hygiene items, cigarettes and medicine (including through fundraising) were collected at the initiative of the ANAU Student Council and were sent to the front line in Artsakh.

Baptism of Fire, Military Cross and Cross of Peace

ANAU

students Arsen Margaryan, Gagik Davtyan and Emin Yeritsyan returned from the war with glory, awarded with the Order of Military Cross of first and second degrees. These three young men who have passed a glorious path of war are the bearers of the noble image of



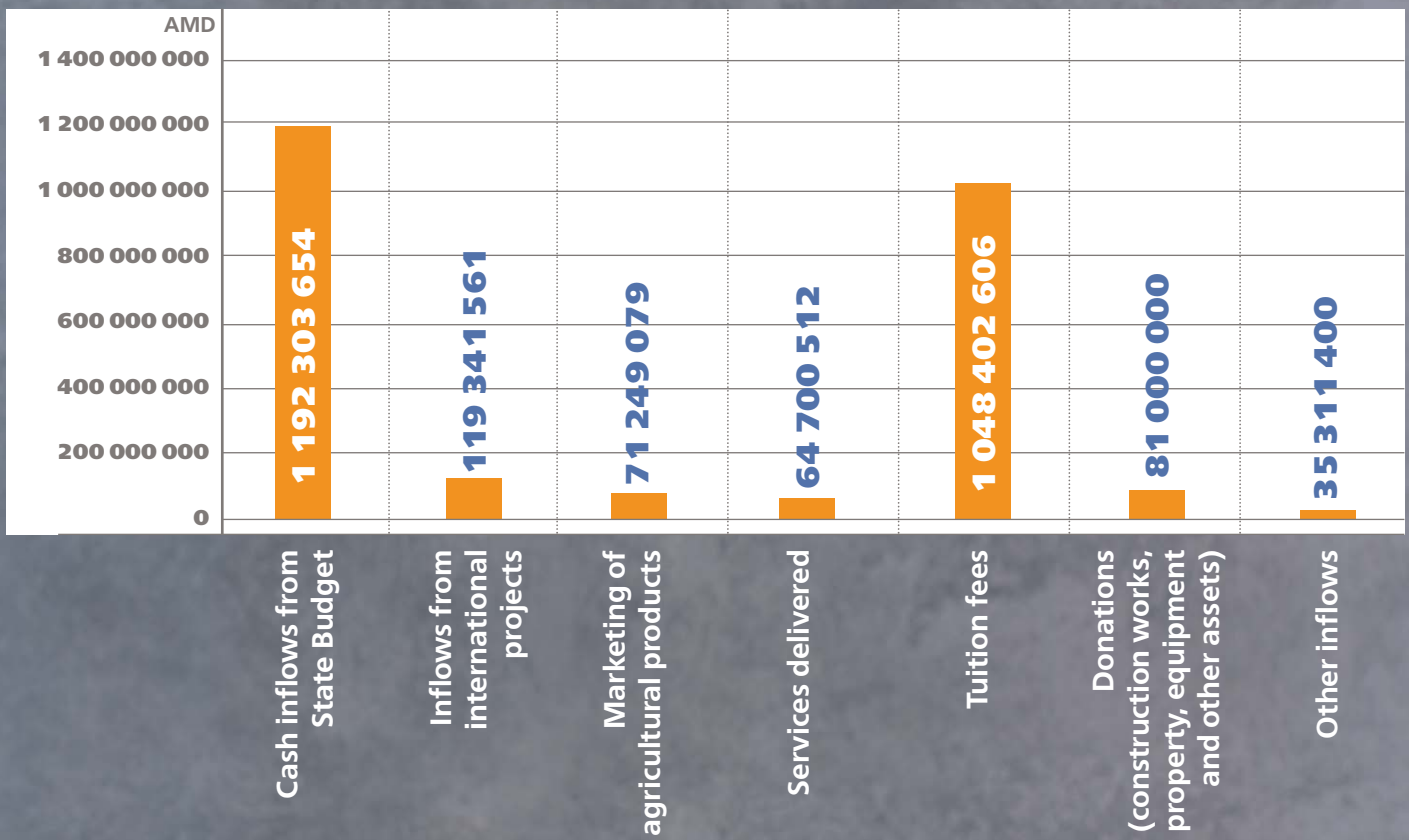
a real man and a real Armenian, and with their mindset and attitude towards their responsibilities, are always prepared to impose their final and fair peace on the many-sided archenemy and bear the cross of peace with joy and a light heart.



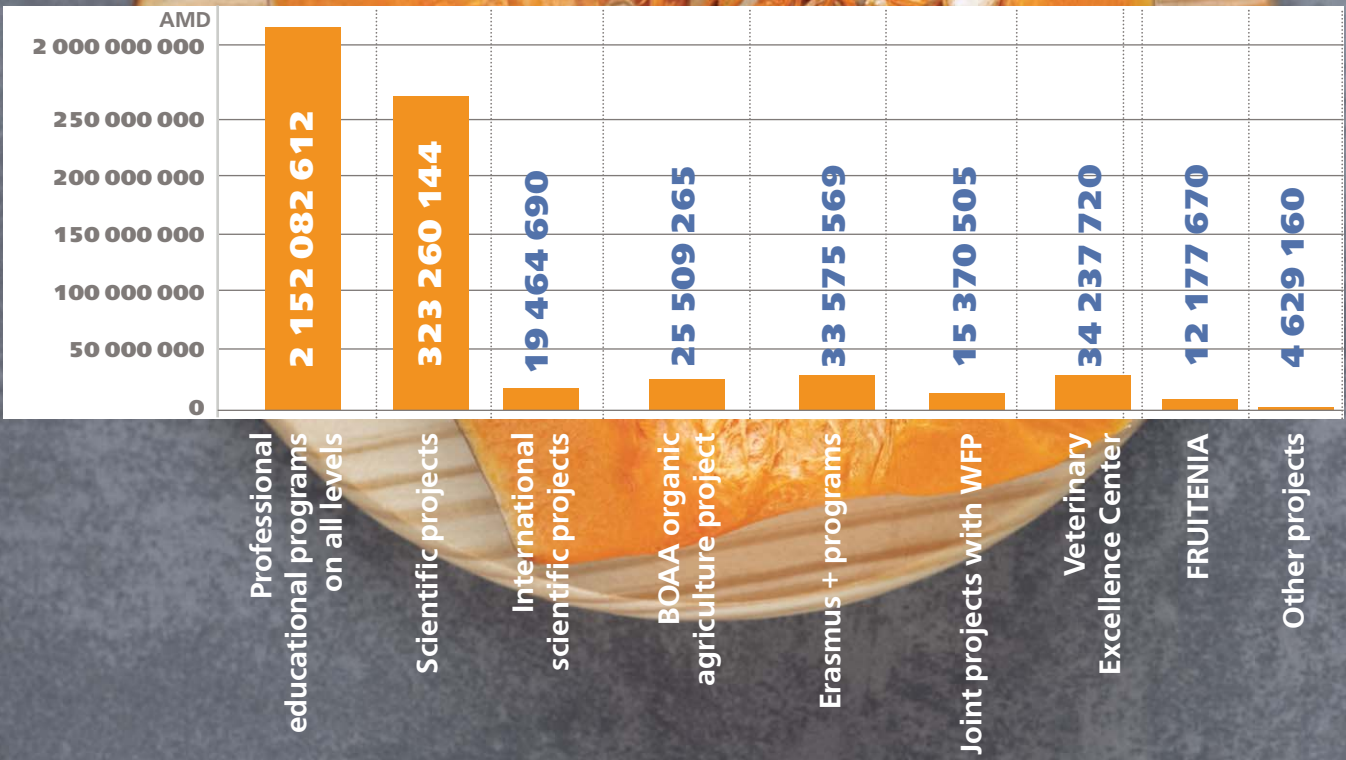


FINANCE

SOURCES OF FUNDING



IMPLEMENTED PROJECTS



The financial audit of the Armenian National Agrarian University was conducted by the Baker Tilly ARMENIA auditing and business consulting closed joint-stock company. The audit includes the statement of the financial situation as of December 31, 2020 and statements on the year’s comprehensive financial results, changes in net assets and cash flows.

In the opinion of the independent auditor, the mentioned financial statements provide the truthful

and real picture of the financial situation, financial results and cash flow of the foundation as of December 31, 2020, in accordance with international standards of financial statements.



DONORS

ICARE Foundation

USAID

Embassy of Japan in Armenia

Embassy of Argentina in Armenia

National Agricultural Technology Institute of Argentina

Armenian General Benevolent Union

Parnagian Foundation

Hirair and Anna Hovnanian Foundation

Austrian Development Agency

German Corporation for International Cooperation (GIZ)

The World Bank in Armenia

UNDP ImpactAim Venture Accelaerator

Asian Development Bank

Victor Zaroogian and Judy Sarian

CARD Foundation

ARDSHINBANK CJSC

THANK YOU FOR FRUITFUL COOPERATION

SERUND wines

In 2020 SERUND red and reserve wines of ANAU, recognized for their high quality during professional blind tastings, entered the domestic market as the only student wines. The label of the “SERUND” brand developed in cooperation with the internationally renowned Backbone Branding Design Company depicts a grape branch transferred from the hand of the master to the hand of the student, symbolizing the eternity of knowledge and continuity of the best traditions of the six thousand years’ winemaking skills. Enjoy SERUND wines and join our mission of educating new generations of creative winemakers!





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