



Annual Report 2024



Faculty of Tropical
AgriSciences

Dean's Introduction

Dear colleagues, students and friends of the Faculty of Tropical AgriSciences, this is my last foreword, as by the end of April a new Dean will take over our beloved faculty. What awaits him, you will wonder...

Well, I think that he inherits a faculty in transition in the way that over the last months of 2023, a new career code and concomitant salary plan was launched at the university. The overall idea is to approach our teaching, but also research and service provision, in a - hopefully - better planned way where teachers' profiles and research thematic can be called in and developed that better to match and follow societal needs and appeals. Since the end of 2022 we saw the advent of Chat GPT with its artificial 'intelligence' (what's in a name...?) that is thought and believed will change the teaching and research landscape, the most recent development being the introduction of DeepSeek, an open-source and thus cheaper (even free ?) competitor to Microsoft's software. All these developments require all of us, be it students, teachers or researchers, but also administrative support staff, to step up our efforts to understand the possibilities, but also the weaknesses and limitations of these new tools. AI already challenges the way students are evaluated, is indeed a tool that may help in writing essays, proposals and such, but can't replace the critical attitude that comes with science (teaching and praxis). So, the challenge now becomes to train students and scientists in critical thinking, and critical assessment of what AI may produce. This clearly is not an easy task in a world that is more and more ruled by 'fake news' and led by superficial, populist people who call themselves leaders and politicians (not to mention Trump...).

These last few sentences bring me to an appreciation of the international 'peace' and political situation. In last year's welcome word to the 2023 annual report, I had expressed my hope that 2024 would have brought back peace and normality. But again, my hope was in vain. Globally, the situation has worsened, with a number of 'silent' conflicts coming more and more into the open. Think the Kivu region where, according to the Rwandese president Kagame to his knowledge there are no Rwandese soldiers present - fake news, anyone? But also think South Sudan, Yemen (with the Houthi), and of course Gaza, and Ukraine. Apart from the latter conflicts, the driving forces are mostly power and

greed. Greed makes the world go round with Musk et al. as almost absurd (if it weren't so serious what's happening) examples.

One might argue that in the almost secluded world that a campus is, we don't feel it so much. However, several security mishaps even here in Suchdol have shown that we need to be careful and need to be critical of what drives people but also need to care for one another. So, I can only repeat what I wrote last year: 'Optimism is a moral duty' - but this moral duty is continuously challenged by reality.

With all this, I haven't mentioned the so-called elephant in the room. The climate, and the speed and pace at which it is changing. For some it is no longer five to twelve, but already five after twelve. Time will tell whether we, the 'world', will be able to redress the situation. Even though I myself am basically an optimist, I must admit that here I am rather pessimistic. At least we here at the faculty try to address and do research on a number of burning questions (pun not intended). Biodiversity, ecology, coping strategies, water harvesting techniques, just to name a few are research themes that we have developed in the past, and will further emphasize in future. I hope that you will us support all in our efforts. I would like to finish by highlighting the relatively new online MSc course programme on agro-ecology. If you are a believer, you go by the idea that agro-ecology might help save the world, so teaching (and doing research) about this shows us to be committed to this cause. As such, the programme fits very well in what could and should be the faculty's motto: *erudimus qui custodient terrae fertilitatem* (we train those who will safeguard the soil's fertility).

Ave atque vale!

PROF. DR. IR. PATRICK VAN DAMME
THE DEAN



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Basic Facts about Faculty

Introduction

The Faculty of Tropical AgriSciences of the Czech University of Life Sciences Prague (CZU) is a unique centre of research in our country with what is now a 60+ year 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.

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

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 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 the development of new insights into the broad field of (sub)tropical life sciences and the application of 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 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 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) FTZ CZU (in English)
FTZ (in Czech) FTZ (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

Mgr. Dagmar Dočkalová

First Vice-dean and Vice-dean for International Relations

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

Vice-dean for Science, Research and Doctoral Study

doc. Ing. Hynek Roubík, Ph.D.

Vice-dean for Education and Quality

Ing. Jiří Hejkrlik, Ph.D.

Vice-dean for Development

doc. Ing. Klára Urbanová, Ph.D.

TAB 1.1 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	FTZ Botanic 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 CROP SCIENCE AND AGROFORESTRY

The mission of the Department is to perform 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 crop diversity. In terms of education, the Department focuses on the cultivation, use and ecology of tropical crops with emphasis on traditional small-scale farming systems (e.g. agroforestry), but also on the use of modern methods, such as plant biotechnology, supplemented by specialised disciplines such as ethnobotany and chemo ecology.

The research of the Department focuses on the selection and research of new crops (and especially on neglected and underutilised species with promising economic value) and the conservation of their genetic resources. Research includes ethnoecological studies of small-farmer communities and indigenous 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 Molecular Biology Lab focuses on the genetic characteristics of crops, especially on research into the population genetics of tropical agroforestry trees. The Plant Tissue Culture Lab focuses on research into new methods of in vitro propagation of plant material for the production of genetically identical and healthy planting material. The Ethnobotany and Ethnopharmacology Lab 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 Soil Biology, Ecology and Environmental Research Lab focuses on the evaluation of soil biodiversity and the functions of soil organisms in the conversion of nutrients. The Department also operates a programme of voucher specimen collection.

The Department currently employs a total of 10 academic staff (3 full professors, 2 associate professor, 3 assistant professors, and 3 researchers) and more than 30 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 conducted in the form of student diploma dissertations with the aim of their publication in the form of scientific articles (in 2024, the members of the Department participated in the publication of 35 articles in journals with IF). Johana Rondevaldová has successfully finished the process of her habilitation to become the second associate professor at the Department. Eleven doctoral students also successfully defended their dissertations in 2024.

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 freshly re-accredited Master's Degree programme *Wildlife and Livestock Production, Management and Conservation*, which the department guarantees: 1) sustainable animal production and 2) wildlife management and conservation.

The research and pedagogical activities in sustainable animal production focus on applying modern knowledge about livestock farming in the Global South. The primary emphasis is on the breeding and utilization of local species and breeds of animals, their nutrition, feeding, disease prevention, and welfare.

Within the specialisation dedicated to wildlife, Department members deal with ecology, population management and conservation, and the agricultural use of native species in the Global South. The Department primarily concentrates on the protection and population management of ungulates, the mitigation of conflicts between wildlife and humans or livestock, the management of protected areas, and environmental education in developing countries. Both specialisations are linked by our genetic research, which mainly focuses on the genetic viability of species.

Since 2000, Department members have been involved in Western Giant Eland (*Tragelaphus derbianus derbianus*) conservation in Senegal. They implement projects to protect the antelopes in the West and Central African savannah under the auspices of the Antelope Conservation NGO. Since 2006, the Department has managed farm breeding of the Common Eland (*Tragelaphus oryx*) at the CZU Experimental Farm in Lány, where a guanaco llama farm (*Lama guanicoe*) was also established three years later. The Department 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, the Emergence and Epidemiology of Zoonoses), MEGERA (Molecular Ecology, Genetics and the Evolutionary Research of Animals), and the Wild Ecology Lab. Research activities of the Department are funded by various grants from the Ministry of the Interior, Horizon 2020, the Developmental Agency and by means of contracted research. In 2024, the Department had a total of 9 core academic staff, 7 persons working on positions within projects, two technicians and 33 doctoral students of which four successfully defended. Members of the Department published 30 articles with IF.

DEPARTMENT OF SUSTAINABLE TECHNOLOGIES

The Department of Sustainable Technologies focuses on research in fields that have a direct impact on security and agricultural and rural development in the tropics and subtropics. The Department's research is oriented towards bioresource and agriculture technology, food processing technology and food security. The Department also focuses on monitoring the impact of environmental and climate change on agriculture in tropical environments and developing countries.

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 TACR, Horizon 2020, Horizon Europe and other donors. Additional funding comes from the Czech Republic's foreign development cooperation programmes, where the Department is addressing or participating in addressing a significant number of projects at the Faculty. The Department operates the Laboratory of Biofuels, BRT-laboratory (Biogas Research), the Food Processing Technology Laboratory and the Termite Biology Laboratory. The Department is involved in teaching in most of the accredited programmes of the FTZ. The DST is a guarantor of the MSc programme *Agri-food Systems and Rural Development* and the Ph.D. programme *Sustainable Rural Development*. Both are taught in English. The Department also provides

teaching for foreign students within the Erasmus+ exchange programmes.

Currently the Department has a total of 9 academic staff including two professors, six associate professors, and two assistant professors. In addition to the academic staff, there are 19 Czech and foreign Ph.D. students.

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

The Department has long-term experience in analysing the economic, environmental, and social aspects that affect the sustainability of agricultural production, natural resource management, added value generation, and the commercialisation of agricultural production. Topics such as migration, consumer behaviour, agricultural policy, adaptation to climate change, profitability and sustainability of farming systems, collective action of small producers, and various forms of certification have become an integral part of the research.

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). The academic staff is also involved in teaching in other programmes of the Faculty and cooperates with partner universities in Czechia and Europe (namely Belgium, France, Italy, Germany, Spain, Denmark, Sweden and Greece) and in countries of the Global South (e.g. Ethiopia, Indonesia, Cambodia, the Cameroon, Kenya, Nepal, Ukraine and Zambia).

The main emphasis is given to the interdisciplinary character of research with the connection to practice. This is achieved through cooperation with global research organizations and institutions (high-ranked 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 22 scientific articles indexed in the Web of Science database in 2024. The Department also continued implementing R&I projects funded by Erasmus+, the EUTF for Africa, the GCF/FAO, Horizon 2020, and Czech development assistance.

In 2024, Vladimír Verner has successfully finished the process of habilitation to become an associate professor at the Department. So the Department consisted of seven regular academic staff members, including two associate professors and five assistant professors, out of whom two hold the position of vice-dean of the Faculty, and 24 Ph.D. students supervised by four internal and external specialists.

Vladimír Verner has successfully finished the process of habilitation to become an associate professor at the Department.

BOTANICAL GARDEN

The main mission of the Botanical Garden of the Faculty of Tropical AgriSciences, CZU Prague is to support the educational and scientific activities of the FTZ by providing plant material and facilities for study and research projects. Our long-term goal is not only to maintain and expand collections of tropical and subtropical crop plants but also to support biodiversity conservation through collaboration with academic and scientific institutions.

The Botanical Garden continues to support scientific research focused on the ecology of tropical plants, their adaptation to climate

change, and their potential use in sustainable agriculture. The garden also actively engages in environmental education and the popularization of tropical and subtropical crop plants, making it a valuable tool for educating the general public. In 2024, we continued to make our plant collections accessible to experts and the public, not only through exhibitions but also through guided tours, practice and lectures, which are part of our wider education programme.

The Botanical Garden annually publishes an *Index Seminum*, a catalog of seeds collected in the Botanical Garden over the last year. These seeds are available for free exchange with other botanical gardens and research institutions worldwide, regulated by international conventions ensuring that the seeds are used only for non-commercial purposes. Students and researchers can also request seeds for their scientific research and projects.

Living plant material from the Botanical Garden is regularly provided not only for teaching at our faculty but also for various events such as open days, excursions, and specialized seminars. This material is used for practical teaching and supporting educational activities, which are part of our regular programmes for students and the public.

The Botanical Garden provides facilities for student teaching (from various faculties of the Czech University of Life Sciences Prague,) participates in seminars, conferences, professional meetings, and other specialized events focused on tropical and subtropical crop plants. The garden has also become a venue for podcast recordings and thematic exhibitions. Additionally, it is open for excursions and lectures, which are part of the curriculum of the University of the Third Age, organized by schools, universities, and institutions across the Czech Republic.

SUMMARY OF 2024

The year 2024 was a period of continued development and the consolidation of changes initiated in previous years. The director of the BG FTZ, Ing. Anežka Daničková, continued her efforts to maintain the quality of collections while implementing new approaches aligned with best practices in the field. The Botanical Garden team, consisting of nine members (three of whom are part-time), continues to take care of the plant collections, develop new exhibitions, and actively promote the BG. The team includes six university graduates, one graduate of a higher vocational school in horticulture, and two secondary school graduates in horticulture.

In 2024, the Botanical Garden continued the process of inventorying and digitizing its plant and seed collections. This extensive digitization not only improves collection management but also highlights the uniqueness and biodiversity of the garden's crop plant collection. With a collection unparalleled in Central Europe, the FTZ Botanical Garden is establishing itself as a key institution in the protection and conservation of tropical and subtropical crop species.



Another significant event in 2024 was the announcement of the National Collection of Tropical Crop Plants, which became a valuable addition to the existing National Citrus Collection. This new collection, originally founded in 1970 by Professor František Pospíšil, has gradually expanded into an extensive collection of plants with diverse uses in food, pharmaceuticals, textiles, and other industries. The collection includes more than 297 species of tropical utility plants, including fruits, spices, medicinal plants, and other economically valuable species with great potential for scientific research.

In 2024, the Botanical Garden modernized its communication channels, increasing the visibility of its activities. In addition to updating its website, the garden developed its Facebook profile, where news and updates about activities are regularly shared. This step improved public awareness of the garden's collections and educational programmes.

New educational worksheets were created for excursions of kindergarten and primary school students in 2024. These worksheets use a playful and interactive approach to help children understand the significance of subtropical crop plants. This initiative is part of a broader environmental education programme aimed at inspiring younger generations to develop a deeper interest in nature and in biodiversity conservation.

In 2024, the FTZ Botanical Garden published the 52nd Index Seminum, containing 650 items, which was offered to more than 200 Czech and international botanical gardens.

The garden also actively participated in organizing thematic exhibitions in collaboration with the Czech Association of Botanical Gardens, and regularly held guided tours during events at the CZU and FTZ, such as Open Days, the Garden Festival, the Open Garden Weekend, the Night of Scientists, and more. In 2024, the Botanical Garden also participated in the prestigious Země Živitelka exhibition in České Budějovice. The Botanical Garden Day, held on May 22, 2024, was another event where the Botanical Garden played a key role in promoting and educating about the importance of botanical gardens. Throughout the last year, numerous excursions, practical training sessions, research projects, student teaching sessions, and workshops took place in the garden, covering topics such as citrus grafting and Cucurbitaceae plants.

RESEARCH ACTIVITIES

In 2024, the BG continued its close collaboration with the "Tropical Biotechnology" research team, led by Prof. Ing. Eloy Fernández Cusimamani, Ph.D. and Ing. Iva Viehmannová, Ph.D. (FTZ). This team focuses on breeding medicinal and ornamental plants through induced polyploidy *in vitro*. The primary research takes place in the Plant Explant Laboratory of the FTZ CZU, after which the newly obtained genotypes are cultivated and maintained in the BG FTZ, where the plants are examined primarily from a morphological perspective. In 2024, the cultivation of the following plant species continued: *Mentha spicata* L., *Melissa officinalis* L., *Solanum muricatum* Aiton, *Rosmarinus officinalis* L., *Satureja montana* L., *Moringa oleifera* Lam., *Melaleuca bracteata* F.Muell., *Macadamia integrifolia* Maiden & Betche. These research activities are still ongoing, as well as the maintenance of an extensive collection of yacon (*Smallanthus sonchifolius* (Poepp.) H. Rob.) for scientific purposes. This South American root crop is cultivated during the vegetation period under field conditions in the BG FTZ area, while in winter the propagation materials (caudexes) are preserved in greenhouses.

PROFESSIONAL ACTIVITIES

In 2024, the BG recorded educational videos in collaboration with the Ministry of Education, Youth, and Sports and the National Recovery Plan. These videos serve FTZ students but are also available to the general public interested in tropical and subtropical crop plants.

FLORIUS

In 2024, preparation was underway for a new version of the Florius database for plant cataloguing, which will better meet the needs of botanical gardens. The Botanical Garden of the FTZ CZU participated in information meetings focused on improving this system.

DEVELOPMENT/PROJECTS

In 2024, the BG applied for a grant project announced by Prague City, focused on ecological education. Through guided educational tours, the project aims to introduce primary school students to the world of tropical and subtropical crop plants. The programme is interactive, educational, and focuses on ethical, sustainable, and ecological aspects of



cultivating these crops. The garden also continues to engage with the local community and involve it in activities at the CZU.

SUPPLEMENTARY ACTIVITIES

The sale of spring seedlings remains a significant part of our supplementary activities. These seedlings primarily serve as plant material for research work and practical skills development for students, but they are also very popular among CZU employees and the general public due to their quality and wide variety. In 2024, this supplementary activity generated revenue of 209,884 CZK from our own cultivated plants, confirming the interest in our products and the economic benefit of this activity for the Faculty of Tropical AgriSciences.

MEMBERSHIP IN INSTITUTIONS AND COOPERATION WITH ORGANIZATIONS

Since 2011, the BG has been an active member of the Union of Botanical Gardens (UBZČR). Through UBZČR, there is intensive cooperation with other member botanical gardens, including regular exchange of information about current events in individual gardens. The Botanical Garden also collaborates with state administration bodies through UBZČR, gaining valuable information about updates concerning legislative changes and requirements arising from the Czech Republic's international commitments. In 2024, the BG participated in several events organized by UBZČR, including:

- A professional excursion of botanical garden representatives (Slovakia 07/2024)
- A professional excursion of the Union of Botanical Gardens 2024 (Kostelec nad Černými lesy 08/2024)
- A UBZČR Conference, which focused on the education of botanical garden managers and sharing professional experiences (11/2024).

Additionally, the Botanical Garden of the FTZ hosted the General Assembly of UBZČR, which brought together representatives of botanical gardens from all over the Czech Republic (01/2024). The day's agenda included a recap of UBZČR activities for 2023 and plans for UBZČR and botanical gardens for 2024, discussion of organizational matters, several expert lectures, and the awarding of honorary memberships. Honorary memberships of UBZ ČR were awarded to notable personalities from the world of botany and natural sciences for their lifelong tireless work: Ing. Milena Dvorská, CSc., Mgr. Václav Větvíčka, Marie Hlaváčová, and Ing. Zdeněk Hlaváč. These experts have significantly contributed to the development of botanical gardens, the popularization of botany, and public education in the natural sciences. Marie Hlaváčová and Ing. Zdeněk Hlaváč dedicated their entire professional lives to tropical and subtropical crop plants. Their deep knowledge in this field helped to spread awareness about the importance of these plants not only among experts but also among the general public. They always willingly shared their experiences with future generations of botanists, growers, and enthusiasts, both through professional publications and through personal consultations and lectures. They were known for their helpfulness, willingness to advise, and enthusiasm for botany, which inspired many of their colleagues and students. Their contribution to the field of tropical and subtropical plants is invaluable, and their work has left a lasting mark on the Czech botanical community and at the Czech University of Life Sciences.

- In 2024, the collaboration between the BG and the Ministry of Environment continued, leading to the recording of a new series of podcasts with well-known Czech personalities. The interviews

again took place in the tropical greenhouse of the BG FTZ and were moderated by naturalist doc. RNDr. Ladislav Miko, Ph.D.

- The BG FTZ continues to successfully develop a mutually beneficial cooperation with the National Agricultural Museum. As part of this cooperation, the Garden participated in organizing a workshop on Bouquet garni, which took place during Herb Day (04/2024) as part of a programme organized by the National Agricultural Museum.
- Cooperation with LAND CRAFT SPIRITS continues within the framework of a pilot project for circular distillates and other innovative projects. Plant waste material that would normally end up in compost is now utilized, for example, in the production of a "Circular Citron" drink, which is part of a broader project focussed on the circular economy.
- Interfaculty cooperation between the BG FTZ and the Faculty of Agrobiology, Food and Natural Resources of the CZU in Prague continues. The FAPPZ Food Pavilion provided space for the production of chili pastes and preserved goat horns, with its employees participating in securing the necessary legal documents and creating labels for the sale of the finished products. This project is part of the university's supplementary activities and allows for the effective use of material that would otherwise remain unused. The processed products are subsequently offered to customers in the University Shop (UM), which supports a sustainable approach to managing plant resources and at the same time presents practical outputs of interfaculty cooperation.

MARKETING AND PUBLIC RELATIONS – SUMMARY

The year 2024 was characterized by a greater emphasis on marketing and PR. The Botanical Garden focussed on optimizing this area, especially on properly targeting promotion and presentation. Interest in the BG is also growing, thanks to supplementary activities, such as greenhouse rentals, sale of plant surpluses, lending plants for balls, conferences, television filming, and more. In 2024, the Botanical Garden prepared floral decorations for significant events, including conferences, Open Days, Miss Agro, balls (including the CZU Ball), and contributed plants to raffles. The greenhouse space is actively used not only by the Czech University of Life Sciences but also by the general public (for example, for podcast recordings, interior photography, etc.).

Thematic exhibitions are gaining great popularity, including the traditional autumn exhibition of chili peppers, which in 2024 was held for the tenth time. More than 120 taxa of chili peppers from our collection were on display at this exhibition. The Botanical Garden continued its media activities, with BG FTZ representatives participating in television recordings and providing radio interviews. On the occasion of Botanical Gardens Day (May 22, 2024), there was also a live broadcast, which significantly contributed to broader promotion and better public awareness of the existence and activities of the BG.

In 2024, 100 guided tours took place in the Botanical Garden, of which:

- 4 were for kindergartens
- 16 were for primary schools
- 3 were for secondary schools and grammar schools
- 77 were for others (Universities, U3V, interest groups, foreign delegations, etc.)

The total number of visitors exceeded 3,367, which is 1,041 more people than in 2023.

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 FTZ. Researchers at CINEZ deal with the issue of infectious animal diseases and zoonoses. On behalf of the FTZ, the activities of CINEZ are conducted mainly by the "e4 research group" led by Dr Jiří Černý and the "CZU mobilAB" team led by Dr Roubík.

In 2024, the CINEZ FTZ research teams worked on research into numerous animal infectious diseases and zoonoses. We continued in our research of coronavirus SARS-CoV-2 in animals but we also focused on other pathogens like Crimean-Congo hemorrhagic fever virus, African swine fever virus, coxiella bacteria etc. We monitored the importing of these pathogens to Czechia via illegal trade with animals and animal products. Further, we continued with a project focused on the establishment of mobile laboratories by preparing an upgraded version of the CZU mobilAB, which would be more suitable to work with even more dangerous biological agents at even higher levels of biological safety and at higher quality standards. We obtained a TAČR grant to perform a field test of these laboratories in Czechia as well as in tropical countries. Finally, in 2024, CINEZ employees also participated in basic research and the teaching of students.

COMMON ELAND AND GUANACO RESEARCH FACILITY

Since 2002, the FTZ has been managing Common Eland (*Tragelaphus oryx*) breeding and since 2009 also the breeding of Guanacos (*Lama lama guanicoe*). The research facility is located at the CZU Farm Estate in Láň, where a barn with a handling system and paddocks for the Common Elands were opened in 2006, and paddocks with shelter for Guanacos were opened in 2009.

Despite the fact that the facility was established for the production of live animals and meat, the predominant interest of the FTZ is research, whether carried out in the form of student work or research projects with international cooperation. Over the years, the facility has been used in practical student training, student internships, for student and public excursions and demonstrations of a unique intensive breeding method for 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 establishing an integrated agroforestry system. For the llamas, this involved the transformation of non-productive apple plantations by cutting and debarking into new plantings in high-stem orchards. In the antelope enclosure, a handling system is in regular use, enabling contactless separation of the animals, weighing and fixation, which allows sampling and examination of the animals without the need of anaesthesia. This handling system also includes automatic scales. Sample collection continues regularly every month, allowing a long-term data collection for blood biochemistry analysis, hormonal level analysis, body condition, weight gain, and behaviour of the animals. Students regularly join routine handling within the practical subject *Animal Handling, Sampling and Processing* where they participate in animal manipulation, sampling, and subsequent analyses including data processing. Bachelor students do regular practical training which lasts one week. Several research projects have been carried out. Currently an ERDF project is under preparation to improve education at the Research Facility by building a new observation and teaching room for the incoming students.

THE COMMON ELAND FARM

Eland husbandry was carried out similarly to previous years with a total overwintering capacity of 50 adult individuals. At the beginning of 2024, the total number of animals was 35 individuals (2 adult males, 17 adult females, and 16 juveniles under 2 years of age). We detected an increased interest in live animals in 2024. In total we sold 4 females, and one female is still pending due to a Bluetongue epidemic and a consequent ban on animal transport. We also encountered one lethal injury of one juvenile male due to an accident when the animal put his head between the bars of the inner structure and another animal charged at him, resulting in a broken neck of the animal "attacked".

A total of 7 calves were born and thrived during the year 2024 and continued to be weighed and measured regularly at monthly intervals to monitor growth and health status. At the end of 2024, the number of animals was 33 individuals (4 adult males, 13 adult females, and 16 juvenile animals up to 2 years of age). The number of animals is currently kept lower than in previous years as we expect reconstruction of the Facility at the beginning of 2025. In certain stages of the reconstruction the animals will have to be closed inside the barn and the lower number of animals prevents the possibility of conflicts between individuals.



THE GUANACO FARM

We entered 2024 with a population of 17 individuals (3 males, 8 females and 5 juvenile animals). As in the case of the Eland, we noted an increased interest in live animals and thus we sold two adult males and two juvenile females. We lost one male, probably due to coccidiosis. We brought one adult female from ZOO Ústí nad Labem as a deposit animal. Two more calves were born in 2024. At the beginning of the year the main stud male and the new male brought from Prague Zoo were separated into different enclosures. Later, when the stud male was sold, the herd was unified and could move freely across both enclosures. A new handling box is planned to be bought in 2025 to enable regular handling of the animals as in the case of Elands. In the paddocks, the transformation of a non-productive apple orchard into a high-stemmed mixed orchard continued. At the end of 2024 we had 15 animals in total (1 male, 9 females and 5 juveniles).



The Academic Senate

The FTZ Academic Senate (FTZ AS) members in 2024 were as follows: Ing. Barbora Motýlová, Ing. Miroslav Mulko and Bc. Mikuláš Středa as student members, and doc. Dr Tatiana Alexiou Ivanova, prof. h. c., Ing. Tamara Fedorova, Ph.D., prof. Ing. Ladislav Kokoška, Ph.D., Olga Leuner, Ph.D., doc. Ing. Johana Rondevaldová, Ph.D. and Ing. Vladimír Verner, Ph.D. as academic staff members. The FTZ AS met four times in 2024. The first meeting in January was mainly focussed on a discussion with the Dean. The second meeting in April resulted in approved the FTZ Annual Report 2023, the budget for specific research, a change at the vice-dean position and also in the Disciplinary committee. The next meeting took place in June, where the distribution of state contributions and subsidies for 2024 and admission procedures to Bachelor's and Master's FTZ study programmes were approved.

The last meeting, held in September, confirmed the FTZ financial report from 2023, the FTZ strategic plan for 2024, admission procedures to Ph.D. study programmes, the composition of the FTZ Disciplinary committee and electoral committee for the election of the Dean, planned for January 2025. Further approvals were made twice outside the meetings by per rollam voting including the approval of study fees for 2025/2026. This topic was discussed at the meetings preceding the voting. Two meeting of the FTZ Annual Academic Community took place in 2024. The first was traditionally as part of *The Day with the Faculty* held on 11th October. A report on the activities of the FTZ AS and the report from the vice-deans were presented at the event. The second, focussed on discussions with the candidates for the post of Dean, took place on 12th December.

Faculty in numbers

TAB 1.2 NUMBER OF STUDENTS IN 2024

Bachelor's studies	228
Master's studies	166
Doctoral studies (in person)	62
Doctoral studies (combined)	8
TOTAL	464

TAB 1.3 NUMBER OF EMPLOYEES IN 2024

	Absolute number	Recalculation by FTE
Professors	5	5.0
Extraordinary Professors	1	1.0
Associate Professors	9	8.5
Professors Assistants	16	14
Research and Science Staff	3	2.5
Research and Science Staff (non-academic)	10	7.35
Others (Administrative and Operational Staff)	39	29.9
TOTAL	83	68.25



FTZ Laboratories

The FTZ has a total of nine laboratories, which are used not only by academic staff but also by students. They use the laboratories to produce 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) focuses 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 focussed mainly on the identification and isolation of their bioactive components.

THE LABORATORY OF FOOD PROCESSING TECHNOLOGIES

This laboratory focuses 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 focuses 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 FTZ HERBARIUM

The FTZ 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 FTZ'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 FTZ Herbarium is a collection focused on useful tropical plant species, including major and minor crops and useful wild plants.

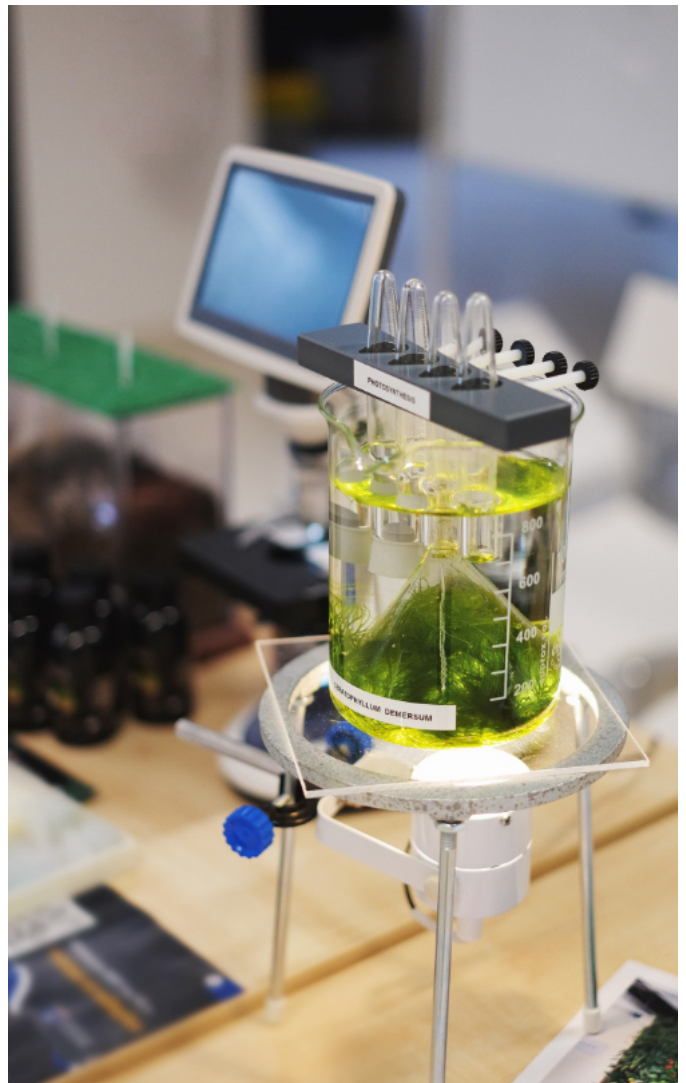
THE LABORATORY OF PLANT TISSUE CULTURES

The Laboratory of Plant Tissue Cultures focuses 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 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 both more and less well-known agricultural crops and agroforestry tree species, mainly from Latin America and Africa. This research mainly focuses 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, focussing 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. Incorporated is the Behavioural Studies Laboratory, equipped with a number of types of behavioural evaluation software. The Laboratory of Animal Science also maintains a collection of equipment for animal fieldwork studies.

THE LABORATORY FOR DETECTION AND CHARACTERISATION OF PATHOGENS

The laboratory is fully equipped for routine and secure work with biological samples potentially containing pathogenic microorganisms (BSL2) including equipment for the 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 BIORESOURCES & TECHNOLOGY LABORATORY (BRT-LAB)

BioResources & Technology Laboratory (BRT-Lab) is dedicated to investigating anaerobic digestion processes and improving understanding of the conversion of organic substrates into biogas. The BRT-Lab is affiliated with the BioResources & Technology (as part of the Faculty of Tropical AgriSciences). Within the framework of the laboratory, it is possible to conduct experiments on several laboratory stands: an anaerobic biogas generation unit and digestion of organic waste and plant residues, and a laboratory stand for biotesting the ecological effect of digestates on biological systems. Additionally, the laboratory provides access to video instructions for operating the equipment within the facility. Also, instructional videos serve as online guides for conducting batch experiments. They are available in English to assist researchers and students in properly utilizing the laboratory's instruments.

The BRT laboratory focuses its scientific research on three main areas: Anaerobic digestion of waste: Investigating the efficient breakdown of various organic waste materials; intensification of the methanogenesis process: exploring ways to enhance methane production during anaerobic digestion; and biotesting of digestates for organic farming: assessing the ecological effects and potential benefits of utilizing digestates in organic agricultural practices.





Studies

Study at the FTZ

Two Bachelor's programmes (one in Czech, the other in English) and nine Master's programmes (in English only) cover many agricultural issues in developing countries, including rural development. In 2024, 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. In 2023, the Faculty introduced a new fully online study programme, Tropical AgroEcology, which in 2024 opened its second year for the first time.

The increase in the total number of Bachelor and Master's students in the last three years slowed due to a stricter admissions process and problems with acquiring visas to the Czech Republic for international students. In 2019, there were 382 Bachelor and Master's students; in 2020, 458; in 2021, 553; in 2022 503 students; in 2023 408 students and in 2024, 394 Bachelor and Master's students. However, there has been an increase in the number of students who fully fund their tuition fees.

Undergraduate study programmes

In 2024, the FTZ offered two accredited Bachelor's programmes:

TROPICKÉ ZEMĚDĚLSTVÍ (TROPICAL AGRICULTURE – TZ)

The graduate profile of the Tropical Agriculture study programme represents a versatile, practically equipped professional course in tropical agriculture. The programme covers both tropical crop production and animal husbandry. A basic knowledge of technology and agricultural economics complements this. 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)

This programme is designed with the objectives of agricultural development and environmental protection, and at the same time, the need to tackle poverty and ensure food security in developing countries along with 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 focused on primary agricultural production; compulsory internship in non-profit organizations, state institutions and private companies engaged in international development and business projects in countries of the Global South. The programme is taught in English.

Master's study programmes

In 2024, the FTZ offered nine Master's study programmes taught exclusively in English.

AGRICULTURAL SCIENCES AND FARMING SYSTEMS IN THE TROPICS AND SUBTROPICS – DOUBLE DEGREE

This Double Degree programme between the Czech University of Life Sciences Prague and the University of Hohenheim (Germany) allows students with a Master's degree in the area of agriculture to live abroad and to study in a cosmopolitan and multicultural environment, thus increasing the job opportunities in a growingly globalized context. The double degree offers an additional benefit for the students by: a) an increased selection of modules offered on tropical agriculture at both universities, b) the acquirement of soft skills in different teaching

environments as well as cultural backgrounds, and c) scientific work under the supervision of two academics from two different universities.

AGRI-FOOD SYSTEMS AND RURAL DEVELOPMENT

This programme aims to prepare graduates to work in agri-food systems and sustainable rural development, specifically focusing on developing countries and tropical areas. The programme is based on an interdisciplinary approach focussed on food production systems in the tropics, food processing, and suitable agricultural technologies based on energy resources. Food security is an essential component of the programme, and it plays a crucial role in rural development in all developing countries.

INTERNATIONAL DEVELOPMENT AND AGRICULTURAL ECONOMICS

This two-year Master's programme has been purposively designed to equip students with the in-depth knowledge and hands-on expertise of the economic theories and approaches necessary to formulate and implement effective agricultural policies, understanding the role of institutions and development economics, promote sustainable farming and rural systems, strengthening the resilience and diversity of household livelihoods, and the associated conservation of cultural and biodiversity heritage. Graduates of the programme often pursue careers in national government and scientific bodies, international and national NGOs, consultancies, contractors, international agencies, and donors active in promoting sustainable, profitable and inclusive farming systems.

GLOBAL FORESTRY – MULTIPLE DEGREE

Global Forestry is a two-year English language world-class Erasmus Mundus MSc. programme that prepares graduates to deal with forestry's tremendous contemporary challenges and potential in medium and low-income countries. A consortium of five European Universities with extensive experience in global forestry offer the programme:

- **CZU:** The Czech University of Life Sciences, Faculty of Tropical AgriSciences (Czech Republic)
- **AgroTech Paris:** The Paris Institute of Technology for Life, Food and Environmental Sciences (AgroParisTech), Montpellier and Kourou campuses (France)
- **TUD:** Die Technische Universität, Dresden, Institute of International Forestry and Forest Products, (Germany)
- **UCPH:** The University of Copenhagen, Department of Food and Resource Economics (Denmark)
- **UP:** The University of Padua, School of Agriculture and Veterinary Medicine (Italy)

WILDLIFE AND LIVESTOCK PRODUCTION, MANAGEMENT AND CONSERVATION

In this study programme, students will receive a solid theoretical background in wild and domestic animal production, management, and conservation. The programme primarily focuses on the regions of the Global South, yet the curriculum is also suitable for applicants interested in *ex-situ* wildlife management, i.e. work in a European zoo. Theoretical knowledge is combined with practical training and fieldwork units. The programme offers Sustainable Animal Production (SAP) and Wildlife Management and Conservation (WMC) specialisations.

TROPICAL AGROECOLOGY

Tropical Agroecology focuses on studying interactions between plants, animals, humans and the environment within broader tropical and subtropical agricultural systems, considering the socio-economic aspects needed to develop sustainable and equitable food systems that support the Sustainable Development Goals. Agroecology combines science with traditional practices to provide long-term solutions to agricultural issues that empower local communities and producers. The programme is provided fully online with two practically oriented periods of stay in the university campus.

TROPICAL CROP MANAGEMENT AND ECOLOGY

This programme aims to prepare professionals for the next generation who need to address challenges closely tied to tropical and subtropical agricultural systems, biodiversity conservation, nutrition, and human health, as well as approaches specific to countries of the Global South.

TROPICAL FARMING SYSTEMS

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

TROPICAL FORESTRY AND AGROFORESTRY

This study programme is based on an interdisciplinary approach to deepen knowledge and practical skills related to forestry and rural development in countries of the Global South. Students are prepared for forestry and wood processing activity in the countries of the tropical and subtropical zones. Great emphasis is also placed on related rural development in these countries.

Doctoral studies

During doctoral studies, students are expected to acquire an understanding of their chosen subject area, develop advanced research skills, and conduct original research that contributes to the knowledge and understanding of the field. This may involve designing and conducting experiments, analysing data, developing theories, or applying existing knowledge to new problems or contexts. In addition to skills, doctoral students are also expected to display strong critical thinking, analytical, and communication skills. This includes the ability to evaluate and synthesize complex information, communicate research findings to both academic and non-academic audiences, and collaborate with others in their field. Ultimately, the goal of such studies is to prepare students to become independent scholars and experts in their field, capable of bringing new knowledge and insights to the broader academic community. Besides their research activities, Ph.D. students at the FTZ are encouraged to publish their results in peer-reviewed journals and participate in teaching and science popularization. They also undertake a doctoral examination including the defence of their doctoral thesis according to their ISP (Individual Study Plan). Currently, the FTZ offers studies in three study programmes.

TROPICAL AGROBIOLOGY AND BIORESOURCE MANAGEMENT

Programme guarantor: Prof. RNDr. Pavla Hejčmanová, Ph.D.

Education: 37 – agriculture (50%), 3 – biology, ecology and environment (50%)

ISCED-F: 0888

Accreditation valid: November 18, 2029

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: yes

Tuition fee (for 1 year of study): CZK 6,000

TABM DOCTORAL DEGREE BOARD:

Chairman of the Board:

prof. RNDr. Pavla Hejčmanová, Ph.D.

External members:

doc. RNDr. David Honys, Ph.D.

prof. Lukáš Kratochvíl, Ph.D.

Ing. Martin Kulma, Ph.D.

Ing. Jíban Kumar, Ph.D.

Prof. RNDr. Irena Valterová, CSc.

CZU members (excluding FTZ):

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. Francisco Ceacero Herrador, Ph.D.

doc. RNDr. Jiří Černý, Ph.D.

Ing. Olga Leuner, Ph.D.

prof. Ing. Bohdan Lojka, Ph.D.

doc. Tersia Kokošková (Needham), Ph.D.

doc. Ing. Zbyněk Polesný, Ph.D.

doc. Ing. Hynek Roubík, Ph.D.

Ing. Iva Viehmannová, Ph.D.

SUSTAINABLE RURAL DEVELOPMENT

Programme guarantor: Prof. Ing. Jan Banout, Ph.D.

Education area: 37 – agriculture (100%)

ISCED-F: 0888

Accreditation validity: December 17, 2028

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: yes

Tuition fee (for 1 year of study): CZK 6,000

SRD DOCTORAL DEGREE BOARD:

Chairman of the Board:

prof. Ing. Jan Banout, Ph.D.

External members:

Ing. Bo-Anne Rohlík, Ph.D.

doc. Ing. Ondřej Dvouletý, Ph.D.

CZU members (excluding the FTZ):

prof. Ing. Lukáš Kalous, Ph.D.

Internal members:

doc. Ing. Miroslava Bavorová, Ph.D.

Ing. Olga Leuner, Ph.D.

Ing. Jana Mazancová, Ph.D.

doc. Ing. Hynek Roubík, Ph.D.

doc. Ing. Klára Urbanová, Ph.D.

doc. Ing. Vladimír Verner, Ph.D.

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

Accreditation valid: November 18, 2029

Standard length of study (maximum length of study): 3 years (6 semesters)

Minimum number of credits: 180

Possibility of studying in a combined form: yes

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.

prof. Lukáš Kratochvíl, Ph.D.

Ing. Martin Kulma, Ph.D.

Ing. Jíban Kumar, Ph.D.

prof. RNDr. Irena Valterová, CSc.

CZU members (excluding the FTZ):

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. Francisco Ceacero Herrador, Ph.D.

doc. RNDr. Jiří Černý, Ph.D.

prof. RNDr. Pavla Hejčmanová, Ph.D.

Ing. Olga Leuner, Ph.D.

doc. Tersia Kokošková (Needham), Ph.D.

doc. Ing. Zbyněk Polesný, Ph.D.

doc. Ing. Hynek Roubík, Ph.D.

Ing. Iva Viehmannová, Ph.D.

doc. Ing. Vladimír Verner, Ph.D.

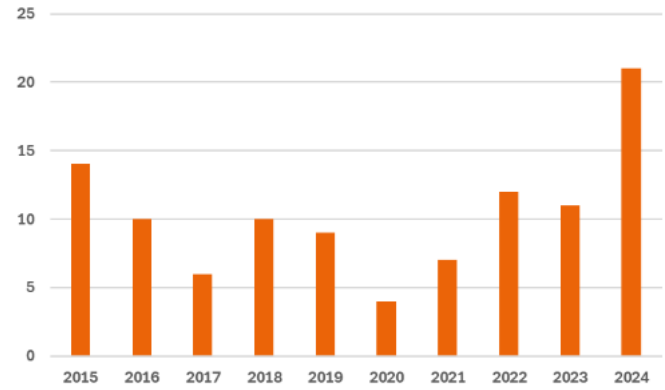
TAB. 2.2 NUMBER OF PH.D. STUDENTS - 31.10.2024

Year of study	D-ATS	D-SRD	D-TABM	D-ZS-TABM	Total
1.	1	9	6	0	16
2.	1	8	12	0	21
3.	0	10	9	0	19
4.	0	5	7	2	14
Total	2	32	34	2	70

This table shows the detailed distribution of doctoral students by programme and type of study.

All three doctoral study programmes at the FTZ have undergone an internal accreditation process and are approved by the Council for Internal Evaluation of the CZU. The topics of dissertations are approved by the DDB (Doctoral Degree Board), and applicants are admitted to study on the basis of a comprehensive evaluation. During their studies, students undergo department attestations twice a year, where they have to show the fulfilment of their ISP (individual study plan), and progress on their research work.

GRAPH 2.1 THE NUMBER OF PH.D. GRADUATES IN THE LAST 10 YEARS



From the graph it is obvious that the number of Ph.D. graduates decreased in the pandemic year 2020. In the following years, the number of graduates increased once again.

TAB. 2.1 NUMBERS OF GRADUATES IN 2024

- ZS-TABM – 12x
- ZS-SRD – 1x
- ZS-ATS – 1x
- TABM – 2x
- SRD – 5x

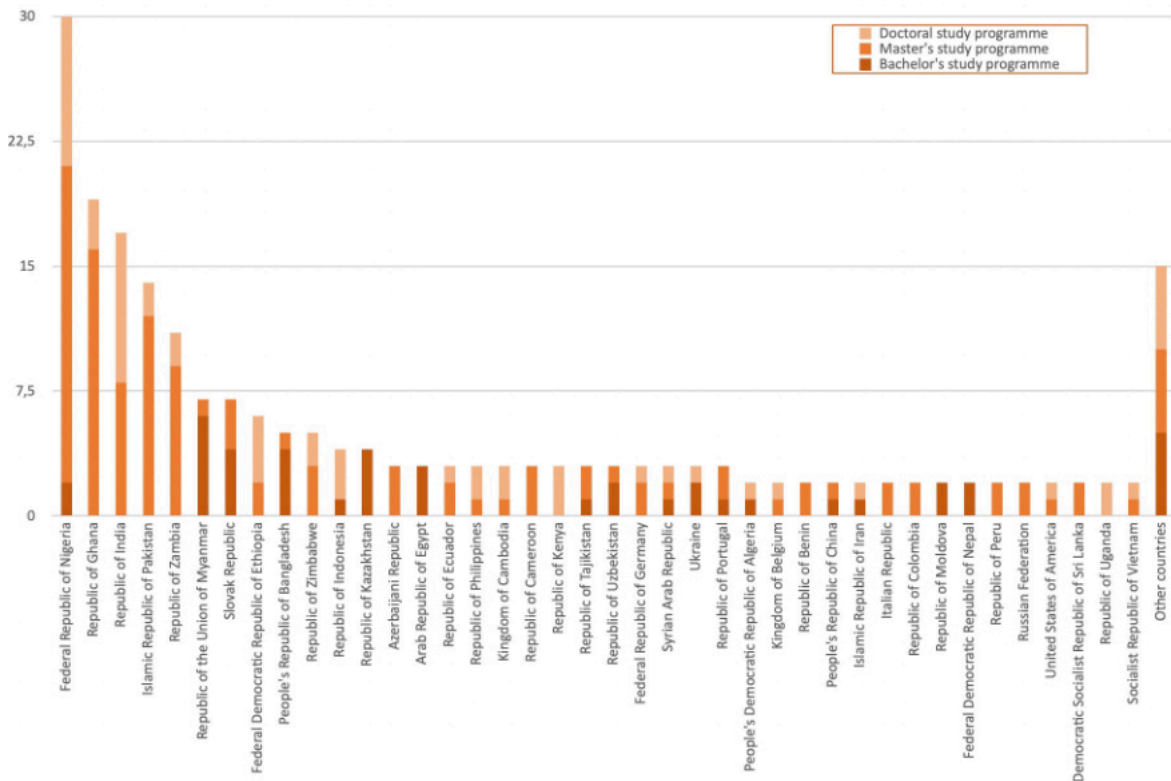
Students in accredited study programmes

The total number of Bachelor's and Master's students in 2024 was 394 (14 students less than in 2023). All students studied full-time forms of study. In addition, 18 students studied in lifelong learning – at the University for the "Third Age". The overviews below contain a review of all study programmes.

More than half of the students were international students, most of whom were students from the Global South countries. As such the faculty maintains a multicultural environment, enabling the mutual interaction of Czech and international students.

Most foreigners in 2024 were from Nigeria, Ghana, India, Pakistan, Zambia, Myanmar, Slovakia, Ethiopia, Bangladesh and Zimbabwe (see the following chart: all figures below are from 31st October 2024).

GRAPH 2.2 NUMBERS OF FOREIGN STUDENTS BY MOST REPRESENTED COUNTRIES (31.10.2024)



**TAB 2.3 TYPE OF STUDY
- BACHELOR'S STUDY
PROGRAMMES**

Year of study	B-ICARD		B-TZE	
	cz	other	cz	other
1.	8	18	82	1
2.	1	10	34	2
3.	8	11	52	1
Total	17	39	168	4

TAB 2.4 TYPE OF STUDY - MASTER'S STUDY PROGRAMMES

Year of study	N-ASRD		N-IDAE		N-TCME		N-TFA		N-TFS		N-WLPMC		N-TAE	
	cz	other	cz	other	cz	other	cz	other	cz	other	cz	other	cz	other
1.	3	10	3	25	6	4	1	5	2	3	12	7	-	3
2.	-	12	3	16	10	7	3	5	4	10	6	6	-	-
Total	3	22	6	41	16	11	4	10	6	13	18	13	0	3

**TAB 2.5 TOTAL NUMBER OF STUDENTS
BACHELOR'S AND MASTER STUDY PROGRAMMES**

Year of study	FULL-TIME STUDY		DISTANT STUDY	
	cz	other	cz	other
1.	117	73	-	3
2.	61	68	-	-
3.	60	12	-	-
Total	238	153	0	3

**TAB 2.6 TOTAL NUMBER OF STUDENTS
DOCTORAL STUDY PROGRAMMES**

Year of study	FULL-TIME STUDY		PART-TIME STUDY	
	cz	other	cz	other
1.	3	10	1	2
2.	5	14	1	2
3.	1	15	-	2
4.	2	12	-	-
Total	11	51	2	6

TAB 2.7 STUDENTS IN STUDY PROGRAMMES IN ACADEMIC YEARS (31. 10. 2024)

Study programme	2016 / 2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
B-ICARD	51	91	76	63	92	106	85	72	56
B-TURS	37	7	-	-	-	-	-	-	-
B-TZE	176	154	164	195	197	234	189	176	172
N-AFS	23	12	3	-	-	-	-	-	-
N-ASRD	39	35	41	32	49	48	49	26	25
N-IDAE	50	59	43	40	50	53	50	30	47
N-TAE	-	-	-	-	-	-	-	1	3
N-TCME	39	28	21	12	23	34	44	32	27
N-TFA	16	11	11	10	12	16	17	14	14
N-TFS	7	4	2	2	5	20	27	25	19
N-WLPMC	30	22	27	28	30	42	42	32	31
Total	468	423	388	382	458	553	503	408	394

Other educational activities, lifelong learning

Following the strategic goal of the CZU (priority strategic goal 3.1 "Linking educational activities in 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 (collaboration 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).

Since 2013, the subject "Block of Experts" has been introduced in Bachelor's programmes to enable presentations by experts with practical experience. In 2024, this was attended by five international development experts from Czech NGOs, academia, companies and state institutions.

The FTZ regularly opens a lifelong learning course – the University of the "Third Age" - called "Tropical Agriculture". 18 students studied in this programme in 2024. The programme is opened once every two years. In addition to lectures and seminars by lecturers from the FTZ, excursions are essential to the programme.



Student support at the faculty

Student counselling is understood to be an integral part of working with students. For this reason, counselling has long been provided in the main areas following 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 through several communication channels: students can obtain the necessary information electronically on the Internet, the students' Intranet or by e-mail or contact with the FTZ specialist counsellor for the given area directly or by phone. Consultation through MS Teams has been recently adopted as well.



In 2024 the CZU opened a new CZU University Counselling Center (CPS) to coordinate counselling services within the university. The CPS covers Mental Health Counselling, Career Center activities and provides Counselling services for Students with Special Educational Needs. A faculty coordinator is regularly in contact with both the students and the CPS to discuss the agenda and help students navigate the counseling and support system for the student population.

The FTZ mainly supports pedagogical counselling, which involves the staff of the Academic Administration Office, one specialized 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 and the Faculty.

International students, in particular, are allowed consultations beyond the regular consultation hours, and one specialized employee of the Faculty's Academic Administration Office is assigned to foreign applicants. In 2021, the Faculty also introduced systematic work by "Student Ambassadors," assisting foreign applicants and new international students. A group of Master's degree students worked as student advisors (ambassadors) in 2024.

At the FTZ, 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 2024.

Furthermore, students are motivated by participation in grants from the Internal Grant Agency of the Faculty, where they are involved in scientific teams with doctoral students and teachers. They also participate in development projects abroad (approximately 15 to 20 Bachelor's and Master's students per year). They can also be supported in terms of international mobility, associated (organized by the International Relation Office) 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 within the professional social network LinkedIn, including 230 graduates from 2011-2024 (<https://www.linkedin.com/groups/5062023>). Through this network, the Faculty maintains contact with graduates and offers job possibilities in the international cooperation sector.

In order to make the Faculty environment more friendly and comfortable, a room for students to relax and study was retrofitted in 2024. Comfortable armchairs, seating bags have been purchased and students can use the room daily according to their needs.

Interest in studies at the faculty

In 2024, the Faculty received 551 applications for Bachelor's and 441 for Master's programmes. The number increased significantly during 2018 – 2022. The increase slowed in 2023, especially for Czech applicants to Bachelor study programmes. In 2024 a positive trend re-emerged (see table below). The admission procedure has become more and more selective, and the quality of admitted students increases every year. However, applicants still face significant problems when entering study, mainly due to the difficulty of obtaining a visa to the Czech Republic for applicants from African and Asian countries.

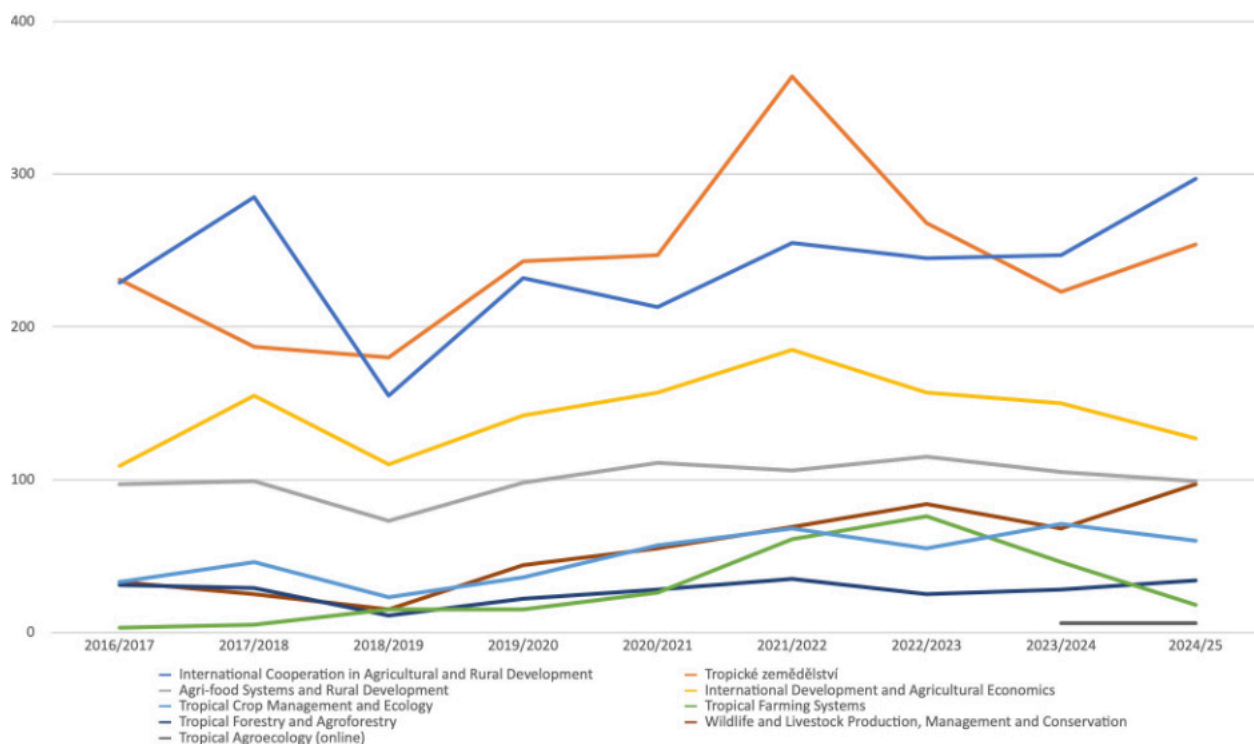
Potential applicants for bachelor's studies were approached primarily through online advertising on social networks and in cooperation with the [vysokeskoly.cz](https://www.vysokeskoly.cz) website. The Faculty was also opened to prospective students during open days held in January, March and November and through events for the general public, such as the Night of Scientists or Sciencefest. Representatives of current students also participated in fairs for high schools and some of them presented the opportunities to study at the FTZ in their former high schools. Faculty members have also participated in several seminars and panel discussions in the country and abroad to communicate the possibilities of studying at the Faculty.

The admission procedure for Bachelor's degree programmes takes 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 1.6 (decrease from 1.8 in 2021) from their graduation certificate or the last completed year of high school.



Number of applications

GRAPH 2.3



Study programme	2016 / 2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
ICARD	229	285	155	232	213	255	245	247	297
TZ	231	187	180	243	247	364	268	223	254
Total	460	472	335	475	460	619	513	470	551

TAB 2.9 MASTERS'S STUDY PROGRAMMES

Study programme	2016 / 2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
ASRD	97	99	73	98	111	106	115	105	99
IDAE	109	155	110	142	157	185	157	150	127
TCMAE	33	46	23	36	57	68	55	71	60
TFS	3	5	15	15	26	61	76	46	18
TFA	31	29	11	22	28	35	25	28	34
WLPMC	33	25	15	44	55	69	84	68	97
SAP	–	–	–	9	20	31	29	39	51
WMC	–	–	–	35	35	38	55	29	46
TAE (online)	–	–	–	–	–	–	–	6	6
Total	306	359	247	401	489	593	596	474	441

Statistics admission procedure

ADMISSION PROCEDURES FOR BACHELOR'S PROGRAMMES

Entrance exams were organized and managed by the Faculty. Entrance exams for both programmes comprise two subjects - languages and one specialised subject. The entire entrance exam course, including the specialised test, is in English as part of the ICARD programme. For applicants who cannot prove their knowledge of the Czech language by a school-leaving examination in Czech, our TZ programme is 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 FTZ according to the points obtained during the entrance exam up until the capacity of the study programme. Sample tests are published on the Faculty website. Since 2024 the applicants also have to write the online test of General Academic Prerequisites organized by the Scio company for the ICARD study programme.

Admissions committees are proposed by the programme guarantors and approved by the Board of the Dean 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. Since 2024 they also have to write the online test of General Academic Prerequisites organized by the Scio company. The entrance exams involve an English interview focussed on the programme content. In the 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 – i.e. according to their level of professional and standard English, an assessment of their cross-sectional knowledge, previous experience, experience in the field, and the focus and quality of their Bachelor thesis. Applicants are admitted to study at the FTZ according to the evaluation of the points obtained in the entrance exam up until the capacity of the study programme.

Admissions committees were also proposed by the programme guarantors and approved by Board of the Dean of the Faculty.

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 university admission procedures, are posted on the official board of the Faculty.

TAB 2.10

Study programme / Specialisation	Number of applications	Complete	Attended	Terms met	Terms not met	Admitted in the first round	Admitted in total	Commented study
International Cooperation in Agricultural and Rural Development	297	277	289	66	223	66	66	22
Tropické zemědělství	254	250	182	139	43	139	139	77
Agri-food Systems and Rural Development	99	75	98	40	57	40	41	9
International Development and Agricultural Economics	127	119	120	47	73	47	47	20
Tropical Agroecology	6	3	6	5	1	5	5	2
Tropical Crop Management and Ecology	60	51	43	28	15	28	28	7
Tropical Forestry and Agroforestry	34	25	33	17	16	17	17	5
Tropical Farming Systems	18	13	15	9	6	9	9	4
Wildlife and Livestock Production, Management and Conservation/ SAP Sustainable Animal Production	51	45	47	16	31	16	16	2
Wildlife and Livestock Production, Management and Conservation/ WMC Wildlife Management and Conservation	46	42	39	24	14	24	25	13



Activities of the department in science, research and doctoral studies

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

- The activities of the Faculty's Scientific Board,
- habilitation and professorial procedures,
- distribution of R&D-related information,
- the organization of support for scientific research activities at the Faculty,
- the organization of the Internal Grant Agency of FTZ (IGA)
- the administrative management of doctoral studies.

Professorship and habilitation procedures

The FTZ is entitled to carry out procedures 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 a candidate who is a distinguished and recognised personality in his/her field are evaluated.

Professorship procedures in 2024:

- None.

Habilitation procedures in 2024:

- Ing. Johana Rondevaldová, Ph.D. – habilitation procedure successfully conducted at the level of the Scientific Board of the FTZ.
- Ing. Vladimír Verner, Ph.D. – habilitation procedure successfully conducted at the level of the Scientific Board of the FTZ.

FTZ scientific board members

TAB 3.1 FTZ MEMBERS

prof. Dr.ir. Patrick Van Damme	Chairman, Dean of the Faculty of Tropical AgriSciences
prof. Ing. Jan Banout, Ph.D.	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
doc. Ing. Hynek Roubík, Ph.D.	Vice-dean for Science, Research and Doctoral Study, Department of Sustainable Technologies
prof. RNDr. Irena Valterová, Ph.D.	Department of Crop Science and Agroforestry

TAB 3.2 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

TAB 3.3 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 (FTZ) is a unique institution in the Czech Republic, striving to become a leader in the field of tropical agrisciences research. Our long-standing efforts have been directed toward this goal, encompassing a wide spectrum of research activities, strategic international partnerships, and a strong emphasis on increasing both the quantity and quality of scientific outputs. In the highly competitive scientific environment, success is measured not only by research achievements but also by their visibility through high-impact scientific publications. To support this, FTZ has established a robust system to encourage both staff and students to publish their research in top-tier journals and present at academic conferences.

Our commitment to nurturing scientific authorship is particularly evident in our approach to student engagement. For doctoral students, a scientific article accepted in a peer-reviewed journal with an Impact Factor (IF) is a mandatory part of the qualifying requirements, alongside the traditional dissertation. The student must be the first author of the article, which must be thematically aligned with the approved dissertation topic. Furthermore, an alternative and increasingly recognized format for Ph.D. thesis defence is a set of published papers. This format requires at least three articles accepted in IF-ranked journals, with the student serving as the first author on at least two of them. All publications must directly relate to the approved dissertation topic.

Academic staff are motivated through a structured annual evaluation system, which balances teaching and research performance. Teaching contributions are tracked via STAT points and thesis supervision, while research performance is assessed based on publication output. This

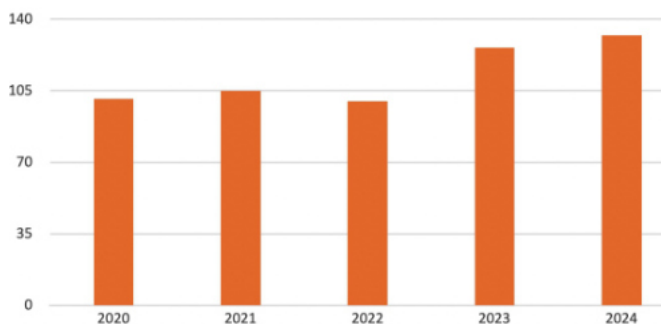
includes the number of publications, journal quality (quartile ranking), number of co-authors, and the individual's authorship position—particularly the role of corresponding author. In light of evolving national research evaluation frameworks, such as the M17+ Methodology, FTZ's incentive system is also being adapted. A new component focused on grant activity will be incorporated, ensuring the system remains aligned with current requirements for evaluating research organizations and funded research programs.

In 2024, a total of 132 articles were published in journals indexed in the Web of Science (WoS) and Scopus databases. 124 articles have been published in WoS journals with IF, and 6 articles were published in Scopus journals with SCImago Journal Rank (SJR) - see the graphs below which give an overview of the evolution of the number of articles with IFOver the last five years. Furthermore, several book chapters were published and one scientific conference organized (MCYR). Furthermore, over 50 other scientific outputs were recorded, which mainly encompassed scientific conferences and presentations at scientific symposiums.

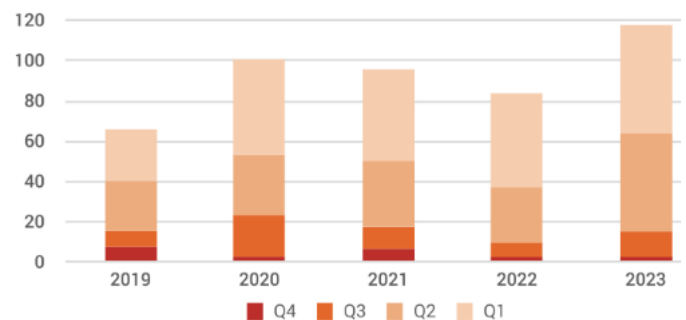
In 2024, the Faculty of Tropical AgriSciences (FTZ) recorded a total of 132 publications in journals indexed WoS, when considered specifically 117 Impact Factor (IF) and 116 publications in journals ranked by Article Influence Score (AIS). The majority of publications based on IF were in Q2 journals (49), followed by Q1 (36), Q3 (13), Q4 (2), and D1 (17). Similarly, the AIS classification shows the highest number of publications in Q2 journals (51), followed by Q3 (28), Q1 (24), Q4 (6), and D1 (7). These figures indicate a strong concentration of FTZ's research output in mid-to-high quality journals, with a notable emphasis on Q1 and Q2-ranked outlets in both metrics. The relatively lower number of publications in Q4 journals suggest a strategic orientation towards visibility and impact in reputable scientific platforms.

Previous 5 years (2019-2023) for comparison are visible in the graph 3.2.

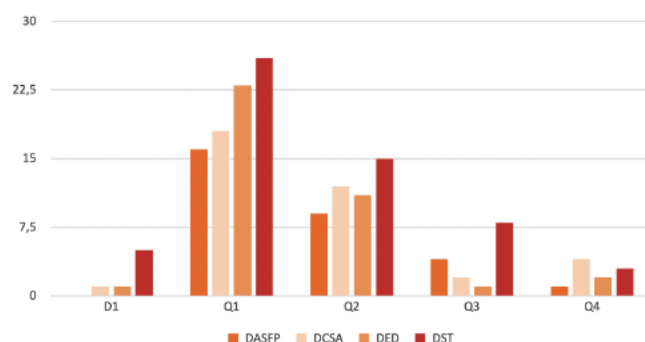
GRAPH 3.1 NUMBER OF FTZ PUBLICATIONS IN THE LAST 5 YEARS



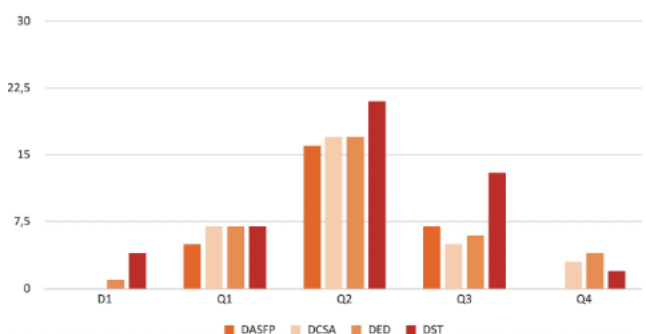
GRAPH 3.2 DISTRIBUTION OF PUBLISHED PAPERS OVER QUARTILES



GRAPH 3.3a DISTRIBUTION OF PUBLISHED PAPERS OVER QUARTILES BASED ON IF (WOS)



GRAPH 3.3b DISTRIBUTION OF PUBLISHED PAPERS OVER QUARTILES BASED ON AIS (FORD)



The evaluation of research and programmes of targeted support for research, development and innovation based on M17+ Methodology is moving away from the IF as one of the important indicators of the quality of publications and instead introduces the AIS (Article Influence Score). In an AIS, journals can still be divided into quartiles according to their WoS categories, but in the full 17+ Methodology FORD (Fields or Research and Development) divisions are required to be used. The graph below shows a comparison of the distribution of papers published in 2024 in quartiles based on IF (WOS) and AIS (FORD) respectively.

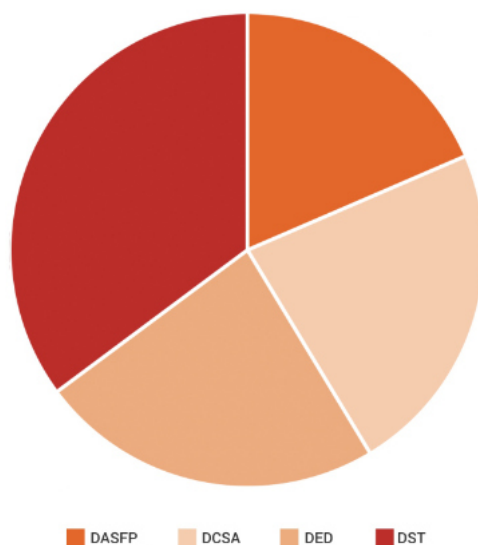
An important performance indicator is the number of published papers per academic staff member. The chart below shows this data compared to the academic FTE (Full-Time Equivalents) in each FTZ department.

To maintain high-quality publications in the long term, it is essential that the publication outputs are distributed equally among all academic staff. We could clearly observe this trend at the Faculty in the past. One of the main goals is that each academic staff member of the Faculty should have at least one publication in an IF per year. With the highest contribution at the DST (57 publications) and relatively similar outputs among the other 3 departments.

Furthermore, as visible in the graph below, it is worth noting the lowest output per member of academic staff and the highest output per member of academic staff across departments. It is clear that in DASFP - Department of Animal Science and Food Processing the average output is 3.3 (which however increased from 2.7 in 2023) publications per member of academic staff and the highest output is visible at the DST - Department of Sustainable Technologies, where it is 7.13 (increased from 5.7 in 2023) publications per member of academic staff. Very positively can be seen improvement of DED over the past two years from 3.1 per academic staff in 2023 to 5.4 per academic staff in 2024.

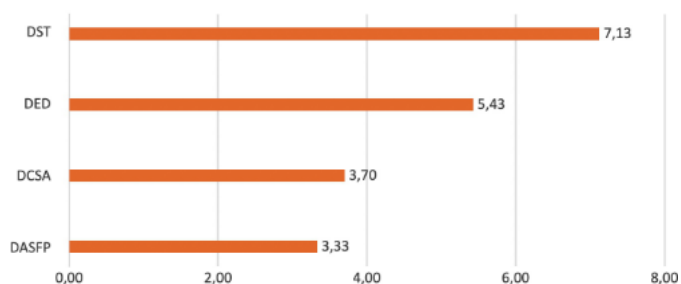
On the other hand, it is also important to note that the average output of publications per member of academic staff remains the highest in the university and among the highest in the Czech Republic.

CHART 3.4 DISTRIBUTION OF PUBLICATION IN 2024 (WOS) AMONG DEPARTMENTS

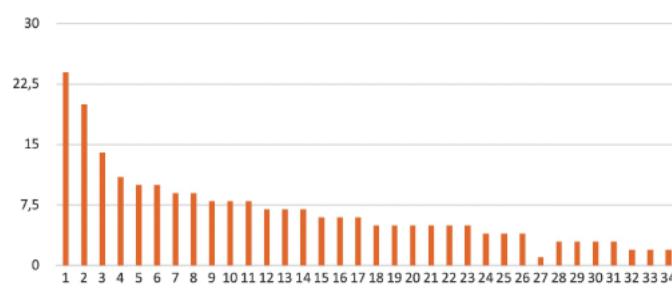


DASFP – Department of Animal Science and Food Processing
 DCSA – Department of Crop Science and Agroforestry
 DED – Department of Economics and Development
 DST – Department of Sustainable Technologies

GRAPH 3.5a WOS PUBLICATIONS IN 2024 / DEPARTMENT / AVERAGE PER ACADEMIC STAFF



GRAPH 3.5b DISTRIBUTION OF PUBLISHED PAPERS IN 2024 AT FTZ BY INDIVIDUAL ACADEMIC STAFF

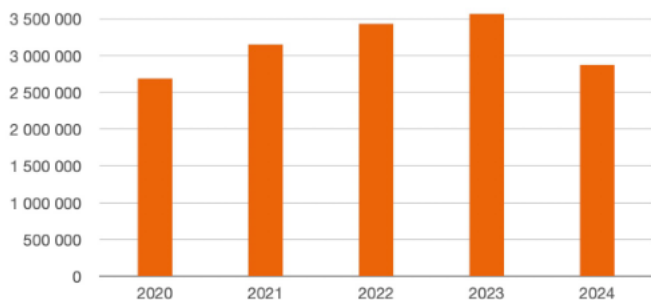


Projects and grants

SPECIFIC UNIVERSITY RESEARCH (SUR)

In 2024, the Faculty of Tropical AgriSciences received funding for Specific University Research (SUR) in the amount of CZK 2,878,480. These funds were used in accordance with the Rules for the Provision of Special Purpose Support for SUR under the Act on Support for Research, Experimental Development and Innovation and were spent in full. The graph to the right shows the evolution of the total subsidy for SUR over the last five years. It can be seen that the amount of funding for SUR FTZ has increased continuously.

GRAPH 3.6 TOTAL SUBSIDY OF SPECIFIC UNIVERSITY RESEARCH AT FTZ FOR THE LAST 5 YEARS (IN CZK)

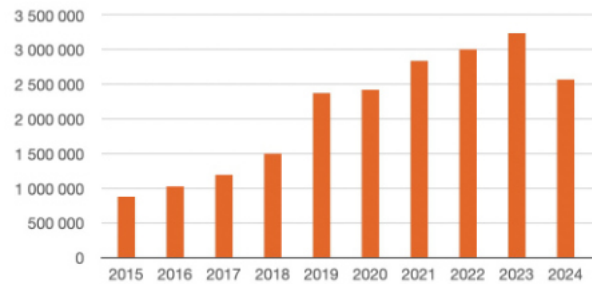


FTZ INTERNAL GRANT AGENCY

The vast majority of SUR funds are managed by the "Internal Grant Agency of the FTZ" (the IGA FTZ). 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 thesis research and education. IGA FTZ grants aim to strengthen the independent creative activity of students in their respective fields, to intensify the involvement of students in research and project activities, and to help students and academic staff in the creation and cooperation of research teams under the leadership of their supervisors. Project leaders are academic staff members and the number of PhD. and M.Sc. students in each project must be at least equal to the number of academic staff members in the research team. Since 2013, according to the internal rules of the FTZ, no personnel costs (other than scholarships) can be claimed from IGA funds.

The funds allocated to the IGA FTZ have been continuously increasing for last ten years, as shown in the figure to the right, but in 2024, for the first time, the amount decreased. In 2024, 15 one-year projects were supported for a total amount of CZK 2,570,000. These projects involved 191 Master's and doctoral students; see the *table 3.4*.

GRAPH 3.7 TOTAL DISTRIBUTED BUDGET OF INTERNAL GRANT AGENCY OF FTZ FROM 2014 - 2024 (IN CZK)



TAB 3.4

NAME OF THE PROJECT	PRINCIPAL INVESTIGATOR	NUMBER OF STUDENTS	BUDGET (CZK)
Appropriate technologies in waste and water management	Tatiana Alexiou Ivanova	13	150 000 CZK
Food security and innovative food processing methods	Jan Banout	29	349 000 CZK
Sustainability and profitability of agri-food systems	Miroslava Bavorová	24	294 000 CZK
Captive breeding of endangered tropical ungulates II	Francisco Ceacero Herrador	18	237 000 CZK
Characterization of genetic changes in populations of animals	Barbora Černá Bolfíková	18	261 000 CZK
Genetic improvement of medicinal plants through biotechnological interventions	Eloy Fernández Cusimamani	8	188 000 CZK
Human-wildlife coexistence in tropical socioecological systems	Pavla Hejcmanová	7	104 000 CZK
Inclusiveness and Sustainability of Food Chains	Petra Chaloupková	16	120 000 CZK
Chemical composition and biological effects of secondary metabolites from medicinal and edible plants of tropical origin	Ladislav Kokoška	13	174 000 CZK
Biodiversity in tropical agroecosystems	Bohdan Lojka	9	175 000 CZK
Challenges for Agenda 2030 – No One is Left Behind in Rural Areas of Developing Countries	Jana Mazancová	18	206 000 CZK
Farm-to-fork: enhancing sustainability in animal production	Tersia Needham	8	125 000 CZK
Plant agrobiodiversity use and management in tropical and subtropical agroecosystems	Zbyněk Polesný	4	55 000 CZK
Evolution of caste systems in termites: <i>Stylotermes</i> and <i>Anacanthotermes</i>	Jan Šobotník	2	76 000 CZK
Biotechnological and proteomic methods: tools for crop improvement	Iva Viehmannová	4	56 000 CZK
		191	2 570 000 CZK



EXTERNAL GRANTS AND PROJECTS

In 2024, FTZ staff and students participated in 17 foreign projects, including 11 EU-funded grants and 9 national research grants funded by the Technology Agency of the Czech Republic, Czech Development Agency and Ministry of Foreign Affairs.

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

TAB 3.5 OVERVIEW OF NATIONAL PROJECTS

Project name	Duration	Provided by / Provider	Programme	Operator	Project Budget	Contact Person / Principal Investigator
Phosphogypsum Processing to EU Critical Raw Materials	2022-2025	TAČR	ERA-MIN	Phosphogypsum Processing to EU Critical Raw Materials	1 000 000 CZK	Hynek Roubík
Genetický monitoring vlka	2024-2026	TAČR	TAČR – Prostředí pro život 7. veřejná soutěž	Univerzita Karlova v Praze	13 683 008 CZK	Barbora Černá Bolfíková
Innovative education and support of scientific and pedagogical work in agro-food sectors	2024	MZV	Strengthening the capacities of public universities in developing countries in 2024	FTZ	1 062 600 CZK	Jan Banout
Modernization and increasing the prestige of higher agricultural education in Moldova	2024	MZV	Strengthening the capacities of public universities in developing countries in 2024	FTZ	1 115 000 CZK	Petra Chaloupková
Strengthening AgriSciences in Ukraine: AgriSci-UA	2024	MZV	Strengthening the capacities of public universities in Ukraine in 2024	FTZ	1 670 000 CZK	Hynek Roubík
Rehabilitation of Cheleleka wetlands and forests in the Wondo Genet area	2023-2025	The Czech Development Agency		Mendel University in Brno	128 900 CZK	Zbyněk Polesný
Integrated farming III. Developing an integrated approach to farming in the western province of Zambia	2022-2024	The Czech Development Agency		Mendel University in Brno	8 000 000 CZK	Vladimír Verner
Bio-gas technology to increase community resilience in the western province of Zambia	2021-2024	The Czech Development Agency		People in Need/FTZ	24 500 000 CZK	Jana Mazancová

PHOSPHOGYPSUM PROCESSING TO EU CRITICAL RAW MATERIALS

- **Principal investigator:** Hynek Roubík
- **Total budget:** 1 000 000 EUR
- **Project duration:** 2022 – 2025
- **Provider:** The Technology Agency of the Czech Republic, ERA-MIN programme

More than three-quarters of phosphate fertilizers produced globally are produced using phosphoric acid as an intermediate product, leaving 4–6 t low-radioactive phosphogypsum (PG) per t P₂O₅ produced, as relevant by-product/waste. About 85% of the 5.6–7.0 billion t PG produced globally by the phosphate industry are disposed of in stacks in 52 countries worldwide. The largest stacks in the EU are found in Lithuania, Poland, Spain, Greece, Bulgaria, Serbia and Kosovo, the Netherlands, Belgium, Portugal and Finland. 3-4 billion are accessible for recovery worldwide and approximately 2 billion t are accessible for

recovery in Europe. At the current rate of production, these stacks of low-radioactive material are growing by some 200 million t per year. From a regional environmental point of view, PG may be the single most critical processing issue of fertilizer production today. The objective of this project is to further develop an innovative process for REE recovery from PG that has recently been patented by the coordinator from TRL 4-5 (lab-scale experiments), which is the current state, to TRL 7-8 (pilot plant operation). The focus will be on the comprehensive use of PG and, besides the opportunity to recover REEs from it, the remaining gypsum matrix will be used as an inexpensive material in construction/sound insulation.

GENETIC MONITORING OF THE WOLF

- **Principal investigator:** Barbora Černá Bolfíková
- **Total budget:** 3 972 640 CZK (2024)
of which to CZU: 1 955 070 CZK (in 2024)

- **Project duration:** 2024 – 2026
- **Provider:** The Technology Agency of the Czech Republic, Environment for Life

The Technology Agency of the Czech Republic (TAČR) has launched an innovative project titled "Environment for Life - Genetic Monitoring of the Wolf (2024-2026)" aimed at developing advanced genetic monitoring techniques for the grey wolf, a key species in Central European ecosystems. The MEGERA (Molecular Ecology, Genetics and Evolutionary Research of Animals) research team working at the FTZ is involved in this prestigious project with the aim to develop genetic monitoring of the wolf, which provides indispensable information in describing the recolonization of Central Europe and in mitigating conflict with humans. The project aims to streamline and automate genetic procedures through close cooperation between research institutions and the applied sphere and this work is expected to set new standards for genetic monitoring in wildlife conservation, with the potential to influence policy and public perception of the grey wolf across Europe.

FOREIGN DEVELOPMENT COOPERATION PROJECTS

In 2024, 7 development projects in four countries were implemented under the guidance or cooperation of FTZ 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 and Ministry of Foreign Affairs.

All development projects implemented under the leadership of the FTZ 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 2024:

REHABILITATION OF CHELELEKA WETLANDS AND FORESTS IN THE WONDO GENET AREA

- **Principal investigator:** Zbyněk Polesný, Vladimír Verner and Jan Staš
- **Total budget:** 128 900 CZK
- **Implementation period:** 2023 – 2025
- **Provider:** The Czech Development Agency

The Cheleleka wetland is an important source of livelihood for the surrounding inhabitants, stabilises the local microclimate, serves as an extensive natural sewage treatment plant and is home to a significant number of organisms. At the same time, however, it is facing high levels of degradation and its area has been steadily decreasing over the long term. The wetland lies on a largely sloping area, rich in biodiversity, water resources and forests, and has overall high production and recreational potential, which is limited by unsustainable logging and the overuse of water for irrigation. Deterioration of soil quality (and fertility) reduces food security, access to drinking water and fuels conflict over resources and the migration of young people from the area. The project primarily aims to prevent the continued degradation of the Cheleleka wetland and restore its functionality and ability to produce environmental services. The project will focus on promoting sustainable natural resource management planning, implementing technical and biological countermeasures and soil conservation. Setting up waste management and water efficiency, introducing agroforestry into people's management

and involving local communities and officials in problem solving are also important components.

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

- **Principal Investigator:** MENDELU
- **on behalf of:** Vladimír Verner, Jan Staš, Radim Kotrba and Miloslav Petřtýl
- **Total budget:** 4 000 000 CZK (in 2024),
- **of which to CZU:** 490 000 CZK (in 2024)
- **Project duration:** 2022 – 2024
- **Provider:** The Czech Development Agency

The project focuses 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 Agrobiological, Food and Natural Resources are the core partners in the project. The scope of work of the CZU within the project is to train farmers in aquaculture development, honey production and (agro-)forest products utilisation.

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

- **Principal Investigator:** People in Need
- **on behalf of CZU:** Jana Mazancová
- **Total budget:** 24 500 000 CZK
- **of which to CZU:** 3 315 000 CZK
- **Implementation period:** 2021 – 2024
- **Provider:** The Czech Development Agency

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 the 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 the provision of products and services related to biogas technology), c) improving access to finance and the financial literacy of target farmers, d) enhancing the knowledge and awareness of how to use outputs of biogas technology for improved agricultural productivity, income, and household nutrition intake.

INNOVATIVE EDUCATION AND SUPPORT FOR SCIENTIFIC AND PEDAGOGICAL WORK IN AGRI-FOOD FIELDS, BOSNIA AND HERZEGOVINA

- **Principal Investigator:** Jan Banout
- **Total Budget:** 1 154 600 CZK
- **Implementation period:** 2024

The aim of the project is to improve the level of scientific research skills and the quality of teaching at the Faculty of Agriculture and Food Technology at the University of Mostar and the Agro-Mediterranean Faculty of the University of Džemal Bijedič in Mostar in the field of organic agriculture through implemented activities and realized outputs, which will focus primarily on the implementation of specialized educational courses. The aim of the project is to increase the research and scientific-pedagogical skills of academic staff and students at both involved faculties. And further to prepare a joint scientific publication,

where there will be a collective of authors from the CZU in Prague with one of the cooperating faculties from Mostar.

MODERNIZATION AND INCREASING THE PRESTIGE OF HIGHER AGRICULTURAL EDUCATION IN MOLDOVA

- **Principal investigator:** Tatiana Alexiou Ivanova
- **Total budget:** 1 650 000 CZK
- **Implementation period:** 2024

The aim of the project is to innovate professional teaching, strengthen scientific and research activities, build a modern background and develop national and international cooperation at the agricultural faculties of the former State Agrarian University of Moldova in order to increase the prestige and motivation of students to study agricultural sciences and support the post-reform integration of the agricultural faculties of SAUM within the Technical University of Moldova (TUM).

TRANSFORMING AGRI-FOOD SYSTEMS IN CAMBODIA THROUGH STRENGTHENING RESEARCH CAPACITIES, CAMBODIA

- **Principal investigator:** Petra Chaloupková
- **Total budget:** 1 115 000 CZK
- **Implementation period:** 2024

The main objective of the project is to increase the capacities of students and academic staff in the field of agri-food systems, value chains and soft skills, focusing on the potential of linking secondary and higher education, which is one of the priorities of the strategy of the Ministry of Education, Youth and Sports in Cambodia. Increasing the knowledge and connectivity of secondary school graduates and the subsequent application of university graduates in the labour market and thus improving the level of employment, is one of the main critical factors in the field of higher education, according to the *Bilateral Cooperation Program of the Czech Republic for Cambodia (2018–2023)*. At the same time, the gap between secondary and higher education in capacities affects the intake of students for further studies.

STRENGTHENING AGRISCIENCES IN UKRAINE: AGRISCI-UA

- **Principal investigator:** Hynek Roubík
- **Total budget:** 1 670 000 CZK
- **Implementation period:** 2024

The primary goal of this project is to enhance the capabilities and collaboration among universities in the area of AgriSciences and to improve the scientific capacities of young educators, researchers, and postgraduate students at select Ukrainian universities. This will be accomplished through the continued development of the AgriSciences Platform, which focuses on increasing expertise in key areas of agrarian sciences, crucial for Ukraine's post-war development. Beyond traditional AgriSciences topics, the project addresses urgent issues specific to present-day Ukraine, including the environmental and social impacts of the war. These topics include war waste, deforestation due to conflict, ecosystem disturbances, air and water contamination, loss of access to vital water resources (e.g., the Black Sea), soil pollution and its consequences, biodiversity losses, and the impact of migration on the agricultural sector. Furthermore, the project will also foster the formation of multidisciplinary research teams and offer grant opportunities to address these emerging challenges. These initiatives are critical for addressing Ukraine's needs during and after the current conflict. As part of the platform's growth, a series of training sessions will be held, led by both Czech and Ukrainian experts. These sessions will aim to enhance scientific outputs, improve publication activities, and expand

specialized knowledge. All these efforts will be integrated under the AgriSci Scientific Academy. Additionally, the project will promote information sharing and strengthen research capacities through mobility programmes. At least 10 selected young Ukrainian scientists will be given the opportunity to intern at the Czech University of Life Sciences Prague (the CZU). Another important aspect of the project is sharing best practices in gender equality, inclusion, and diversity within academia, meeting the specific needs of partner universities. Furthermore, the project seeks to motivate Ukrainian students to pursue studies in the Czech Republic by disseminating information about the Czech Government's scholarship programme. Building on the success of previous projects in Ukraine, this initiative will deepen the interconnections among universities focused on agricultural sciences. This enhanced cooperation will not only strengthen ties between institutions but also bolster their roles within the European Higher Education Area (EHEA).



LONG-TERM PROJECTS

ANTELOPE CONSERVATION – GIANT ELAND CONSERVATION IN WEST AFRICAN SAVANNAH

- **Principal investigator:** Karolína Brandlová
- **Project duration:** since 2010
- **Provider:** international grants and private donations

The Antelope Conservation NGO associates scientists, students and enthusiasts who want to participate in biodiversity conservation and to change the fate of the Western Giant eland and other antelope species in the West and Central African savanna. The NGO is based at the Faculty of Tropical AgriSciences, the Czech University of Life Sciences Prague and closely cooperates with students and staff from Wildlife Ecology Lab.

The team members have 25 years of experience in antelope conservation in the West African savannah. The team provides scientific evidence for conservation management decisions, builds capacities for antelope conservation and provides support for field operations. Antelope 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).

EXHIBITION "JEWELS OF THE WEST AFRICAN SAVANNAH" – ORGANIZED BY ANTELOPE CONSERVATION AND FTZ

In October 2024, the Faculty of Tropical AgriSciences (the FTZ) hosted the unique exhibition Jewels of the West African Savannah, showcasing the beauty and diversity of West African nature through the captivating photographs of the 7x7 family. This exhibition highlighted the importance of wildlife conservation, with a special focus on the majestic Derby's eland, the largest antelope species in the world. As part of the exhibition, a seminar was held by Assoc. Prof. Karolína Brandlová, Ph.D., a wildlife expert from the Wildlife Ecology Lab and chair of the Antelope Conservation association. Assoc. Prof. Brandlová introduced the 7x7 family project and their insights from travelling across West Africa. The discussion also emphasized the importance of biodiversity conservation and sustainable approaches to natural resource management. The exhibition's grand opening took place on the same day in the FTZ lobby. Among the distinguished guests were Mgr. Lenka Pokorná, former Czech ambassador to Senegal and current Special Envoy for the Sahel, and Mgr. Václav Prášil from the Ministry of Foreign Affairs of the Czech Republic, accompanied by an expert programme, the exhibition provided a valuable opportunity to deepen the understanding of ecological challenges in West Africa and inspired engagement in wildlife conservation efforts.

The Antelope Conservation also organized "Day with the Antelope" events in ZOOs across the country during summer. Visitors were able to learn more about these majestic animals, their conservation and their importance to the ecosystem. The programme included educational lectures, interactive activities and the opportunity to support conservation projects.



TAB 3.6 OVERVIEW OF FOREIGN PROJECTS

Project name	Duration	Provided by / Provider	Programme	Operator	Project Budget	Contact Person / Principal Investigator
GLOFOR – EMJM in Global Forestry	2022-2028	European Commission	Erasmus+	University of Copenhagen	4 864 800 EUR	Bohdan Lojka/Petra Chaloupková
Structural Capacities for Tackling Wicked Problems (SCORE)	2022-2025	European Commission	Erasmus – Cooperation partnerships	3R-BioPhosphate Ltd.	121 705 EUR	Hynek Roubík
DIGITAF – DIGITal Tools to help AgroForestry meet climate, biodiversity and farming sustainability goals: linking field and cloud	2022-2026	European Commission	Horizon Europe	National Institute of Agricultural Research (INRA)	3 667 138 EUR	Bohdan Lojka
UNICOM – Universities-Communities: strengthening cooperation	2023-2027	European Commission	Erasmus+	Universita di Genova	988 435 EUR	Hynek Roubík
AGRIGEP – Assessment and implementation of Agriculture and Life Science Universities' first Gender Equality Plans in widening countries	2023-2025	European Commission	Horizon Europe-Widera	Hungarian University of Agriculture and Life Sciences	998 237 EUR	Jana Mazancová
OSIRIS – Open Science to Increase Reproducibility in Science	2023-2026	European Commission	Horizon Europe-Widera	Ghent University	1 688 433 EUR	Hynek Roubík
ADVALUE Advancing Sustainable Agricultural Value Chains through Strengthening Transdisciplinary Skills and Cooperation in East African Doctoral Education	2024-2026	European Commission	Erasmus+	Nuertingen-Geislingen University	800 000 EUR	Petra Chaloupková
BIO-CAPITAL - Mobilising investments for protecting and restoring biodiversity by harnessing innovative financial solutions and advanced geospatial analytics	2024-2027	European Commission	Horizon Europe	Czech University of Life Sciences Prague	298 875 EUR	Hynek Roubík
Combined Use of EGNSS and Copernicus Data to Develop Innovative Downstream Services for the Users from Chile and Colombia	2024-2026	European Commission	Horizon Europe	LESROJEKT-SLUŽBY Ltd	1 499 893 EUR	Hynek Roubík
MSCA4UKRAINE - Yelizaveta Chernysh	2023-2025	European Commission	MSCA4Ukraine	Czech University of Life Sciences Prague	150 439 EUR	Hynek Roubík
H2SCALE - Paving the way for setting up scalable, green hydrogen-based economic models for local communities in the Danube Region project	2024-2025	European Commission	Interreg Danube	University of Pécs	117 740 EUR	Hynek Roubík
YPARD Europe and Global Coordination Units	2022-2025		European Commission	Czech University of Life Sciences Prague	539 095 USD	Lucie Ackermann Blažková
Case study competition: Networking through student cooperation on case study challenges (NET-COOP)	2024	European Commission	ELLS network	Czech University of Life Sciences Prague	10 000 EUR	Petra Chaloupková
One Planet Fellowship Programme	2023-2024		One Planet Fellowship Programme	Czech University of Life Sciences Prague	32 635 EUR	Hynek Roubík
Visegrad Living Labs Network 4 Youth of Universities (VSLLN4YOU)	2023-2024		Visegrad+ Grants	University of Information Technology and Management in Rzeszow	44 780 EUR	Hynek Roubík
Vermiculture Based Sustainable Organic Innovative Livelihoods (V-SOIL)	2024	United Nations Development Programme	Challenge Fund 2023	ADRA CR	201 888 USD	Hynek Roubík
Nutritional Rich Powders for Fortified Diet, Cambodia	2024	United Nations Development Programme	Challenge Fund 2023	Diakonie ČCE	50 000 USD	Jan Staš

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

Conferences

The Faculty of Tropical Agriculture has hosted several major conferences in 2024 to strengthen its role as a centre of professional dialogue and research in various fields.

CZECHOSLOVAK VIROLOGY CONFERENCE 2024

The Czechoslovak Virology Conference 2024 took place on February 15-16 at the Czech University of Life Sciences in Prague. Organized by RNDr. Jiří Černý, Ph.D., and his team, with support from the National Institute of Virology and Bacteriology and the Czech Society for Biochemistry and Molecular Biology, the conference marked its return after a five-year hiatus due to COVID-19. The event brought together virologists from the Czech Republic, Slovakia, and abroad to discuss diverse topics in virology and foster scientific collaboration.

The conference covered a diverse range of topics, including virus ecology, evolution, epidemiology, plant virology, clinical virology, antiviral compounds, virus-host interactions, antiviral immunity, molecular and structural virology, biochemistry of viral proteins and many more.

CZECH EVALUATION CONFERENCE: EVALUATION DYNAMICS FROM THE PERSPECTIVE OF DIFFERENT PLAYERS

The Annual Conference of the Czech Evaluation Society took place on June 12–13, 2024, at the Czech University of Life Sciences Prague, hosted by the Faculty of Tropical AgriSciences. This two-day event featured a diverse programme focussing on evaluation across various fields, from education to social inclusion. The conference opened with welcome remarks by Daniel Svoboda from the Czech Evaluation Society and Michal Lošťák, Vice-Rector for International Relations at the CZU. Participants had the opportunity to attend practical workshops, thematic sessions, and panel discussions, addressing topics such as teaching in multicultural environments and integrating gender perspectives into evaluations. The conference served as a platform for sharing experiences and exploring more effective ways to apply evaluation methods.

5TH INTERNATIONAL MULTIDISCIPLINARY CONFERENCE FOR YOUNG RESEARCHERS (MCYR)

The Faculty of Tropical AgriSciences (FTZ) hosted the 5th International Multidisciplinary Conference for Young Researchers (MCYR) on 3 – 4 October 2024 in Prague, Czech Republic. This year's theme, "Resilience in the Face of Global Challenges," provided a timely platform for early-career researchers to address critical global issues. The conference brought together researchers from diverse disciplines to share their insights, foster interdisciplinary collaboration, and contribute to solutions for today's complex challenges. MCYR 2024 proved to be a valuable event for those looking to expand their professional networks and deepen their research impact. The core aim of this conference was to provide opportunities for early career researchers from a range of disciplines to share their research through the conference podium, as well as to receive informal in-depth feedback through discussions and to enable them to establish contact with professionals and other institutions. There were over 120 participants from various countries. The subtopic was "Resilience in the Face of Global Challenges", with the following sessions taking place: Society and Culture (Explores the intersection of human societies and cultural dynamics, including medicine, social psychology, gender studies, urban development, etc.), Plants and Agriculture (Focuses on agrobiolgy, agricultural practices, and food security).



Awards

ICA EXCELLENCE AWARD IN THE CATEGORY OF NETWORKING

The Vice Dean for International Relations at the FTZ, **Ing. Petra Chaloupková, Ph.D., dr. h. c.**, has been awarded the prestigious ICA Excellence Award in the category of Networking. This award was presented by the Association for European Life Science Universities (ICA) in recognition of her outstanding contributions to the field of networking and international relations.

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

Jan Šobotník, Thomas Bourguignon, Aleš Buček, Tereza Beránková (PhD student), Johanna Romero Arias

- Evidence of cospeciation between termites and their gut bacteria on a geological time scale – PROCEEDINGS OF THE ROYAL SOCIETY B - BIOLOGICAL SCIENCES

Onyedika Emmanuel Okpala (PhD student)

- Genome-scale metabolic reconstruction of 7,302 human microorganisms for personalized medicine – NATURE IOTECHNOLOGY

Iva Bernáthová (PhD student), Barbora Černá Bolfíková:

- Genomic analyses reveal poaching hotspots and illegal trade in pangolins from Africa to Asia – SCIENCE

Karolína Brandlová, Pavla Hejcmanová:

- Ranging behaviours across ecological and anthropogenic disturbance gradients: a pan-African perspective of giraffe (*Giraffa spp.*) space use - PROCEEDINGS OF THE ROYAL SOCIETY B

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

Hidayatul Fitri

- Biomass potential from agricultural residues for energy utilization in West Nusa Tenggara (WNT), Indonesia – GLOBAL CHANGE BIOLOGY BIOENERGY

JOSEF HLÁVKA AWARD FOR THE BEST STUDENTS AND GRADUATES

Abubakar Sadiq Musa

- The award is given to candidates who have demonstrated exceptional ability and creative thinking in their field of study.

MINISTER OF AGRICULTURE AWARD

Jignesh Italiya

- The award was given for the dissertation thesis "SARS-CoV-2 in zoo-kept and wild-living animals".

PROFESSOR STOKLASA PRIZE

The most prestigious award for PhD students in the country for the doctoral thesis.

Rohit Bharati

- Rohit Bharati, M.Sc. from the Tropical Biotechnology Research Group from the Department of Crop Science and Agroforestry of our faculty, was awarded the prestigious Stoklasa Prize. Rohit's research primarily focusses on the amelioration of medicinal, ornamental, and aromatic plants through biotechnological interventions. This recognition is a testament to Rohit's exemplary abilities and innovative thinking within the field of Tropical Biotechnology. His dedication and innovative contributions to the Department of Crop Science and Agroforestry are truly commendable. This achievement reflects not only Rohit's excellence but also enhances the reputation of our academic community.

PROFESSOR MIROSLAV VLČEK SCHOLARSHIP

Hajra Munir

- Hajra Munir (PhD student) was awarded by an extraordinary scholarship for foreign students who represented their universities in an exceptional way and contributed to the positive promotion of the Czech Republic.

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

Mustapha Yakubu Madaki:

- Agricultural insurance as a climate risk adaptation strategy in developing countries: a case of Nigeria – CLIMATE POLICY

Miroslava Bavorová:

- Agricultural insurance as a climate risk adaptation strategy in developing countries: a case of Nigeria – CLIMATE POLICY

David Sillam-Dusses:

- Neoisoptera repeatedly colonised Madagascar after the Middle Miocene climatic optimum – ECOGPRAPHY

Thomas Bourguignon:

- Neoisoptera repeatedly colonised Madagascar after the Middle Miocene climatic optimum – ECOGPRAPHY
- Alarm communication predates eusociality in termites – COMMUNICATIONS BIOLOGY

Jan Šobotník:

- Neoisoptera repeatedly colonised Madagascar after the Middle Miocene climatic optimum – ECOGPRAPHY



- Alarm communication predates eusociality in termites – COMMUNICATIONS BIOLOGY

Nikola Teutscherova:

- Disentangling the effects of rice husk ash on increased plant growth and nitrogen recovery – GEODERMA

Michael Kolaříková:

- Disentangling the effects of rice husk ash on increased plant growth and nitrogen recovery – GEODERMA

Jan Banout:

- Disentangling the effects of rice husk ash on increased plant growth and nitrogen recovery – GEODERMA

Hidayatul Fitri:

- Biomass potential from agricultural residues for energy utilization in West Nusa Tenggara (WNT), Indonesia – GLOBAL CHANGE BIOLOGY BIOENERGY

Hynek Roubík:

- Biomass potential from agricultural residues for energy utilization in West Nusa Tenggara (WNT), Indonesia – GLOBAL CHANGE BIOLOGY BIOENERGY

- Fungal solid-state fermentation of crops and their by-products to obtain protein resources: The next frontier of food industry – TREND IN FOOD SCIENCE & TECHNOLOGY
- COVID-19 crisis interlinkage with past pandemics and their effects on food security – GLOBALIZATION AND HEALTH

Seyma Celima:

- Re-Emergence of BTV-4 in Sheep Farms in Kosovo, 2020: A Retrospective Study – TRANSBOUNDARY AND EMERGING DISEASES

Jiří Černý:

- Re-Emergence of BTV-4 in Sheep Farms in Kosovo, 2020: A Retrospective Study – TRANSBOUNDARY AND EMERGING DISEASES

Chama Theodore Ketuama:

- COVID-19 crisis interlinkage with past pandemics and their effects on food security – GLOBALIZATION AND HEALTH

Charles Amarachi Ogbu:

- COVID-19 crisis interlinkage with past pandemics and their effects on food security – GLOBALIZATION AND HEALTH

THE RECTOR'S AWARD FOR TEACHING ACTIVITY

The award for the best teacher of the academic year 2023/2024 was awarded to Assoc. Prof. Ing. Vladimír Krepl, CSc. Assoc. Prof. Krepl began his teaching career at the Czech University of Agriculture in 1984 at the then Faculty of Mechanization (today Faculty of Engineering). Since 1986 he has been teaching the course Mechanization of Agriculture at the Institute of Tropical and Subtropical Agriculture (ITSZ), which has now been translated into the Faculty of Tropical AgriSciences. He further developed his professional and teaching career after 1991, when he moved to ITSZ, where he became the supervisor of the course Mechanization of Agriculture in the Tropics and Subtropics.

His teaching work, especially in the Department of Technical and Economic Rural Development of the Tropics and Subtropics, includes teaching important subjects such as "Projects Planning and Management in Developing Countries", "Extension Services in Developing Countries", "Introduction to Engineering" and "Farm Machinery for Plantation Crops". In the Bachelor's programme, he supervises courses on mechanization in tropical areas of crop and livestock production.

Assoc. Prof. Krepl has extensive experience in teaching at foreign universities under EU programmes such as Socrates and Erasmus+, especially in Morocco, Egypt and Syria. He has worked for many years as a teacher and expert in Africa, mainly in Tanzania, Ethiopia, Nigeria and Libya. In Asia, it was mainly Vietnam, Iraq (Kurdistan) and Uzbekistan. He integrates into his teaching his long experience from different cultural backgrounds and projects he has been involved in all over the world. His interactive and participatory approach to teaching, as well as his efforts to foster a multicultural environment within the faculty, are highly valued by both students and colleagues. Student feedback and surveys repeatedly highlight his inspiring approach and support for their involvement in international activities.

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

Barbora Černá Bolfíková

The prize was awarded to MEGERA research team (team leader Barbora Černá Bolfíková) for their research on pangolins as a significant contribution to the scientific community. This work has led to critical advancements in understanding an understudied and highly trafficked species, shedding light on their genetics, ecology, and conservation. Pangolins are the most trafficked mammals globally, yet their biology remains poorly understood. Through research of her team, they have uncovered unknown aspects of pangolin genetics and history, with findings published in high-impact journals Science and Scientific Reports. These publications highlight not only the scientific merit of their discoveries but also their relevance to global conservation and policy discussions.

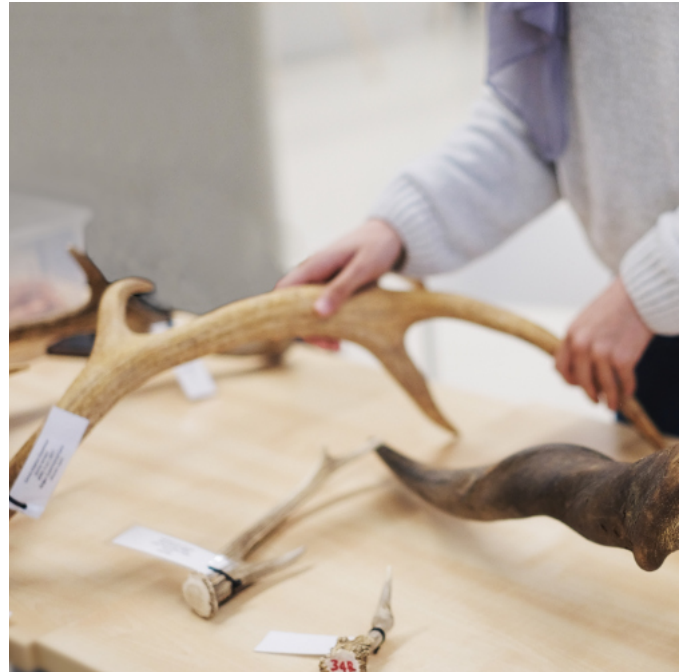


Their work has had significant international recognition, exemplified by our invitation to join the International Consortium for Pangolin Genetics and Protection. This collaboration enables them to contribute to a unified, multidisciplinary approach to pangolin conservation, integrating genetic studies with fieldwork and policy recommendations. Additionally, they prioritize public engagement to raise awareness about pangolin trafficking and conservation. Through media initiatives, they have successfully brought attention to the plight of these animals, bridging the gap between scientific research and societal impact. This project exemplifies the integration of innovative research, international collaboration, and community engagement.

FTZ research groups

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

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





The importance of international activities for the FTZ

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

The FTZ's international activities in 2024 focused mainly on:

- bilateral cooperation with institutions, especially in less developed countries,
- implementation of international projects funded by Erasmus+, Horizon or Czech Aid and the submission of new international projects.

Approximately 46% of FTZ students (of the total number) come from 56 countries around the world (e.g. Nigeria, Ghana, India, Pakistan, Ethiopia, Slovakia, Bangladesh, Myanmar, Zambia 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*, *Tropical Farming Systems*, *Agricultural Sciences and Farming Systems in the Tropics and Subtropics* (double degree) and *Global Forestry* (multiple degree). Ph.D.-level programmes are also taught in English: *Tropical Agrobiolgy and Bioresource Management*, *Sustainable Rural Development*, *Agriculture in the Tropics and Subtropics*.

FTZ students are motivated to study English and other world 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 FTZ participates in the organization of seminars, training, summer schools, and research

projects in cooperation with major world institutions. International development projects are also implemented.

New forms of higher education implemented in cooperation with foreign partner institutions

The project "**Networking through student cooperation on case study challenges (NET-COOP)**" was supported by the ELLS network and the project team consisted of academic staff from BOKU, the CZU and the SLU. The main goal of the project was to connect students of master's study programmes of three ELLS universities (horizontally) and at the same time of different study programmes (vertically) within one university so that they jointly developed a case study in the form of a proposal for an international project focussed on the eating habits of refugees who had to leave their country. Each working group prepared a part of the project in terms of its focus (food safety and security, plant health, social aspects of consumers, sustainability of agricultural production, international cooperation, SDG's) and shared it with other groups from partner universities. The topic of food security for refugees and their eating habits in the host country was chosen as a cross-cutting theme for the case studies in this project. According to information from the UNHRC (the UN Refugee Agency), there are currently 35.3 million refugees worldwide as a result of persecution, conflict, violence, human rights violations or events seriously disturbing public order. More than half of all refugees come from just three countries, the Syrian Arab Republic (6.8 million), Ukraine (5.7 million), and Afghanistan (5.7 million). Most refugees are accepted by countries such as Turkey (3.6 million people), followed by the Islamic Republic of Iran (3.4 million people), Colombia (2.5 million people) and Germany (2.1 million people).

Students from BOKU, the CZU and the SLU worked in groups on four case studies (countries) to focus on the food security of refugees in each country, they chose their perspective according to the focus of

their course. The four case studies which gradually circulate between universities according to the prepared case study template (project proposal) format. At the end, the students prepared presentations and posters, which they presented during the event called The Green Plate Forum on 25th June 2024 in the TÜWI student restaurant, BOKU, Vienna. During this event, students compiled a degustation menu composed of one dish per country, prepared the recipe, focussed on the sustainability of the production of the selected dish, and discussed the aspects of sustainable consumption with the audience.

The Erasmus+ programme

ERASMUS+ IN 2024 AT FTZ IN NUMBERS

Number of agreements (= institutions) (KA103/KA107, 171) 24/33

Mobility of students (KA103/KA107):

- Outgoing students FTZ – study stays (SMS) – 14/2.
Number of months 60/3*
- Outgoing students FTZ – traineeship (SMP) – 9/5.
Number of months 29/10*
- Outgoing students FTZ – KA131 BIP 5 students for 53 days in total.
- Erasmus+ KA131 – Short-term mobility of PhD students – 3 students for 75 days.
- Graduate internships 2 students for a total of 124 days.
- Incoming students – study stays – 34/10.
Number of months 136/32*
- Incoming students – traineeship – 1/18.
Number of months 2/36*

Mobility of teaching and other staff (KA103/KA107):

- Outgoing FTZ staff 15/14. Number of days 83/109
- The most frequent destinations of FTZ staff were countries: Austria, Cambodia, Moldova, Zambia, Germany, Greece, Spain and others.
- Incoming staff 4/20. Number of days 14/237*

* These are months and days of 2024 from the academic years 2023/24 and 2024/25

The Erasmus+ programme is traditionally one of the main activities within the international activities of the FTZ. By 2024, the FTZ had concluded bilateral agreements with the following 24 institutions within the respective programme countries (i.e. KA103):

- 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

CAPACITY BUILDING IN HIGHER EDUCATION

The new project *Advancing Sustainable Agricultural Value Chains through Strengthening Transdisciplinary Skills and Cooperation in East African Doctoral Education – 'ADVALUE'* addresses the need for qualified doctorates and future academic professionals in agricultural sciences who impact the research and teaching capacities of their Higher Education Institutions and contribute to local and regional achievement of SDG goals with the development of sustainable agricultural value chains. In line with this, the specific objectives of ADVALUE are:

- modernised doctoral programmes with innovative course offers in transdisciplinary research methods and value chain approaches,
- strengthened stakeholder involvement to ensure needs orientation and innovation potential,
- capacity building of staff and students, and
- improved quality assurance and development in doctoral education.

The joint development of four doctoral modules (aka scientific working, transdisciplinary research, rangeland management, and agricultural value chains) involves about 120 staff and 160 students in online and offline events. The online training and collaboration provide access to more persons beyond 32 EU study trip participants, 80 pilot training participants and other conference travels. After pilot testing and evaluating the new courses, the implementation in about 30 degree-programmes at the four partner universities in Kenya and Uganda is possible as well as the adaptation of the project results through dissemination of the actively participating network partners to ensure sustainability of the project's outputs. Accompanying these activities, strategies of further improving the quality of doctoral education are elaborated and discussed, including the public exchange on two project conferences (multiplier events).

ADVALUE emphasizes stakeholder involvement on all levels, from the local universities' cooperation with working life partners up to the national exchange and support by associated governmental partners, as well as the international exchange.

In 2023 was furthermore running project called UNICOM – Universities – Communities: strengthening cooperation. The aim of this

project is to enhance universities' social role through boosting university-community engagement leading to the elaboration of state policy on supporting the third mission of universities for ensuring social cohesion, resilience, sustainability and prosperity in Ukraine. UNICOM is a project with a total funding of 988,431 Euro and will run for 4 years.

INTERNATIONAL CREDIT MOBILITY (ERASMUS+ KA 171)

In 2024, the Faculty of Tropical AgriSciences coordinated a range of projects under the Erasmus+ programme, specifically within the "International Credit Mobility" framework. A total of 24 projects were running concurrently, stemming from the 2022 (implementation period 2022-2025) and 2023 (implementation period 2023-2026) calls. These initiatives spanned across a diverse group of countries, including Albania, Algeria, Bhutan, Bosnia and Herzegovina, Cambodia, the Cameroon, East Timor, Fiji, India, Indonesia, Kyrgyzstan, Morocco, Niger, Samoa, Senegal, Somaliland, South Africa, Thailand, Ukraine, Uzbekistan, and Vietnam. Detailed information about partner universities and the number of mobilities can be found in the previous pages.

As part of the 2024 call for project submissions, the FTZ submitted 41 new applications. In the previous year, a total of 212 mobilities were assigned under the 2022 call. This included the participation of 17 employees from five different countries. Additionally, two students commenced their studies in the winter semester, while six employees engaged in teaching and training mobility at institutions in Albania, Kazakhstan, Kyrgyzstan, Fiji, Moldova, and other countries.

The Faculty of Tropical AgriSciences focused primarily on the fields of aromatic plants, ethnobotany, and human nutrition as part of its exchange programmes. Thanks to the European Commission's ERASMUS+ KA171 international credit mobility initiative, the Czech University of Life Sciences in Prague (the CZU) was ranked among the top three most successful applicants nationwide. This allowed CZU employees and students to participate in cross-disciplinary knowledge exchange and share experiences across borders.

Notably, the CZU received 212 mobilities in 2022 and 192 in 2023 under this project, with more than half of these mobilities allocated to FTZ.

The ERASMUS+ KA171 project is a three-year initiative that is submitted annually, aimed at enhancing the capacity of higher education institutions, disseminating best practices, and fostering international collaboration with non-EU partner states. The international credit mobility programme at the CZU underscores its commitment to inclusivity, providing support to disadvantaged student groups, and aligning with Sustainable Development Goal 4 – Quality Education. The ERASMUS+ initiative serves as a vital tool for internationalisation, offering extensive opportunities for professional and academic development for both employees and students.

Through its engagement with ERASMUS+, the FTZ and CZU demonstrate a strong commitment to fostering collaboration and knowledge sharing. Looking ahead, the CZU aims to continue building on its international exchange efforts, leveraging ERASMUS+ to shape a future where academic cooperation and exchange transcend national borders in a meaningful and impactful way.

Erasmus+ KA171 (3-Year) Calls Active in 2024

- Call 2022–2025
- Call 2023–2026

- Call 2024–2027

Number of Interinstitutional Agreements within Erasmus+ KA171 (International Credit Mobility)

- Call 2022–2025: Agreements with 17 countries
- Call 2023–2026: Agreements with 9 countries
- Call 2024–2027: Agreements with 6 countries

Planned Staff and Student Mobilities within Erasmus+ KA171 (Both Incoming and Outgoing)

- Call 2022–2025: 105 mobilities
- Call 2023–2026: 81 mobilities
- Call 2024–2027: 124 mobilities

Countries Involved in Erasmus+ KA171

- Call 2022–2025: Philippines, Bhutan, Algeria, Fiji, India, Indonesia, South Africa, Cambodia, the Cameroon, Kyrgyzstan, Laos, Niger, Senegal, Thailand, Ukraine, Vietnam, East Timor
- Call 2023–2026: Bosnia and Herzegovina, Algeria, East Timor, the Cameroon, Morocco, Samoa, Somaliland, the Central African Republic, Uzbekistan
- Call 2024–2027: Algeria, Egypt, Ethiopia, Cambodia, Moldova, Senegal

Erasmus+ KA171 Student and Staff Mobilities in 2024 under Calls 2022-2025 and 2023-2026:

- 3 outgoing staff mobilities to Bosnia and Herzegovina
- 2 outgoing staff mobilities to Somaliland
- 2 outgoing staff mobilities to Uzbekistan
- 6 incoming staff mobilities from Somaliland
- 5 incoming student mobilities for traineeships from Bosnia and Herzegovina
- 3 outgoing student mobilities for traineeships to Bosnia and Herzegovina
- 2 incoming student mobilities for studies from Algeria

Erasmus+ "International Credit Mobility" Project – 2024 Bilateral Agreements

As part of the Erasmus+ programme, the "International Credit Mobility" (KA171) project, which focuses on cooperation with partner countries, the FTZ has established bilateral agreements with the following institutions in 2024:

- 1) **L'Université 8 Mai 1945 Guelma**, Algeria
- 2) **The Royal University of Bhutan**, Bhutan
- 3) **L'Université De Dschang**, Cameroon
- 4) **The Fiji National University**, Fiji
- 5) **Savannakhet University**, Laos
- 6) **L'Université Dan Dicko Dankoulodo Maradi**, Niger
- 7) **La Faculté d'Agronomie Université Abdou Moumouni**, Niger
- 8) **Visayas State University**, Philippines
- 9) **L' Université de Thiès**, Senegal
- 10) **A Universidade Nacional Timor Lorosa'e**, East Timor
- 11) **Truong Dai Hoc Nong Lam - Dai Hoc Hue**, Vietnam
- 12) **The University of Lampung**, Indonesia
- 13) **Pandit Ravishankar Shukla University**, India
- 14) **The University of Central Asia**, Kyrgyzstan
- 15) **The Royal University of Agriculture**, Cambodia
- 16) **The University of Pretoria**, South Africa
- 17) **Tshwane University of Technology**, South Africa
- 18) **Prince of Songkla University**, Thailand
- 19) **The National University of Life and Environmental Sciences of Ukraine**, Ukraine

- 20) **Dnipro State Agrarian and Economic University**, Ukraine
- 21) **Sumy National Agrarian University**, Ukraine
- 22) **Sumy State University**, Ukraine
- 23) **The University of Mostar**, Bosnia-Herzegovina
- 24) **Džemal Bijedić University of Mostar**, Bosnia and Herzegovina

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>.

COOPERATIVE PARTNERSHIPS

The FTZ is a partner in the Erasmus+ SCORE project "*Structural Capacities for Tackling Wicked Problems Programme*". The main coordinator of the project is the Ss. Cyril and Methodius University in Skopje, Macedonia. Other partners include Panepistimio Ioanninon (Greece) and Sofia University St Kliment Ohridski (Bulgaria). The implementation of the project with a budget of over 32,000 EUR is planned for the 2022-2025 period.

Modern policy implementations and organizational frameworks fail to create a sustainable approach to solving hard-to-identify problems that are a growing global challenge. These include problems that are difficult to define, or difficult to solve, and require different approaches to their ultimate solution. Poverty, climate change, health, gender equality and justice are all so-called "*wicked*" problems that are part of the SDG agenda. This project thus aims to create a cooperation structure and develop a model for solving these problems. Broader transnational capacities are involved, suggesting a bottom-up approach in social planning processes. The goal is to show that such a problem can be solved with a holistic approach.

The project supports and strengthens European cooperation on this topic, while also proposing and piloting new research in the fight against climate change. Specific topics to be addressed include the environment and climate change, interregional cooperation, and research and innovation. The project consortium will mutually benefit from active participation. Practically, project participants will be able to demonstrate determination and their ability to solve many problems in the relevant fields, thereby creating a basis for organizations to be able to implement such approaches. In addition, through the implementation of the project and subsequent phases, a new generation of participants will acquire the knowledge, tools and methods needed to solve wicked problems. The sharing of best practices and the development of interconnected higher education systems will be supported through the sustainability network, models, e-tools and guidelines developed within the project.

More information about the project is available on the website <https://score-eu.org/>.

ERASMUS MUNDUS JOINT MASTER'S DEGREE

The FTZ is a partner of the Erasmus Mundus Joint Master's Degree programme "Global Forestry" (GLOFOR) as part of the new concept of the Erasmus+ programme, mainly thanks to its English-taught programme "*Tropical Forestry and Agroforestry*". GLOFOR is organized by a consortium of five top European universities in the field of forestry under the leadership of the Danish University of Copenhagen. Other partners are AgroParisTech (France), Die Technische Universität, Dresden (Germany) and the University of Padua (Italy).

The consortium also cooperates with so-called "associate" partners, such as the University of Bamenda (The Cameroon), Tribhuvan

University (Nepal), ICRAF (Kenya), the Sokoine University of Agriculture (Tanzania) and others. It is a two-year, English-taught, world-class Master's programme that prepares graduates to address the enormous current challenges and potential of forestry in middle- and low-income countries. Through a high level of research-based education, graduates will acquire the required competencies for working with global forestry issues, such as practical and international experience and openness to foreign cultures. These are all competencies needed to work both as a researcher and to work in the tropics, e.g. with a development agency, doing consultancy, NGOs, international organizations, ministries or government institutions. Successful students will also be able to apply to high-level international Ph.D. programmes.

The structure of the programme is as follows - during the first year, students will receive a thorough introduction to the local and global role of forestry in middle- and low-income countries. All students will spend their first semester in Copenhagen, where teachers from all universities in the consortium will join in the teaching activities. During February of the first year, all students and one teacher from each partner university participate in a joint field course in a middle- or low-income country. Students then move to either Dresden or Padua to complete their first year. In the second year, students focus on a specific specialisation at one of the other partner universities. More information about the project is available on the website <https://globalforestry.eu/>.

Preparation and organization of summer schools and short-term courses

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

SUMMER SCHOOL IN CAMBODIA

"AGRO-FOOD SYSTEMS TOWARDS GREEN TECHNOLOGIES AND SELF-SUFFICIENCY"



The ten-day Summer School took place from August 19 till September 1, 2024. 10 students from the Royal Agricultural University (RUA) in Phnom Penh and 8 Czech students from the Czech University of Life Sciences Prague (CZU) were trained.

The summer school was aimed at training students in Project-Based Learning on agri-food systems and food sovereignty while connecting them to local producers and the local market. Participants improved their theoretical knowledge in agri-food systems and food sovereignty, green technologies and practical skills, as well as theory and soft skills (presentation skills, creative thinking, self-assessment) useful across disciplines and topics. Students experienced the production of food and products under laboratory conditions, which they then placed in the wider context of local production, market and marketing.

The content of the intensive summer school "Agri-food systems towards green technologies and self-sufficiency" was divided into eight sub-sections, which took students through the whole process of food product production from both theoretical and practical perspectives, leading to a final output at the International student food tasting day dedicated to a presentation including tasting and sensory evaluation, where representatives of the farms visited during the summer school were also invited.

Horizon Europe

Reproducibility is crucial to the progress and impact of Research and Innovation (R&I) as it confirms or corrects the outcomes of single studies, resulting in higher quality research, more reliable and implementable outcomes, and a reduction in research costs. Embedding reproducibility in the strategy and design of research should thus be regarded as a key precondition of research quality. Unfortunately, only a fraction of published studies can be reproduced due to science's need to be continuously innovative, pressure to publish, a lack of transparent reporting, and career assessments based on quantity rather than quality. Currently, the burden of improving reproducibility lies with the researchers, as there are limited- to no incentives to encourage active engagement in reproducibility and ideas for improvement have never been tested in practice. That is the reason for the **OSIRIS project** (funded by the European Union). In this project, the FTZ is a leading WP.

Recently, the EC has prioritized addressing gender inequality in research and development (R&D) as a key objective. Regarding this, the FTZ also had success in the Horizon Europe calls with the support of the **AGRIGEP project** (The Assessment and Implementation of Agriculture and Life Science Universities' first Gender Equality Plans in widening countries (2023 – 2025), No. 101094158), which brings together 6 partners in a consortium (besides the CZU, the Hungarian University of Life Sciences (Leader) (Hungary), the University of Primorska (Slovenia), La Universitat Politècnica de Catalunya BarcelonaTech (Spain), the Association for Hungarian Women in Science (NaTE) (Hungary), and Yellow Window (Belgium). This project aims to evaluate the status of Gender Equality Plan (GEP) implementation in universities, enhance capabilities through intensive capacity-building efforts, and devise and execute agriculture-specific GEPs focused on life sciences. These plans will include sector-specific measures and strategies aimed at driving long-term institutional reforms. Furthermore, the project promotes the integration of gender equality issues into the education system. In 2024, several activities on awareness-raising and capacity-strengthening of GE staff and academia were organised.

Agrinatura Association

The FTZ is an active member of the international organization Agrinatura Association. It is a unique institution of this type in Europe and 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 a European and global level. Agrinatura member organizations are actively involved in a number of research and education projects focused primarily on developing countries in the Tropics. Agrinatura strengthened its partnership with various partner networks such as the ICA (the Association for European Life Science Universities), IROICA, RUFORUM (the Regional Universities Forum for Capacity Building in Agriculture), SEARCA (the Southeast Asian Regional Center for Graduate Study and Research in Agriculture), YPARD (Young Professionals in Agricultural Research for Development) and many more.

Student ambassadors

The Student Ambassadors of the Faculty of Tropical AgriSciences (FTZ) have been actively engaged within the FTZ's Multicultural Centre for over five "years. The team of 16 students from Europe, Asia, Africa and America are focusing on supporting newly arriving students via email by sharing their own experiences and through Welcome courses, leaflets and meetings. Student Ambassadors are also organising teambuilding activities, contributing to FTZ promotion (social media support, newsletter, map), providing links with alumni and friends of the faculty (Learn and Discuss, quiz, documentary screening, Christmas event, Garden party), and cooperating with students and international organizations (BeFair, Pupen and YPARD). Moreover, they focus on sustainability issues (maintaining the Little Free Library in the FTZ lobby, organising plant swaps, Christmas swaps, and promoting eco-friendly activities). The Student Ambassadors cooperate closely with the Faculty to support students' academic and career growth, fostering a welcoming atmosphere and enhancing international outreach.





Faculty development

Strategic management support plan (PPSR)

PPSR projects are funded by the Ministry of Education, Youth and Sports of the Czech Republic (MSMT).

In 2024 the following projects were implemented within MSMT projects.

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

- **Sub-part:** Strengthening the quality of new forms of education
- **Coordinator:** Jiří Hejkrlik

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

STRENGTHEN THE QUALITY, OPENNESS AND INTERNATIONALISATION OF DOCTORAL STUDIES

- **Coordinator:** Olga Leuner

International internships are an integral part of the Doctoral Study Programmes (DSP) at the FTZ, as they not only enhance the quality of the DSP but are also crucial in its internationalization. The aim of this institutional plan sub-division is to support Ph.D. students in internships with a minimum duration of one month. These internships could be carried out at quality workplaces in the Czech Republic, but mainly abroad in institutions and in companies and other relevant organizations.

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 linked to 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 internships submitted reports on their stay.

Conclusion: A total of 7 students were supported.

COOPERATION OF THE FTZ WITH FOREIGN UNIVERSITIES AND INTERNATIONAL ORGANIZATIONS

- **Coordinator:** Petra Chaloupková

The goal of this project is to strengthen the strategic management of internationalisation through the support of cooperation via strategic partnerships and membership in international networks and organisations where the FTZ/CZU provides secretariats and is part of the management of these organisations (AGRINATURA, YPARD, ELLS), e.g. via joint projects and possible involvement in networks, in order to strengthen sustainable strategic management at all levels of the CZU, helping to reduce the administrative burden and strengthening investments in and social capital existing at the CZU (i.e. in the intellectual capital of the CZU). The project also includes the promotion of these networks among teachers and students and their involvement in joint activities.

SUPPORT OF STUDENT MOBILITIES ABROAD

- **Coordinator:** Petra Chaloupková

The aim of this project is to support the mobility of students and teachers beyond the scope of Erasmus+ projects and the development of global competences (skills to be acquired in an international academic and cultural environment) of students, in order to obtain high-quality and competent graduates who will actively contribute to the sustainability of life for the 21st century and to deepen the dimension of education in such a way as to form socially responsible graduates. The project supported 11 FTZ students who went for data collection abroad as part of the preparation of their diploma theses. They travelled to Cambodia, the Cameroon, Thailand, Ethiopia, the Philippines, Nigeria and France.

PROMOTING AND REPORTING ON THE PRINCIPLES OF SOCIAL RESPONSIBILITY (CSR) OF THE FTZ/CZU

- **Main coordinator:** Klára Urbanová

In 2024, the Faculty of Tropical AgriSciences organized and supported several events aimed at communicating and promoting the **principles of social responsibility of the CZU Prague**. During the academic year, several exhibitions were held in the lobby of the FTZ with the aim of drawing attention to the issue of conservation of natural resources.

- The exhibition "Gandoca Lives": drew attention to the importance of protecting the lowland rainforest in Costa Rica. It included also a lecture for students and meetings with experts.
- Sea Turtles Exhibition: Informed about ways to protect sea turtles and concluded with a Learn and Discuss seminar on "Illegal Trade in Animals" organized by Student Ambassadors with special guests' speakers from the Faculty of Environmental Sciences (the FZP) and the Ministry of Environment.
- Beauty of the West African Savannah Exhibition held In October 2024. The FTZ and the Antelope Conservation NGO produced an exhibition showcasing the beauty and diversity of West African wildlife through 7x7 family photography. This exhibition highlighted the importance of protecting endangered species, among which the majestic Derby's antelope - the largest antelope in the world - stands out. The exhibition included an accompanying seminar led by Assoc. Ing. Karolina Brandlová, Ph.D., an expert from the Wildlife Ecology Lab and chairwoman of the Antelope Conservation Association. The opening was attended by distinguished guests: Mgr. Lenka Pokorná, former Czech Ambassador to Senegal and now Special Representative for the Sahel, and Mgr. The exhibition, accompanied by an expert programme, was an opportunity to gain a deeper understanding of the environmental challenges in West Africa and to inspire involvement in conservation.

Communication of events, achievements and news was communicated regularly via the Faculty's website, social networks, and university-wide channels such as the Živá univerzita magazine. The FTZ also used external platforms such as Vysokeskoly.cz and CzechStudies, and mediated the comments of Faculty experts on current topics through cooperation with the media. Faculty representatives also participated in conferences, expert debates and roundtables. In addition, new promotional leaflets were created to promote the FTZ as a Fairtrade Faculty, paid advertising and recruitment campaigns presenting the FTZ as a responsible institution – Vysokeskoly.cz, Czech Universities, KamPoMAturitě.cz.

STRENGTHENING THE ACCESSIBILITY OF RESULTS OF CREATIVE ACTIVITIES TO THE GENERAL PUBLIC IN VARIOUS FORMS; PROMOTING THE POPULARIZATION OF SCIENCE AND COMMUNICATION OF ITS CONTRIBUTION TO SOCIETY TO TARGET GROUPS

- **Coordinator:** Klára Urbanová

In 2024, the Faculty of Tropical AgriSciences participated in a number of events and held several conferences aimed at popularizing the scientific work and communicating its benefits to target groups, introducing the activities of the Faculty to the general public and new potential applicants, and strengthening relationships between staff and

students. Popularization of scientific work and communication of the Faculty's activities to the general public and potential applicants for studies took place at Open Days and at fairs.

The Open Days were held in January, March and November and introduced the study programmes, the Faculty's facilities, including the FTZ Botanical Garden, Herbarium and laboratories. Representatives of the Student Ambassadors, BeFair and Antelope Conservation were also involved and presented their activities.

The FTZ presented study programmes at the Socrates Fair, which was attended by a representative of FTZ students, and at other events aimed at high school students, such as Sciencefest or Night of Scientists.

FTZ representatives represented the Faculty at important local and international meetings:

NATIONAL DEVELOPMENT DAY 2024

On 25 April, the first National Development Day was held at the Ministry of Foreign Affairs. The Faculty of Tropical Agriculture was represented by: Petra Chaloupková and Tatiana Ivanova - round table on the topic of education and awareness and Marie Kalousová and Vladimír Verner - climate and environmental security section.

The morning included panel discussions and expert debates on topics such as education, climate security and economic development. The afternoon offered the general public exhibitions, interactive presentations, screenings and tastings of food from developing countries, as well as discussions with experts and personalities from humanitarian fields.

ZEMĚ ŽIVITELKA

The members of Faculty of Tropical AgriSciences also joined the largest agricultural fair in Central Europe - Země Živitelka, with the theme of the exhibition "Science not only for tropical areas". Visitors were able to learn about the activities of the Animal Physiology and Behaviour team, the BioResources & Technology Division team focussed on the innovative use of biogas and renewable energy sources, and representatives of the FTZ Botanical Garden taught how to tie traditional herb bouquets "Bouquet garni" and gave advice on how to use herbs in everyday life.

CELEBRATION OF 20 YEARS OF FAIRTRADE CZECH REPUBLIC AND SLOVAKIA WITH THE PARTICIPATION OF THE FTZ

On Monday, 4 November, the Museum of Literature hosted a celebration of the 20th anniversary of Fairtrade Czech Republic and Slovakia under the auspices of the First Lady of the Czech Republic Eva Pavlova and Deputy Mayor of the City of Prague Jana Komrsková, which commemorated the significant contribution of the Fair Trade movement. This important anniversary is also commemorated by the FTZ, which as a Fairtrade Faculty supports responsible consumption. Jiří Hejkrliík, Vice-Dean for Education and Quality Assessment at the FTZ, was at the signing of the agreement twenty years ago in Bonn as chief negotiator and one of the founders of Fairtrade Czech Republic and Slovakia. Representatives of the FTZ - the Dean of the Faculty Prof. Patrick van Damme and members of the student association Be Fair - Bára Karasová, Ondřej Cingálek and Mikuláš Středa attended the ceremony in Prague.

Part of the media output included Podcasts prepared in cooperation with the CZU where we introduced our experts and their projects. In 2024 we released Podcasts with:

- The Vice Dean for International Relations Petra Chaloupková - about the International Activities and possibilities for our students.
- The Head of the Botanical Garden – Ing. Anežka Daničková – about the importance of Botanical Garden, not only for the FTZ.

SUPPORTING THE ACTIVITIES OF STUDENT ORGANIZATIONS AS ACTORS CONTRIBUTING TO THE QUALITY FUNCTIONING OF THE CZU, ESPECIALLY IN ITS EDUCATIONAL COMPONENT

- **Coordinator:** Klára Urbanová

Due to its disciplinary focus, the FTZ also focuses on events of an international nature, whether in terms of theme, target group or professional programmes in English. The organization of events often works in cooperation with student organizations - Student Ambassadors, BeFair at the CZU and Antelope Conservation, which makes it easier to reach a wider range of participants with our activities.

Student organizations are involved in the organization of Open Days and also participate in other public events where we present our activities (Scientists' Night, the Garden Festival, Vědafest). Other events organized by Student Ambassadors, such as the Plant Swap, Christmas Swap or Learn and discuss series help to strengthen the community and spread awareness of sustainability and environmental issues.

The FTZ also maintains its status as a Fairtrade Faculty, to which the activities of the BeFair organization contribute greatly. Examples include serving Fairtrade refreshments during the Easter or Christmas Fairs or providing information about the activities of the association at Faculty events. A map with an overview of the countries with which the faculty cooperates was installed in the lobby of the FTZ, unveiled during the Tropical Fiesta event.

The FTZ is also promoted within the Antelope Conservation Association, which aims to save the Derby antelope in Senegal and whose activities are carried out by teachers and students, especially from the FTZ/CZU in Prague.

The FTZ in the media

Last year, a total of **153 articles** were published in connection with the Faculty of Tropical AgriSciences (FTZ).

The articles covered various topics, ranging from the **impacts of climate change on agricultural production**, including coffee and cocoa, to **virological research and virus-related risks**. Virologist **RNDr. Jiří Černý, Ph.D.**, is a regular commentator on viral diseases and frequently appears on **Czech Television** and **Czech Radio** news. Another key topic was the **increased activity of mosquitoes and ticks in the Czech Republic**. Articles also discussed the **return of avian influenza to the country** and the **spread of new COVID-19 variants**.

Another significant focus was the **conservation of the Derby eland** and the **opening of a new research station in Senegal**, highlighting the efforts of the **Antelope Conservation Association**, led by **Assoc. Prof. Karolína Brandlová, Ph.D.** The media reported on how Czech scientists

are successfully working to protect these critically endangered antelopes in Senegal.

Additionally, the media covered the findings of a research team led by scientists from the **Czech University of Life Sciences Prague (CZU)**, who published a study revealing new insights into the **genetic structure and population dynamics of African pangolins**, particularly in relation to conservation efforts and the fight against the illegal wildlife trade. The study was based on **previously unstudied population samples**, providing new opportunities for conservation strategies. As part of the project, researchers discovered a **unique lineage of the white-bellied pangolin**, shedding light on how rivers act as significant barriers for pangolins and how they have responded to past climate changes. The **lead researcher from the FTZ** on this project is **Mgr. Barbora Černá Bolfíková, Ph.D.**

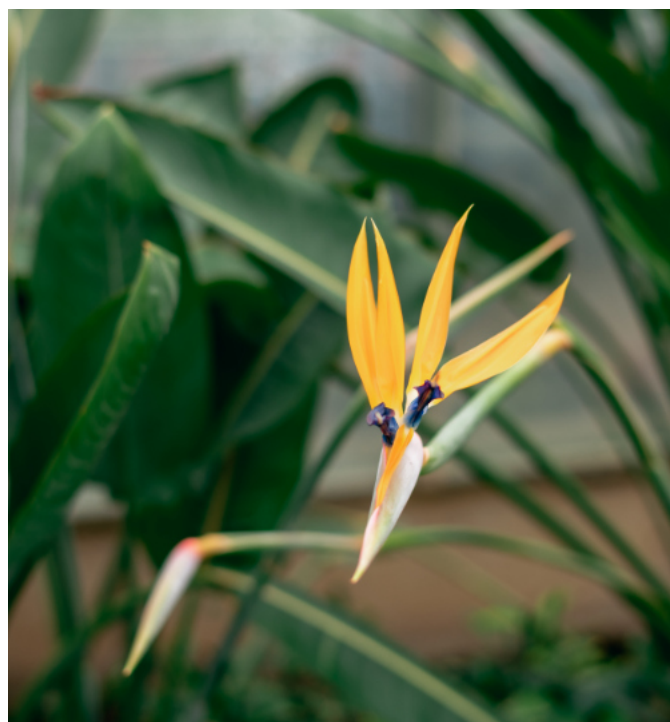
Another major topic was a **Czech study on termite behaviour**, in which **Prof. Jan Šobotník from the FTZ** participated.

Scientific journals also reported on the **prestigious recognition of Prof. Ladislav Kokoška**, who was ranked among the **top 0.5% of the world's most influential researchers in medicinal plants** and received the title **Top Scholar** from the renowned **ScholarGPS** platform for his outstanding publication record and significant scientific impact.

Another highlighted topic was the **recently launched EU-funded BIO-CAPITAL project** (Research and Innovation Action), which contributes to the development of **financial instruments for biodiversity conservation** by linking **private capital investments with satellite data**. The project is coordinated by **Assoc. Prof. Hynek Roubík, Ph.D.**, Director of the **BioResources & Technology Division at FTZ**.

The media also reported on **innovative projects**, such as the **production of briquettes from mango seeds in Cambodia**.

FTZ staff were regularly informed about faculty activities through a **biannual newsletter**. The general public is kept up to date on The FTZ also actively participates in **public outreach events**, including **Open Days, Vědafest, Researchers' Night, and the Země žitelka agricultural fair**, engaging with a broad audience to promote science and education.





Financial report

Management of the state non-investment contribution and subsidies in 2024

TAB 6.1 DRAWING ON THE ALLOWANCE FOR EDUCATIONAL ACTIVITIES

	ALLOTTED (IN CZK)	DRAWN (IN CZK)
Wages and salaries	20 846 000	21 982 333
Payroll deductions 35.22%	7 341 963	7 542 080
Educational activities – operation	250 000	231 404
International Relations	59 770	1 916
Special purpose activity	60 000	0
TOTAL	28 557 733	29 757 733*

TAB 6.2 DISBURSEMENT OF FUNDS FOR SPECIFIC UNIVERSITY RESEARCH

	SVV FTZ	SVV FTZ
The IGA Organisation	65 690	65 690
Organisation of a student scientific conference	242 790	242 790
Internal grants	2 570 000	2 570 000
TOTAL	2 878 480	2 878 480
BUDGET AMOUNT 2024 / EXPENDITURE 2024	31 436 213	32 636 213

TAB 6.3 DISBURSEMENT OF INSTITUTIONAL SUPPORT

	RVO FTZ	RVO FTZ
Capital funds	0	0
Wages and salaries	10 992 716	10 819 680
Payroll deductions	4 149 873	3 790 158
Scholarships	0	276 560
Other current assets	3 366 909	3 623 100
TOTAL	18 509 498	18 509 498
BUDGET AMOUNT 2024 / EXPENDITURE 2024	49 945 711	51 145 711

TAB 6.4 OTHER

University of the Third Age	30 000	30 000
Students with Specific Needs	122 115	122 115
Basic subsidy for students with governmental scholarship (category B)	0	0
Basic subsidy for foreign students, students with governmental scholarships – English language teaching (category G)	951 383	951 383
Government scholarships B	0	0
Government scholarships (category G)	2 241 500	2 241 500
Achievement and exceptional scholarships for government scholarship holders	0	0
Achievement and exceptional government scholarships (category G)	194 000	194 000
Allowance for short stays	412 700	412 700
DSP Scholarships for doctoral programmes	10 464 296	8.593.576/1.870.720**

TAB 6.5 PROJECTS FOR SUPPORT OF STRATEGIC MANAGEMENT:

PSSM NON-INV	1 225 600	1 225 600
PSSM INV	0	0

* Budget amendment of plus CZK 1 200 000.

** Operational Costs Fund

Category B – studies in the Czech language

Category G – studies in the English language

PSSM – Strategic Management Support Programme



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