



Josip Juraj Strossmayer University of Osijek

**Faculty of Agrobiotechnical
Sciences Osijek**

Strategic program for scientific research of the Faculty of Agrobiotechnical Sciences Osijek 2019 - 2023



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The Faculty Council held its 1st regular session in the academic year 2018/2019 on 26th October 2018, within which it accepted the Dean's proposal as of the article 42 of the Faculty Statute (revised text) under the agenda item 6, and it reached an unanimous decision to appoint the Committee for preparation of the Strategic program for scientific research of the Faculty of Agrobiotechnical Sciences Osijek for the period 2019-2023.

The Committee consisted of the following members:

- Prof. Dr. Zvonko Antunović, Vice-Dean for science and postgraduate studies, President
- Prof. Dr. Marcela Šperanda - science coordinator of the Department of Animal Production and Biotechnology, member
- Assoc. Prof. Dr. Igor Kralik - science coordinator of the Department of Bioeconomics and Rural Development, member
- Assoc. Prof. Dr. Irena Rapčan - science coordinator of the Department of Agricultural Engineering and Renewable Energy Resources, member
- Assoc. prof. dr. sc Vesna Rastija, science coordinator of the Department of Agroecology and Environment Protection, member
- Assoc. Prof. Dr. Andrijana Rebekić, science coordinator of the Department of Plant Production and Biotechnology, member
- Assoc. Prof. Dr. Ivana Majić, science coordinator of the Department of Phytomedicine, member.

Based on the article 42 of the Faculty Statute (revised text), at its 10th session in the academic year 2018/2019 held on 18th July 2019, under the agenda item 3.1., the Faculty Council reached the unanimous decision about the adoption of the Strategic program for scientific research of the Faculty of Agrobiotechnical Sciences Osijek for the period 2019-2023.

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1. Introduction

Faculty of Agrobiotechnical Sciences Osijek (abbreviation used in the text: FABSOS; the Faculty), is a leading regional scientific research and higher education institution oriented to the field of biotechnical sciences. Over 60 years of its existence, FABSOS main activities are focused on education of students and creation of high-quality professionals for the labor market, as well as on organization of scientific research activities within projects funded from different sources. At the same time, the Faculty nourishes successful cooperation with many business entities and state administration bodies, mostly through the transfer of knowledge and technologies to the economy sector.

In cooperation with many national and European partner institutions, the Faculty is systematically encouraging research activities through investing significant sources into development and implementation of scientific research projects.

Since 1972, the Faculty has been conducting postgraduate studies, among which the most dominant is the University postgraduate (doctoral) study program Agricultural sciences. This study program provides a platform for advanced education of high-quality scientific staff, as well as for the transfer of knowledge to the economy sector.

Strategic program for scientific research for the period 2019–2023 is a follow-up of the previous Strategic program of scientific research realized from 2014-2018, yet it offers significantly improved actions and recommendations.

Strategic program for scientific research for the period 2019-2023 provides strategic aims that the Faculty shall achieve, having in focus the mission and vision of the Faculty's work in the future period.

As existing in the globalized world, the Faculty is faced with many challenges, to which it shall give answers and feasible high-quality solutions, primarily in the field of biotechnical sciences, but also in related scientific fields.

In the future, the Faculty will develop its scientific research activities through harmonization of teaching and research within the set strategic aims, while having support from the local, regional and international community. The demanding strategic aims defined in this Strategic Program have been determined while considering the fact that the Faculty disposes of significant human resources and quality infrastructure (laboratories, practice halls, scientific equipment, experiment stations). One of the most important strategic aims that the Faculty sets by this Strategic program is to increase the number of scientific papers published in journals indexed in the Web of Science (WoS) database and to increase the number of project proposals and granted competitive research projects. This will contribute to better profiling of the Faculty at the international level.

2. Mission and vision of the Faculty of Agrobiotechnical Sciences Osijek

Faculty of Agrobiotechnical Sciences Osijek has clearly defined its mission and vision, both of which have been significantly contributing to the definition of the Faculty Development Strategy aims to be accomplished in the period referring to the academic years 2018/2019 - 2022/2023.

2.1. Mission

Mission of the Faculty of Agrobiotechnical Sciences Osijek is focused on assuring sustainable development through providing high-quality education based on modern learning outcomes, on lifelong learning concept, and on the training of highly qualified experts. Scientific activity is based on the development and strengthening of basic, applied and developmental research for the purpose of acquiring new knowledge and ideas relying on critical reflection and creativity. The Faculty enables students to acquire competences based on contemporary scientific findings through the transfer of knowledge and technologies, through active cooperation with the economy sector and partnerships for community development. The Faculty encourages the development of the economy and wide social community by its active involvement into the European Research Area and the European Higher Education Area.

2.2. Vision

As a leading research and higher education institution in the field of biotechnical sciences in the region, the Faculty of Agrobiotechnical Sciences Osijek will be developing its scientific and educational profile that shall be well recognized at international level. Until 2025, the Faculty shall gain recognition in biotechnical and interdisciplinary scientific areas of research, within which it will achieve excellence at international level and get actively involved in the European Research Area (ERA), all for the purpose of profiling itself as a biotechnical center of excellence for knowledge and technology transfer to the economy sector.

3. Scientific research potentials of the Faculty

The Faculty of Agrobiotechnical Sciences Osijek disposes of significant scientific and research potential that will be used for achievement of the strategic aims set by this document. FABSOS employs 115 staff holding a doctoral degree. Along with its spatial capacities, the Faculty constantly ensures its further development of scientific and research potential. Scientific research activity is carried out in 19,000 square meters of modern facility located in Osijek, primarily in 5 central laboratories and its subunits (counting 43 laboratories in total), 27 practice halls and 3 community areas spreading on 132.8 sq.m.

FABSOS also owns facilities and agricultural land where it maintains three experiment stations for scientific research. These experiment stations are: Vineyard and viticulture experiment station Mandićevac (3.3 ha), the Klisa experiment station (51.7 ha), and the Experiment station in the area of Antunovac municipality (8.2 ha), which is in the phase of preparing the study to carry out a project "Research and Development BioPark for Hunting, Fisheries and Beekeeping".

Scientific research activity at the Faculty of Agrobiotechnical Sciences Osijek has a long tradition. In the last five years referring to the period 2014-2018, the Faculty employees published 577 scientific and review papers, of which 298 have been published in journals indexed in the Web of Science Core Collection (WoS). In addition, Faculty employees have published 413 papers in conference proceedings. In the referral period, Faculty employees published 990 papers in total. The analysis of publications indexed in the WoS database shows that Faculty employees published 22 papers in the Q1 quartiles and 25 papers in the Q2 quartiles with a total of 505 citations. The Faculty's average h-index reaches 13. Except for the WoS database, the Faculty employees published papers that are indexed in Scopus and CAB Abstract. In the observed period, there are 110 papers indexed in the Scopus database, with a total number of citations amounting to 133, and the Faculty's h-index is 6. In the same period of past five years, the CAB Abstract database indexed 148 scientific papers published in journals and 286 papers published in conference proceedings.

In the past five years, the Faculty staff have completed or still work on 6 research projects supported by the Croatian Science Foundation, 21 so-called VIP projects research projects funded by the Ministry of Agriculture, and 11 scientific research projects funded by the University of Osijek. Furthermore, the Faculty participates in one Horizon2020 scientific project, 7 bilateral projects and 4 projects realized in cooperation with the European partner institutions .

There are 145 students enrolled at eight modules of the Doctoral study program of Agricultural Sciences, which number refers to 10% of total number of students studying at the Faculty. Postgraduate specialist studies are enrolled by 25 students, referring to 2% of total number of students.

Faculty employees are also working in the centers of excellence, precisely in the Scientific Center of Excellence for Personalized Health Care, and in the Scientific Center of Excellence for Biodiversity and Molecular Plant Breeding.

FABSOS holds a unique geographic site in the heart of the agricultural region, which enables it to retain its position as a leading scientific and higher education institution. Such position is also possible due to its long tradition and strong cooperation with the economy sector and with the local government, all of which assures a framework for significant scientific productivity.

While aiming to improve its scientific research activity, the Faculty's main objective is related to its promotion and affirmation of its research potentials at regional and international level.

4. Compliance with European and national strategic documents

Strategic program for scientific research of the Faculty of Agrobiotechnical Sciences Osijek for the period 2019-2023 is a follow-up of the previous Strategic program of scientific research of the Faculty of Agriculture in Osijek realized in the period 2014-2018.

Strategic aims referring to the development of the Faculty's scientific activity for the period 2019-2023 are based on the analysis of the Development Strategy of Josip Juraj Strossmayer University of Osijek 2011-2020, and the Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek 2018/2019 - 2022/2023. While determining the strategic aims, the Faculty also considered the outcomes of its SWOT analysis referring to the scientific activity and human scientific potentials.

Strategic program for scientific research of the Faculty of Agrobiotechnical Sciences Osijek 2019-2023 is in line with the following European and national strategic documents:

- EUROPE 2020 - A strategy for smart, sustainable and inclusive growth,
- Strategy of Education, Science and Technology of the Republic of Croatia,
- Croatian Smart Specialization Strategy 2016 - 2020,
- Action plan for development of research capacities in the Republic of Croatia,
- Innovation Strategy of the Republic of Croatia 2014-2020,
- Development Strategy of Josip Juraj Strossmayer University of Osijek 2011-2020,
- FABSOS Development Strategy.

5. SWOT analysis of the scientific activities at the Faculty of Agrobiotechnical Sciences Osijek

For the successful realization of FABSOS Strategic program for scientific research and its incorporation into the increasingly demanding national and international scientific and research community, it is of utmost importance to assess its own strengths, weaknesses, opportunities and threats, in order to be able to use all available human, infrastructural and financial resources for the institutional progress. For this reason, the SWOT analysis was completed, which provided four main indicators of strengths, weaknesses, opportunities and threats in a given situation to facilitate assessment of FABSOS internal and external environment. The presented SWOT analysis is performed by using data provided by all FABSOS departments.

5.1. Strengths:

- long tradition and rural environment
- the greatest number of scientific-teaching staff if compared to other University units
- significant number of relatively young scientific-teaching staff
- many professional projects
- extensive international experience of scientific-teaching staff
- a large number of published scientific and professional papers, many participations in national and international conferences, and application of research results in practice
- significant number of signed cooperation agreements with agricultural faculties and universities in the EU and in the countries of Southeastern Europe
- potentials for interdisciplinary and collaborative research
- successful long-term interdisciplinary scientific cooperation with other University constituent units and with the Agricultural Institute
- experience in organization of national and international scientific and professional conferences and courses
- 35-year long tradition of publishing the Agriculture Scientific Journal that is indexed in the WoS and SCOPUS database
- ownership of experimental stations and agricultural land (about 63 ha)
- favorable teacher-student ratio, which allows organization of classes in small groups and focus on research work with students, especially at the postgraduate study level.

5.2. Weaknesses:

- inadequate equipment of experiment stations
- insufficient number of employed assistants, laboratory assistants and technicians
- small number of research projects applied for funding
- lack of professional administrative support for preparation of European competitive project proposals
- low number of published papers with high impact factor (quartiles Q1 and Q2)
- insufficient funding available for pre-financing and co-financing of scientific research projects at national and international levels
- insufficient cooperation between Faculty departments and chairs
- insufficient cooperation with the economy sector
- inadequate equipment of some laboratories
- irrational use of existing scientific equipment
- uneven development of Faculty departments
- uncertainty in the recruitment of young scientists, especially assistants working on the Croatian Science Foundation projects
- difficult access to scientific databases, especially to those of importance for scientific research activity
- underdeveloped basic research
- difficult development of new areas within the biotechnical sciences

5.3. Opportunities:

- intensification of cooperation with economy sector
- development of experiment stations and set-up of multiannual experiments
- involvement in interdisciplinary projects and EU-funded projects (Horizon 2020, FP9 EU Framework Programme for Research and Innovation)
- accreditation of laboratories and stronger market orientation
- availability of international scholarships and grants for individual exchanges and mobility projects
- fostering the quality and scientific excellence of research teams or individuals based on scientific productivity and quality
- encouraging young scientists to realize exchange study abroad at prestigious research institutions
- better connection between different scientific fields and realization of interdisciplinary projects with partner universities and scientific institutions
- greater accessibility to capital research equipment through networking with other University constituent units
- many open calls for international research projects
- upgrading models of rewarding and stimulating top-quality scientists and researchers
- increase in the number of citation of papers published in the Agriculture Scientific Journal
- improving the quality of doctoral theses
- establishment of better relations between Alumni Club members and prominent in-house scientists

5.4. Threats:

- constant reduction of state investments in higher education
- increasing competitiveness of the agricultural faculties from other EU countries
- neglecting of agriculture as a strategic branch
- unrecognized profession value on the labor market
- difficult employability of young researchers
- lack of funds for establishment of experiment stations
- teaching and professional activities dominate over scientific and research activities
- insufficient resources for development and improvement of scientific work quality
- insufficient funds for scientific and capital equipment
- not enough scientific papers published in journals of the Q1 / Q2 quartiles, which is a precondition for applying scientific project proposals for funding
- insufficient funding for research performed by PhD students within their doctoral dissertations

6. Priority areas and research topics for 2019-2023

Based on the analyzed European strategies and their parts related to the research in the field of biotechnical sciences, and by having in mind its existing research capacities for the period 2019-2023, FABSOS scientific research activity will be focused on the development of interdisciplinary research in the following research areas and topics:

1. 1. SUSTAINABLE AGRICULTURE IN PRODUCTION OF HIGH QUALITY FOOD

a) production systems

research into new technological systems in plant and animal production to overcome stress conditions of agrobiocenosis caused by climate change and burdens of the ecosystem through applying optimal soil and water management, crop care and appropriate agricultural technology

b) biofortification and enrichment of products

research into biochemical, physiological and genetic mechanisms of biofortification and enrichment of animal products with essential nutrients; assessment of barrier mechanisms of toxic elements in the soil-plant-animal system for the purpose of producing safe and quality food

c) development of functional products

research into mechanisms of biosynthesis, distribution and accumulation of functional substances of plant and animal origin, research into mechanisms of plant secondary metabolites and research into agrotechnological measures of ecosystems management for the purpose of transferring these mechanisms into natural production systems

d) feeding and physiology of animals and forage technology

research into quality of forages and feed in animal nutrition and their impact on nutrient metabolism, physiological processes, productivity, product quality and health status

2. AGRICULTURE, FORESTRY AND NATURE PROTECTION

a) soil protection

research into the physical, chemical and biological soil properties of soils and the impact of soil management on quality of soils in terms of environmental protection and increasing agricultural productivity

b) environment protection

research into the impact of agricultural production and exploitation of natural resources on environment and biodiversity, with the aim to achieve quality coexistence in a healthy environment; researches include ongoing data collection, risk assessments, and the systematic monitoring and evaluation of plant and animal status and their habitats; researches include environmentally friendly methods in plant protection while preserving the biodiversity of agroecosystems

- c) **organic agriculture**
organic plant and animal production
- d) **forestry**
research into forestry includes forest tree genetics and breeding, forest technology and management, urban forestry and nature protection, landscaping and ecology in forests, and forest hunting preservation
- e) **ICT**
research into the application of ICT in agriculture, forestry and nature protection
- f) **geoinformation technology**
research into opportunities for the use of geoinformation systems in agriculture, forestry and nature protection - GIS, remote research through the use of satellite imagination and drones for cyclical monitoring, classification and anomaly detection, and precision agriculture involving application of agroinformation technology to agricultural machinery for the purpose of optimizing agrotechnical work
- g) **sustainable energy resources in nature protection**
research into the possibilities of using biomass and its by-products, as well as waste from agricultural production used for energy production, with the aim of protecting nature and reducing the adverse impact of agricultural production

3. GENETIC RESOURCES USE AND PRESERVATION

- a) **preservation of genetic resources**
research into and collection of old, native, autochthonous and protected varieties and breeds that represent important genetic material, as the loss of such material may have adverse effects on future selection and agricultural production
- b) **use of genetic resources**
research into the genetic basis of collected genetic resources by using molecular and biotechnological methods and their application in selection processes

4. AGROECONOMIC ASPECTS OF SUSTAINABLE AGRICULTURAL PRODUCTION

- a) **rural development**
research into effects of sustainable agricultural production on functioning and opportunities for development of rural areas, by putting emphasis on family farms and models of agricultural production organization
- b) **marketing of agricultural products**
research into the demands and trends in agricultural markets, by focusing on high quality functional products and analysis of consumers' demands; research into marketing activities to increase the consumption of high quality functional products

At its 7th regular session in the academic year 2019/2020, held on 16th May 2019, the Faculty Council approved the names of FABSOS research teams for the period 2019-2022. The following research teams shall be holders of scientific research activity at the Faculty:

- Agroecological and physiological mechanisms of plant nutrition and biofortification;
- Biologically active compounds;
- Biomass and renewable energy resources;
- Biodiversity of cereals - conservation of genetic, nutritional and utilization values;
- Diversification of agriculture in agroforestry systems;
- Economics and entrepreneurship in agriculture and natural resources;
- Innovative breeding and technological procedures in animal production;
- Innovative technologies in fruit growing, viticulture and winemaking;
- Conservation and climate-smart agriculture;
- Quality and safety of animal products;
- Seed quality, growth of crops under stress conditions;
- Conservation and sustainable use of wild fauna and flora;
- Sustainable animal breeding and selection;
- Environmentally friendly plant protection;
- Beekeeping and population genetics;
- Development of conditional potential of animals;
- Technical and technological systems of plant production, GIS and environment protection.

7. Strategic aims of the scientific research activities for 2019-2023

In accordance with the conducted SWOT analysis and identified priority research areas, the following strategic aims of the scientific research program for the period 2019-2023 have been defined:

1. Improving, encouraging and rewarding scientific excellence and developing a multidisciplinary research environment to facilitate more efficient use of research capacities
2. Raising the quality level of the University postgraduate (doctoral) study program and the quality of young researchers (assistants, doctoral students, postdoctoral students)
3. Intensifying the Faculty's scientific activity at international level
4. Improving the cooperation with the economy sector to facilitate the transfer of knowledge and technologies

Strategic aim 1.

Improving, encouraging and rewarding scientific excellence and developing a multidisciplinary research environment to facilitate more efficient use of research capacities

- Measure 1.1. To analyze the current state of FABSOS scientific research activity as a basis for achieving the aims defined by this Strategic program for scientific research 2019-2023
- Measure 1.2. To intensify the work of FABSOS research teams and to develop priority research areas in order to encourage interdisciplinarity and cooperation with other researchers at the University and wider
- Measure 1.3. To establish well-functioning system for collecting information on FABSOS research activity and to create a database
- Measure 1.4. To establish a system of consultations related to scientific publishing activities
- Measure 1.5. To increase continuously the number of published scientific papers with high impact factor indexed in the WoS database (Q1 and Q2)
- Measure 1.6. To improve the quality of the Agriculture Scientific Journal
- Measure 1.7. To increase the number of scientific projects and scientific centers of excellence applied for funding and to increase the number of granted projects
- Measure 1.8. To develop a quality system for evaluating and rewarding scientific research excellence and innovative research at the Faculty, by promoting the principles of leadership and mentoring within the scientific research work
- Measure 1.9. To increase the number of visiting researchers at FABSOS, and to encourage FABSOS staff to realize study visits at other universities

- Measure 1.10. To establish an effective human resource policy for scientific work
- Measure 1.11. To intensify the work of the Office for science by organizing events related to the popularization of scientific work (science festivals, scientific seminars, workshops, forums, etc.)
- Measure 1.12. To encourage the procurement of new research equipment through projects and programs, by obtaining funds from national and international sources, all with the aim of increasing the overall quality of scientific work
- Measure 1.13. To refresh the existing Equipment Catalog with newly purchased equipment
- Measure 1.14. To intensify the scope of work of existing experiment stations and to develop new ones dealing with animal production

Strategic aim 2.

Raising the quality level of the University postgraduate (doctoral) study program and the quality of young researchers (assistants, doctoral students, postdoctoral students)

- Measure 2.1. To reorganize University postgraduate (doctoral) study program and to increase mentoring and co-mentoring capacities within the doctoral study
- Measure 2.2. To increase the quality of studying and the quality of doctoral dissertations
- Measure 2.3. To increase the number of doctoral students, especially the number of students coming from other institutions or business entities
- Measure 2.4. To intensify the promotion of the University postgraduate (doctoral) study program both among FABSOS graduates and other University graduates, as well as among employees of other scientific and economic entities, all with the aim to attract the best students to enroll the FABSOS doctoral study
- Measure 2.5. To develop a system that will stimulate the best graduate students to enroll the FABSOS doctoral study, by enabling them to choose quality research topics and mentors
- Measure 2.6. To enable part of the doctoral students' researches to be conducted at other renowned institutions in the country or abroad
- Measure 2.7. To ensure the employment of assistants, doctoral students and postdoctoral students
- Measure 2.8. To assure a practice of organizing postdoctoral training programs for postdoc researchers at prestigious research institutions abroad
- Measure 2.9. To assure that the most successful young researchers shall have the conditions for scientific independence, while motivating them to acquire new scientific competences

Strategic aim 3.

Intensifying the Faculty's scientific activity at international level

- Measure 3.1. To intensify the activities of the Office for international relations and projects, which shall coordinate all ongoing international activities at FABSOS. The Office for international relations and projects shall inform the FABSOS staff on all newly opened calls for funding of project proposals in the country and abroad
- Measure 3.2. To establish a Faculty Fund for cooperation with international institutions, the purpose of which is to support short visits of the Faculty staff to international partner institutions, within which they shall develop cooperation plans and prepare project proposals
- Measure 3.3. To develop a system of stimulative awarding system of employees that actively participate in international research projects
- Measure 3.4. To intensify development of project proposals that shall be applied for funding to Horizon2020 and FP9 calls
- Measure 3.5. To increase the number of postgraduate students from abroad, by offering the doctoral study modules in English language. To increase the number of postdoctoral students and researchers from abroad visiting FABSOS through international exchange and scholarship programs
- Measure 3.6. To increase the number of new cooperation agreements in the field of biotechnology and agronomy signed with prestigious international institutions
- Measure 3.7. To improve and strengthen capacities for organization of scientific meetings, symposia and conferences in cooperation with international, national or regional scientific institutions or associations
- Measure 3.8. To encourage employees to participate in scientific and organizational boards of international conferences, editorial boards of scientific journals and other governing bodies of international, regional and national institutions, associations, societies and similar organizations associated with scientific research

Strategic aim 4.

Improving the cooperation with the economy sector to facilitate the transfer of knowledge and technologies

- Measure 4.1. To strengthen cooperation with the economy sector
- Measure 4.2. To intensify the work of the Committee for cooperation with the economy sector and innovations
- Measure 4.3. To increase the scope of research activities with direct application to the economy sector by encouraging patent applications, innovations and start-up companies
- Measure 4.4. To recruit more members to the Alumni Club and involve them in various FABSOS research activities

8. Performance indicators for the implementation of the strategic aims of the scientific activity

Strategic aim 1.

Improving, encouraging and rewarding scientific excellence and developing a multidisciplinary research environment to facilitate more efficient use of research capacities

Measure	Performance indicators	Monitoring mechanisms	Executive authorities	Implementation deadline
1.1.	Analyzed scientific research activity of FABSOS Updated new Faculty website with information on the scientific research activity	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year
1.2.	Number of applied project proposals per each research team Number of applied and granted interdisciplinary projects Number of internationally recognized research teams	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science; Committee for Science; Research teams' coordinators	Report prepared until 31 December each year
1.3.	Established efficient system for collecting information on the scientific research activity at FABSOS and creation of a related database Established system for continuous monitoring and evaluation of strategic aims implementation and observation of changes occurring in the Faculty environment	Established database for collection of information about scientific research activities and established monitoring system	Dean, Vice-Deans; Head of the Office for science; Head of the Office for international cooperation and projects	December 2020
1.4.	Established system of consultations related to publication of scientific papers	Records on the established system operations	Dean; Vice-Deans; Committee for Science; Head of the Office for science	Report prepared until 31 December each year
1.5.	Number of scientific papers published in the WoS database and number of scientific papers submitted for publication in journals indexed in the WoS database	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year

1.6.	Number of published papers in the journal Agriculture Scientific Journal, structured by the paper category, interdisciplinarity of authors and their citation in the WoS database	Comparison with the previous period	Editorial Board of the Agriculture Scientific Journal	Report prepared until 31 December each year
	Number of events (roundtables, presentations, etc.) organized to raise the quality of papers published in the Agriculture Scientific Journal	Records on the undertaken activities	Editorial Board of the Agriculture Scientific Journal ; Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared on the three previous years
	Number of citations of papers published in the Agriculture Scientific Journal	Records on the citations in the WoS and Scopus databases	Editorial Board of the Agriculture Scientific Journal ; Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year
	Regular issuing of the Agriculture Scientific Journal during the year	Number of the Agriculture Scientific Journal volumes issued during the year	Dean; Editorial Board of the Agriculture Scientific Journal	Report prepared until 31 December each year
1.7.	Number of applied / granted scientific research projects	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Vice-Dean for international cooperation; Head of the Office for science; Head of the Office for international cooperation and projects	Report prepared until 31 December each year
	Number of applied / granted scientific research projects developed in cooperation with other University constituent units. Number of published papers prepared in cooperation with scientists from other University constituent units	Records on the undertaken activities		
	Number of joint doctoral dissertations			
	Number of organized events (workshops, panels, round tables) related to project application process, within which invited lecturers are national or international renowned experts or consultants in the field of EU project management			
1.8.	Developed system of rewarding scientific and research excellence	Adopted revised Regulations on the rewarding of excellent employees	Dean; Vice-Deans; FABSOS Academic Secretary; Committee for Science; Faculty Council	December 2020
	Promoted principles of leadership and mentoring of scientific research activities			
1.9.	Number of visiting researchers per year Number of FABSOS professors realizing research or specialization at other universities	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Vice-Dean for international cooperation; Head of the Office for science; Head of the Office for international cooperation and projects	Report prepared until 31 December each year

1.10.	Prepared systematization of researchers' job positions and human resource development plan	Adopted document of the systematization of researchers' job positions and human resource development plan	Dean, Vice-Deans; FABSOS Academic Secretary, Faculty Council	Report prepared until 31 December each year
	Number of recruited young researchers for project work; Number of assistant professors compared to the total number of scientific-teaching staff	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year
1.11.	Prepared Regulations on the activities of the Office for Science	Adopted Regulations on the activities of the Office for Science	Dean; FABSOS Academic Secretary; Vice-Dean for science and postgraduate studies; Vice-Dean for international cooperation; Head of the Office for science	December 2020
	Developed annual plan of activities related to popularization of scientific research work (science festivals, scientific seminars, workshops, forums, etc.)	Records on participation in the stated events	Vice-Dean for science and postgraduate studies; Head of the Office for science; Committee for Science; Scientific Forum	Report prepared until 31 December each year
1.12.	Records listing value of research equipment procured within projects funded from national and international sources and its financial value	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science; Project coordinators	Report prepared until 31 December each year
1.13.	Records on the scientific research equipment and prepared new Catalog on FABSOS equipment	Catalog on FABSOS equipment published online	Vice-Dean for science and postgraduate studies; Head of the Office for science; Committee for Science	December 2019
1.14.	Experiment stations are facilitating scientific research and teaching work	Ownership documents; Regulations on the activities of experiment stations; Appointed coordinators of all experiment stations; Prepared Annual action plan	Dean; Vice-Deans; Heads of Faculty departments; coordinators of the experiment stations	December 2020

Strategic aim 2.

Raising the quality level of the University postgraduate (doctoral) study program and the quality of young researchers (assistants, doctoral students, postdoctoral students)

Measure	Performance indicators	Monitoring mechanisms	Executive authorities	Implementation deadline
2.1.	Reorganized University postgraduate (doctoral) study program	Prepared revised doctoral study program; obtained license from the University Senate	Vice-Dean for science and postgraduate studies; Coordinators of the doctoral study modules; Head of the Office for science;	31 December 2022
	Number of new mentors appointed to the doctoral study program. Total number of mentors affiliated with the doctoral study program	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year
	Number of new co-mentors appointed to the doctoral study program. Total number co-mentors affiliated with the doctoral study program			
	Number of new study advisors appointed to the doctoral study program. Total number of study advisors affiliated with the doctoral study program			
2.2.	Analysis of the quality of teaching process and other activities organized within the University postgraduate (doctoral) study	Comparison with the previous period. Adopted Analysis of the doctoral students' performance and evaluation of teachers' work by the Faculty Council	Vice-Dean for science and postgraduate studies; Head of the Office for science; President of the Committee for quality assurance	Report prepared each 3 rd year
	Number of activities related to encouraging of doctoral students to follow scientific and professional lectures held on the Faculty and other institutions	Evidence about the organized lectures and invitations sent to students (via e-mail or announcements on the Faculty website);	Vice-Dean for science and postgraduate studies; Head of the Office for science; Coordinators of doctoral study modules; Scientific Forum	Report prepared until 31 December each year
	Number of defended doctoral dissertations	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science	Report prepared until 31 December each year
2.3.	Number of students enrolled at the University postgraduate (doctoral) study program	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Head of the Office for science; Head of the Student Office	Report prepared until 31 December each year

2.4.	Number of activities related to the promotion of the University postgraduate (doctoral) study program and evidence on the attendees	Comparison with the previous period; Evidence on the attendees	Vice-Dean for science and postgraduate studies; Head of the Office for science; Head of the Student Office	Report prepared until 31 December each year
	Prepared promotional materials about the University postgraduate (doctoral) study program	Printed promotional materials	Dean; Vice-Dean for science and postgraduate studies; Head of the Office for science; Head of the Student Office	31 December 2023
2.5.	Prepared Document on stimulating the enrollment of graduates in the doctoral study program	Adopted Document and defined Action plan for recruitment of the best graduates to enroll the doctoral study	Dean, FABSOS Academic Secretary; Vice-Deans	31 December 2020
2.6.	Number of completed doctoral researches outside of FABSOS at the University Number of completed doctoral researches at the institutions abroad	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Vice-Dean for international cooperation; Head of the Office for science; Head of the Office for international cooperation and projects	Report prepared until 31 December each year
2.7.	Provided coefficients for employment for new assistants, doctoral students and postdoc researchers	Comparison with the previous period	Dean, FABSOS Academic Secretary; Project coordinators	Report prepared until 31 December each year
2.8.	Conducted postdoctoral training programs by assistants at prestigious scientific institutions	Comparison with the previous period; Provided information on available scholarships	Dean, Vice-Deans; FABSOS Academic Secretary; Teachers; Mentors of young researchers; Project coordinators; Head of the Office for science; Head of the Office for international cooperation and projects	Report prepared until 31 December each year
2.9.	Employment of the most successful young researchers by FABSOS	Comparison with the previous period	Dean; Vice-Deans; FABSOS Academic Secretary; Teachers; Project coordinators	Report prepared until 31 December each year

Strategic aim 3.

Intensifying the Faculty's scientific activity at international level

Measure	Performance indicators	Monitoring mechanisms	Executive authorities	Implementation deadline
3.1.	Prepared Regulations on the activities carried out by the Faculty's Office for international cooperation and projects	Adopted Regulations	Dean; Vice-Dean for international cooperation; FABSOS Academic Secretary; Head of the Office for international cooperation and projects	31 December 2020
3.2.	Established Faculty Fund for cooperation with international institutions, and available material resources for the realization of planned activities	Decision on the Faculty Fund establishment and on the criteria for funds awarding	Dean; Vice-Dean for international cooperation; Head of the Office for international cooperation and projects	31 December 2020
3.3.	Regulations on the rewarding of excellent employees, by putting focus on their international activities	Adopted Regulations	Vice-Dean for international cooperation; FABSOS Academic Secretary; Head of the Office for international cooperation and projects	31 December 2020
3.4.	Number of organized workshops and lectures about Horizon2020 and the FP9 Framework Programme for Research and Innovation; Number of applied/granted Horizon 2020 and FP9 projects	Comparison with the previous period	Vice-Dean for international cooperation; Head of the Office for international cooperation and projects	Report prepared until 31 December each year
3.5.	Number of postgraduate doctoral study modules taught in English language; Number of incoming international PhD students, postdoctoral students and researchers visiting FABSOS	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Vice-Dean for international cooperation; Head of the Office for international cooperation and projects; Head of the Office for science	Report prepared until 31 December each year
3.6.	Number of new cooperation agreements signed with prominent institutions focused on the field of biotechnology	Comparison with the previous period	Dean; Vice-Deans; FABSOS Academic Secretary; Head of the Office for science; Head of the Office for international cooperation and projects; Heads of Faculty departments	Report prepared until 31 December each year
3.7.	Number of held scientific meetings, symposia or conferences co-organized with major national, regional and international scientific institutions or associations	Comparison with the previous period Records on completed activities	Dean; Vice-Deans; Head of the Office for science; Head of the Office for international cooperation and projects; Heads of Faculty departments	Report prepared until 31 December each year
3.8.	Number of staff participating in international scientific meetings, editorial boards of scientific journals and governing bodies of international, regional and national institutions, associations, societies and organizations related to scientific research	Comparison with the previous period Records on staff participation	Vice-Dean for international cooperation; Vice-Dean for science and postgraduate studies; Head of the Office for science; Head of the Office for international cooperation and projects; Heads of Faculty departments	Report prepared until 31 December each year

Strategic aim 4.

Improving the cooperation with the economy sector to facilitate the transfer of knowledge and technologies

Measure	Performance indicators	Monitoring mechanisms	Executive authorities	Implementation deadline
4.1.	Number of research projects completed upon orders of a business entity	Comparison with the previous period	Vice-Dean for science and postgraduate studies; Vice-Dean for experiment stations development and technology transfer; Head of the Office for science; members of the Committee for cooperation with economy and innovations	Report prepared until 31 December each year
4.2.	Analysis of the work and number of meetings held by the Committee for cooperation with the economy sector and innovations in one academic year	Comparison with the previous period	Vice-Dean for experiment stations development and technology transfer; members of the Committee for cooperation with economy and innovations	Report prepared until 31 December each year
4.3.	Number of applied patents and innovations Number of applied startup companies	Comparison with the previous period	Vice-Dean for experiment stations development and technology transfer	Report prepared until 31 December each year
4.4.	Number of meetings held by the FABSOS Alumni Club	Comparison with the previous period	Vice-Dean for experiment stations development and technology transfer; President and secretary of the Alumni Club	Report prepared until 31 December each year
	Number of FABSOS Alumni Club members that participated in the scientific research activities of FABSOS		Vice-Dean for experiment stations development and technology transfer; President and secretary of the Alumni Club	
	Number of meetings held by the FABSOS Postgraduate Student Association		Coordinator of the FABSOS postgraduate student association,	

