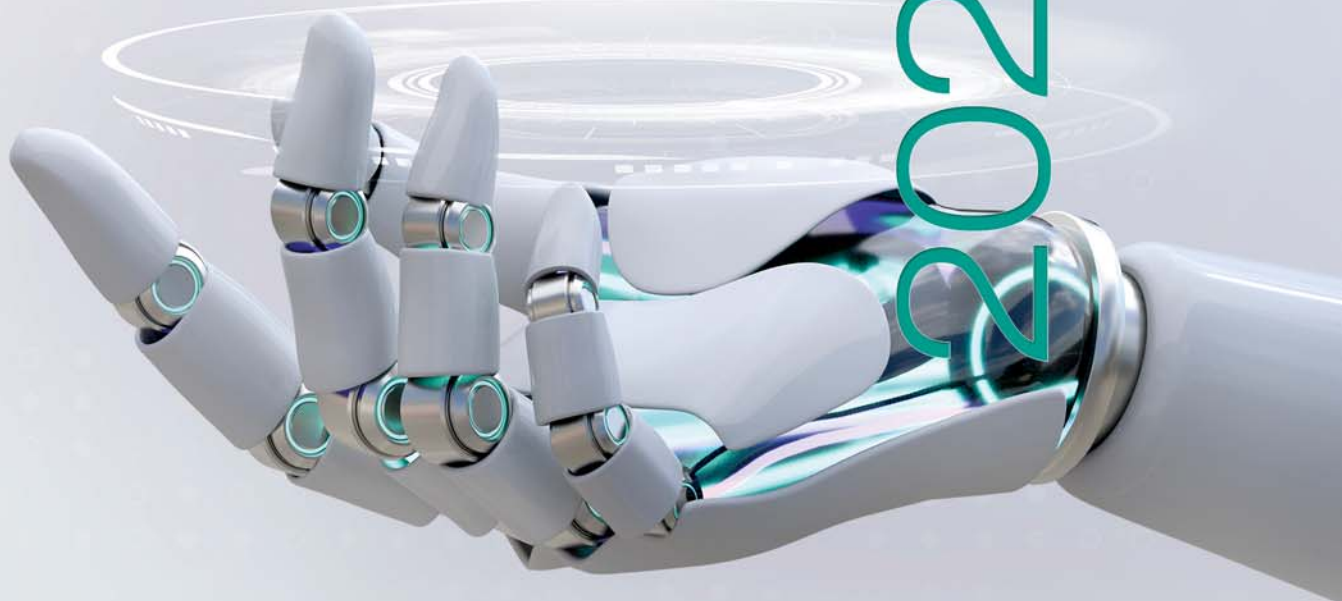




ARMENIAN
NATIONAL
AGRARIAN
UNIVERSITY

ANNUAL **REPORT**

2021





ARMENIAN
NATIONAL
AGRARIAN
UNIVERSITY



ANNUAL REPORT

2021

YEREVAN 2022



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**VARDAN
URUTYAN**

ANAU Rector

Dear colleagues of the Armenian National Agrarian University:

The 91st year of our university's history marked another step of significant progress on the path of its transformation into an agrotechnology excellence center.

The year 2021 was fruitful in improvement of the education quality, extension and increased practical value of the R&D activities, creation of many innovative laboratories and centers, expansion of the geography and effectiveness of the international cooperation.

The University introduced a dual education system in collaboration with GIZ and seven privately owned wineries. We continued modifying curricula content and introduced new STEM-oriented classes. We pay serious attention to faculty capacity strengthening through targeted trainings. In 2021 the number of instructors who took training courses increased tenfold compared to the previous year.

With the support of local and international partners, the University achieved significant success in implementation of short-term educational programs. Particularly, trainings with various durations on bread, confectionery, and chocolate production, greenhouse crop production, winemaking and wine business, and dairy production enjoyed an unabated demand and currently continue successfully.

The ANAU AgriTech Incubator plays a unique and important role in creation of the agricultural startup ecosystem in the country. It is no mere chance that two out of the three winners of the annual AgriTech Startup Clash later developed their success by winning at larger contests.

The grant programs, which generally played an important role in transformation and development of the university in the recent years, contributed also in 2021 to a considerable success in infrastructure development, strengthening our R&D and scientific potential, and shaping the student-centric environment. The successful progress of FRUITENIA orchard management and fruit production development megaproject, launching the innovative AGRI CAMP (Agriculture Training and Learning Camp), a large-scale program of workforce development in Armenia together with USAID and other partners, SMARTI project aimed at supporting innovative English medium instruction methodology, GeoTAK project for development of interdisciplinary postgraduate programs in technology and a number of other projects and programs are worth mentioning in this regard.

In the context of continuous infrastructure development, it is very important that positive changes have been implemented or commenced not only at the main campus of the University, but also at the branches, the College, the Lyceum, and educational-experimental farms.

Today at ANAU we have a largely finalized, modern student-centric environment of agricultural education, science, and consultancy, and despite some external objective difficulties, we continue accomplishing our mission of training specialists equipped with the latest agri-tech knowledge for the key industry of our country.



INTRODUCTION

Despite the calamities that hit our country in 2021, we did not succumb and with our dedicated daily work ensured the continuity of our success.

We are pleased to state that in 2021 we generally reached the planned milestones in the main areas of the University's activities, including education, science, and consultancy. Another significant step was taken toward the University's technological future. Overall, we succeeded in finalizing the new educational environment through structural and content reforms of the curricula, introduction of dual education, state-of-the-art majors (Sustainable and Precision Agriculture, Soil and Water Engineering, etc.), a number of newly created modern infrastructures (Agri Camp, Agri-drone laboratory, Dairy Master School, the Brewing and Distilling Laboratory, the Bread, Confectionary and Chocolate Laboratory, etc.), and the continued professional training of the faculty.

In 2021 the big family of the Agrarian University strengthened internally, became more unified and robust, and connected with new partners, like-minded people and supporters, both in Armenia and outside. In a concerted effort we were able to improve the University's reputation and rating.

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Considering the speed and in-depth nature of the reforms, the expanding network of our partners and the government support, the continued process of deepening the reforms and creating new infrastructures is irreversible. ANAU will continue to surprise by its new and impressive achievements and innovations, such as introduction of the work semester, implementation of new scientific, educational, and other megaprojects that will boost development of the whole agriculture/agribusiness sector and create thousands of new jobs.

ARMENIAN NATIONAL AGRARIAN UNIVERSITY REACCREDITED FOR THE NEXT FOUR YEARS

The March 15, 2021 session agenda of the National Center for Professional Education Quality Assurance Foundation's (ANQA) Accreditation Committee involved the institutional accreditation of the Armenian National Agrarian University.

The Committee members discussed external evaluation expert report based on 10 criteria, reviewed the positively and negatively assessed areas, the existing problems, progress since the last accreditation, and the results of the improvement program implementation.

The Accreditation Committee made a decision to grant a four-year institutional accreditation to the Armenian National Agrarian University. Last time ANAU had received institutional accreditation in 2015, again for four years.





EDUCATIONAL PROCESS

The labor market requirements have considerably changed nowadays due to the technological progress, dynamic development of economic relations and other objective realities. In order to harmonize the expected learning outcomes in the curricula of the majors most demanded in the agrarian sector of Armenia with the labor market requirements, the University has outlined the following main actions:

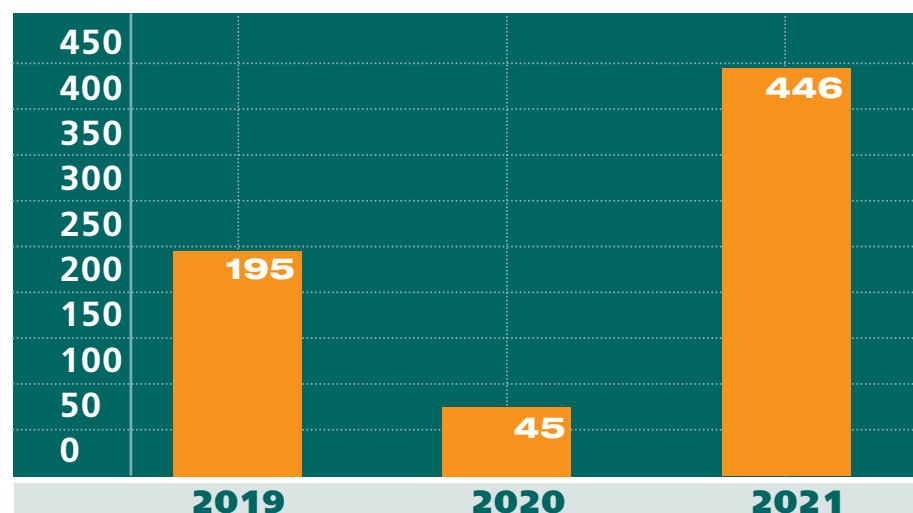
- Structural and content reform of the curricula;
- Development of STEM disciplines;
- Creation of a learning environment furnished with modern equipment in line with the student-centric and competitive educational approaches;
- Faculty capacity strengthening, involvement of production professionals;
- A full semester-long paid internships, use of dual approach;
- Development of a startup ecosystem, incubators and accelerators;
- Commercialization of science.

As a first step in response to the labor market requirements, the Master's Degree curricula have been updated. Also, new educational programs were introduced: Equipment and Machinery Engineering, Soil and Water Engineering, Agroindustry Technologies, Sustainable Agriculture, and Precision Agriculture. Representatives of Aratos Group and instructors from University of Western Macedonia are involved in the implementation of the Precision Agriculture educational program.

The first cohort of Sustainable Agriculture Master's Degree program graduated in 2021, with 40% of the graduates having completed their research in international programs, particularly at GIZ.

Faculty capacity strengthening has also been a high priority in 2021, as **446** ANAU faculty members were trained in various areas; a **tenfold** increase from 2020 and threefold increase compared to 2019.

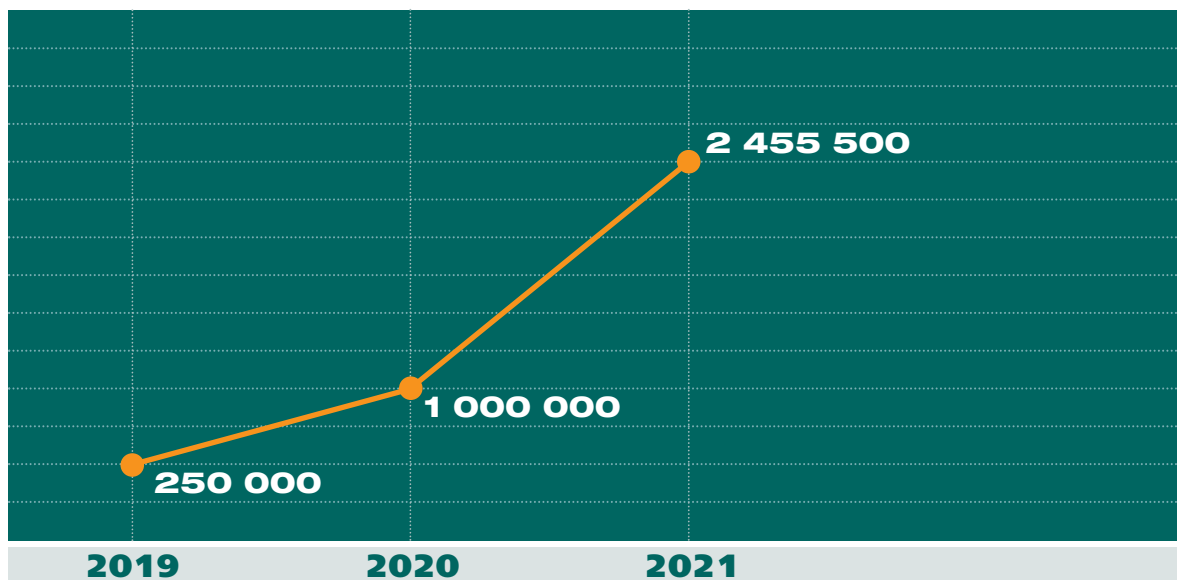
Number of Trained Faculty





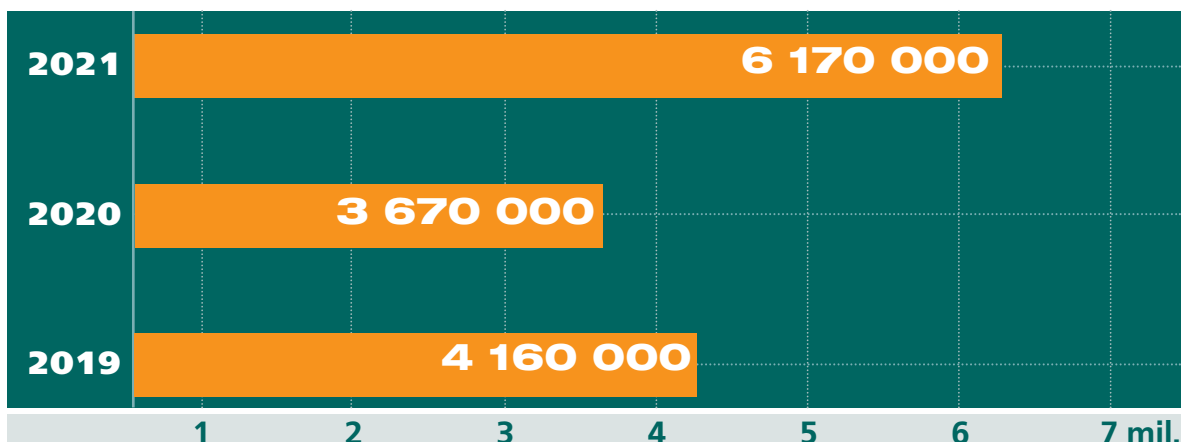
In 2021 ANAU invested **AMD 2,455,500** in human capital development; a **tenfold** increase from 2019.

ANAU Investments in human capital development (in AMD)



The inflow of payments for training services increased by **68%** in 2021, totaling **AMD 6,170,000**.

Payments for training services (in AMD)



INTRODUCTION OF THE DUAL PROGRAM FOR VOCATIONAL EDUCATION AND TRAINING (VET) IN WINE SECTOR



Dual VET in winemaking was introduced within the framework of the Private Sector Development and Vocational Education and Training in the South Caucasus project and based on a contract between ANAU and German Agency for International Cooperation (GIZ). Needs assessment for seven private winemaking companies was implemented, the structure of curriculum was revamped, and modular programs were modified and developed.

The dual, work-based vocational education and training has been successfully used at A. Kochinyan Agricultural College of ANAU. The internships and work semester carried out at the partner wineries provide effective content to the dual education.

The learning plans, structure of the taught modules and examinations are based on government-endorsed criteria, relevant experiences in Germany and the existing needs of the private wineries.

The Voskehat Educational-Experimental Farm with its vineyards, winery and Educational and Research Center of Enology, as well as the EVN Wine Academy with its wine chemistry lab and tasting rooms contribute much to achievement of the dual VET practical objectives.



GRANT PROGRAMS

FRUIT PRODUCTION SECTOR DEVELOPMENT PROJECT IN ARMENIA (FRUITENIA)

fruitenia

The agrotechnical and educational components of the FRUITENIA project are in the implementation stage.

Within the framework of **the agrotechnical component**, establishment of an intensive demo orchard has commenced in February 2021 at the ANAU Voskehat Educational-Experimental Farm, **including planting 700 saplings** of **12 peach, 10 plum, 16 cherry** varieties imported from Italy and **132** saplings of two local varieties.

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Hail protection and orchard drip irrigation systems with remote control were commissioned. The agricultural machinery acquired within the project framework based on the agreement between ANAU and

ICARE Foundation on free use of agricultural machinery was provided to ANAU Voskehat Educational-Experimental Farm to increase the effectiveness of the intensive orchard cultivation activities. The machinery included Dongfeng DF-504 tractor, Shaktiman BMF 1.8 mulcher, Shaktiman SRT-1.55 cultivator, Agromaster TAS 600 orchard sprayer with capacity of 600 liters, and Agromaster 4 furrow micro plough.



The construction/repair of the amenities and support infrastructure at the orchard continued. Particularly, the facilities have been connected to the power grid and internet, the field storage has been repaired, lighting fixtures and security videomonitoring systems were installed.



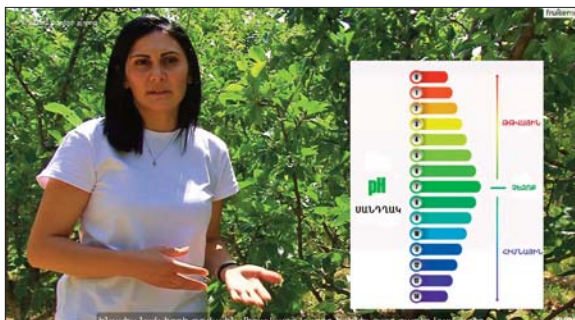
Within the framework of the FRUITENIA project's **agrotechnical component**, manuals have been developed or updated, including Fruit Tree Entomofauna and its Control, Fruit Tree Diseases and Treat-

ment, Nursery Establishment and Management, Establishment and Management of Nut Orchards, Intensive Fruit Farming, Fruit Production, and Basics of Sustainable Agriculture. These manuals were provided to the ANAU Agronomy Department.

Memorandums of cooperation were signed within the framework of the project with a number of agricultural colleges. It is planned to organize field trips for college students, instructors, and specialists to the intensive orchard of ANAU, develop a manual on horticulture and provide it to the colleges, conduct orchard management and fruit production trainings of trainers for college instructors and let the colleges use the aygi.am website on fruit production for teaching/learning.



The website www.aygi.am created within the framework of the FRUTENIA project provides an opportunity to the beneficiaries involved in fruit growing activities to acquire knowledge related to the field. It is an unprecedented internet



resource in our reality in terms of its scope, urgency, and content. It is intended primarily for farmers and students but can be very useful also for the specialists and researchers interested in the area, and many others.

The Publications and Consulting section of the website contains valuable professional consulting materials, manuals for growing various fruit varieties, and covers such key topics as orchard planting and management, organic agriculture, harvesting, fertilization, irrigation, pest, weed and disease control, tree pruning, climate-resilient and climate-smart agriculture, sustainable agricultural waste management, circular economy, post-harvest loss minimization, and many more. The professionally-oriented video materials are also quite rich in content, from pruning/trimming techniques in traditional and intensive orchards to disease and pest control, as well as success stories. The website provides information on training programs, projects, agricultural startup contests, as well as available expert services in such areas as nurseries, soil sample testing at the laboratories, plant protection, fruit growing, etc.



INNOVATIVE AGRICULTURE TRAINING AND LEARNING CAMP (AGRI CAMP)

AGRI CAMP

The USAID-funded Innovative Agriculture Teaching and Training Camp (AGRI CAMP) project is implemented together with the International Center for Agribusiness Research and Education (ICARE) Foundation.



Within the framework of AGRI CAMP project, in 2021 the renovation and furnishing of Zartonk Resort's floors, conference room, kitchen and cafeteria, as well as landscaping of the vicinities were completed and on October 12 the AgriCamp practical learning center opened its doors to welcome the project beneficiaries.



The research grants provided to the students is one of the important components of the project. By the end of 2021, eight University students received grants. The research topics mostly involved horticulture, fruit farming,



and food and beverage production. Also, within the framework of the project, the AgriThon competition of startup ideas with innovative solutions is held.

In the aftermath of the 2021 competition, 43 startup teams/ideas were selected, of which 15 passed to the second incubation period. Among these teams, two consist solely of

ANAU instructors and students, while many members of the other teams are ANAU alumni.

The project also conducts trainings for women entrepreneurs and in 2021 over 350 women participated.

Trainings were conducted also for agricultural and consumer cooperatives and farmers.





THE USAID ARMENIA WORKFORCE DEVELOPMENT ACTIVITY

The presentation of the USAID Armenia Workforce Development Activity was held in December 2021. The program is implemented by Enterprise Incubator Foundation in the high-tech, agriculture and tourism/hospitality sectors, in collaboration with ANAU, Armenian Relief Fund of the USA and Civitta Armenia business consulting company.



The program objective is to provide the youth with opportunities to acquire and improve modern work skills.

The program implementation period is from October 2021 to September 2026. During these five years about 10,000 specialists will be trained, of which 3200 in agriculture sector. The target group includes youth and women, who as the result of the program will find employment in agriculture, ICT, tourism and hospitality industries. 7,000 young people will be employed or will have better employment opportunities, including 2,240 in agriculture.

STRENGTHENING ORGANIC AGRICULTURE IN ARMENIA: PARTICIPATORY HIGHER EDUCATION AND KNOWLEDGE EXCHANGE FOR DEVELOPMENT



Universität für Bodenkultur Wien
University of Natural Resources
and Life Sciences, Vienna



Austrian Partnership Programme
in Higher Education and Research
for Development



Strengthening Organic Agriculture in Armenia

Together with its partner University of Natural Resources and Life Sciences, Vienna (BOKU), the ANAU has won the Austrian Development

Agency's APPEAR Advanced grant which is a logical continuation of the already implemented project Building Organic Agriculture in Armenia: Improving the Knowledge and Skills of Organic Stakeholders through Participatory Curriculum Development and Outreach.

The project objective is to assess and improve the existing Organic Agriculture master program (OAMP), create a student farm, and introduce short-term organic agriculture programs.

The project is coordinated by Armenian National Agrarian University in partnership with University of Natural Resources and Life Sciences, Vienna (BOKU).

The BOKU team will support ANAU staff to improve their international programs coordination capacities.

The project implementation period is from March 2022 to February 2025.



Visegrad+ STRENGTHENING SOFT SKILLS AS EMPLOYMENT KEY TOOL: TRANSFERRING V4 EXPERIENCE

- **Visegrad Fund**

The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad

Grants from International Visegrad Fund. The grant holder and main project coordinator is Armenian National Agrarian University. The Project will be implemented with the support of the Hungarian University of Agriculture and Life Sciences (MATE), Slovak University of Agriculture in Nitra (SUA) and University of South Bohemia (USB).

The main goal of this project is to increase the future employability of the students and professionals in the labor market through the development and improvement of soft skills by providing various modules during formal and informal education.

Within the framework of the project ANAU will create a Soft Skills Development Center (SSDC).

SUPPORT FOR INNOVATIVE METHODOLOGY, APPROACHES AND TOOLS FOR TEACHING THROUGH THE MEDIUM OF ENGLISH IN ORDER TO IMPROVE EDUCATIONAL YIELD, SUSTAINABILITY AND INTERNATIONALIZATION (SMARTI)



The project aims at developing transparent, national and international, educational standards and comparable learning tools and teaching standards in accordance with Bologna criteria; enhancing the quality of academic content and staff and students through development of a sustainable curricula for teacher training; and provide support to the internationalization of participating EU and Armenian and Russian institutions and support staff and student mobilities and exchanges.



DEVELOPING INTERDISCIPLINARY POSTGRADUATE PROGRAMMES AND STRENGTHENING RESEARCH NETWORKS IN GEOINFORMATION TECHNOLOGIES IN ARMENIA AND KYRGYZSTAN (GEOTAK)



The main goal of the program is to develop postgraduate Higher Education programmes in Geoinformation Technologies (GIT) and strengthening

the links in research and innovation between Higher Education Institutions (HEI), industry and administration in Armenia and Kyrgyzstan

Within the framework of the program Research Nodes in GIT will be created per partner country to promote and harmonize collaborative innovation projects and joint research lines, research laboratories of GIT will be improved and updated, trainers will be trained, interdisciplinary postgraduate programmes (courses and joint PhD programmes) will be created that enhance the potential of GIT in different areas and degrees and focus research outputs on contemporary problems at regional and global scales.

DEVELOPMENT AND IMPLEMENTATION OF TRAINING PROGRAM FOR PROFESSIONAL CERTIFIERS AND APPROBATORS OF SEEDS AND PLANTING MATERIALS

Since December 1, 2021, ANAU commenced the 9-month-long Development and Implementation of Training Program for Professional Certifiers and Approbators of Seeds and Planting Materials, which is funded by EU Green Agriculture Initiative in Armenia (EU GAIA).



The project aims to train professionals who will conduct the selection of mother block of fruit and berry crops by adequate methods and qualitative evaluation, and will follow the complete process of production of planting material within the entire scheme of production in all sections of the nursery and the compliance of the process to the requirements prescribed by law.

Within the framework of the project a training course of certifiers and approbators of seeds and planting materials will be implemented, which will involve both theoretical and laboratory sessions, as well as field visits to nurseries.



PILOTING OF SUSTAINABLE MANURE/DAIRY PRODUCTION WASTE MANAGEMENT IN GEGHARKUNIK REGION

Piloting of sustainable manure/dairy production waste management in Gegharkunik Region project has commenced in 2021, aimed at reduction of nutrient pollution loads on Lake Sevan.



It is a research project implemented by ANAU professional team with the financial support of GIZ. In the vicinity of Lake Sevan 19 communities have been selected that are considered the main contributors to the pollution load on the lake. Based on a study of communities, analysis of existing international and local experiences and their applicability assessment, the project will propose solutions for manure/dairy production waste neutralization and processing, which will prevent influx of nutrient pollutants into Lake Sevan, addressing the important issue of the lake's eutrophication.

ANAU INFRASTRUCTURE DEVELOPMENT

In 2021 vast amount of work was carried out to create and renovate supporting infrastructures that facilitate transformation of Armenian National Agrarian University into an agrotechnology excellence center.

Through collaboration between ANAU and the Foundation for Armenian Science and Technology (FAST) and with funding from the Ministry of Education, Science, Culture and Sports of the Republic of Armenia (RoA MESCS), laboratories along with their adjacent hallways, offices, bathrooms, and staircases were renovated in the Building #1 of ANAU, while activities to create a biotech incubator/open laboratory equipped with necessary facilities and resources are nearing completion.

Building #2 saw renovation of its unmanned aerial vehicles laboratory space, where the agricultural UAVs, a.k.a. agri-drones donated by GeoTAK and EU Green Agriculture Initiative in Armenia (EU-GAIA) programs will be demonstrated, which will be used for disease control and fertilization of orchards and fields at ANAU Voskehat and Akunk Educational-Experimental Farms.

Within the framework of the USAID-funded AGRI CAMP project of International Center for Agribusiness Research and Education (ICARE), the ANAU Zartonk Resort's entire 3rd floor, 2nd floor conference room, 1st floor cafeteria with adjacent lobbies and bathrooms were fully renovated and furnished, while the 4th and 5th floors were modified and partially renovated.



■ The ANAU Lyceum now has chemistry, biology, physics and computer classrooms, which were modernized through the support from ICARE Foundation and RoA MESCS.

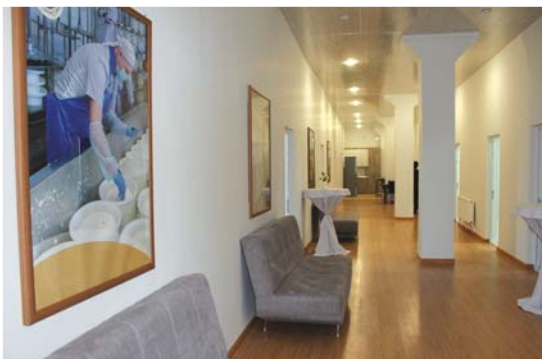


As an effect of the active cooperation between ANAU and Strategic Development Agency NGO, supported by Swiss Agency for Development and Cooperation, the Bread, Confectionary and Chocolate Laboratory was established at ANAU Building #1, which was used in 2021 not only for the



University's regular classes, but also for short-term paid trainings.

One of the best results of cooperation with Strategic Development Agency NGO is the Dairy Master School created at Balahovit Educational-Experimental Farm, renovation and furnishing of which in part were



funded by philanthropists Judy Saryan and Victor Zarougian. A facility with good amenities and appropriate furnishing has thus been created, where short trainings are conducted, and trainees may stay overnight. Among the first participants of such a training were 20 trainees from Artsakh.

At Balahovit Educational-Experimental Farm a sheepfold was restored, where special French Blanche breed sheep will be kept that have been procured through the support of the EU Green Agriculture Initiative in Armenia project.



■ The wind-damaged roof parts of the ANAU A. Kochinyan Agricultural College and the educational-experimental laboratory of the ANAU branch Academician M. Tumanyan State Agricultural College of Shirak were repaired. The branch also added a milk processing educational production work-



shop-laboratory in 2021, the milk and dairy technology equipment for which was provided by People in Need NGO Armenia representation.



At the ANAU branch Academician M. Tumanyan State Agricultural College of Shirak a Knowledge Hub was opened in partnership with Green Lane NGO and a Soil analysis laboratory with the support of EU Green Agriculture Initiative in Armenia.

YOUTH OF LORI ACTIVELY USE THE KNOWLEDGE HUB AT ANAU VANADZOR CAMPUS

■ In cooperation with Green Lane NGO, an Innovation Knowledge Hub has been established at ANAU Vanadzor campus.



The objective of Innovation Knowledge Hubs is to facilitate employability of the youth by capacity building and support the establishment of favorable ecosystems for social entrepreneurship and green innovation.





■ Since the Lori Innovation Knowledge Hub opened on July 15, 2021, by the end of the year about 600 young people from Vanadzor and rural communities participated in the 55 events held there. In cooperation with NGOs, educational institutions, and local municipalities, a variety of events, including, primarily on ecology, agriculture and related fields were held at the Hub aimed at developing capacities and networking for the youth. There is an initiative group, 60 activists, and various clubs (debate, English language, book discussion, Armenian dances, etc.) at the Hub. In addition to discussions, the hub participants and beneficiaries carry out practical environmental activities.

Here school and university students learn how to write competitive grant applications, participate in cultural, social, sports and creativity competitions. The Vanadzor City Council has assistants at the Hub, who help ensure mutually beneficial relations between the Council and the city's youth and facilitate involvement of the youth in the activities of the municipality.

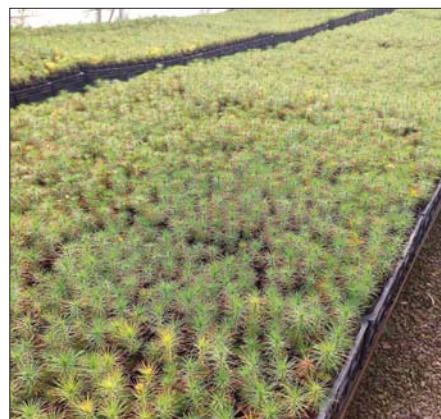
In a short period of time the Hub was able not only to become a favorite and pleasant place for the city and marz youth to meet, but also an important platform for the youth who quite efficiently use it to communicate social, agricultural, environmental, educational, and other urgent problems in the marz and their own ideas about the solutions for those to the decision-makers.

The Lori Innovation Knowledge Hub expands its partnership, "making friends" not only with the organizations of the marz, but also those at the national, regional and international level, using the opportunities available through the ANAU and its Vanadzor campus, as well as their own initiative.

The evident success of the Hub has been much contributed to by Tatev Hovsepyan, the Hub Coordinator. She is a young leader who is able to rally people of her generation and achieve concrete results.

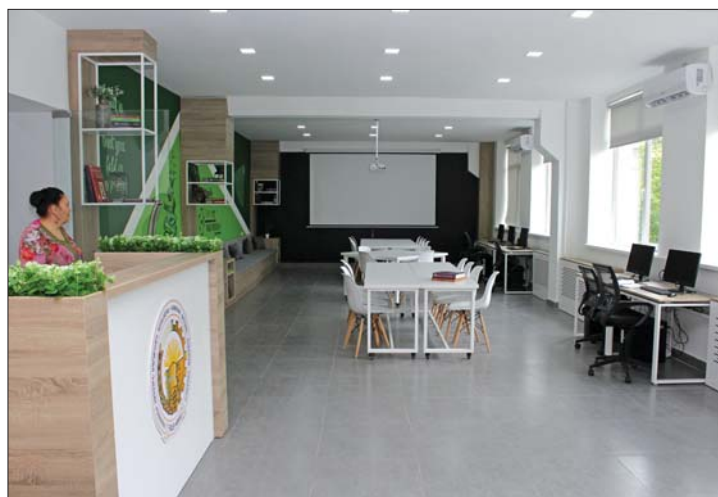


■ In 2021, another infrastructure was added to the ANAU Vanadzor Campus. A greenhouse was built in partnership with My Forest Armenia environmental NGO.



Currently, about 40,000 conifer tree seedlings are grown, soon to be used in reforestation of Armenia.

The museum of ANAU branch H. Petrosyan Scientific Centre of Soil Science, Agrochemistry and Melioration was renovated through the support of UNDP.



■ In the reporting year, ANAU acquired three vehicles from the State Property Management Committee of Armenia for free use, which enabled cutting the vehicle fleet management costs.

The former press room is now fully furnished, which earlier has been remodeled in a loft style through investments made by individual philanthropists. A similar floor space has



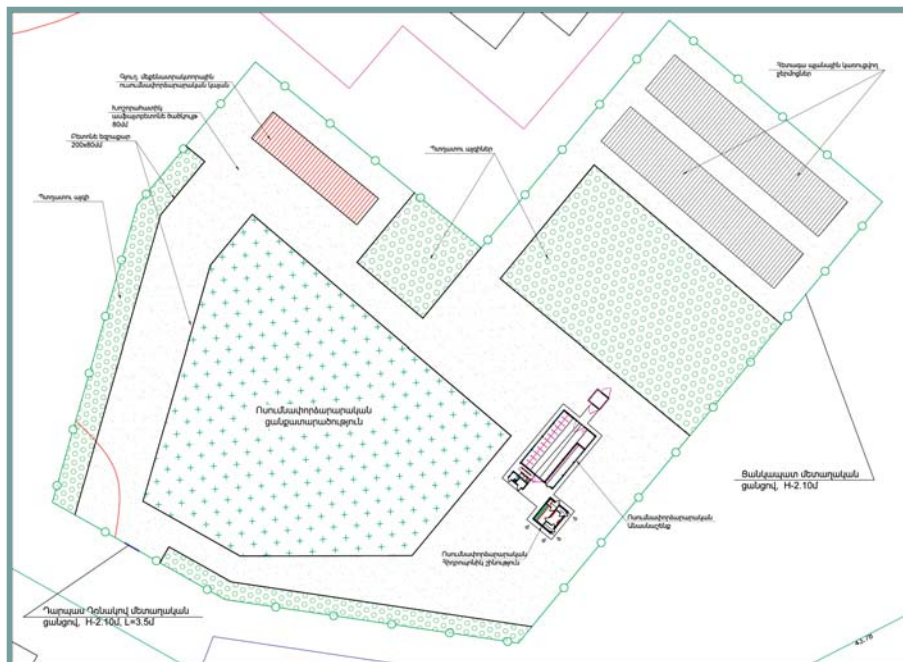
been renovated and fully furnished to become a modern reading room, which was made possible by Ardshinbank CJSC and Parnagian Foundation.

Renovation of the rooms for Veterinary Education and Science Excellence Center to be created by Armenia Higher Education Competitive Innovation Fund's grant program has been completed at one of the ANAU Veterinary Medicine and Animal Husbandry department's buildings located in Aresh district of Yerevan. The creation of this center will facilitate training of competitive specialists and strengthening of the University-labor market ties.





■ With the support of the Japanese government, Fund for Armenian Relief, WFP and GIZ, Smart Agriculture Development Center Foundation at ANAU Sisian Campus program has commenced on an area of 1.5 hectares, within the framework of which the following sub-projects will be implemented:



- 1.** Creation of an agricultural machinery educational and training center, funded by the Japanese government;
- 2.** Constructing and equipping a “smart” barn and a greenhouse, financed by the Fund for Armenian Relief;
- 3.** Establishing hydroponic production of feeds and conducting relevant trainings, funded by GIZ.

Overall, throughout 2021 ANAU invested about AMD 170 million in construction, renovation, furnishing, facilities, and resources, most of which were provided by supporters and partners.



SCIENCE

ANAU has implemented structural reforms in R&D for the efficient use of material and human resources in science and avoiding redundant research. In 2021 two scientific units were disbanded, although activities in all science fields remained intact. Despite a 7% reduction of science and R&D base funding received from the Armenian government budget, with the remaining AMD 219.8 million all 10 programs were fully implemented.

Distribution of funding between the science and R&D units/divisions

3 Scientific centers/branches	165,845	75%
2 Research and development institutes	30,839	14%
3 Research centers	23,159	11%
	219,843	100%

■ A group of engineers from Division of Livestock and Fodder Production Mechanization of ANAU Scientific Research Institute for Agricultural Mechanization and Automation led by Dr. Artur Altunyan, Associate Professor, presented to the public at specialized exhibition ArmprodExpo 2021 **two inter-tree tillers** to be used in traditional and intensive orchards, respectively. Equipment created by our specialists are unique in the market in terms their ease of use, efficiency, suitability for use in stony soils, low price and, perhaps the most important advantage, safety.



In December 2021, Dr. Altunyan's team won **a prestigious From Idea to Business contest** of the Armenian Public TV and received an award of AMD 10 million to develop a startup. Aiming at mechanization of soil cultivation and mechanical weed control at orchards and vineyards, in this project the team will develop an inter-tree/inter-vine tiller and an under-tree/inter-tree mower.

■ In 2020 eleven contractual thematic grant projects and two programs to support the research of young scientists (with a funding of AMD 46.8 million) were completed, whereas in 2021 four international and two internationally

co-financed thematic grant projects were implemented. In 2021 the university won 16 grants amounting total **AMD 422 million**, which is **9 times as much as in 2020**.

Mapping the Zoonotic Infections in North Caucasus project was implemented with the financial support from the US Strategic Threats reduction Agency.



Targeted Probiotics for Aquacultures project was implemented in partnership with Russian and Uzbek research centers.



Grain subsector development prospects and production volume justification in the context of Armenian-Russian trade relations program results are an important prerequisite for solving food security problem.



Methanogenesis in Sulfide and Nitrate Containing Sedimentary Environments grant project is implemented in partnership with Leibniz Institute of Freshwater Ecology and Inland Fisheries (Berlin, Germany). Environmental Biochemistry Laboratory will be created by this project, adding another modern infrastructure to the already existing ones at the University.



“Agricultural biotech: heat stress regulation of fish and poultry” research topic will be addressed in a 5-year project in partnership with some US institutions.



The project started in October 2021, with a funding of AMD 156 million. As the project lead, Dr. Astghik Pepoyan mentioned, heat stress may seriously affect fish growth, immune system and resistance against diseases. The objective of the project is to develop applied science bases for increasing



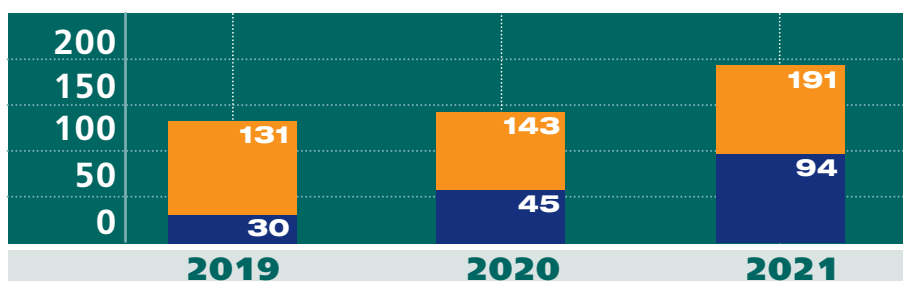
the resistance of poultry (particularly, chicken) and fish (Sevan trout (*Salmo ischchan*) species) against heat stress. The hypotheses of interrelation between heat stress and intestinal microbiota of fish and poultry will be tested. Based on biomarkers, an experimental assessment of the working

hypotheses on the heat resistance regulation with fecal transplants for poultry and probiotics for fish will be performed.



There has been a surge in scholarly publications in the reporting period. The number of published articles in 2021 totaled at **192** (33% increase), of which **92** (84% increase) in international scientific periodicals, including 25 in those with high impact factors.

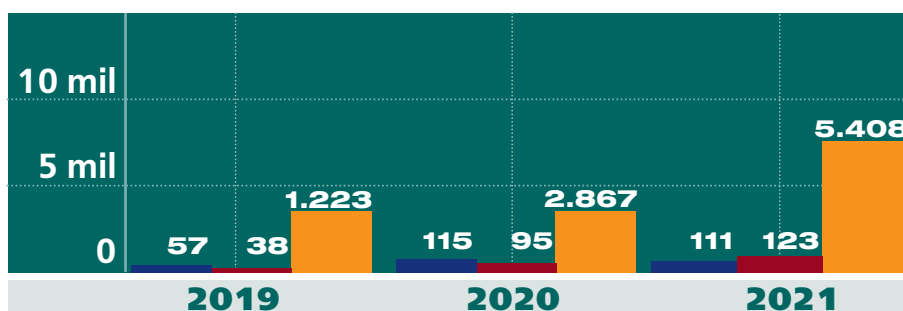
Scientific Publications



- Research papers and reports at research conferences
- Research papers and conference reports in international scientific periodicals

The ANAU Scientific Council increased the publication bonus size based on its decision dated March 15, 2021. In 2021, 111 scientific works were accepted, and 123 authors were paid AMD 5.4 million in bonuses, which is about **89% higher** than the AMD 2.8 million paid to 95 beneficiaries for 115 articles in 2020.

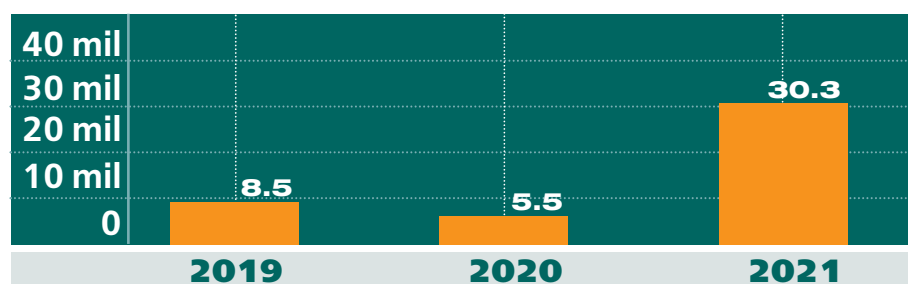
Encouraging Scientific Activities of the Academic Staff



- Bonuses, mil. AMD
- Scientific works
- Number of authors

In the 2021 "Modernization of Infrastructure, Material and Technical Base in the Field of Science" competition of the Armenian Science Committee, ANAU won AMD 30.3 million, **a sixfold increase from 2020.**

Funding Received for Modernization of Infrastructure, Material and Technical Base (mil AMD)



Based on the qualitative and quantitative criteria for the academic staff assessment procedure stipulated in the decision of the ANAU Scientific Council, 100 employees were assessed for qualifications, setting prerequisites for determining new, higher pay rates for the University's academic staff.



INTERNATIONAL COOPERATION

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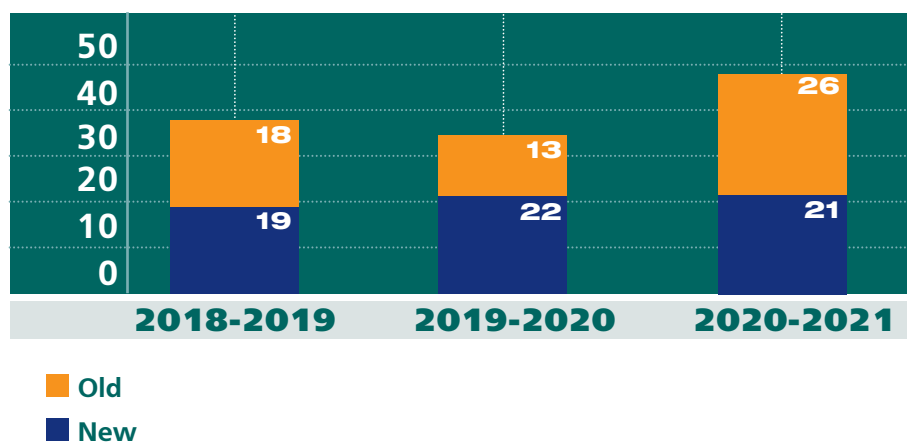


CONTRACTS AND AGREEMENTS

In 2021, ten memorandums of cooperation were signed or reaffirmed with the University of Belgrade, University of Lodz, Sumy State University, Apadana Institute of Higher Education, Aratos Group (Greece), University Network for Cultural Routes Studies, and University of Agronomic Sciences and Veterinary Medicine of Bucharest.

In 2021, ANAU had 47 Erasmus+ agreements and collaborated with total 35 universities within the framework of this program.

Erasmus+ Agreements



CONFERENCES AND TRAININGS ABROAD



- Tech Week Artsakh 2021 series of events brings together important IT sector events to one place. Vardan Urutyan, ANAU Rector, made a presentation at the Tech Week titled Agritech Sector Development Opportunities in Armenia and Artsakh.
- Global Gateway to Innovation in Asia conference was held within the framework of Singapore Week of Innovation and Technology (SWITCH), where among other five keynote speakers representing Eurasia, Rector Urutyan made a presentation under the rubric of Transforming Agriculture with Technology in Eurasia.



- The Rector also participated in the online discussion of the International Food Policy Research Institute's (IFPRI) Transforming Food Systems after COVID-19: Implications of the 2021 Global Food Policy Report for Eurasia.

The event was co-organized by the Eurasian Center for Food Security at Lomonosov Moscow State University, Westminster International University in Tashkent, Armenian National Agrarian University, the World Bank, and IFPRI.



➤ The 28th International Exhibition of Agricultural Machinery, Equipment and Materials for Crop Production in Russia.

➤ A study trip for seed production, certification and training of specialists organized by the Slovak University of Agriculture.

➤ A consulting trip to Georgia for establishing modern grapevine and fruit tree nursery.





➤ The Rector participated in the Rectors' Conference at Weihenstephan-Triesdorf University of Applied Sciences.



➤ 13 students of the ANAU International Master's Program in Agrarian Management and three faculty members attended a seminar organized at Weihenstephan-Triesdorf University of Applied Sciences.

➤ The Second Eurasian Congress in Russia.



STUDENT ACTIVITIES

In order to coordinate and improve the quality of the Student Council activities, in 2021 the student councils of ANAU A. Kochinyan Agricultural College and General Education Lyceum became part of the ANAU Student Council, with the status of branch councils. The College and Lyceum students will now participate in discussions of important problems and issues and in organization of events.



Over 50 cultural, sports, intellectual, leisure, learning and environmental events have been organized throughout 2021.



TEAM AGRO UPHOLDS THE SPORTS HONOR OF THE UNIVERSITY

The Agrarian University has long-standing and good sports traditions, which today continue to pleasantly distinguish our institution at various arenas. In 2021 our volleyball, table tennis, shooting, futsal, basketball, and strength sports teams competed valiantly at different sports arenas. Our futsal Team Agro competes in the premier league of Armenia.



Students, faculty, and staff members have participated in interdepartmental matches organized by the Students Council and Chair of Physical Training. Members of the Lyceum, College and Department of Part-Time Studies also participated in the tournaments. In addition to promoting healthy lifestyle, these tournaments help strengthen the interpersonal relations.



In February 2021 our faculty members won the Faculty Cup volleyball tournament. Hermine Mkhitarian, an employee of our IT Center won the chess tournament of the Cup. Later that month a sports trophies exhibit of Chair of Physical Training was opened in the Building #1. In March 2021, Hovhannes Hovhannisyan, a student at our College, became a two-time champion of Armenia and bronze medal winner of world championship in grappling. In April, we won medals in the 23rd Students Sports games, and in May, in Kentron Community Cup futsal tournament. In May 2021 Davit Nersisyan, Instructor of the Beekeeping, won the European Arm-wrestling Championship in Bucharest, Romania. In October 2021 Team Agro distinguished itself by becoming the runners-up in the Universiade. Finally, in December 2021 ANAU was awarded by the RoA MESCS Certificate of Gratitude as the best higher education institution participant in the Armenian 22nd Universiade Games.



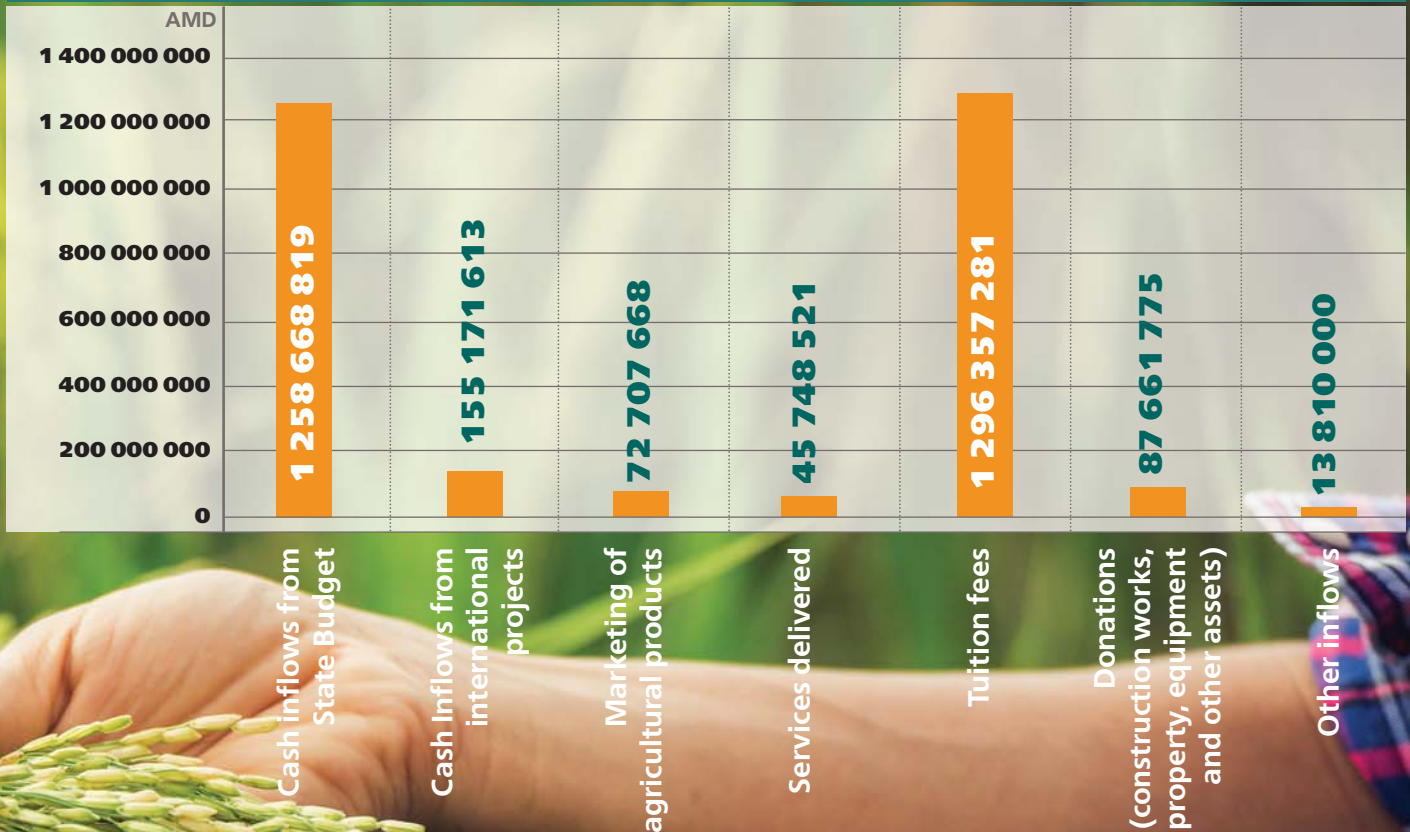
FINANCE

The financial audit of the Armenian National Agrarian University has been conducted by PKF AUDIT SERVICE CJSC. The audit includes the statement of the financial situation as of December 31, 2021 and statements on the year's comprehensive financial results, changes in net assets and cash flows.

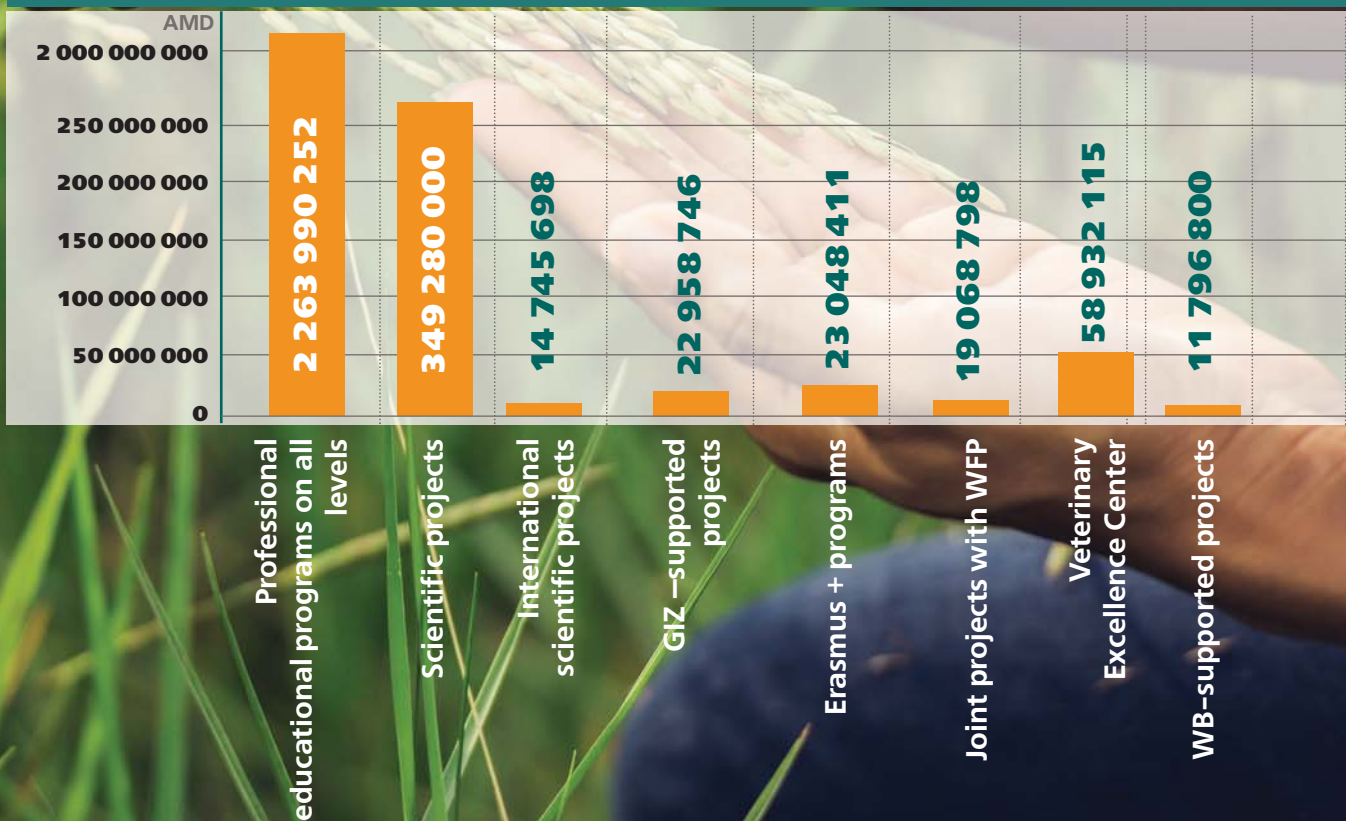
In the opinion of the independent auditor, the mentioned financial statements provide the truthful and real picture of the financial situation, financial results and cash flow of the Foundation as of December 31, 2021, in accordance with International Financial Reporting Standards (IFRS).



SOURCES OF FUNDING



IMPLEMENTED PROJECTS





DONORS AND SUPPORTERS

USAID

Austrian Development Agency

EU Green Agriculture Initiative in Armenia (EU GAIA)

The Foundation for Armenian Science and Technology (FAST)

German Agency for International Cooperation (GIZ)

United Nations Development Programme

UN World Food Programme

Armenia Higher Education Competitive Innovation Fund

The World Bank Armenia Country Office

Embassy of Japan in Armenia

Embassy of Argentina in Armenia

Armenian General Benevolent Union

Fund for Armenian Relief (FAR)

ACBA FEDERATION CJSC

Strategic Development Agency NGO

Saryan Zarougian Philanthropic Organization

ICARE Foundation

Parnagian Foundation

ARDSHINBANK CJSC

Volkswagen Foundation

The International Visegrad Fund

Green Lane NGO

My Forest Armenia environmental organization

People in Need NGO

Greg Buzbuzian, philanthropist, Canada

THANK YOU FOR FRUITFUL COOPERATION



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