

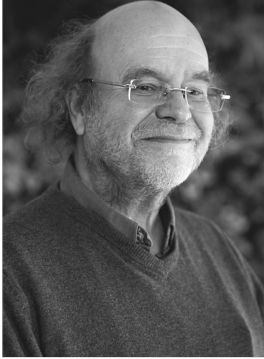
Annual Report 2021



Faculty of Tropical
AgriSciences



Faculty of Tropical
AgriSciences



DEAN'S INTRODUCTION

Dear colleagues, students and friends of the Faculty of Tropical Agriculture,

This is reportedly the first FTA annual report with a foreword in English. Rejoice and: boom drumbeat! (as Flemish poet, writer and Dada artist Paul van Ostaïjen wrote in 1920). In line with its international R&D mandate, the Faculty wants to go global and deliver its messages to a wide (r) audience and in a more international language than Dutch (my mother tongue) or Czech (the language of our university and faculty).

It is also, I am proud to say, the first FTA annual report written by a foreign dean (who is citing his fellow-country men, as you see above). In a way, this reflects, and is in line with, the Faculty's mandate and constituency: a fair share of our MSc and PhD students are indeed foreigners. For a few years now, we also have academics from abroad in our teaching and research staff. It is proof of the internationalisation agenda that the Faculty has been building since its creation as the 'Department of World Agriculture and Forestry' in 1961. We celebrated the 60th anniversary during our Open Faculty Day on October 15, during one of the rare periods that Covid-restrictions were more lenient. Since its creation, the

department evolved into an institute and eventually a 'true' faculty, that started in 2013, with my predecessor Prof. Ing. Jan Banout, Ph.D., as the first dean. When I took over in April 2021, he had been leading the Faculty for 8 years. Under his guidance the Faculty grew, and eventually 'landed' in our prize-winning brand-new Faculty building. For the first time, all Faculty departments are housed under the same roof, which should further inter- and transdisciplinary collaboration within the institution. Thanks, Honza, for all the efforts you put into bringing our Faculty to the next level! You can proudly say: *exegi monumentum aere perennius* (I raised a monument more lasting than bronze)!

In this foreword, I would like to share with you some of the Faculty's achievements and highlights of 2021. As in the previous year, our ambitions and planning were a bit curtailed by the Covid-pandemic that, wave after wave, imposed restrictions on our normal behaviour and functioning. Teaching was not easy as most had to be dispensed 'from a distance'. Pure distance teaching sometimes got blended with *in vivo* classes, whereas we also had to be creative in finding alternative ways of organising state exams and thesis defences. The fact that more than half of our students come from the so-called Global South increased the challenges to provide them with high-quality teaching. Overall, however, I think – or should I say hope? - we succeeded in accommodating most. A number of foreign students, however, were unable to make it into the Czech Republic due to administrative and travel restrictions, whereas the consecutive lockdowns had a very negative impact on the social interactions for which our university with its unique campus model is widely known and praised. Let's hope that the socio-emotional stress and burden caused by the repeated and continuous restrictive measures will not have long-lasting

effects on the morale of both our students and personnel. As I write these lines, it would seem that the pandemic is easing, and that we will gradually return to normal. We will probably evolve into some FTA 2.0 version, with internet teaching becoming part and parcel of day-to-day interaction.

COVID-19 clearly affected both our social and professional lives. At faculty level, not only teaching was hit. Research and international cooperation also suffered. Indeed, our Faculty is typically outward looking, with numerous R&D collaborative projects in the Global South. Visas were difficult to obtain. When flying into a foreign country, one had to be tested, not once, not twice but sometimes every day. Quarantining became part of the work plan. Overall, however, I was happy to see that most of our tropical field research activities continued and yielded some nice results. One highlight was the Faculty's Covid-bus that performed tests in Zambia. Another was how tropical agriculture *sensu lato* can lead us into very unexpected (content) destinations. Involving ourselves in trying to solve societal problems is part of our mandate. But we also continue to spearhead more fundamental research on medicinal plants and their active compounds, plant breeding using modern (bio) technology, and not forgetting the application of all our wisdom in more development-oriented interventions, such as, the Azerbaijan project in support of desertification and land degradation (D/LD) in which a team led by our Department of Economics and Development assisted the government in identifying D/LD-mitigation measures.

All this research is carried out by a relatively small group of enthusiastic and dedicated scientists. The Faculty's academic staff is assisted by research assistants, post-docs, PhDs, lab technicians and administrative personnel in its teaching and research mandate. At the level of publications our Faculty excels by the number of publications: the total

output of 97 Web of Science articles (with additionally 4 Scopus-articles and 3 books/book chapters) brings us the highest relative output per researcher in the whole university. Congrats to all for this!

A special word on the number of PhD students hosted by the Faculty: in 2021, a total of 103, of which no less than 70 % were foreigners, actively pursuing their doctoral degree. I would almost say: the future is ours!

In 2021, it was almost impossible to host or carry out high participant live events such as international conferences, seminars or summer schools. The perspectives for 2022 look a lot less gloomy, and we are already preparing to host and organise Tropentag (14 – 16 September), an event that we were supposed to have organised in 2020 but which had to be postponed then, and that attracts each year more than 700 (young) scholars from abroad. I would like to invite you to come and participate!

Thanks to our PR department we have increased yet again our presence in the national media. By widening the scope to our interventions in the Global South, we attract new publics, and new interests. This type of outreach promotes our Faculty and helps to popularise our science and is a useful complement to the more normal ways of sharing our scientific accomplishments.

With this, I would like to thank everyone, staff, and students, but also you, the public for your support and trust. I am pretty sure that we will continue to deliver on promise and expectations in this new year 2022!

Prague, 14. 3. 2022

PROF. DR. IR. PATRICK VAN DAMME

The Dean



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BASIC FACTS ABOUT THE FACULTY

INTRODUCTION

The Faculty of Tropical Agriculture of the Czech University of Life Sciences in Prague (CZU) is a unique centre of research in our country with what is now 60 years of tradition in tropical agriculture and the sustainable management of natural resources in the tropics, promoting rural development, food processing and food security, alternative technologies based on renewable sources of energy, economics, and the sociology of rural areas in developing countries.

The Faculty offers studies in Bachelor's, Master's, and doctoral study programmes, with study in Master's programmes taking place exclusively in English, resulting in a significant proportion of our students coming from outside the Czech Republic.

Faculty graduates typically find employment in the Czech Republic, the EU, and around the world, both in the private sector and in governmental and non-governmental institutions dealing with issues of developing countries in general, trade, education, technology transfer and, last but not least, conducting research in the tropics.



MISSION AND VISION OF THE FACULTY

MISSION

The mission of the Faculty is to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence possible.

More specifically, we provide higher, university and academic research-supported/derived/based education to foreign and Czech students in the fields of (sub)tropical agriculture, rural development, and the sustainable management of natural and energy resources in the tropics and subtropics.

An integral part of our mission is to perform research and promote the development of new insights into the broad field of (sub)tropical life sciences and the application of these R&D results in the specific conditions of (sub)tropical and/or developing countries.

VISION

The vision of the Faculty is to be an institution of excellence in the Czech Republic and Europe, with the specific mandate to transfer the latest knowledge and technology between the Czech Republic, the EU and (sub)tropical regions in the Global South, building on and respecting the traditional values of local communities in the developing world as well as respecting their level of socio-economic and technological development. This also involves empowering our students to fulfil their academic and professional passions and aspirations in an environment that is – de facto – diverse, welcoming, and inclusive for all students, the Faculty and staff.

This further means serving our community of alumni and friends through imaginative and creative programmes that inspire a lifelong relationship with the Faculty and help expand our contributions to the world.

OFFICIAL NAME AND ADDRESS

Česká zemědělská univerzita v Praze
Fakulta tropického zemědělství
Kamýcká 129
165 00 Praha – Suchdol

IN ENGLISH

Czech University of Life Sciences Prague
Faculty of Tropical AgriSciences
Kamýcká 129
165 00 Prague – Suchdol
Czech Republic

ABBREVIATIONS

FTZ ČZU (in Czech) FTA CZU (in English)
FTZ (in Czech) FTA (in English)

WEBPAGES OF THE FACULTY

WWW.FTZ.CZU.CZ

STRUCTURE

FACULTY MANAGEMENT

Dean

Prof. dr. ir. Patrick Van Damme

Head of Dean's Office

Ing. Lucie Ackermann Blažková, Ph.D., MBA.

First Vice-dean and Vice-dean for Science, Research and Doctoral Study

Prof. Ing. Jan Banout, Ph.D.

Vice-dean for International Relations

Ing. Petra Chaloupková, Ph.D., dr.h.c.

Vice-dean for Education and Quality

Ing. Jiří Hejkrlík, Ph.D.

Vice-dean for Development

Ing. Jana Mazancová, Ph.D.

LIST OF THE DEPARTMENTS AND UNITS

NO.	CZECH NAME	ENGLISH NAME
51110	Katedra tropických plodin a agrolesnictví	Department of Crop Sciences and Agroforestry
51120	Katedra chovu zvířat a potravinářství v tropech	Department of Animal Science and Food Processing
51130	Katedra udržitelných technologií	Department of Sustainable Technologies
51140	Katedra ekonomiky a rozvoje	Department of Economics and Development
51150	Botanická zahrada FTZ	FTA Botanical Garden
51900	Děkanát: Sekretariát děkanátu Studijní oddělení Oddělení mezinárodních vztahů Oddělení pro vědu, výzkum a doktorské studium Farmový chov antilop losích a lam guanako v Lánech	Dean's Office: Secretariat of Dean Academic Administration Office International Relations Office Office of Research and Doctoral Studies Eland and Guanaco Farm at Lány

DEPARTMENT OF ANIMAL SCIENCE AND FOOD PROCESSING

The Department's activities can be divided into two main areas according to the two specialisations of the recently established Master's Degree programme Wildlife and Livestock Production, Management and Conservation, which the department guarantees: 1) sustainable animal production and 2) management and conservation of wild animals.

The research and pedagogical activities in sustainable animal production focus on applying modern knowledge about livestock farming in the Tropics. The primary attention is paid to the breeding and use of local species and breeds of animals, their nutrition, feeding, zoo hygiene, disease prevention and welfare.

Within the specialisation dedicated to wild animals, the Department members deal with breeding, conservation and the agricultural use of native species in the Tropics. Research focusses on various aspects of animal protection and the environment. The Department focusses mainly on the protection of ungulates, the mitigation of conflicts between wildlife and humans or livestock, managing protected areas, and environmental education in developing countries. The conservation of animals outside their original distribution (ex-situ) is not neglected, and research and teaching are often carried out in zoos. Both specialisations are linked by population genetics research, which focusses mainly on wild and domestic mammals. Research and teaching also focus on ethology, physiology and reproduction.

Since 2000, Department members have been involved in the Derby Antelope (*Taurotragus derbianus derbianus*)



rescue programme in Senegal. They are implementing projects to protect ungulates in the savannah of West Africa under the auspices of the Derbianus Conservation. Since 2006, the Department has managed the farm breeding of common eland (*Taurotragus oryx*) at the CZU Experimental Farm in Lány, where a guanaco llama farm (*Lama guanicoe*) was also established three years later. The department also operates the Laboratory of Animal Science, the Laboratory of Molecular Genetics, and the Laboratory for Detection and Characterisation of Pathogens.

The Department's research activities are concentrated in four research teams - Animal Physiology and Behaviour, e4 (Ecology, Evolution, Emergence and Epidemiology of Zoonoses), MEGERA (Molecular Ecology, Genetics and Evolutionary Research of Animals), and Wildlife Management and Conservation. In 2021, the Department had a total of 14 academic staff. Our staff members published 25 articles with IF. There were also 30 doctoral students in the Department.

DEPARTMENT OF CROP SCIENCE AND AGROFORESTRY

The mission of the Department is educational and research activities in the field of crop production in the Tropics and Subtropics aimed at increasing the sustainability and productivity of agricultural crops, with a special focus on small-scale agricultural systems through a wider use of diversity of crops. In terms of education, we focus on the cultivation, use and ecology of tropical crops with emphasis on traditional and organic farming systems (e.g., agroforestry), but also on the use of modern methods, such as plant biotechnology, supplemented by specialised disciplines such as ethnobotany or chemoecology.

The research of the Department is focussed on the selection and research of new crops (especially on neglected and underutilised species with promising economic value) and the conservation of their genetic resources. The research includes ethnoecological studies of small farmer communities and indigenous ethnic groups to determine the species diversity of cultivated and naturally growing useful plants and to describe traditional practices in their cultivation, processing, and use. The Department operates four specialised laboratories. The Laboratory of Molecular Biology focusses



on the genetic characteristics of crops, especially on research into the population genetics of tropical agroforestry trees. The Plant Tissue Culture Laboratory is focussed on research into new methods of *in vitro* propagation of plant material for the production of genetically identical and healthy planting material. The Laboratory of Ethnobotany and Ethnopharmacology researches the nutritional properties, chemical composition, and medicinal effects of plants, with the aim of identifying new nutritional and health-promoting foods and developing promising products usable in the food and pharmaceutical industries. The research of the Laboratory of Soil Biology, Ecology and Environmental Research is focused on the evaluation of soil biodiversity and the functions of soil organisms in the conversion of nutrients. The department also operates an Herbarium for voucher specimen collection.

The Department currently employs a total of 11 academic staff (4 professors, 1 associate professor, 3 assistant professors, 1 researcher and 2 postdoctoral fellows) and more than 40 Ph.D. students. Employees and students of the Department are involved in four research teams: the Tropical Biodiversity Research Group, the Tropical Biotechnology Research Group, the Tropical Botany and Ethnobiology Lab, and the Tropical Ethnobotany and Ethnopharmacology Lab. The research activity of the Department is mainly realised in the form of student diploma dissertations with the aim of their publication in the form of scientific articles (in 2021 the members of the Department participated in the publication of 30 articles in journals with IF). Also in 2021, two doctoral students from the Department successfully defended their dissertation and Prof. Lojka was appointed as a professor in Tropical Agriculture and Ecology.

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

The Department has long-term experience in analysing the economic, ecological and social aspects affecting the sustainability of agricultural production, natural resources management, added value generation, and agricultural production commercialisation. Topics such as migration, consumer behaviour, agricultural policy, adaptation to climate change, sustainability of farm systems, collective actions of small producers, and various forms of certification have become an integral part of the research topics.

The Department is the guarantor of the Bachelor's study programme: International Cooperation in Agricultural and Rural

Development (ICARD), and the Master's study programme: International Development and Agricultural Economics (IDAE). Its academic staff is also involved in teaching other programmes at the Faculty, at all three levels of Bachelor, Master and Doctoral studies. They regularly lecture at partner universities in Czechia and Europe (Belgium, France, Italy, Germany and Greece) and partner institutions in the developing world (e.g. Ethiopia, Indonesia, Cambodia, Cameroon, Kenya, Ukraine and Zambia).

The main emphasis is given to the interdisciplinary character of research with the connection to practice. This idea is realised through cooperation with global research organisations and institutions (universities, the CGIAR system, the UN system etc.) and development-oriented activities in the countries of the Global South, such as recently in Cambodia, Georgia, Kenya, Kyrgyzstan, Nigeria, Nepal, Peru and Zambia. As a result, academic staff at the Department published eighteen scientific articles indexed in the Web of Science database in 2021. The Department also continued implementing R&I projects funded by Erasmus+, EUTF for Africa, GCF/FAO, Horizon 2020, and the Czech development assistance.

In 2021, the department consisted of five regular academic staff members, including one associate professor and three assistant professors, out of which two hold the position of vice-dean at the faculty, and 31 Ph.D. students supervised by four internal and external specialists. Two young part-time researchers are also involved in seminars for the Bachelor's degree programmes.



DEPARTMENT OF SUSTAINABLE TECHNOLOGIES

The Department of Sustainable Technologies focuses on teaching and research in fields that have a direct impact on food security and agricultural and rural development in the tropics and subtropics. The Department's research focuses on environmental engineering, sustainable agricultural technologies, food processing technologies and food security. The Department also focuses on monitoring the impact of agriculture on environmental and climate change.

As of 2020, the Department includes a team dedicated to the study of termites, their impact on the environment and human life in the tropics. Currently, research at the Department is funded by projects of the TAČR, the GAČR and Horizon 2020. Additional funding comes from the Czech Republic's foreign development cooperation fund, where the Department is addressing or participating in addressing a significant number of projects at the Faculty. The Department operates the Environmental Technology Laboratory, the Food Processing Technology Laboratory, and the Termite Biology Laboratory.

The Department is involved in teaching in most of the accredited programmes of the FTA. The DST is a guarantor of the MSc programme Agri-food Systems and Rural Development and the PhD programme Sustainable Rural Development. Both are taught in English. The Department also provides teaching for foreign students within the Erasmus-



exchange programmes. The Department currently has a total of 9 academic staff including one professor, three associate professors, four assistant professors and one postdoc. In addition to its academic staff, there are 17 Czech and foreign PhD students.

BOTANICAL GARDEN

The Botanical Garden of the Faculty of Tropical AgriSciences (BG FTA) specialises in the cultivation of tropical and subtropical plants. Our collection is not only unique in the Czech Republic but also in Europe. BG has five greenhouses divided according to the temperature requirements of the plants and type of focus. Our collection also features plants



for direct consumption, for textiles, for medicinal use, and aromatic plants. A considerable part of the plant material is available for sale and for students who develop practical skills in growing greenhouse and field crops. In 2021, its former head Zdeněk Hlaváč who contributed to its current extensive collection of nearly 2,000 species retired and was succeeded by Anežka Daníčková who comes with her vision of constructing a new tropical greenhouse. Preparations for obtaining the authorisation to issue plant passports and a feasibility study for the new greenhouse are underway as well as specification of its location on the CZU campus. Daníčková also started the inventory of extensive seed material, a digitisation process, and the creation of new nameplates that are to be introduced all over the CZU campus.

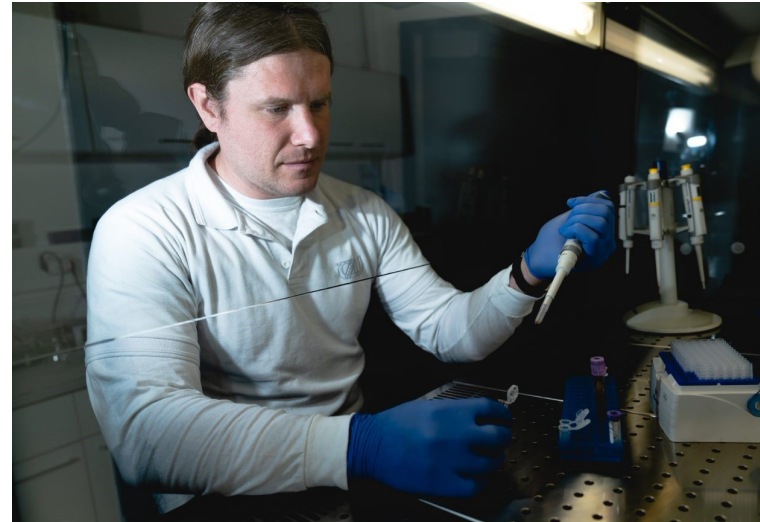
The BG also published an Index Seminum of more than 650 entries offered to more than 200 Czech and international botanic gardens. The BG FTA has been an active member of the Union of Botanical Gardens worldwide since 2011, which involves regular exchange of information, events, and current legislative changes. The year 2021 was also marked by efforts to enhance the PR image of the BG, with an emphasis on communication of its new activities to the media. The BG organised 62 guided tours with a total of more than 3,000 visitors.

CENTRE FOR INFECTIOUS ANIMAL DISEASES (CINEZ)

The Centre for Infectious Animal Diseases (CINeZ) was established in 2020 as an interfaculty centre involving experts from several CZU faculties, including the FTA. Researchers at the CINeZ deal with the issue of infectious animal diseases and zoonoses. On behalf of the FTA, the activities of the CINeZ are conducted mainly by the research group "e4 research group" led by Dr. Jiří Černý and the "CZU mobiLAB" team led by Dr. Hynek Roubík. In 2021, the CINeZ FTA research teams focused on the CZU mobiLAB-PCR project, funded by the Czech Development Aid, which sent 3 CZU mobiLAB units created for the detection of infectious agents to Zambia. Local experts have been trained on the ground and through online training, and the project is now being approved by the local authorities in Zambia. Another success was the involvement of e4 research group employees in the HERA project aimed at the coordination of sequencing of SARS-CoV-2 and the increase of capacities for pathogens detection and determination in the Czech Republic, both in response to the COVID-19 epidemic and other possible infectious diseases. In 2021, CINeZ employees also participated in basic research and teaching of CZU students.



CINeZ



OUR COMMON ELAND AND GUANACO FARMS

Since 2002, the FTA has been involved in the management of common eland antelope (*Taurotragus oryx*) and since 2009 in the breeding of guanaco llamas (*Lama glama guanicoe*). The farms are located at the CZU Farm Estate in Lány, where a new barn and paddocks for the common elands were opened in 2006.

Despite the fact that both farms were established for the production of farm animals and meat from the beginning, the predominant interest of the Faculty is research, whether carried out in the form of student work or research projects with extensive international cooperation. During the year, both facilities were used in student practical training, student internships and, along with the entire university, for student and public excursions and demonstrations of a unique intensive breeding method during national and international visits.

From 2017 onwards, we continued to renew tree planting on the farm, both landscaping and productive, especially of old varieties of high-stemmed fruit trees, with the aim of integrating our agroforestry system. For the llamas, this involved the transformation of non-productive apple plantations by cutting and debarking to new plantings in high-stem orchards. In the antelope enclosure, a handling system is in use, enabling contactless separation of the animals, weighing and fixation, which allows sampling and examination of the animals without the need of anaesthesia.



For the antelopes, an automatic weighing scales is set up and weighing and sampling take place on a monthly basis, which allows measurement of body development, condition and weight gain. The practical subject Animal Handling, Sampling and Processing has since been introduced, in which students can participate in the handling of the animals, in sampling, and in subsequent processing. Several research projects have already been carried out.



Our Guanacos

We entered 2021 with a population of 10 individuals. In the breeding group at the beginning of the year there was one breeding male, five females of reproductive age and four young males. At the end of 2021, there were eight individuals, of which one was the breeding male, five were females of reproductive age, and two were reared young. During the year, the four young males were slaughtered. The transformation of the non-production apple orchard into a high-stemmed mixed orchard continued in the paddocks.

Our Common Elands

Antelope husbandry was conducted similarly to previous years with a total overwintering capacity of 50 adults. At the beginning of 2021, the total number of animals was 57 individuals, made up of the basic herd (2 males, 29 females) with 26 calves and juveniles up to 2 years of age. Due to the maximum capacity of the breeding facility, a total of 6 old females and 4 young males were culled and sampled. A total of 13 calves were born during the year and continued being weighed and measured at monthly intervals to monitor growth and health. At the end of 2021, the number of animals was 49 individuals, made up of the basic herd (2 males, 23 females) and 10 calves and 13 juveniles animals up to 2 years of age.



THE ACADEMIC SENATE

The Academic Senate of the FTA (AS FTA) began its activities in its first election period of 2013. In 2021, the student senators were Ing. Iva Bernathova, Ing. Ingrid Faltová and Bc. Barbora Motýlová and for the academic staff the senators were Ing. Tamara Fedorova, Ph.D., Ing. Johana Rondevaldová, Ph.D., Prof. Ing. Ladislav Kokoška, Ph.D., Ing. Radim Kotrba, Ph.D., doc. Ing. Zbyněk Polesný, Ph.D. and Ing. Vladimír Verner, Ph.D. In 2021, the Senate met a total of eight times, taking into account epidemiological constraints: four times in hybrid form and then voting three times outside the normal session per rollam. The Academic Community of the FTA met twice a year, firstly to introduce the candidates for the position of Dean of the FTA and then for the second time during the “Day with the FTA”. The AS FTA also organized the election of representatives to the AS CZU. The AS FTA discussed the Annual Management Report for 2020, the FTA budget for 2021, approved proposals for Vice-deans, and documents for admission procedures for all levels of education. In October, at the beginning of the academic year, the “Day with the FTA” took place. During whole day events a meeting of the FTA Academic Community was

organised. Several events that had been postponed due to Covid restrictions took place on the opening of the FTA New Building, including the introduction of the new Dean, honoured by the plantation of a walnut tree, a student scientific conference, the Be Fair party and performances of associations operating within the FTA. We would very much like to start a tradition of organising the “Day with the FTA” in the years ahead.



THE FTA LABORATORIES

The FTA has a total of eight laboratories, which are used not only by academic staff but also by students. They use the laboratories to solve their bachelor, diploma and dissertation theses and thus gain valuable skills and experience. The laboratories are also used for teaching and are often presented at open day events for both study applicants and the public.

THE LABORATORY OF ETHNOBOTANY AND ETHNOPHARMACOLOGY

The Laboratory of Ethnobotany and Ethnopharmacology (LEE) focusses on the study of the chemistry and bioactivity of underutilised (neglected) crops of tropical and subtropical origin. Species used by native peoples in traditional folk medicinal systems are plants of special interest. Particular research activities involve ethnobotanical inventory studies, the evaluation of (ethno)pharmacological properties, and chemical and nutritional analyses of plant materials focused mainly on the identification and isolation of their bioactive components.

THE LABORATORY OF FOOD PROCESSING TECHNOLOGIES

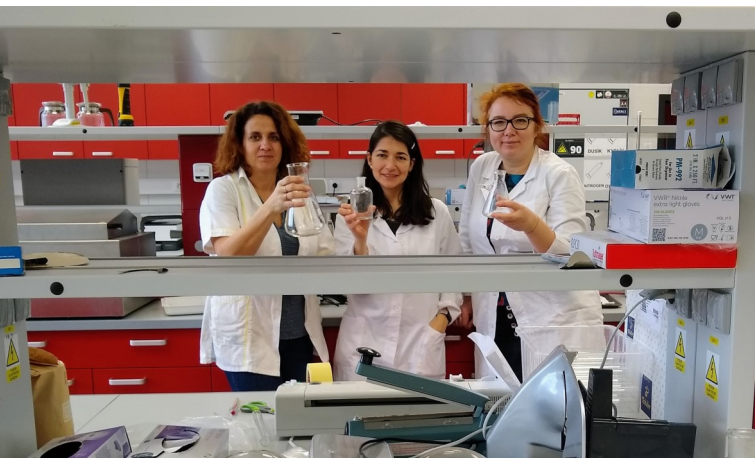
This laboratory focusses on the study of the technological aspects of food processing, with an emphasis on their applicability in the tropical areas of the developing world. A priority of our research is food preservation by drying, using simple and economically feasible techniques to support renewable energy sources (e.g. solar drying, solar cooking). The application of different pretreatments is investigated before drying as well as the effect of these pretreatments on the organoleptic properties of the final product.

THE LABORATORY OF BIOFUELS

This laboratory is focussed on the study of biomass - a promising renewable energy source with great potential. The purpose of this operation is to research the properties of solid biofuels (pellets and briquettes) made of different types of biomass and mixtures thereof, including interesting energy crops and agricultural waste. The Biofuels Laboratory is fully equipped with modern equipment such as a calorimeter, a muffle furnace, a laboratory oven drier, a vibrating device for determination of particle size distributions, and a flue gas analyser.

THE FTA HERBARIUM

The FTA Herbarium is part of the Department of Crop Sciences and Agroforestry. It is affiliated with the Tropical Botany and Ethnobiology Lab (TRIBE) team. The Herbarium in conjunction with the Botanical Garden forms the FTA's primary facility for research and education in tropical botany and agronomy. A herbarium is a scientific reference collection of permanently preserved plant specimens for species identification and is also useful for the determination of the geographical distribution, abundance, habitats, and flowering and fruiting periods of species. The FTA Herbarium is a collection focussed on useful tropical plant species, including major and minor crops and useful wild plants.



THE LABORATORY OF PLANT TISSUE CULTURES

The Laboratory of Plant Tissue Cultures focusses on research into in vitro cultures of plants from tropical and subtropical regions with a specialisation in the breeding, plant propagation, and in vitro conservation of plant genetic resources. Our main research objectives are focussed on the optimisation of micropropagation technology (nodal and apical cultures, the formation of adventitious shoots, indirect organogenesis and somatic embryogenesis), the induction of polyploidy, the in vitro conservation of plant genetic resources (medium-term conservation, microtuberisation), and the study of somaclonal variability of in vitro regenerants.

THE LABORATORY FOR DETECTION AND CHARACTERISATION OF PATHOGENS

The laboratory is fully equipped for routine and safe work with biological samples potentially containing pathogenic microorganisms (BSL2) including the equipment for extraction of nucleic acids (DNA and RNA) from such samples and for further detection of specific nucleic acids by (RT-q) PCR and their sequencing by nanopore sequencer. Further, immunological assays such as ELISA and basic microbiological experiments can be performed in the laboratory. The laboratory is primarily used by the “e4 research group”, which uses it to study the ecology, evolution, emergence and epidemiology of viral zoonoses and vector-borne diseases.

THE LABORATORY OF MOLECULAR GENETICS

The laboratory is fully equipped for DNA extractions from various types of tissue, standard PCR techniques including real-time PCR, visualisations by electrophoresis, and other related activities. The laboratory has been newly equipped with a real-time PCR thermocycler and an automatic pipetting robot, which are mainly used for teaching quantitative PCR. A separate laboratory room for DNA extraction from non-invasive samples has also been newly introduced to reduce contamination in analyses. The animal research working group has long been involved in all aspects of gene flow in populations, and studies have been carried out on population structure detection, hybridisation monitoring, and phylogenetic analyses in selected species. In this laboratory, students from the Department of Tropical Crops and Agroforestry are working on the genetic diversity of more, and less known, agricultural crops and agroforestry tree species, mainly from Latin America and Africa. Research is mainly focussed on assessing the impact of various factors such as domestication, deforestation, habitat fragmentation, breeding programmes, etc. on the genetic diversity of the species under study.



THE LABORATORY OF ANIMAL SCIENCE

The Laboratory of Animal Science studies biological materials of animal and animal feed origin, using simple and economically feasible techniques, focusing on their applicability in tropical regions of the developing world. Primary research activities within the laboratory include the monitoring of blood biochemical parameters, coprological investigations, basic sperm evaluation, and chemical composition and mineral analyses of feedstuffs and faeces.

FACULTY IN NUMBERS

NUMBER OF STUDENTS IN 2021

Bachelor's studies	340
Master 's studies	213
Doctoral studies (in person)	100
Doctoral studies (combined)	6
TOTAL	659

NUMBER OF EMPLOYEES IN 2021

	Absolute number	Recalculation by FTE
Professors	7	5.6
Extraordinary Professors	1	1.0
Associate Professors	8	8.8
Professors Assistants	14	11.6
Research and Science Staff	11	7.1
R & D Staff	3	3.5
Others (Administrative and Operational Staff)	29	20.2
TOTAL	70	56.8





STUDIES

STUDY AT THE FTA

Two Bachelor's programmes (one in Czech, the other in English) and six Master's programmes (taught in English only) cover many agricultural issues in developing countries, including rural development. In 2021, the Faculty offered three Doctoral programmes (taught only in English). Thanks to the out-of-European focus of the activities of the entire Faculty, the offer of programmes also reflects the possibilities of employment for graduates outside the territory of the Czech Republic.

Since 2019, all study programmes have been significantly restructured. Innovated study programmes which the CZU Internal Evaluation Council accredited during December 2018, were offered to students in 2019. In 2021, the first students graduated from the new Master's study programmes.

The interest in studying at the Faculty is mainly confirmed by the fact that the total number of students at the Faculty has been increasing for a long time. In 2019 there were 464 students at all levels of studies; in 2020, there were 561, and in 2021, there were already 659 students.



UNDERGRADUATE STUDY PROGRAMMES

In 2021, the FTA offered two newly accredited Bachelor's programmes. The first students have reached 3rd year and in 2022 they will be the first graduates.

TROPICKÉ ZEMĚDĚLSTVÍ (TROPICAL AGRICULTURE - TZE)

The graduate profile of the Tropical Agriculture study programme represents a versatile, practically equipped professional in the field of tropical agriculture. The programme covers both tropical crop production and animal husbandry. This is complemented by a basic knowledge of technology and agricultural economics. Unlike the original accreditation, however, students can choose their preferred course of study and specialize in crop or livestock production due to the larger number of electives. The programme is designed in line with environmental protection and the need to address poverty and food security in developing countries. This programme is taught in the Czech language.

INTERNATIONAL COOPERATION IN AGRICULTURAL AND RURAL DEVELOPMENT (ICARD)

The programme is designed with the objectives of agricultural development, environmental protection and, at the same time, the need for tackling poverty and ensuring food security in developing countries along UN SDGs. The profile of a graduate capable of preparing, managing and evaluating a development project requires that the study be based on the following foundations: the graduate's detailed knowledge and skills in project management, international communication and human resource management in a multicultural environment; a basis in biological disciplines focussed on primary agricultural production; compulsory internship in non-profit organizations, state institutions and private companies engaged in international development or business projects in developing countries. The programme is taught in English.

MASTER'S STUDY PROGRAMMES

In 2021, the FTA offered six Master's study programmes taught in English only.



AGRI-FOOD SYSTEMS AND RURAL DEVELOPMENT (ASRD)

The aim of this programme is to prepare graduates to work in agri-food systems and sustainable rural development with specific focus on developing countries and tropical areas. The programme is based on the interdisciplinary approach focused on food production systems in tropics, food processing and use of suitable agricultural technologies based on renewable energy resources. An important component of the programme is food security, which plays a key role in sustainable rural development in all developing countries.

INTERNATIONAL DEVELOPMENT AND AGRICULTURAL ECONOMICS (IDAE)

This interdisciplinary Master's programme provides a great opportunity for students to understand the role of economic theories in agricultural production systems, agri-food chains, development strategies, climate change initiatives and policies, particularly in tropical regions.

TROPICAL FORESTRY AND AGROFORESTRY (TFA)

The study programme is based on the interdisciplinary approach in order to deepen theoretical knowledge and practical skills related to forestry and rural development in Third world countries. Students are prepared for professional forestry and wood processing activity in the countries of the tropical and subtropical zones. Great emphasis is also placed on related agriculture and rural development in these countries.

TROPICAL CROP MANAGEMENT AND ECOLOGY (TCME)

The aim of the programme is to create professionals for the next generation needed to address challenges closely tied to the sustainability of tropical and subtropical agricultural systems, biodiversity conservation, nutrition and human health, and climate change through interdisciplinary approaches in plant sciences.

TROPICAL FARMING SYSTEMS (TFS)

The programme is oriented towards modern farming systems in tropical regions of developing countries. The TFS study programme covers the issue of crop production with emphasis on the long-term sustainability of farming systems and surrounding natural ecosystems. In this programme, students pay for their studies in full. However, the programme offers a wide range of specialisation through elective courses.



WILDLIFE AND LIVESTOCK PRODUCTION, MANAGEMENT AND CONSERVATION (WLPMC)

Students receive a solid theoretical background in wild and domestic animal production, management and conservation in tropical and developing regions. The knowledge obtained is put to use during several training and fieldwork units. The programme offers two specialisations - Sustainable Animal Production (SAP) and Wildlife Management and Conservation (WMC).

DOCTORAL STUDIES

Doctoral studies are the highest level of higher education and are intended for future science and research workers, university teachers and practitioners in senior management positions or working on methodological and conceptual issues. Ph.D. students at the FTA are encouraged to work and study independently under the supervision of a supervisor.

In their dissertations they summarise the results of their scientific research activities, they participate in creative activities, teaching at Bachelor and Master's level, in the processing of grants and projects, in seminars and conferences, publishing the results of their research in international peer-reviewed journals, and participate in the popularisation of scientific results and the running of the Faculty. In the course of their studies, they must also pass the state doctoral examination in their field of study.

If a student successfully completes his/her doctoral studies, he/she is entitled to use the title of Ph.D. in his/her title. Currently, the FTA offers studies in three study programmes ...



AGRICULTURE IN TROPICS AND SUBTROPICS

Programme guarantor: Prof. Ing. Bohdan Lojka, Ph.D.

Education area: 37 - agriculture (100%)

ISCED-F: 0888

Language of study (Accreditation): English

Standard length of study (maximum length of study):

3 years (6 semesters)

Minimum number of credits: 180

Possibility of studying in a combined form: open

Tuition fee (for 1 year of study): CZK 80,000

ATS Doctoral Degree Board:

Chairman of the Board:

Prof. Ing. Bohdan Lojka, Ph.D.

External members :

Doc. RNDr. David Honys, Ph.D.

Doc. RNDr. Jan Pluháček, Ph.D.

CZU members (excluding FTA) :

Doc. Ing. Jaroslav Havlík, Ph.D.

Doc. Ing. Pavel Klouček, Ph.D.

Prof. Mgr. Ing. Markéta Sedmíková, Ph.D.



Internal members:

Prof. Ing. Jan Banout, Ph.D.

Doc. Ing. Karolína Brandlová, Ph.D.

Prof. Dr. Ing. Eloy Fernández Cusimamani

Prof. RNDr. Pavla Hejcmanová, Ph.D.

Prof. Ing. Ladislav Kokoška, Ph.D.

Ing. Olga Leuner, Ph.D.

Prof. RNDr. Irena Valterová, CSc.

Ing. Vladimír Verner, Ph.D.

SUSTAINABLE RURAL DEVELOPMENT

Programme guarantor: Prof. Ing. Jan Banout, Ph.D.
Education area: 37 - agriculture (100%)
ISCED-F: 0888
Language of study (accreditation): English
Standard length of study (maximum length of study):
4 years (8 semesters)
Minimum number of credits: 240
Possibility of studying in a combined form: open
Tuition fee (for 1 year of study): CZK 5,000

SRD Doctoral Degree Board:

Chairman of the Board:

Prof. Ing. Jan Banout, Ph.D.

External members:

Doc. RNDr. Ing. Tomáš Rätinger, Ph.D.

Ing. Bo-Anne Rohlík, Ph.D.

CZU members (excluding FTA):

Prof. Ing. Lukáš Kalous, Ph.D.

Internal members:

Doc. Ing., Dr. sc. agr., Dr. sc. habil. Miroslava Bavorová

Doc. Ing. Karolína Brandlová, Ph.D.

Ing. Olga Leuner, Ph.D.

Ing. Jana Mazancová, Ph.D.

Ing. Klára Urbanová, Ph.D.

Ing. Vladimír Verner, Ph.D.

TROPICAL AGROBIOLOGY AND BIORESOURCE MANAGEMENT

Program guarantor: Prof. RNDr. Pavla Hejcmanová, Ph.D.
Education: 37 - agriculture (50%), 3 - biology, ecology and
environment (50%)
ISCED-F: 0888
Language of study (accreditation): English
Standard length of study (maximum length of study):
4 years (8 semesters)
Minimum number of credits: 240
Possibility of studying in a combined form: open
Tuition fee (for 1 year of study): CZK 5,000

TABM Doctoral Degree Board:

Chairman of the Board:

Prof. RNDr. Pavla Hejcmanová, Ph.D.

External members:

Doc. RNDr. David Honys, Ph.D.

Doc. RNDr. Jan Pluháček, Ph.D.

CZU members (excluding FTA):

Doc. Ing. Jaroslav Havlík, Ph.D.

Doc. Ing. Pavel Klouček, Ph.D.

Prof. Mgr. Ing. Markéta Sedmíková, Ph.D.

Internal members:

Prof. Ing. Jan Banout, Ph.D.

Doc. Ing. Karolína Brandlová, Ph.D.

Prof. Ing. Ladislav Kokoška, Ph.D.

Prof. Ing. Bohdan Lojka, Ph.D.

Ing. Olga Leuner, Ph.D.

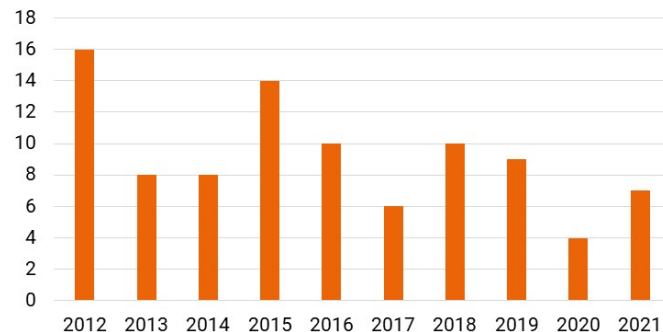
Prof. RNDr. Irena Valterová, CSc.

All three doctoral study programmes at the FTA have undergone an internal accreditation process and are approved by the Council for Internal Evaluation of the CZU.

The topics of FTA dissertations undergo rigorous approval by the disciplinary councils before publication, and applicants are admitted to the DSP on the basis of a comprehensive evaluation of applicants on a pre-approved selected topic (i.e. a specified scientific project, objectives). Doctoral students undergo attestations twice a year, where it is verified that they are fulfilling their individual study plan, and study and research obligations.

The number of Ph.D. students at the FTA has increased significantly over the last few years from 60 as of December 2018 to 103 at the end of 2021. Two factors have mainly contributed to this increase: i) the change in the standard study period from three years to four years for two of the Ph.D. programmes and ii) the increase in the number of supervisors in all Ph.D. programmes at the FTA. The table shows the detailed distribution of doctoral students by programme and type of study.

THE NUMBER OF DSP FTA GRADUATES IN THE LAST TEN YEARS



The figure shows the number of DSP FTA graduates in the last ten years. In the pandemic year 2020, the number of Ph.D. graduates decreased significantly for logical reasons. Only 4 students defended their dissertation. In the following year 2021, the number of graduates increased again.

Programme Year of study	TABM		SRD		ATS	
	CZ	other	CZ	other	CZ	other
1.	2	8	1	6	0	1
2.	5	7	2	9	0	0
3.	9	11	5	16	0	1
4.	9	11	0	0	0	0
Totals	25	37	8	31	0	2

STUDENTS IN ACCREDITED STUDY PROGRAMMES

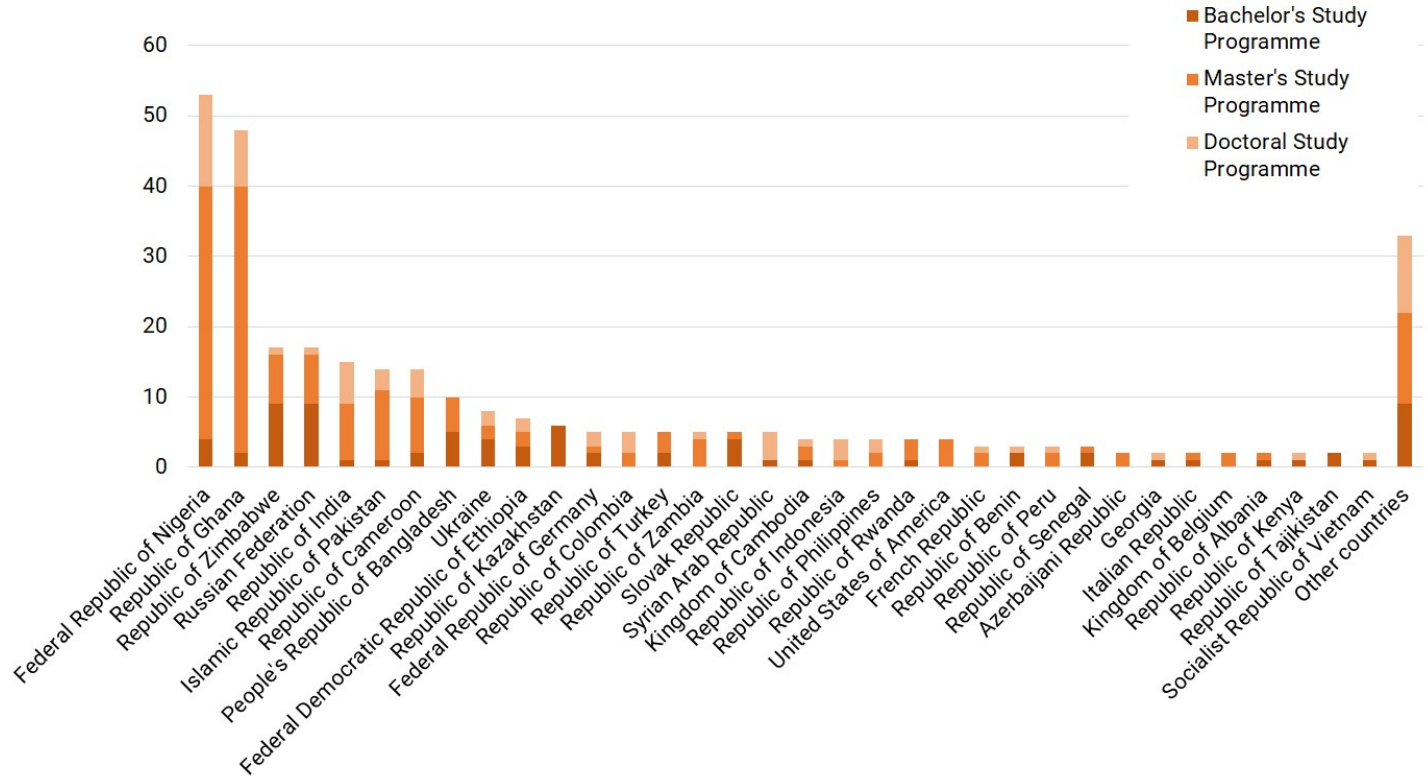
The total number of Bachelor's and Master's students in 2021 was 553 students (in 2020, it was 458 and in 2019, only 383 students). All students studied in full-time forms of study. In addition, 22 students studied lifelong learning – the University for the "Third Age". The overviews below contain ongoing study fields and newly accredited and innovated study programmes.

More than half of the students were international students, most of whom were students from developing countries. Within the studies, a multicultural environment has been created, enabling the mutual interaction of Czech and international students.

Most foreigners in 2021 were from Nigeria, Ghana, Zimbabwe, Russia, India, Pakistan, Cameroon, and Bangladesh (see the following chart; all figures below are from 31 October 2021).



NUMBERS OF FOREIGN STUDENTS BY MOST REPRESENTED COUNTRIES



NUMBER OF STUDENTS - BACHELOR'S STUDY PROGRAMMES

Programme Study year	B-ICARD		B-TZE	
	CZ	other	CZ	other
1.	21	37	137	8
2.	12	15	39	5
3.	10	11	44	1
Totals	43	63	220	14

NUMBER OF STUDENTS - MASTER'S STUDY PROGRAMMES

Programme Study year	IDAE		WLPMC+WLM		TCME		ASRD+SRD		TFA		TFS+ZTS	
	CZ	other	CZ	other	CZ	other	CZ	other	CZ	other	CZ	other
1.	6	23	8	9	7	19	1	22	3	9	0	19
2.	3	21	6	19	5	3	3	22	1	3	0	1
Totals	9	44	14	28	12	22	4	44	4	12	0	20

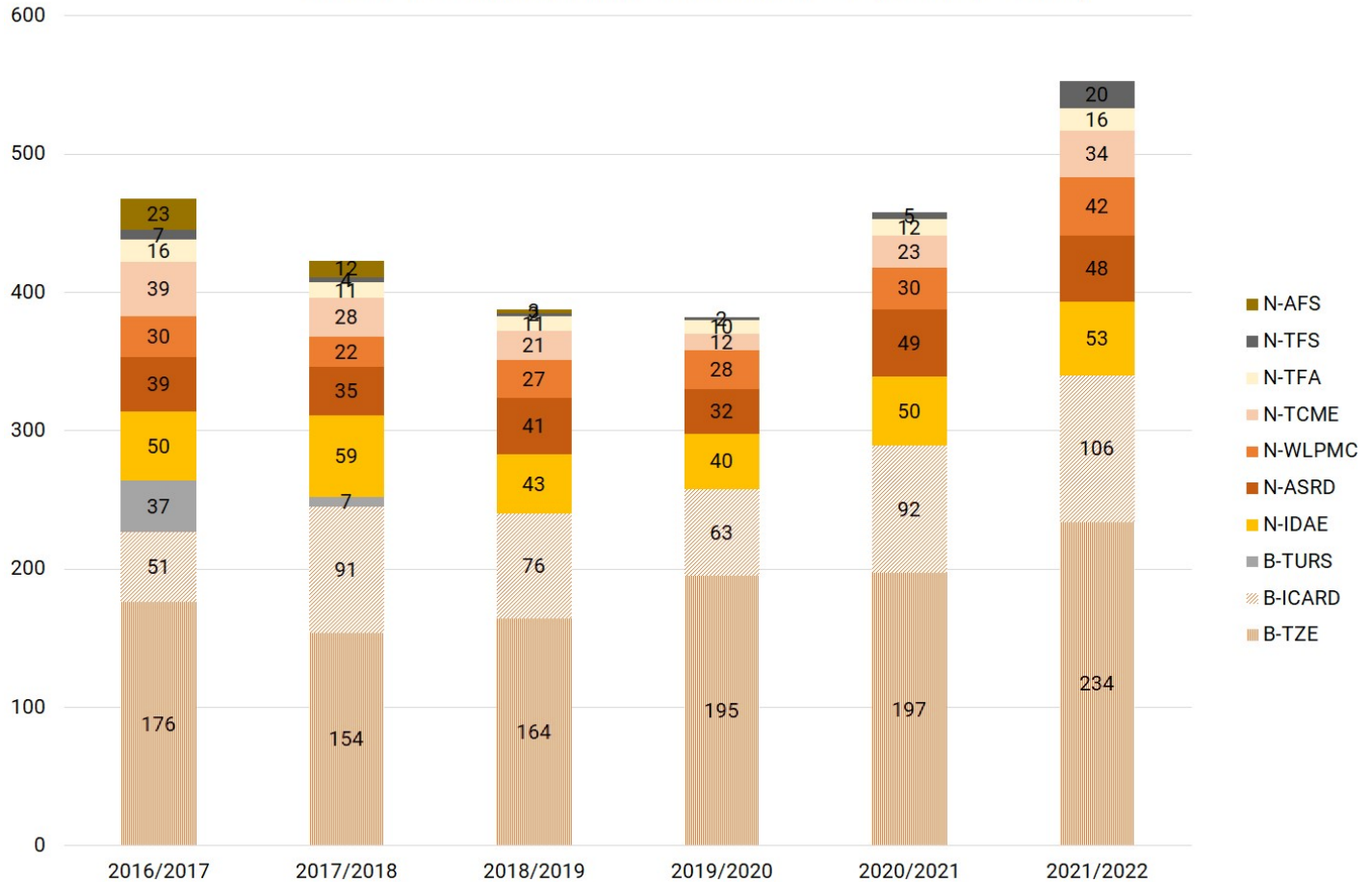
TOTAL NUMBER OF STUDENTS (BACHELOR'S AND MASTER'S STUDY PROGRAMMES)

Form of study Year of study	Full-time	
	CZ	other
1.	183	146
2.	69	89
3.	54	12
Totals	306	247

TOTAL NUMBER OF STUDENTS (DOCTORAL STUDY PROGRAMMES)

Form of study Year of study	In Person		Hybrid	
	CZ	other	CZ	other
1.	2	15	1	1
2.	8	16		
3.	12	27	1	3
4.	9	11		
Totals	31	69	2	4

Students in study programmes in academic years (as on 31 October)



OTHER EDUCATIONAL ACTIVITIES, LIFELONG LEARNING

Following the strategic goal of the CZU, (priority strategic goal 3.1 "Linking educational activities in the study with the involvement of students in scientific and research work"), students were involved in the creative activities of the Faculty and especially in research and development projects within their final and seminar papers, and partial assignments on grant projects.

Close cooperation also took place with the application sector in the fields of science and research (cooperation with research institutes, implementation of research for application in the private sphere), development projects (partnerships with companies and non-profit organizations) and teaching (sharing external lecturers in taught subjects, offers of internships for students in companies and non-governmental organizations involved in international development projects, offers of diploma theses in cooperation with the application sphere). However, due to the global COVID-19 pandemic, these activities, especially trips abroad, were still significantly reduced in 2021.

Since 2013, the subject "Block of Experts" has been introduced in Bachelor's programmes to enable presentations by experts with practical experience. In 2021, this was

attended by five international development experts from Czech NGOs, companies and state institutions.

The FTA regularly opens a lifelong learning course - the University of the "Third Age" - called "Tropics for Everyone". In this programme, 22 students studied in 2021, using a mix of online distance and in person forms. The programme is opened once every two years. In addition to lectures and seminars by lecturers from the FTA, excursions form an essential part of the programme. However, most field trips had to be cancelled in 2021 due to the pandemic.



STUDENT SUPPORT AT THE FACULTY

Student counselling is understood as an integral part of working with students. For this reason, counselling has long been provided in the main areas, in accordance with the Higher Education Act:

- in the field of study and pedagogy,
- in the psychosocial domain,
- in the field of professional careers,
- in the legal area and
- in the field of access to information.

Counselling is provided to students through several communication channels: students can obtain the necessary information electronically in the Internet environment or by e-mail, or they can contact the FTA specialist counsellor for the given area directly or by phone. Consultation through MS Teams has been recently adopted as well.

The CZU Institute of Education and Counselling plays the role of coordinator of counselling services within the university. The Counselling Center for Students with Special

Educational Needs has been operating at the CZU since 2006. In the case of psychosocial counselling services, these services are provided by the Department of Psychology, Faculty of Business and Economics, CZU.

The FTA mainly supports pedagogical counselling, which involves the staff of the Academic Administration Office, one specialised pedagogical counsellor, the Vice-dean for Education and Quality, and two teachers – coordinators of 1st-year Bachelor's programmes. In addition, there is mutual counselling between students at the Faculty. Six Master's degree students worked as student advisors in 2021. As well as this, international students in particular are allowed consultations beyond the regular consultation hours, and one specialised employee of the Faculty's Academic Administration Office is assigned to contact foreign applicants. In 2021 the Faculty also introduced systematic work by "Student Ambassadors", who assist foreign applicants and new International students at the Faculty.

At the FTA, exceptionally gifted students are motivated by a system of merit scholarships (a scholarship during their studies and a one-off scholarship for the State Final



Examination). The current merit scholarship is CZK 1,500 per month. A total of 12 outstanding students were supported during 2021.

Furthermore, students are motivated by participation in grants from the Internal Grant Agency of the Faculty, where they are involved in scientific teams together with doctoral students and teachers. They also participate in implementing development projects abroad (approximately 10 to 15 Bachelor's and Master's students per year). They are also supported in terms of international mobility associated with their qualification work (support for students going abroad to collect data for their qualification work).

Since 2013, a group of graduates has been introduced at the FTA within the professional social network LinkedIn, including 185 graduates from 2011-2021 (<https://www.linkedin.com/groups/5062023>). Through this network, the Faculty maintains contact with graduates and offers job possibilities in the international cooperation sector.

INTEREST IN STUDIES AT THE FACULTY

In 2021, the Faculty received 619 applications for Bachelor's and 593 for Master's programmes. This number has increased significantly since last year for both levels of studies (see table below). The admission procedure thus becomes more and more selective, and the quality of the admitted students increases every year. However, applicants still face significant problems when entering the study, mainly due to difficulty obtaining a visa to the Czech Republic for applicants from African countries.

Potential Bachelor's students were addressed directly at secondary schools and preparatory courses. Faculty staff also participated in several seminars and panel discussions both in the Czech Republic and abroad, where they promoted study opportunities at the Faculty. Active promotion also took place through the embassies of the Czech Republic in countries where the FTA has partners in universities.

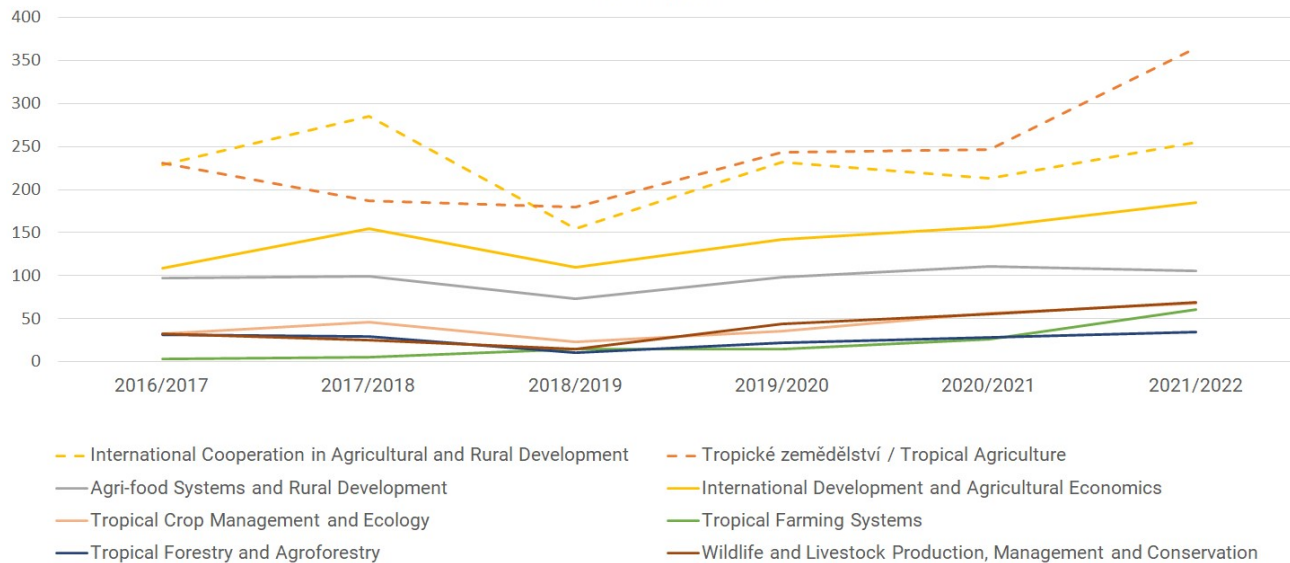


The admission procedure for Bachelor's degree programmes took into account the previous achievements of applicants in the form of good results in national olympiads and the study average of earlier studies - admission without an entrance exam for Bachelor's degree programmes up to an average of 1.8 from their graduation certificate or from the last completed year of high school.

NUMBER OF APPLICATIONS



Number of applications



BACHELOR'S STUDY PROGRAMMES

Programme	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
International Cooperation in Agricultural and Rural Development	229	285	155	232	213	255
Tropické zemědělství / Tropical Agriculture	231	187	180	243	247	364
Totals	460	472	335	475	460	619

MASTER'S STUDY PROGRAMMES

Programme	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Agri-food Systems and Rural Development		97	99	73	98	106
International Development and Agricultural Economics		109	155	110	142	185
Tropical Crop Management and Ecology		33	46	23	36	68
Tropical Farming Systems		3	5	15	15	61
Tropical Forestry and Agroforestry		31	29	11	22	35
Wildlife and Livestock Production, Management and Conservation (totals)		33	25	15	44	69
Specialisation SAP - Sustainable Animal Production					9	31
Specialisation WMC - Wildlife Management and Conservation					35	38
Totals		306	359	247	401	593

STATISTICS

ADMISSION PROCEDURE

ADMISSION PROCEDURES FOR BACHELOR'S PROGRAMMES

Entrance exams were provided only by the Faculty. Entrance exams for both programmes are composed of two subjects - languages and one specialised subject. For the ICARD programme, the entire course of the entrance exam, including a specialised test, was in English. For applicants who could not prove their knowledge of the Czech language by a school-leaving examination in Czech, the TZ programme was followed by a written interview in the Czech language focussed on assessing the level of language skills required to study the programme. Applicants were admitted to study at the FTA according to the points obtained during the entrance exam until the capacity of the study programme was filled. The minimum limit for admission was at least 15 points from each test and meeting the condition of an oral language interview for foreign applicants for the TZ study programme. The sample tests are published on the website of the Faculty.



ADMISSION PROCEDURE FOR MASTER'S PROGRAMMES

Applicants had to provide a CV, an annotation of their Bachelor's thesis and a motivation letter in English for all study programmes. The entrance exams consisted of an English interview focussed on the content of the programme. For oral interviews for all programmes, the candidate had to achieve at least 60 points out of 100 according to the criteria set by the examination committee for each programme - according to the level of professional and standard English, assessment of cross-sectional knowledge, previous experience, experience in the field, and focus and quality of the Bachelor thesis for study. Applicants were admitted to study at the FTA according to the evaluation of the points obtained in the entrance exam until the capacity of the study programme was filled.

Students were admitted to the Tropical Farming Systems programme without an entrance exam, only after the submitted documents were reviewed. Admissions committees were proposed by the programme guarantors and approved by the Faculty Dean's Board.



Study Programme / Specialisation	Number of applications	Complete	Attended	Terms met	Terms not met	Admitted in the first round	Admitted in total	Commenced study
B-ICARD International Cooperation in Agricultural and Rural Development	255	240	233	94	138	94	95	53
B-TZE Tropické zemědělství / Tropical Agriculture	364	362	218	199	19	199	199	146
N-ASRD Agri-food Systems and Rural Development	106	102	102	32	70	32	32	22
N-TZ-IDAE International Development and Agricultural Economics	185	180	173	38	135	38	38	23
N-TCME Tropical Crop Management and Ecology	68	64	62	36	26	36	36	23
N-TFA Tropical Forestry and Agroforestry	35	31	32	18	14	18	18	9
N-TFS Tropical Farming Systems	61	50	61	56	5	56	56	18
N-WLPMC Wildlife and Livestock Production, Management and Conservation; specialisation Sustainable Animal Production	31	31	29	9	20	9	9	5
N-WLPMC Wildlife and Livestock Production, Management and Conservation; specialisation Wildlife Management and Conservation	38	36	34	17	17	17	17	11

Detailed statistical overviews, based on the Decree of the Ministry of Education, Youth and Sports No. 343/2002 Coll., giving the procedure and conditions for publishing data on admission procedures at universities, are published on the official board of the Faculty.



SCIENCE AND RESEARCH

ACTIVITIES OF THE DEPARTMENT IN SCIENCE, RESEARCH AND DOCTORAL STUDIES

The Department for Science, Research and Doctoral Studies provide organisational and administrative support in the following areas:

- the activities of the Faculty's Scientific Board,
- habilitation and professorial procedures,
- the distribution of R&D-related information,
- the organisation of support for scientific research activities at the Faculty,
- the organisation of the IGA FTA
- the administrative management of doctoral studies.



PROFESSORSHIP AND HABILITATION PROCEDURES

The FTA holds proceedings for the appointment of full professors and habilitation procedures in the field of "Tropical Agriculture and Ecology". In these procedures, the teaching and scientific qualifications of the candidate, who is a distinguished and recognised personality in his/her field, are demonstrated.

Professorship procedures in 2021:

- Prof. Dr.ir. Patrick Van Damme - the professorship procedure for the position of Extraordinary Professor, has been initiated and successfully conducted at the level of the Scientific Board of the FTA and the Scientific Board of the Czech University of Life Sciences CZU.
- Doc. Mgr. Jan Šobotník, Ph.D. - professorship procedure initiated

Habilitation procedures in 2021:

- Tersia Needham, Ph.D. - habilitation procedure successfully conducted at the level of the Scientific Board of the FTA
- Ing. Hynek Roubík, Ph.D. - habilitation procedure successfully conducted at the level of the Scientific Board of the FTA.



FTA SCIENTIFIC BOARD MEMBERS

EXTERNAL MEMBERS (OUTSIDE THE CZU)

Prof. RNDr. Daniel Frynta, Dr.	Department of Zoology, Faculty of Science, Charles University
Prof. Dr. RNDr. Oldřich Lapčík	Department of Chemistry of Natural Compounds, Faculty of Food and Biochemical Technology, The University of Chemistry and Technology, Prague
Doc. Ing. Jan Chyský, CSc.	Division of electrotechnics, Faculty of Mechanical Engineering, The Czech Technical University in Prague
Doc. RNDr. Josef Novotný, Ph.D.	Department of Social Geography and Regional Development, Faculty of Science, Charles University
Prof. RNDr. Vojtěch Novotný, CSc.	Department of Ecology, The Biology Centre of the Czech Academy of Sciences
Doc. Mgr. Zdeněk Opršal, CSc.	Department of Development and Environmental Studies, Faculty of Science, Palacký University Olomouc
Doc. RNDr. Pavlína Maloy Řezáčová, Ph.D.	The Institute of Organic Chemistry and Biochemistry of The Czech Academy of Sciences

FTA MEMBERS

Prof. Dr.ir. Patrick Van Damme	Chairman, Dean of the Faculty of Tropical AgriSciences
Prof. Ing. Jan Banout, Ph.D.	Vice-dean for Science, Research and Doctoral Study, Department of Sustainable Technologies
Doc. Ing., Dr. sc. agr., Dr. sc. habil. Miroslava Bavorová	Department of Economics and Development
Doc. Francisco Herrador Ceacero, Ph.D.	Department of Animal Science and Food Processing
Prof. Dr. Ing. Eloy Fernández	Department of Crop Science and Agroforestry
Prof. Ing. Pavla Hejcmanová, Ph.D.	Department of Animal Science and Food Processing
Prof. Ing. Ladislav Kokoška, Ph.D.	Department of Crop Science and Agroforestry
Prof. Ing. Bohdan Lojka, Ph.D.	Department of Crop Science and Agroforestry
Prof. RNDr. Irena Valterová, Ph.D.	Department of Crop Science and Agroforestry

CZU MEMBERS

Doc. Ing. Vilém Jarský, Ph.D.	Faculty of Forestry and Wood Sciences, CZU
Prof. Dr. Ing. František Kumhála	Faculty of Engineering, CZU
Prof. PhDr. Michal Lošťák, Ph.D.	Faculty of Economics and Management, CZU
Ing. Kateřina Černý Pixová, Ph.D.	Faculty of Environmental Sciences, CZU
Prof. Mgr. Ing. Markéta Sedmíková, Ph.D.	Faculty of Agrobiolgy, Food and Natural Resources, CZU

PUBLICATIONS AND RESULTS IN R&D

The Faculty of Tropical AgriSciences is a unique centre of research in the Czech Republic, with the ambition to become a leader in the field of tropical sciences. The Faculty activities have been directed towards this goal for a long time, in addition to its whole spectrum of research activities, cooperation with foreign partners, and emphasis on increasing the number and quality of outputs of research activities.

In a highly competitive environment, such as the scientific space, it is not only the results achieved that matter, but also their presentation in scientific publications. The FTA has developed a support system for staff and students to publish their results at conferences and in high-quality scientific journals. Students are motivated by an extraordinary background in scholarship for the authoring of scientific publications, and its recognised form of completed qualifying work is, in addition to a classical thesis, the acceptance for publication of an annotated scientific article in a peer-reviewed journal with an impact factor (IF or SJR), where the student is the first author and the publication is thematically related to the approved topic of the qualifying work. In addition to the traditional dissertation, the recognised form of a Ph.D.

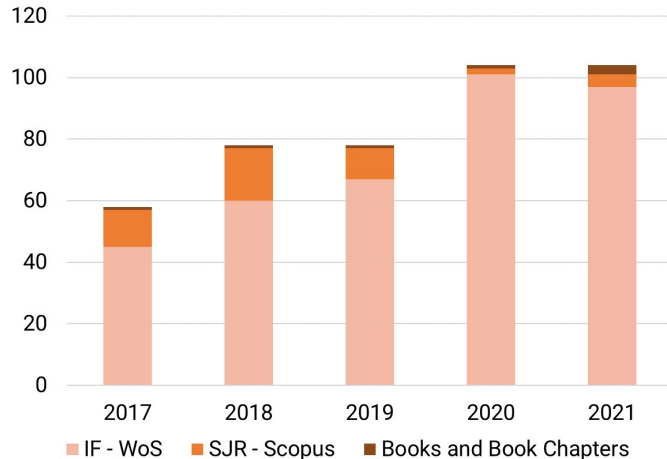
programme is a set of annotated papers, which must include at least 3 articles accepted for publication in a scientific journal with an impact factor (IF or SJR). Of these, the student must be the first author on at least two articles and may be in any order of authorship on the others. All publications must be thematically related to the approved dissertation topic.

Staff are incentivised by a personal appraisal system which is updated annually according to the performance of individual academic staff members. In this system, a personal evaluation is made up of two components: teaching (monitored in the form of STAT points) and publications. For publications, the number of publications, the quality of the journal (quartile), the number of authors, and the position of the person in the author team (the role of the corresponding author is also taken into account) play a role

With changes in the evaluation of research organisations and the evaluation of programmes of targeted support for research, development, and innovation required by the M17+ Methodology, the incentive system for creative activity at the FTA will now also need to be modified by adding an item relating to grant activity.

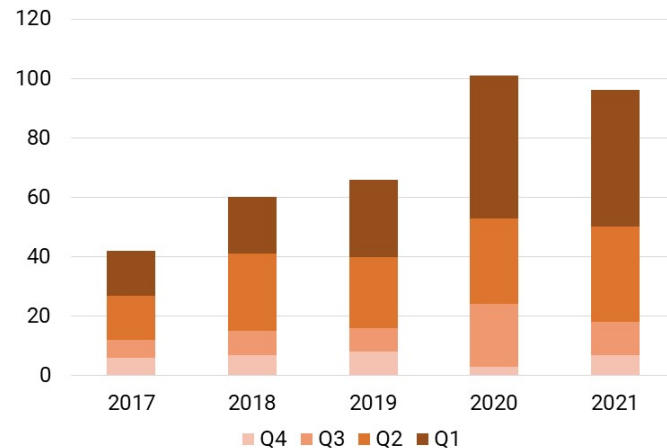
In 2021, a total of 101 articles were published in journals indexed in the Web of Science and Scopus databases. Of these 101 articles, 97 were published in WoS journals with IFs (1 article was in WoS without an IF), and 4 articles were published in Scopus journals - see the graph below which gives an overview of the evolution of the number of articles with IF/SJR and monographs over the last five years.

THE NUMBER OF PUBLICATIONS IN THE LAST FIVE YEARS



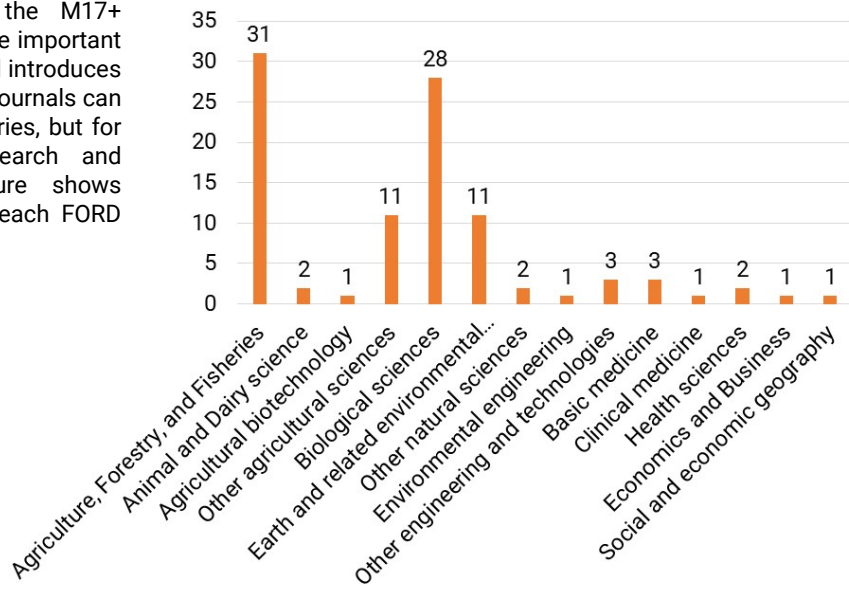
From a total of 96 publications with IF, 81% were published in journals ranked in Q1 and Q2 according to IF (WoS); in absolute numbers, this was 78 publications (46 and 32 in Q1 and Q2, respectively). The figure below shows the number and evolution of the quartile ratio of journals with publications affiliated to the FTA over the last five years. The data shows that there has been an increase in the number of publications and in their quality.

DISTRIBUTION OF PUBLICATIONS BY QS - WOS IF



The evaluation of research organisations and the evaluation of programmes of targeted support for research, development and innovation as set out in the M17+ Methodology moves away from the IF as one of the important indicators of the quality of publications and instead introduces AIS (Article Influence Score). According to the AIS, journals can be divided into quartiles according to WoS categories, but for Methodology 17+ the FORD (Fields of Research and Development) divisions were used. The figure shows the distribution of FTA publications for 2021 in each FORD category.

DISTRIBUTION OF FTA PUBLICATIONS BASED ON FORD



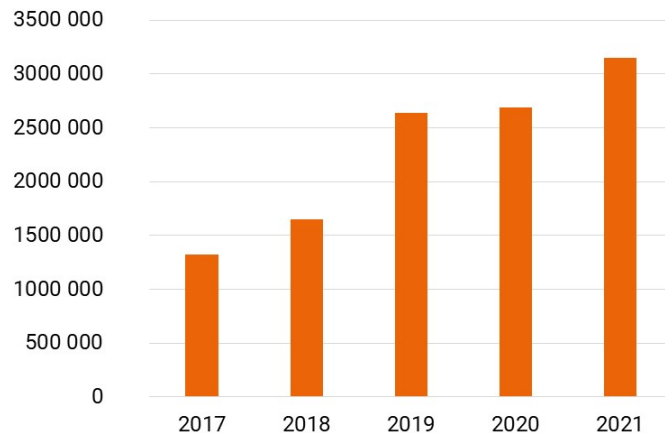
PROJECTS AND GRANTS

SPECIFIC UNIVERSITY RESEARCH (SUR)

In 2021, the Faculty of Tropical AgriSciences managed a subsidy for SUR in the amount of CZK 3,152,210. These funds were used in accordance with the Rules for the Provision of Special Purpose Support for Specific University Research under the Act on Support for Research, Experimental Development and Innovation and were fully exhausted. The chart shows the evolution of the total subsidy for Specific University Research over the last 5 years. It can be seen that the amount of funding for SUR FTA has been continuously increasing.

In 2021, the SUR funds were mainly used for the Internal Grant Agency of the FTA (2,840,000 CZK); the following conferences were also supported from the SUR budget with the Faculty participating in their organisation: the EAAE (European Association of Agricultural Economists) 20-23 July 2021; the GBCC (6th Global Biodiversity Conservation Conference) 10-12 November 2021; ČES 2021 Czech Evaluation Society 8-10 June 2021; a Conference of Ph.D. students within the Faculty Open Day 15.10.2021.

THE TOTAL SUBSIDY OF SPECIFIC UNIVERSITY RESEARCH AT THE FTA FOR THE LAST 5 YEARS (IN CZK)

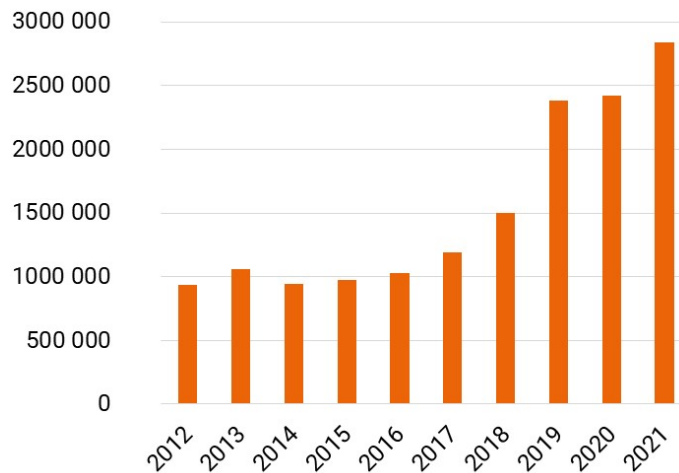


FTA INTERNAL GRANT AGENCY

The vast majority of the funds earmarked for Specific Research are managed by the "FTA Internal Grant Agency" (IGA FTA). Specific Research is research carried out by research teams that include students enrolled in accredited Master's and doctoral degree programmes and is directly related to their research and education. The aim of the IGA FTA grants is to strengthen the independent creative activity of students in their field of research and development, to intensively involve students in problems under research, especially within team research and development activities, and to achieve greater efficiency in the work of students and student groups in the implementation of diploma theses. Project leaders are members of academic staff, but the number of Ph.D. and M.Sc. students in each project must be at least equal to the number of other members in the research team. Since 2013, according to the internal rules of the FTA, no personal costs (other than as granted via scholarships) can be claimed from IGA funds.

The funds allocated to the IGA FTA have been continuously increasing for seven years, as shown in the chart. In 2021, a total of 14 one-year projects were supported by a total amount of CZK 2,840,000. These projects involved 211 Master's and doctoral students; see the table on the next page.

THE TOTAL DISTRIBUTED BUDGET OF THE INTERNAL GRANT AGENCY OF THE FTA FROM 2012 - 2021 (IN CZK)



Name of the project	Principal Investigator	Number of students	Budget [CZK]
Food security and innovative food processing methods	Jan Banout	11	102,000
Behaviour of actors in agri-food chains	Miroslava Bavorová	45	366,000
Ecology of large mammals in tropical ecosystems	Karolína Brandlová	25	333,000
Improvement of husbandry techniques in tropical ungulates	Francisco Ceacero	18	364,000
In vitro induced polyploidy in <i>Thymus camphoratus</i> Hoffmanns. & Link.	Eloy Fernández Cusimamani	8	152,000
Genetic diversity of mammals	Barbora Černá Bolfíková	10	173,000
Sustainable Value Chains: From Social Collective Actions of Producers to Responsible Consumers	Petra Chaloupková	18	87,000
Research on environmental and sustainable technologies for developing countries	Tatiana Ivanova	12	116,000
Evaluation of biological effects and chemical analysis of substances from tropical plants	Ladislav Kokoška	15	271,000
Biodiversity in tropical agroecosystems	Bohdan Lojka	15	382,000
Challenges for Agenda 2030 – No One is Left Behind in Rural Areas of Developing Countries	Jana Mazancová	22	310,000
Ethnobotany of Wild and Semi-domesticated Tropical and Subtropical Plant Species	Zbyněk Polesný	5	76,000
Trophic relations and feeding ecology of Afrotropical termites revealed by stable isotopes analysis	Jan Šobotník	2	56,000
Biotechnological, proteomic and molecular approaches as a tool in crop breeding	Iva Viehmannová	5	52,000
Total		211	2,840,000

EXTERNAL GRANTS AND PROJECTS

In 2021, the FTA staff and students participated in seven EU-funded grants, seven national research grants funded by the Technology Agency of the Czech Republic and the National Agency for Agricultural Research and the Operational Programme for the Environment, and 16 foreign development cooperation projects.

Participation in the LEAP4FNSSA (Long-term Europe-Africa Partnership for Food and Nutrition Security and Sustainable Agriculture) project funded by Horizon 2020 can be considered a particularly great success.

The table on the next page summarises all these projects, including the programme from which the projects were funded, the principal investigator, and the total project budget.



SUMMARY OF THE PROJECTS

Project Name	Duration	Provided by / Provider	Programme	Operator	Project Budget	Contact Person / Principal Investigator
Analysis of genetic samples of large carnivores for the project "Coexistence with large carnivores", implemented under the Operational Programme Environment	2021-2022	MŽP	OPE	CZU	1,610,000 CZK	Barbora Černá Bolfíková
Agroforestry systems for the protection and restoration of landscape functions threatened by the impacts of climate change and human activities	2019 - 2022	TAČR	EPSILON	Silva Tarouca Research Institute for Landscape and Ornamental Horticulture, v.v.i.	14,929,000 CZK	Bohdan Lojka
The spread of ticks and tick-borne diseases: new and neglected risks to domestic and farm animals and humans	2019 - 2021	MZe	NAZV Země	Biological Centre of the CAS, v. v. i.	12,000,000 CZK	Jiří Černý
Advanced hot water boiler system with low-emission automatic burners for standardised solid fuels from residual biomass	2019 - 2021	TAČR	DELTA	PONAST spol. s r. o.	15,353,000 CZK	Michel Kolárek, Jan Banout
Development of a sealing cap for microtiter plates for testing volatiles	2021-2023	TAČR	GAMA2	CZU	1,474,508 CZK	Ladislav Kokoška
Use of molecular probes for rapid and simple detection of SARS-CoV-2 and its differentiation from influenza virus	2021-2022	TAČR	GAMA2	CZU	1,500,000 CZK	Jiří Černý
Creation of a functional sample head for 3D printed (rubber) products	2020	TAČR	GAMA2	CZU	2,000,000 CZK	Lucie Ackermann Blažková



DEVELOPMENT OF A SEALING CAP FOR MICROTITER PLATES FOR TESTING VOLATILES

Principal investigator: Ladislav Kokoška

Total budget: 1,474,508 CZK

Project duration: 2021-2023

Provider: the Technology Agency of the Czech Republic, GAMA2 programme

Natural volatile substances with antimicrobial activity have a high potential for application in medical, food, and agricultural practice as antibiotic drugs, preservatives, and fungicides. However, a limiting factor for the development of such products has been the lack of suitable (rapid and accurate) methods for testing their efficacy. A major milestone in this field is the new broth microdilution volatilisation method developed by the proponent's team in 2017. However, the conventional microtiter plate cap, which the new method uses to test the antimicrobial activity of volatiles in the gas phase, has a number of drawbacks.

AGROFORESTRY SYSTEMS FOR THE PROTECTION AND RESTORATION OF LANDSCAPE FUNCTIONS THREATENED BY THE IMPACTS OF CLIMATE CHANGE AND HUMAN ACTIVITIES

Principal investigator: Radim Kotrba, Bohdan Lojka

Total budget: 14,929,000 CZK

Project duration: 2019 – 2022

Provider: the Technology Agency of the Czech Republic, EPSILON programme

The main objective of the project is to research and quantify the expected non-productive functions and benefits of traditional and modern AFS, i.e., silvo-plough, silvo-grazed, coppice plantations, etc. for the contemporary landscape, especially in the field of soil conservation, temperature and water regime, and biodiversity both at the level of selected habitats and landscape. An important objective is also to obtain information on the planting, growth and appropriate management of tree crops on agricultural land and the possible impact of these trees on agricultural production itself (growth and yield of agricultural crops, welfare of livestock). The aim is also to identify appropriate support for the development of agroforestry systems suitable for the natural and ownership-economic conditions of the Czech Republic for the protection and restoration of landscape functions threatened by the impacts of climate change and human activities.

THE SPREAD OF TICKS AND TICK-BORNE DISEASES: NEW AND NEGLECTED RISKS TO DOMESTIC AND LIVESTOCK ANIMALS AND HUMANS

Principal investigator: Jiří Černý

Total budget: 2,000,803 CZK

Project duration: 2019 – 2021

Provider: the Ministry of Agriculture

Objectives of the project are: (i) to carry out large-scale monitoring of invasive tick species and tick-borne diseases of importance to human and animal health in the Czech Republic using state-of-the-art molecular epidemiology approaches in domestic and pet, farm and wild animals; (ii) to carry out a study of the influence of ecological aspects on the distribution and abundance of important ticks; (iii) to develop and optimise area-wide diagnostic molecular methodologies; (iv) to implement area-wide mapping of invasive ticks in collaboration with the public; (v) to develop a web portal for dissemination of the findings; and (vi) to implement a series of workshops for the professional public and livestock farmers.



USE OF MOLECULAR BEACON PROBES FOR RAPID AND SIMPLE DETECTION OF SARS-COV-2 AND ITS DIFFERENTIATION FROM INFLUENZA VIRUS

Principal investigator: Jiří Černý

Total budget: 1,500,000 CZK

Project duration: 2021-2022

Provider: the Technology Agency of the Czech Republic, GAMA2 programme

The LAMP isothermal nucleic acid amplification method has proven to be a very suitable approach for the detection of nucleic acids in biological samples. However, its main disadvantage compared to PCR is that it is not possible to detect multiple types of target nucleic acids in a single tube using current approaches. The aim of this project is to develop and test a LAMP reaction that, using molecular beacon probes, will allow either the detection of three different targets on the SARS-CoV-2 genomic RNA or the differentiation of SARS-CoV-2 and influenza virus from each other.

ADVANCED HOT WATER BOILER SYSTEM WITH LOW-EMISSION AUTOMATIC BURNERS FOR STANDARDISED SOLID FUELS FROM RESIDUAL BIOMASS

Principal investigator: Michel Kolaříková / Jan Banout

Total budget: 15,353,000 CZK

Project duration: 2019 – 2021

Provider: the Technology Agency of the Czech Republic, Delta programme

The main objective of the project is to achieve the ability of automatic boilers to burn low-quality renewable energy sources efficiently and environmentally.

ANALYSIS OF GENETIC SAMPLES OF LARGE CARNIVORES FOR THE PROJECT "COEXISTENCE WITH LARGE CARNIVORES", IMPLEMENTED WITHIN THE FRAMEWORK OF THE OPERATIONAL PROGRAMME ENVIRONMENT

Principal investigator: Barbora Černá Bolfíková

Total budget: 1,610,000 CZK

Project duration: 2021 – 2022

The subject of the public contract is to perform DNA extraction and genotyping of non-invasively collected samples (hair, droppings, urine, saliva) or tissue samples (carcasses, captured injured individuals, e.g. after a collision with a car) of lynx (*Lynx lynx*), wolf (*Canis lupus*), and brown bear (*Ursus arctos*) to obtain information on the size and structure of populations and on relationships between individuals.

CREATION OF A FUNCTIONAL HEAD SAMPLE FOR 3D PRINTING OF POLYISOPRENE (RUBBER) PRODUCTS

Principal investigator: Lucie Ackermann Blažková

Total budget: 2,000,803 CZK

Project duration: 2021-2023

Provider: the Technology Agency of the Czech Republic, GAMA2 programme

Currently, there is no technological solution for the use of natural latex in 3D printing. This is because the last technological step in rubber production is vulcanisation, which guarantees the flexibility, strength, and shape memory of the final product. Re-heating oxidizes and degrades the rubber. 3D printing is currently a promising production technology with high expectations for the future. However, a number of limitations and disadvantages help prevent its greater use. Among the disadvantages of 3D printing technology is the fact that the filaments are mostly made of plastic, which is difficult to recycle after 3D printing. The project addresses the current market demand to expand the supply of flexible materials with a positive environmental impact in various industries, which may make the case for the use of natural latex rubber in 3D printing.

OVERVIEW OF FOREIGN PROJECTS

Project Name	Duration	Provider	Programme	Operator	Project Budget	Contact Person / Principal Investigator
PISAI (Participatory and Integrative Support for Agricultural Initiative)	2017 - 2021	European Commission	Erasmus+	Prince of Songkla University, Thailand	€ 865,865	Petra Chaloupková
ESCAPAdE - Erasmus Curricula in Applied Plant Sciences	2018 - 2021	European Commission	Erasmus+	Montpellier SupAgro	€ 342,001	Zbyněk Polesný
Enhancement of livelihoods in the Kenyan Coastal Region by supporting Organic and Fair Trade certification of smallholders, Kenya	2017 - 2021	European Commission	SAIDC	Ten Senses Africa Ltd., Athi Business Park, Bamburi Rd., Athi River, Kenya	€ 1,900,000	Jiří Hejkrlić
Enhancing Whole Genome Sequencing (WGS) and/or Reverse Transcription Polymerase Chain Reaction (RT-PCR) national infrastructures and capacities to respond to the COVID-19 pandemic in the Czech Republic.	2021 - 2022	European Commission	ECDC	State Institute of Health	€ 3,473,394	Jiří Černý
LEAP4FNSSA (Long-term Europe-Africa Partnership for Food and Nutrition Security, and Sustainable Agriculture)	2018-2022	European Commission	Horizon 2020	CIRAD France	€ 5,136,250	Jan Banout, Vladimír Verner
Rural NEET Youth Network: modelling the risks underlying rural NEETs social exclusion	2019 - 2022	European Cooperation in Science and Technology (COST)		Instituto Universitario de Lisboa		Miroslava Bavorová

A more detailed description of some of these projects is contained in the chapter International Relations .

FOREIGN DEVELOPMENT COOPERATION PROJECTS

In 2021, 16 development projects in seven countries were implemented under the guidance or cooperation of the FTA experts. The implementation of development projects has aspects of international and research activities (applied research) and provides practical knowledge for students and teachers. The projects are financed from various sources, but mostly by the Czech Development Agency.

All development projects implemented under the leadership of the FTA are presented on the Faculty's website in both Czech and English. For more information see: <https://www.ftz.czu.cz/en/r-9423-projects-and-partnerships>.



The following development projects were implemented in 2021:

INCREASING SCIENTIFIC RESEARCH CAPACITIES AND SUPPORT OF EDUCATION AT UNIVERSITY OF MOSTAR AND UNIVERSITY OF DZEMAL BJEDIC MOSTAR

Principal investigator: Iva Kučerová, Jan Banout

Total budget: 2,000,000 CZK

Project duration: 2020 – 2021

Provider: the Ministry of Foreign Affairs of the Czech Republic

The aim of the project is to improve the level of scientific research skills and quality of education at the Faculty of Agriculture and Food Technology at the University of Mostar and the Agro Mediterranean Faculty of Dzemal Bijedic University in Mostar through implemented activities and outputs, which will focus mainly on the implementation of specialized training courses. The aim of the project is to increase the research and scientific-pedagogical skills of academic staff and students at both participating faculties and to prepare joint scientific publications in the form of articles. The project builds on the experience from the implementation of previous projects in Bosnia and Herzegovina and thus expands and deepens activities leading to a fuller interconnection of partner universities.

PROTECTING LAKE AWASA THROUGH SUSTAINABLE MANAGEMENT OF THE SURROUNDING LANDSCAPE (ETHIOPIA)

Principal investigator: the MENDELU in Brno, on behalf of the CZU: Zbyněk Polesný
Total budget: 25,270,000 CZK,
of which to the CZU: 367,000 CZK
Implementation period: 2019 – 2022

Unsustainable land management, erosion, soil degradation, and landscape pollution are among the main problems Ethiopia has been facing recently. As a result of poor landscape management, mainly due to deforestation, stripping of slopes by grazing, and subsequent erosion, the overall damage to the environment is alarming. Therefore, the project aims to improve the environmental conditions of the Awassa lake and its surrounding through the implementation of sustainable landscape management, reduction of water pollution, and clogging of the lake. At the end of the project, people of 11 kebeles will be able to manage their land in a sustainable way respecting the landscape. At least 370 ha of the land will be rehabilitated, reducing the percentage of degraded land around the lake by a minimum of 50%. Four kilometers of protection zone will prevent soil and waste from being flushed into the lake. The final group of beneficiaries consists of about 340 directly + 5,500 indirectly affected households, counting for at least 27,500 inhabitants, including children.



IMPLEMENTATION OF A FRUIT VALUE CHAIN FOR IMPROVED NUTRITION AND EFFICIENT PRODUCTION IN ARBA MINCH ZURIA

Principal investigator: the MENDELU in Brno, on behalf of the CZU: Vladimír Verner

Implementation period: 2019 – 2022

Even though fruit crops are staple ingredients in Ethiopian households, the average per capita consumption of fruit in Ethiopia is only 7 kilograms per year (the recommended consumption is about 21 times higher). Arba Minch Zuria is an important fruit-growing district, which accounts for 10-15% of total fruit production in Ethiopia. However, the potential of the area is much higher. Therefore, the project aims to introduce a fruit value chain to improve nutrition as well as the health of local people and to increase the market competitiveness of farmers. Specifically, the project focuses on the diversification of cultivated fruit crops, efficient storage, post-harvest processing, and subsequent market access. The project is implemented in four target kebeles under the local administration of the Arba Minch Zuriaworeda, namely Kolla Shara, Chano Dorga, Chano Cheleba and Chano Mile. Project activities and outputs should reach at least 2,000 households and 400 young people.

INTERUNIVERSITY COOPERATION AS A TOOL FOR ENHANCEMENT OF QUALITY OF SELECTED UNIVERSITIES IN UKRAINE

Principal investigator: Jana Hvozdovičová

Total budget: 4,536,600 CZK

Project duration: 2019 – 2021

Provider: the Czech Development Agency

The main aim of the project is to enhance the capacity building of management, young academics, researchers and master students at selected Ukrainian universities in the field of quality assurance, scientific research, cooperation with practice, and community involvement. The aim will be achieved through the active participation of the Czech university academics in sharing know-how and transferring good practice from Czech University of Life Sciences in Prague to partner universities. The project includes professional thematic workshops on quality assurance tools in practice, strengthening scientific and research activities, the proposal for the introduction of Green Office, and the transfer of know-how of business incubators at universities. An integral part of this is strengthening the partnership with the business community on student internships and a pilot strategy for regional development at the BTNAU university. The proposed project builds on the experience of implementation of previous projects in Ukraine and expands its activities, when in addition to SNAU and SSU the project also targets other universities - the Bila Tserkva National Agrarian University, the Kharkiv National Agrarian University, and the Dnieper State Agrarian-Economic University.

STRENGTHENING SCIENTIFIC CAPACITY AND COOPERATION OF UKRAINIAN UNIVERSITIES IN AGRARIAN SCIENCES (UKRAINE)

Principal investigator: Hynek Roubík

Total budget: 3,200,000 CZK

Project duration: 2020 – 2021

Provider: the Ministry of Foreign Affairs of the Czech Republic

The project aims to strengthen the capacities and cooperation of young teachers, researchers, and masters and doctoral students at selected Ukrainian universities by creating a platform - AgriSciences Platform for sharing information on Agrarian Sciences (8 key sectors - Agricultural engineering, Environmental economics, Ecological engineering, Forestry, Socio-economic aspects in Agriculture, Gender and Migration in Agriculture, Plant sciences, Agricultural Policy), as well as creating multidisciplinary scientific teams and announcing grant opportunities. In addition to the platform, a series of training opportunities (both Czech and Ukrainian experts) will be organised to improve the quality of scientific



outputs and publications, as well as to extend the knowledge of selected participants. Finally, yet importantly, the project will support information sharing and increase scientific and research capacities through the organisation of mobilities. 10 selected Ukrainian young scientists will be sent for an internship to the Czech Republic to the CZU. In addition, the last intended outcome of the project is to increase the motivation of Ukrainian students to study in the Czech Republic by way of the dissemination of information about the scholarship programme of the Czech Government. The proposed project builds on the experience from the implementation of previous projects in Ukraine and expands its activities to bring more deep links between universities dealing with agricultural sciences. Moreover, this link will strengthen cooperation not only between universities but also strengthen their role in the European Higher Education Area (EHEA).

DEVELOPING AN INTEGRATED APPROACH TO FARMING IN THE WESTERN PROVINCE OF ZAMBIA

Principal Investigator: MENDELU, on behalf of the CZU: Vladimír Verner

Total budget: 28,421,053 CZK,
of which to the CZU 1,646,000 CZK

Project duration: 2019 – 2021

Provider: the Czech Development Agency

The project focusses on improving agricultural production in the Western Province of Zambia. Special emphasis is placed on a holistic approach to farming (integrated farming). The main implementer is Mendel University in Brno, while the Faculty of Tropical Agriculture and the Faculty of Agrobiology, Food and Natural Resources are also involved in the project. The scope of work of the CZU within the project is to train farmers in the introduction, or improvement, and subsequent use of complementary production with higher added value, to link farmers to suppliers of quality inputs and buyers of products, and to support farmers in the development of business plans. During 2019, training of farmers in on-farm fish farming (aquaculture) and small mammals, the importance of neglected plant species in farming practices and human nutrition, and mapping linkages between farmers and suppliers of quality agricultural inputs began. The project works with about 800 farmers in four districts located along the upper Zambezi River.



AGRIBUSINESS FOR LIFE – LIVELIHOODS, INNOVATION, FOOD & EMPOWERMENT

Principal Investigator: the Charitas Czech Republic, on behalf of the CZU: Vladimír Verner

Total budget: 23,955,000 CZK,
of which to the CZU 2,060,000 CZK

Project duration: 2018 – 2021

Provider: the Czech Development Agency

The aim of the project is to increase productivity and diversity of agricultural production and incomes of better-off farmers and cooperatives through improved farming practices, promotion of underutilised plant species, value chains development, and better access to agrarian markets in selected districts in Western and Central Province.

PUBLICATION AND RESEARCH ACTIVITIES DEVELOPMENT FOR EDUCATION IN LIFE SCIENCES AT HAWASSA UNIVERSITY

Principal investigator: Bohdan Lojka

Total budget: 1,495,000 CZK

Project duration: 2021

Provider: the Ministry of Foreign Affairs of the Czech Republic

The aim of the project is to strengthen research and publication capacity at two agriculturally oriented colleges of Hawassa University (HU) in fields linking ecosystem diversity with sustainable agricultural intensification (agroforestry, molecular genetics, molecular ecology of animals, in-vitro plant technologies, soil science). During the project, academic staff from the CZU will continue to provide workshops and training to students and staff from HU and further assist with supervision of students' research activities, final theses, and scientific publications, and will organise workshops on scientific writing and statistical data analysis training.



IMPROVING THE STANDARD OF LIVING IN THE COASTAL REGION OF KENYA BY PROMOTING ORGANIC AND FAIRTRADE CERTIFICATION OF SMALL FARMERS (KENYA)

Principal Investigator: the Slovak Aid, on behalf of the CZU:
Jiří Hejkrlik

Total budget: 1,900,000 EURO

Project duration: 2017 – 2022

Provider: Trust for Africa (V4 project) /EU

The main objective of the project is to strengthen economic and employment opportunities in the coastal region of Kenya, especially for women and young people, through increased productivity, organic and Fairtrade certification, and improved marketing of cashew, sesame, and other identified crops as appropriate. The target group is 15,000 smallholder farmers. The project also aims to raise social, political, and economic awareness in the participating communities, especially among young people, primarily through the building of self-help groups.



TECHNOLOGY NEEDS ASSESSMENT FOR THE IMPLEMENTATION OF AZERBAIJAN'S NDC (NATIONAL DETERMINED CONTRIBUTIONS) TARGETS IN THE AGRICULTURE, LAND USE, LAND USE CHANGE AND FORESTRY SECTOR (LULUCF)

Principal investigator: Miroslava Bavorová

Total budget: 40,000 USD

Implementation period: 2021

The project specifically aims to support the Government of Azerbaijan and local partners in knowledge transfer in the field of agriculture and land use; in conducting a detailed analysis on the viable application of technological solutions in practice that will lead to the implementation of the GSP in the field of agriculture and land use; and in strengthening knowledge capacity for the use and development of the prioritised technologies.

TURNING WINE WASTE INTO PROFIT: POSSIBILITIES OF THE MOLDAVIAN WINE INDUSTRY

Principal investigator: Hynek Roubík
Total budget: 50,000 USD
Project duration: 2020 – 2021
Provider: UNDP

This project aims to assess the possibilities of local winemakers in terms of valorisation of their processing waste. Based on the preliminary data collection and interviews with stakeholders the briquetting technology has been assessed as the most appropriate technology for small-scale and medium-scale producers.

The project starts with the study of waste management flows among the wine makers in Moldavia. Based on the study, the technology of briquetting press and wood shredder will be implemented together with a small-scale biogas plant. Further on the implemented technology will be tested based on specific inputs in the target location. As a follow up, there will be organised study visits from local schools and local wine makers to observe the technology. At the end of the project, recommendations for further up-scaling and replication within the country will be developed.



PROMOTING TEACHING INNOVATION, RESEARCH DEVELOPMENT AND INTER-UNIVERSITY COOPERATION BETWEEN THE SAUM AND TSU (MOLDOVA)

Principal investigator: Tatiana Ivanova

Total budget: 1,280,600 CZK

Project duration: 2021

Provider: the Ministry of Foreign Affairs of the Czech Republic

The aim of the project is to innovate professional teaching, develop scientific research activities, and strengthen inter-university cooperation between the SAUM and TSU. The outputs of the project will be fulfilled by providing professional training for teachers and students of partner universities in the field of GIS applications, introducing an innovative course, equipping modern workplaces for teaching and creative activities, transferring Czech know-how in the field of higher education management, internship of the SAUM and TSU representatives in the Czech Republic, cooperation in scientific and publishing activities, and organisation of the International Scientific Conference and the SAUM and TSU Popularisation Day.

BIO-GAS TECHNOLOGY TO INCREASE COMMUNITY RESILIENCE IN THE WESTERN PROVINCE OF ZAMBIA

Principal Investigator: the Czech Development Agency, on behalf of the CZU: Jana Mazancová

Total budget: 24,500,000 CZK,

of which to the CZU: 3,315,000 CZK

Implementation period: 2021 – 2024

The proposed project will address the challenges described above by leveraging the potential of biogas technology for improved access to clean and sustainable energy and organic fertilizer. This will be achieved by employing a holistic approach to development of the biogas market and by integrating the following key components into the project design: a) increasing the demand for the technology, b) strengthening the supply side (including provision of products and services related to the biogas technology), c) improving access to finance and financial literacy of target farmers; and, finally, d) enhancing the knowledge and awareness of how to use outputs of the biogas technology for improved agricultural productivity, income, and household nutrition intake.

INCREASING PRODUCTIVITY AND SUPPORTING THE DEVELOPMENT OF MANGO, CASSAVA, AND ORGANIC FERTILIZER VALUE CHAINS IN WESTERN PROVINCE

Principal Investigator: Caritas Czech Republic, on behalf of the CZU: Vladimír Verner
Total budget: 15,251,130 CZK,
of which to the CZU: 828,909 CZK
Implementation period: 2020 – 2022

The project entitled Increasing productivity and supporting the development of mango, cassava, and organic fertilizer value chains in Western Province, Zambia aims at supporting value addition and contributing to agricultural productivity through realisation of five selected business plans. The implementation of this project builds on the outcomes of the first phase of the project named Farmers Capacity Building Focusing on Value Chains Development (implemented by Caritas Czech Republic as well), where 2 mango, 2 cassava, and 1 cashew value chain business plans were selected from emerging farmers-businessmen.



LONG - TERM PROJECTS

DERBIANUS CONSERVATION — ANTELOPE CONSERVATION IN WEST AFRICAN SAVANNA

Principal investigator: Karolína Brandlová

Project duration: since 2010

Provider: international grants and private donations

The NGO associates experts, scientists, students and enthusiasts who want to participate in biodiversity conservation and who want to change the fate of the Western Derby eland and the other antelope species in their habitat. Derbianus promotes the conservation of the whole ecosystem of the West African savanna. The NGO is based at the Faculty of Tropical AgriSciences, the Czech University of Life Sciences Prague.

The team has more than 20 years of experience in antelope conservation in West African savanna. The NGO provides scientific evidence for conservation management decisions, builds capacities for antelope conservation and provides support for field operations. Derbianus Conservation also developed and implemented environmental education and awareness programmes for everyone from school kids to the general public in many countries both in Africa and Europe and provides carefully designed educational and awareness materials for all types of public use with special focus on Western Africa (mostly in French).



AWARDS

JOSEF HLÁVKA AWARD FOR THE BEST STUDENTS AND GRADUATES

Ing. Tereza Slámová Ph.D.

Tereza Slámová is a graduate of the Ph.D. programme Sustainable Rural Development at the Faculty of Tropical AgriSciences. She has achieved excellent academic results with her thesis focused on the very important topic of monitoring the quality of fish processed in Cambodia. The results of her thesis have been published in 3 prestigious scientific journals with high IF. The results of her research are valuable to local authorities involved in monitoring food quality and setting food quality standards. As part of her research, she has collaborated with the University of Cracow (Poland), where she spent 6 months as a fellow, and in Cambodia with the Royal University of Agriculture (3 months).

THE RECTOR'S AWARD FOR THE BEST PUBLICATION OUTPUT OF CZU EMPLOYEES, LISTED IN THE NATURE INDEX

Thomas Bourguignon:

- Increased Mutation Rate Is Linked to Genome Reduction in Prokaryotes - CURRENT BIOLOGY
- Ocean currents promote rare species diversity in protists - SCIENCE ADVANCES

THE RECTOR'S AWARD FOR THE BEST PUBLICATION OUTPUTS OF DOCTORAL STUDENTS' RESEARCH WORK

Ing. Steffen Münch:

- Climate Change Adaptation by Smallholder Tea Farmers: a Case Study of Nepal - ENVIRONMENTAL SCIENCE AND POLICY



THE RECTOR'S AWARD FOR THE BEST PUBLICATION OUTPUT OF CZU EMPLOYEES IN JOURNALS RANKED IN THE 1ST DECILE IN WOS

Ing. Nikola Teutscherová, Ph.D.:

- No-tillage and liming increase the root mycorrhizal colonisation, plant biomass and N content of a mixed oat and vetch crop
- Gross nitrogen transformations in tropical pasture soils as affected by Urochloa genotypes differing in biological nitrification inhibition (BNI) capacity
- Liming reduces N₂O emissions from Mediterranean soil after-rewetting and affects the size, structure and transcription of microbial communities
- Pasture diversification affects soil macrofauna and soil biophysical properties in tropical (silvo)pastoral systems
- Response of soil properties and microbial indicators to land-use change in an acid soil under Mediterranean conditions

RNDr. Jiří Černý, Ph.D.:

- A human secretome library screen reveals a role for Peptidoglycan Recognition Protein 1 in Lyme borreliosis

Ing. Olga Leuner, Ph.D.:

- Feature-Based Molecular Networking to Target the Isolation of New Caffeic Acid Esters from Yacon (*Smallanthus sonchifolius*, Asteraceae)



Prof. Dr. Ing. Eloy Fernández Cusimamani:

- Feature-Based Molecular Networking to Target the Isolation of New Caffeic Acid Esters from Yacon (*Smallanthus sonchifolius*, Asteraceae)

Prof. dr. ir. Patrick Van Damme:

- Impact of insecticide and pollinator-enhancing substrate applications on cocoa (*Theobroma cacao*) cherule and pod production in Cote d'Ivoire

Prof. Ing. Bohdan Lojka, Ph.D.:

- Pasture diversification affects soil macrofauna and soil biophysical properties in tropical (silvo)pastoral systems

PROFESSOR STOKLASA PRIZE

Ing. Lukáš Pawera, Ph.D.

Lukáš Pawera is a Ph.D. graduate at the Faculty of Tropical AgriSciences. In his Ph.D. thesis, he investigated the relationship between crop diversity, nutrition, and food security of two ethnic groups living in rural areas of West Sumatra, Indonesia. This study was funded by an external grant received from the Neys-van Hoogstraten Foundation and also through the ALFABET mobility under the Erasmus Mundus Action 2 programme. Lukáš has experience in field scientific research and development activities in Indonesia, India, Thailand, Kyrgyzstan, Ethiopia, Poland and the Czech Republic. His publication activity includes nine scientific papers (seven are in Web of Science indexed journals), three chapters in monographs, and five technical manuals.



THE FTA DEAN'S AWARD FOR THE BEST SCIENTIFIC PUBLICATION OR POPULARISATION OUTPUT

Mgr. Barbora Černá Bolfíková, Ph.D.

After a long engagement in the research of the genetics of small mammals, Barbara's latest efforts resulted in a publication being accepted in Nature. The paper proved that antibiotic resistance in *Staphylococcus aureus*, which is an important human pathogen, evolved before the use of antibiotics in clinical practice. Resistance co-evolved with fungi which occur on the skin of hedgehogs and which produce penicillin-like substances. Increased attention by the public is expected as the topic has medical implications.

THE RECTOR'S AWARD FOR TEACHING ACTIVITY

The Rector's Award for Teaching Activities in 2021 was awarded to **doc. Ing. Tatiana Ivanova, Ph.D.** from the Department of Sustainable Technologies.



POSTDOC POSITIONS

The FTA has 6 postdocs, and all of them characterised by a variety of academic competencies, extensive research experience, great ideas, considerable energy, and above-average publication activity.



FTA Postdocs in 2021:

JIŘÍ ČERNÝ

RNDr. Jiří Černý, Ph.D. is interested in ecology, epidemiology and the evolution of viral zoonoses.

TERSIA NEEDHAM

Dr. Tersia Needham focuses on improving the welfare and meat quality of livestock and game species, using techniques like immunocastration.



MARKÉTA HOUDKOVÁ

Ing. Markéta Houdková, Ph.D. is a member of the Laboratory of Ethnobotany and Ethnopharmacology and is engaged in the assessment of the biological activities of plant extracts and substances for use in pharmacology.

NIKOLA TEUTSCHEROVÁ

Ing. Nikola TeutscheroVá, Ph.D. is focused on the influence of natural resource management on the taxonomic and functional diversity of soil microflora and soil quality.

HYNEK ROUBÍK

Ing. Hynek Roubík, Ph.D. is a member of the Biogas Research Team and works on family biogas plants in lower income countries.

MARTINA KOMÁRKOVÁ

Mgr. Martina Komárková, Ph.D. is interested in the ethology of wild and domesticated animals (mainly horses, but also cervids and antelopes).



FTA RESEARCH GROUPS

There are 14 research teams at FTA, which consist of academic staff, doctoral students and FTA students:

- **ANIMAL PHYSIOLOGY AND BEHAVIOUR RESEARCH GROUP**
- **BEHAVIORAL STUDIES IN AGRI-FOOD SECTOR**
- **BIOGAS RESEARCH TEAM**
- **CONSUMERS' BEHAVIOUR & CAPACITY BUILDING (COBE)**
- **COOPERATIVE RESEARCH GROUP**
- **E4 (ECOLOGY, EVOLUTION, EMERGENCE & EPIDEMIOLOGY OF ZOOSES) RESEARCH GROUP**
- **FOOD SECURITY RESEARCH GROUP**
- **MEGERA: MOLECULAR ECOLOGY, GENETICS AND EVOLUTIONARY RESEARCH OF ANIMALS**
- **TERMITE RESEARCH TEAM (TRT)**
- **TRIBE | TROPICAL BOTANY AND ETHNOBIOLOGY LAB**
- **TROPICAL BIODIVERSITY RESEARCH GROUP**
- **TROPICAL BIOTECHNOLOGY RESEARCH GROUP**
- **TRACE | TROPICAL FARMING SYSTEMS & ECOLOGICAL ECONOMICS**
- **WILDLIFE MANAGEMENT AND CONSERVATION RESEARCH GROUP**





INTERNATIONAL RELATIONS

THE IMPORTANCE OF INTERNATIONAL ACTIVITIES FOR THE FTA

International activities and cooperation with foreign partners are among the priority activities of the Faculty of Tropical AgriSciences (FTA).

The FTA's international activities in 2021 focused mainly on:

- Implementation of the Erasmus+ programme, incl. coordination of the Erasmus+ Capacity Building (PISAI), the Strategic Partnership (ESCAPAdE), and International Credit Mobility projects,
- Bilateral cooperation with institutions, especially in less developed countries,
- Active participation in the international association AGRINATURA,
- Implementation of development projects,
- Submission of new international projects.

However, all the international activities in 2021 were strongly affected by the global crisis associated with the COVID-19 pandemic.

Approximately 52% of FTA students (of the total number) come from 69 countries around the world (eg. Nigeria, Ghana,

Ukraine, India, Zimbabwe, Cameroon, Pakistan, Syria, France, Turkey, etc.).

Most of the modules are taught in English thanks to the Bachelor's programme International Cooperation in Agriculture and Rural Development, and the Master's programmes: International Development and Agricultural Economics, Agri-food Systems and Rural Development, Tropical Crop Management and Ecology, Tropical Forestry and Agroforestry, Wildlife and Livestock Production, Management and Conservation, and Tropical Farming Systems. Ph.D. level programmes are also taught in English: Tropical Agrobiology and Bioresource Management, Sustainable Rural Development, Agriculture in the Tropics and Subtropics.

FTA students are motivated to study English and other world and regional languages as part of their preparation for future professions and are also motivated thanks to the opportunity to participate in studies or training abroad within the Erasmus+ programme. The FTA participates in the organisation of seminars, training, summer schools, and research projects in cooperation with major world institutions. International development projects are also being implemented.

THE ERASMUS+ PROGRAMME

STUDENTS INVOLVEMENT IN 2021	NUMBER OF PERSONS	NUMBER OF MONTHS
Number of outgoing FTA students	12	82
Number of incoming students	32	135
Number of outgoing FTA students for training	9	23
Number of incoming students for training	5	13

STAFF INVOLVEMENT IN 2021	NUMBER OF MOBILITIES	NUMBER OF DAYS *
Outgoing FTA staff	27	173
Incoming staff	13	44

* Months/days of 2021 from the academic years 2020/21 and 2021/22

The Erasmus+ programme is traditionally one of the main activities within the international activities of the FTA. By 2021, the FTA had concluded bilateral agreements with the following 24 institutions:

- 1) The University of Wageningen, Netherlands
- 2) La Universidad Politécnica de Valencia, Spain
- 3) La Universidad Politécnica de Madrid, Spain
- 4) La Universidad de Castilla-La Mancha, Spain
- 5) The University of Kassel, Germany
- 6) The University of Hohenheim, Germany
- 7) Montpellier SupAgro, France
- 8) O Instituto Politécnico de Castelo Branco, Portugal
- 9) Szent István University, Hungary
- 10) Ghent University, Belgium
- 11) The Catholic University of Leuven, Belgium
- 12) L'Université Catholique de Louvain, Belgium
- 13) La Università degli Studi di Firenze, Italy
- 14) La Università degli Studi di Catania, Italy
- 15) Ondokuz Mayıs University, Turkey
- 16) Akdeniz University, Turkey
- 17) La Università degli Studi della Basilicata, Italy
- 18) The Agricultural University Plovdiv, Bulgaria
- 19) Die Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany
- 20) L'Haute École Charlemagne, Belgium
- 21) Josip Juraj Strossmayer University of Osijek, Croatia
- 22) The University of Angers, France
- 23) La Universidad de la Laguna, Spain
- 24) La Universidad de Cádiz, Spain.

ERASMUS+ PROJECTS

INTERNATIONAL CREDIT MOBILITY

In 2021, the FTA coordinated projects within the Erasmus+ programme the so-called “International Credit Mobility” projects. In total 12 projects from the calls 2019 (implementation period 2019-2022) and 2020 (implementation period 2020-2023) are running in the following countries: Albania, Algeria, Bosnia and Herzegovina, Cameroon, Georgia, Senegal, South Africa, Syria, Ukraine, and Vietnam. Due to the transformation of the Erasmus+ programme, a call for applications was not opened in 2021, but we plan to participate in the next call in 2022.

More information is available on the faculty website:

<https://www.ftz.czu.cz/en/r-9422-international-relations/r-10720-erasmus/r-16500-international-credit-mobility>.



Co-funded by the
Erasmus+ Programme
of the European Union



CAPACITY BUILDING IN HIGHER EDUCATION

The Faculty of Tropical AgriSciences is a partner in the Erasmus+ Capacity Building project “PISAI” - Participatory and Integrative Support for Agricultural Initiative, coordinated by the Prince of Songkla University. The project, with a budget of almost nine hundred thousand Euro, focused on the preparation of a joint double-degree Master’s programme in sustainable agriculture, which is implemented at four major Thai universities (Prince of Songkla, Kasetsart University, Chiang Mai University and Khon Kaen University). This study programme was enriched by 4 teaching modules (three-week field training) led by European project partners (Agrinatura, the Czech University of Life Sciences in Prague, Montpellier SupAgro, the University of Helsinki, and the University of Copenhagen). In 2021, the final conference of the project entitled “1st International Conference on Sustainable Agriculture and Aquaculture (ICSAA)” took place. It was attended by FTA students and teachers who presented their research contributions online. The project was successfully completed, and the project report was approved by the donor (EACEA).



STRATEGIC PARTNERSHIPS

The aim of the Erasmus+ Strategic Partnerships project called ESCAPAdE “EraSmus Curricula in Applied PlAnt SciEnces” was to align the content of the study programmes with the practical needs in the field of applied plant sciences and at the same time to support the mobility between partner universities.

This three-year project was coordinated by the Montpellier SupAgro University (France) and its partners were the FTA/CZU (the Czech Republic), La Universidad Politécnica de Madrid (Spain), La Università Politecnica delle Marche (Italy), The Democritus University of Thrace (Greece), Universität für Bodenkultur Wien (Austria), and The Swedish University of Agricultural Sciences (Sweden). The project was implemented from September 2018 to August 2021. In August 2021, the final meeting of the project partners took place in Alnarp, the campus of the Swedish University. At the meeting, there was a final inspection of documents, an evaluation of achieved goals and activities, and a joint reflection on future cooperation.

The main activities of the project focused on current issues in areas related to global change (e.g. climate, demography, new ways of crop protection), support

of student mobility in applied plant sciences, and improvement of the interaction between current and future actors: students, professors and researchers. The project brought together experts and academics within the given focus and concentrated on professional topics such as plant breeding and protection, sustainable plant production, and biodiversity management.



PREPARATION AND ORGANISATION OF SUMMER SCHOOLS AND SHORT-TERM COURSES

The organisation of summer schools and short-term intensive courses are among the priority areas of the international activities of the Faculty of Tropical AgriSciences. FTA teachers and students are actively involved in the organisation or participate in the summer schools organised by both the FTA and other faculties within the CZU Prague.

SUMMER SCHOOL IN BOSNIA AND HERZEGOVINA

An intensive summer course focussing on the processing of traditional and non-traditional foods and their quality was implemented within project No. 2021-PKVV-02 entitled "Increasing of scientific research capacity and supporting education at the University of Mostar and Dzemal Bijedic University of Mostar" funded by the Ministry of Foreign Affairs of the Czech Republic. This took place from September 16th to September 23rd 2021 on the premises of the Faculty of Agriculture and Food Technology of the University of Mostar in Bosnia and Herzegovina. The seminars were attended by students of partner universities as well as by students of the FTA CZU Prague. The topics of the course were as follows: food safety and sustainability, underutilised and neglected crops, new approaches and alternative food sources, edible

insects, micro-plants, innovative products, antioxidant and antimicrobial activity of herbal extracts.

The whole summer course was conceived in the form of theoretical lectures, which were followed by practical exercises in laboratories as well as in the field. There was also a workshop on basic laboratory skills, where participants learned about safety rules and rules of proper laboratory practice. This activity was very positively evaluated by the management of both universities, as well as by the participants themselves, not only due to the unique content of the course, but also, due to the opportunity to go beyond one's comfort zone and to experience and try very unconventional moments such as tasting of edible insects.

SUMMER SCHOOL IN SWEDEN

From August 17th to August 24th 2021, a summer school called "Host Plant Resistance Breeding" took place in Alnarp, one of the 4 campuses of the Swedish University of Agricultural Sciences (SLU). It was organised within the ESCAPAdE project – EraSmus Curricula in Applied PAnT SciEnces, a European project of the Erasmus+ Strategic partnership programme funded by the European Union, which ran from September 2018 to August 2021 and focussed on the development of plant sciences in response to global change (e.g. integrated crop protection and crop breeding). The summer school was attended by 40 Master's students from a number of European universities of the ELLS consortium, including 4 FTA students, 8 tutors – doctoral students, who led small groups of students and helped them to solve the assigned tasks.

AGRINATURA ASSOCIATION



The FTA is an active member of the international organization Agrinatura. The Secretariat of which has been based at the CZU Prague since 2004. It is the unique institution of this type in Europe, which is an important link between Europe and the Global South in agricultural research and education. The membership brings benefits in the form of exchange of information, contrasting visions, participation in international EU-funded projects and networking at European and global level. Since 2019, the new Secretary General has been

Ing. Tereza Slámová, Ph.D., who is a recent graduate of the doctoral study programme at the FTA. In 2020, Ing. Petra Chaloupková, Ph.D., dr. h.c. was elected Vice-president of this association and holds this position from May 2021 for the following 4 years.

Agrinatura member organizations are actively involved in a number of research and educational projects focused primarily on developing countries in the Tropics.

In 2019, Agrinatura renewed, in cooperation with the FAO, the Memorandum of Understanding which includes the FAO TAP (Tropical Agricultural Platform). The aim of this Memorandum is to increase national capacities for agricultural innovation.



In 2021, Agrinatura participated in the creation of an action plan for the coming years. Agrinatura also participates in the dialogue with the European Commission's Directorate-General for International Partnerships (DG INTPA) leading to greater involvement of science and research in political decision-making. The new initiative also includes the Nutrition Research Facility (NRF), which provides information and data to the European Commission in the field of nutrition, and the DeSIRA Lift project, which contributes to climate, productive and sustainable transformation in agriculture and food systems in low- and middle-income countries. Agrinatura is actively involved in Erasmus+ Capacity Building projects (e.g. FSCC) implemented in cooperation with Asian universities and SmartAI, implemented in cooperation with Albanian universities. Agrinatura is a partner of the PISAI project which enables a "double degree" at four Thai universities.

The FTA is actively involved in the activities of the international organisation Agrinatura. In May 2021, Vice-Dean for International Relations, Dr. Petra Chaloupková, attended the General Assembly meeting of this association online.

Agrinatura also actively cooperates with other European institutions such as YPARD (Young Professionals in Agricultural Research for Development), SEARCA (Southeast Asian Regional Center for Graduate Study and Research in Agriculture), and RUFORUM (Regional Universities Forum for Capacity Building in Agriculture). Since 2016, the YPARD Secretariat has also been based at the CZU.

HORIZON 2020

In 2021, for the third year in a row, the Faculty participated in the implementation of the H2020 project in the field of food security entitled "Long-term Europe-Africa Partnership for Food and Nutrition Security and Sustainable Agriculture (LEAP4FNSSA)". In 2021, an online webinar was organised as part of Work Package 1 between Central and Eastern European food security experts in Africa. The aim of this seminar was to support high-level political dialogue with the focus on the countries of Central and Eastern Europe.

The FTA is also part of Work Package 3, which addresses, among other things, the development of an open database of food security projects in Africa and around the world. More information about the project, which involves 34 other European and African institutions, in addition to our Faculty, and whose total EU budget exceeds 5 million EUR, is available at <http://leap4fnssa.netseven.it/>.



European
Commission

Horizon 2020
European Union funding
for Research & Innovation

STUDENT AMBASSADORS

Student Ambassadors of the Faculty of Tropical Agriculture (FTA) were established within the FTA Multicultural Centre in January 2021. A team of 12 students from Europe, Asia, Africa, and America are focusing on supporting newly arriving students via email, by sharing their own experiences and organising teambuilding activities online as well as in-person (online Meet and Greet, Game Night, supporting Welcome course). Student Ambassadors are contributing to FTA social media, providing links with alumni and friends of the Faculty (Alumni Speakers Series, Learn and Discuss) and cooperating with student and international organisations (BeFair, YPARD and Agrinatura). Moreover, they focus on sustainability issues (organising SWAPs, field trips, and promoting eco-friendly activities).

Student Ambassadors actively cooperate with the Faculty throughout the study and career development of the students, creating a friendly environment and promoting the university internationally.





FACULTY DEVELOPMENT

STRATEGIC MANAGEMENT SUPPORT PLAN (PPSR)

PPSR projects are funded by the Ministry of Education, Youth and Sports of the Czech Republic (MŠMT). In 2021 the following projects were implemented within MŠMT projects.

Main coordinator: Jana Mazancová

FTA promotion outside the the CZU campus started on (Jan 21) with the **Gaudeamus Fair Online** which took place as a live stream with a presentation introducing the FTA STUDY GUIDE by the Vice-dean for Education and Quality Dr. Jiří Hejkrlík. The next event took place again online due to the pandemic restrictions – **Congroo Fair** (Jan 25 – Feb 7) – a weeklong online presentation of the FTA's study programmes through live streams.

The FTA presented itself on **VědaFEST** fair (Sept 8) themed Digital World with a short video presenting its innovative solution – CZU mobiLAB, mobile laboratories for infectious disease testing.

Researchers Night / Noc vědců (Sept 24) took place live in the Pavilion of Tropical AgriSciences with the laboratories opened up for visitors, presenting the current research

conducted at the FTA, an essential oil quiz, and an escape game testing knowledge of animals.

The digital part introduced themes such as ethics in Fairtrade, mutations in viral genomes, and the historical development of biogas from early days until the present in the form of instructional videos by Dr. Hejkrlík, Dr. Černý and Associate Professor Roubík, as well as podcast talks with the



new Dean Prof. Van Damme on climate change fight entitled: ["No time to lose to address climate change."](#)

VIDEOS:

- [Ethics in Fairtrade](#)
- [Will a wolf become a lamb? Cumulation of Mutations in Viral Genomes](#)
- [How Time went with Biogas: from Ancient Assyria to the Present Day](#)

The FTA also ran digital campaigns on social networks, mainly Facebook and Instagram, aimed at attracting fresh high school graduates in cooperation with the CZU Communication Department.

A recruitment campaign entitled **Become who you want to be** presented current FTA graduates as role-models/influencers showing their current jobs to showcase possible career prospects and delivering the message of the impact of the FTA and the value of the degree: job careers, career preparedness.

The promotion of the FTA and the entire CZU also took place in all countries where the FTA implements development projects (Bosnia and Herzegovina, Ethiopia, Kenya, Moldova, Ukraine, Zambia), as well as in Senegal, Ghana and Zimbabwe through the influence of FTA doctoral and Master's degree students.



"Biodiversity conservation for current and future generations through cryopreservation of endangered species – that's a dream job that I get to have thanks to my studies at FTA CZU."

Stacy Denise Hammond
Hammond, Ph.D., an alumna
of FTA CZU, researcher,
Crop Research Institute (CRI)

**Become who
you want to be**

CZU Czech University
of Life Sciences Prague

INCREASE THE USE OF DISTANCE LEARNING METHODS IN FULL-TIME STUDY PROGRAMMES

Sub-part: Strengthening the quality of new forms of education

Coordinator: Olga Leuner

The aim was to improve the availability of study materials in electronic form, to introduce innovative solutions that will help to increase the efficiency and quality of distance education.

Conclusion - support developed:

1. Laboratory Rules, Procedures and Practices - an electronic resource useful in teaching courses that involve hands-on laboratory instruction and prepare learners for practice/work in the laboratory.

2. Practical Animal Handling, Sampling over Processing Guidelines - a set of protocols for animal handling, collection, and processing of faecal, blood and feed samples, recording and processing of biometric and behavioural data, analysis of blood biochemistry, parasite load, nutrient content of feed and faeces, analysis of social behaviour and status, etc.

3. Research Ethics and Academic Integrity - designed to support students in understanding the principles of research integrity and ethics, understanding the basics of good research practice, and helping them to be able to navigate issues

related to plagiarism, falsification of data, deception, and cheating, as well as other forms of academic dishonesty.

4. Small-scale biogas technology for waste management - this support, developed for students, aims at enabling the students in investigation and understanding the sources, quantities and characteristics of biodegradable waste produced by agriculture, the food industry, and municipalities (especially in tropical areas). Support includes biogas composition and properties, basic kinetic analysis, comparison of experimental and simulation results, and basic system dynamics of biogas technologies and their applicability in tropical areas.



STRENGTHEN THE QUALITY, OPENNESS, AND INTERNATIONALISATION OF DOCTORAL STUDIES

Sub-part: Strengthening the quality and internationalisation of doctoral studies

Coordinator: Olga Leuner

International internships are an integral part of the Doctoral Study Programmes (DSP) at the FTA, as it not only enhances the quality of the DSP but is also crucial in its internationalisation. The aim of the institutional plan sub-part was to support Ph.D. students in internships of a minimum duration of one month. The internships could be carried out at quality workplaces in the Czech Republic, but mainly abroad in academic institutions and in companies and other relevant organisations.

The following steps led to the achievement of the set objectives: i) announcement of the selection procedure (transparent conditions were drawn up and a selection committee was set up); ii) selection of students; iii) agreement with students: a contract was drawn up with each Ph.D. student containing the conditions that would be linked to the financial support; iv) implementation of the internships: the Ph.D. students completed their internships at a Czech or foreign workplace; v) follow-up and feedback: the graduates of the internships submitted reports on their stay.

Conclusion: A total of seven students were supported.



SUPPORT OF STUDENT MOBILITIES ABROAD AND LONG-TERM STUDENT STAYS OF FOREIGN STUDENTS AT CZU (MOBILITY)

Coordinator: Petra Chaloupková

The aim of this project is to support student mobility beyond Erasmus + projects in data collection at foreign universities as part of the elaboration of their Bachelor's, Master's and dissertation theses. In May 2021, FTA students were informed about the possibility of applying for a travel allowance for trips abroad for mobilities in order to collect data for their final thesis.

SUMMER SUPPORT OF SHORT-TERM MOBILITIES - SUMMER-SCHOOLS AND INTERNATIONAL CONFERENCES

Coordinator: Petra Chaloupková

This activity supports studies at partner European universities within the so-called Summer Schools, which are becoming increasingly popular with FTA students. In 2021, 6 FTA students were supported in participating in two summer schools.



ENHANCING THE REACH OF AVAILABLE INFORMATION ABOUT THE UNIVERSITY BOTH TO THE PUBLIC IN THE CZECH REPUBLIC AND ABROAD

Coordinator: Klára Jiříčná

Within the Project, information about the FTA's activities was disseminated through websites, Facebook and Instagram and media outlets (more in the chapter "The FTA in the Media"). At least one news item was published each month:

- The First International Conference on Sustainable Agriculture and Aquaculture for Well Being and Food Security
- The Student Ambassadors Hosted their First Event: A Successful Online Night In
- The Faculty of Tropical AgriSciences has elected a foreign national as a new Dean in an effort to expand its international positioning/ranking
- Molecules Webinar: Biological and Pharmacological Activity of Natural Plant Compounds
- PHOTO REPORT: Inauguration of the Dean, Prof. Patrick Van Damme
- Mobile laboratories CZU mobiLAB in Zambia
- The FTA calls for support for the Hodonín Zoo, devastated by tornado
- The power of family tradition: an interview with the new head of the FTA Botanical Gardens

- How does the tropical reality concern the Czech Republic?
- The FTA has extended its presence and partnership in Kenya
- The Pavilion of Tropical AgriSciences wins BEST WORKPLACE SOLUTION adapted to climate change
- A look back at the celebration of the 60th anniversary of the founding of the Faculty of Tropical AgriSciences



SUPPORTING EXTRACURRICULAR ACTIVITIES OF STUDENTS

Coordinator: Jana Mazancová

This project supported the students' own creative activity through the BeFair student association at the CZU, established at the Faculty of Tropical AgriSciences. Its activities are in line with the campaign promoting sustainable social responsibility. BeFair at the CZU organized events aimed at spreading awareness of responsible consumer behaviour, working conditions of farmers in developing countries, child labour, and individual assistance to contribute to change. The project supported the BeFair student association at the CZU and its events:

- Fair Trade Products Hunt (publishing photos of the top FT products on Instagram)
- Fair Trade Basics (instructional video presenting the FT on IG)
- Veggie March (sharing vegan and vegetarian recipes on IG)
- Going abroad volunteering (video promoting volunteering on IG)
- Fair Trade Recipes (sharing the best of FT recipes on IG)
- Researchers Night (introducing the BeFair organisation)



THE FTA IN THE MEDIA

Coordinator: Klára Jiříčná

The second year after the launch of the PR department, headed by Klára Jiříčná, the FTA managed to increase the number of media outputs yet again to 369, which represents a 14 percent increase in comparison with the previous year.

In 2021, the FTA gained most media coverage thanks to the following topics: the COVID-19 pandemic, the victory of the Pavilion of Tropical AgriSciences as the Best Workplace Solution, the appointment of the new Dean Prof. Patrick Van Damme and the deployment of CZU mobiLABs to Africa.

The FTA also achieved international coverage this year thanks to the research of Prof. Kokoška into the anti-cancer and anti-microbial potential of Samoan nutmeg, his interview being published in the Samoa Observer. The CZU mobilab deal which involved provision of mobile laboratories equipped for conducting tests for COVID-19 and other ailments, helping Zambia to fight the pandemic in inaccessible areas, was published in the Zambia Daily.

Prof. Kokoška was also featured in a 5-page interview for the Téma magazine introducing his research into volatile antimicrobial agents. He also appeared as a guest on Host Lucie Výborné's show at Český Rozhlas-Radiožurnál explaining



the connection between western medicine and alternative medicine. On Apr 21, he was featured as a guest on the popular talk show - Show Jana Krause - presenting his medicinal plant research among the indigenous tribes of the Pacific area.

The participation of the Pavilion of Tropical AgriSciences (PTZ) in the Adapterra Awards (AA) 2021 contest and its subsequent the victory of the PTZ in the AA 2021 as the best workplace solution adapted to climate change achieved the highest number of media outlets – nearly 100.

Dr. Černý appeared on the Otázky Václava Moravce political talk show in the Czech Republic as a main guest along with the head of the Czech Vaccinology Society. Furthermore, he became a regular guest expert as virologist at Czech TV's 90' news programme summing up weekly progress on the pandemic and appearing on TV NOVA and CNN PRIMA NEWS evening news. He also appeared as a guest on Czech Radio-Radiožurnál on Tereza Kostková's show Blízká setkání discussing the safety of the vaccination.

The appointment of a Belgian dean at the FTA was featured by many media outlets with the first interview in French for Radio Prague International, followed by coverage in the renowned Czech science magazine VESMÍR, Pražský Deník and more, peaking with a Czech TV science desk crew coming to the PTZ on the day of the new Dean's appointment to interview him on his vision as the first foreign dean at a Czech academic institution.



Assoc. Prof. Karolína Brandlová was featured in an interview for Reporter magazine on poachers and cattle as a threat to the survival of antelopes and Prof. Bohdan Lojka appeared on Radio Proglas talking on agroforestry benefits for the soil. The media also covered the 60th anniversary event resulting in an interview with Dean Van Damme about his future vision for the FTA.

A listing of the main media outputs is available on our website in the PR and media section.

ACTIVITIES OF FTA STUDENTS AND STAFF



BE FAIR AT THE FTA CZU

Affected by the restrictions of the second pandemic year, the activities of the Be Fair organisation took place partly online. Be Fair elected a new leadership – Filipp Melaj as chair and Tereza Beránková as vice-chair. Live events culminated in the organization of the International Fair Party, attended by approx. 150 ppl with the FTA OPEN DAY, marking the 60th anniversary of the establishment of tropical studies in the country.

The concept of the party involved short presentations from each of the different countries featuring their cuisine and customs (dance etc.). This year the participants hailed from Cambodia, Colombia, Ghana, India, Nigeria, the Netherlands, and Kurdistan. BE FAIR expanded its presence on social media, with Facebook users numbering 1393 followers and Instagram 388, as well as recruiting new members to the BeFair team.

CZU MOBILAB

CZU mobiLAB, the concept of mobile laboratories for detecting infectious diseases in inaccessible areas of the world using molecular biological methods originated by Dr. Roubík and Dr. Černý in 2020 as a response to the COVID-19 pandemic, continued into 2021. Under CINEz (The Centre for Infectious Animal Disease) and the research group e4 led by Dr. Černý, the CZU mobiLAB PCR Project was further developed with 3 mobiLABs being sent to Zambia as approved by local authorities.



“STUDY IN PRAGUE” PROJECT

The Study in Prague Project is a joint effort of Prague universities (The Czech Technical University, Charles University, The CZU Prague, The University of Economics and The University of Chemical Technology) to promote the capital city of Prague as an attractive place for international students.

Study in Prague (SiP) offers a unique choice of university studies from the five best and largest public universities in Prague. The study programmes offered are taught entirely in English, and the choice covers a wide spectrum - from Philology, Pedagogy, Social Sciences, Natural Sciences, Medicine, Architecture, Economics, and Management to Computer Science, Nanotechnology, Chemistry and Biotechnology, Mathematics, Nuclear Physics, Engineering, Agriculture and Forestry.

In particular, the SiP Project supports:

- 1) Active participation in international study fairs for post-secondary education.
- 2) Creation of joint printed promotional materials with the SiP logo, including the use of online marketing tools

- 3) Involvement of existing self-paying students, organisation of one joint event for international students of participating HEIs
- 4) Developing cooperation with international alumni
- 5) Development of SiP social networks, expansion of the SiP website
- 6) Participation in seminars on the recruitment of international students, quality improvement in foreign language programmes, etc.
- 7) Promotional trips to secondary schools with extended foreign language teaching (in the Czech Republic and abroad)

More information at <http://studyinprague.cz/>.



Study in Prague

OPERATIONAL PROGRAMME RESEARCH, DEVELOPMENT AND EDUCATION

The key principle of the Operational Programme Research, Development and Education (OP RDE) is the development in a human resources for the knowledge economy and sustainable development in socially cohesive society and it is supported by interventions in the context of several priority axes (PA).

This is followed by the theme of support for quality research, for which a qualified workforce represents the key input factor. Interventions in the field of education will also be supported by systemic changes that aim to improve the educational system of the Czech Republic.



EUROPEAN UNION
European Structural and Investment Funds
Operational Programme Research,
Development and Education

MSMT
MINISTRY OF EDUCATION,
YOUTH AND SPORTS

MODERNIZATION OF STUDIES AND STUDY PROGRAMMES, QUALITY AND CONSULTANCY AT THE CZU IN PRAGUE (THE “MOST” PROJECT)

Call number: 02_16_015

Call title: ESF call for universities

Project title: Modernization of studies and study programmes, quality, and consulting at the CZU in Prague

Project registration number: CZ.02.2.69/0.0/0.0/16_015/0002386

Total eligible expenses for CZU: 182,197,504.47 CZK

FTA's total budget: 6,429,000 CZK

Implementation of the Project: 1 July 2017 - 31 December 2022

Project Annotation:

MOST is a comprehensive project of the Czech University of Life Sciences in Prague aimed at increasing the quality of higher education provided by: raising the professional level of academic staff, reworking existing and creating new study programmes taking into account modern teaching methods, labour market and practice needs, and the requirements of students with special needs, quality evaluation systems and strengthening the strategic management of the CZU.

The Project is divided into key activities and the Faculty participates in only some of them. These are:

KA 2 - Improving educational activities and modern teaching trends,

KA 3 - The creation of new, and the modification of the content of existing, Bachelor's and Master's Study Programmes, taking into account the needs of the labour market and practice, and

KA 5 - Strengthening internationalisation

In 2021, the implementation of new study programmes created within the MOST Project in the University Information System was completed and our first students successfully graduated. The preparation and development of a personal safety course for undergraduate students and an English language course for Faculty staff continued, enabling more staff to obtain a Cambridge Certificate in Advanced English in spring 2022, demonstrating a high level of English in teaching and creative faculty activities. As a part of the Development of International Cooperation and Staff Mobility, the FTA International Council, the so-called Advisory Board, was also supported. It meets once a year at the FTA and evaluates FTA activities in the international field. In 2021 consultancy activities related to the strengthening of institutional and personal security management at the Faculty were initiated.

INCREASING THE QUALITY OF STUDIES AT THE CZU

Call number: 02_18_056 17

Call title: ESF Call for HEIs II in Priority Axis 2 of the OP

Project title: Increasing the quality of studies at the CZU

Project Reg. No.: CZ.02.2.69/0.0/0.0/18_056/0013123

Total eligible expenditure for CZU: 43,044,664.82 CZK

Total budget of the FTA: 2,140,165 CZK

Physical implementation of the Project: 1 January 2020 -
31 December 2022



Project Annotation:

Arising from this call is a comprehensive project aimed at increasing the quality of educational activities, introducing practical elements into study programmes, increasing the participation of students with special needs in education, the internationalisation of the CZU environment, the development of links between the university and graduates in relation to the employability of graduates in the labour market with the aim of implementing the strategic management of study programmes at the university and activities leading to increased interest in studying at the CZU among students from the University. The link between the Project and complementary ERDF II projects is significant. Following ERDF II activities, Real-Time PCR and food drying methods were introduced into selected courses. In September 2021, a special seminar on "Multicultural Environment and Study in the Czech Republic" was organized for foreign first-year students. Seminars on non-discrimination practices and attitudes were also held for academic and technical staff of the FTA and other parts of the CZU in November-December 2021. A 40-hour course aimed at increasing the competence of FTA staff in the use of modern technology in field data collection and at introducing the Spatial Survey and Monitoring method into the teaching of the Wildlife Survey and Monitoring, Wildlife Fieldwork and Protected Areas Management courses was postponed until 2022 due to restrictions associated with COVID-19.



HR EXCELLENCE IN RESEARCH

THE HR AWARD

The HR Award is a prestigious award given by the European Commission for excellence in human resources in a scientific environment. The CZU in Prague was awarded the HR Excellence in Research Award (The HR Award) on 12 November 2021, placing it alongside other prestigious institutions in Europe. With this award, the CZU confirms that it adheres to the rules set out in its Charter and Codes in the area of recruitment and employment of more than just its academic and scientific staff and proves that it is a quality employer for potential employees from all over the world. The HR Award was awarded to the CZU for a period of 24 months.

FTA employees are active members of working groups that revise or create documents in the field of implementation of the management strategy, ensuring the development of capacities, knowledge and skills of CZU employees, as well as the strategic setting and development of international cooperation in R&D, intersectoral cooperation and technology transfer, and development of the popularisation of R&D at the CZU. In addition, FTA employees actively participate in training courses that are organized at the CZU within the framework of the implementation of the HR AWARD principles.

INTERNATIONAL MOBILITY OF RESEARCHERS

The aim of this call is to support the professional development of researchers and the development of research organisations by strengthening human resources and enhancing international cooperation. Under this call, with the working title "PROMO II", the FTA received funding to employ one incoming post-doc from abroad for 10 months in 2020, scheduled to be recruited in September 2021. The call for applications closed in February 2021. Out of 44 applications submitted, the committee selected 29 valid applications. The best applicant was selected from Pakistan, however, due to the visa situation related to COVID-19, his mobility did not start as planned, and we now expect him to start in the first half of 2022.



FINANCIAL REPORT

MANAGEMENT OF THE STATE NON-INVESTMENT CONTRIBUTION AND SUBSIDIES IN 2021

DRAWING ON THE ALLOWANCE FOR EDUCATIONAL ACTIVITIES:

	ALLOTTED (in CZK)	DRAWN (in CZK)
Wages and salaries	17 270 000	17 229 451
Payroll deductions 35.22%	6 082 494	5 901 334
Educational activities - operation	1 361 253	1 634 589
International Relations	300 000	248 373
TOTAL	25 013 747	25 013 747

DISBURSEMENT OF FUNDS FOR SPECIFIC UNIVERSITY RESEARCH:

	SVV FTA	SVV FTA
The IGA Organisation	77 210	77 210
Organisation of a student scientific conference	235 000	235 000
Internal grants	2 840 000	2 840 000
TOTAL	3 152 210	3 152 210

BUDGET AMOUNT 2021/EXPENDITURE 2021

28 165 957	28 165 957
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DISBURSEMENT OF INSTITUTIONAL SUPPORT:

	RVO FTZ	RVO FTZ
Capital funds	450 000	450 000
Wages and salaries	7 554 378	7 529 082
Payroll deductions	2 660 654	2 532 336
Scholarships	167 021	257 350
Other current assets	913 281	976 566
TOTAL	11 745 334	11 745 334
BUDGETED AMOUNT 2021/EXPENDITURE 2021	39 911 291	39 911 291

OTHER:

University of the Third Age	22 000	22 000
Students with Specific Needs	82 750	82 750
Basic subsidy for students with governmental scholarship (category B)	97 296	97 296
Basic subsidy for foreign students, students with governmental scholarships – English language teaching (category G)	293 762	293 762
Government Scholarships B	168 000	168 000
Government Scholarships (Category G)	664 000	664 000
Achievement and exceptional scholarships for government scholarship holders	42 000	42 000
Achievement and Exceptional Government Scholarships (Category G)	98 000	98 000
Allowance for short stays	71 432	71 432
DSP Scholarships	11 846 250	11 846 250

PROJECTS FOR SUPPORT OF STRATEGIC MANAGEMENT:

PSSM NON-INV	1 217 300	1 217 300
PSSM INV	20 000	20 000

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