

INTERNATIONALIZATION STRATEGY OF THE FACULTY OF AGRICULTURE

INTERNATIONALIZATION 2023

The Faculty of Agriculture is the fourth largest faculty at the University of Bonn. It has a very diverse structure, encompassing not only the agricultural sciences but also nutritional and food sciences as well as geodesy. The faculty works closely with the Faculty of Mathematics and Natural Sciences and the Faculty of Medicine and enjoys a strong academic reputation in Germany and worldwide. Besides BSc and MSc degree programs taught in German, it also offers three international MSc programs. The faculty boasts an extensive international network and runs projects with universities and other research institutions as well as private companies and many local stakeholders in its partner countries.

Internationalization plays an important role in the areas on which the faculty focuses, due in particular to our highly globalized world and the interconnected nature of farming, trade and food systems. This is reflected in the progress that the faculty has made with its internationalization process, as shown by its many research publications with a high level of international impact. This process has led to the faculty securing an interdisciplinary Cluster of Excellence funded by the German Research Foundation (DFG) and dealing with robotics and phenotyping in sustainable crop production alongside its involvement in several Collaborative Research Centers (CRCs) and a large number of international research projects. The faculty is constantly seeking to recruit more international professors, postdocs, doctoral students and visiting professors and, more broadly, to step up its collaboration with global experts. This increased internationalization is geared toward producing stronger research proposals and raising the profile of the research conducted here, which will create new opportunities for early-career researchers as well as increase diversity at the University of Bonn more generally. This process also requires all areas of the faculty, including its administration, to embrace internationalization and has already resulted in a central post being created whose holder is responsible for international affairs in the Faculty of Agriculture.

One outcome of this process has been the faculty's internationalization strategy, which is based on the overarching Internationalization Strategy of the University of Bonn and aligns with its guiding principles, objectives and five action areas:

- **Internationalization of academic research**
- **Internationalization of study offerings and teaching**
- **Framework for internationalization**
- **Strategic partnerships**
- **Collaborations based in the international city of Bonn**

In line with the University-wide strategy, this document sets out to highlight the priorities, prospects and requirements of the Faculty of Agriculture. To formulate the strategy, input was collected in two working groups during the yearly faculty retreats (2021 and 2022), during the annual Germany-wide faculty day (2022), at the general director's meetings and from one-to-one conversations with the professors of the faculty. Advancing internationalization in all five action areas in order to increase quality and competitiveness in research and teaching is extremely important to the faculty. The international, collaborative and innovative working environment and culture that it fosters enables researchers to develop research ideas from multiple perspectives and to find solutions to today's problems and for the benefit of society while embracing diversity, inclusion and sustainability.

1. Action area 1: Internationalization of academic research

The Faculty of Agriculture is firmly embedded in the international research landscape and runs a broad range of working groups including international teams and outreach. Most of the publications originating in the faculty are written in English and appear in international journals (478 "category 1" publications in 2021). The faculty is also high up in the QS World University Rankings for agriculture and forestry, being placed 4th in Germany and 83rd worldwide (2022).

The research done by the faculty's various institutes and projects (see Appendix 3) enjoys an international reputation, and the volume of its publications has increased sharply in recent years. However, its international activities are somewhat fragmented, meaning that the faculty as a whole is not regarded as particularly international by universities abroad.

The Faculty of Agriculture was successful in securing a Cluster of Excellence, PhenoRob, that is a pioneer in internationalization (in terms of courses, events, recruitment, publications and communication) and was recently chosen to host the DETECT CRC. It also makes a substantial contribution to the Future Rural Africa Collaborative Research Center (CRC) and is an active participant in numerous international collaborative projects. Although the institutes that teach international MSc programs have an especially strong international flavor (in terms of their courses, staff, etc.), agreements with other institutions (a list can be found on our homepage) and the networks of individual faculty members enable lively discussions and dialogue among researchers across the board (e.g. visiting professorships, students on internships or working on their MSc/BSc theses, or doctoral/postdoc research visits, conferences, summer schools, etc.).

The faculty is involved in two joint doctoral degree programs: the JUMPA (Jülich-University of Melbourne Postgraduate Academy) program together with the University of Melbourne, a strategic partner of the University of Bonn; and the Marie-Skłodowska Curie Innovative Training Network MANNA, which forms part of the EU's Horizon 2020 framework program. MANNA ("The European Joint Doctorate in Molecular Animal Nutrition") offers doctoral students the opportunity to follow a three-year program at two different universities. The Bonn International Graduate School (BIGS)—Land and Food was established in 2008 and connects a large number of international and German doctoral students at the faculty together through joint capacity development programs (themed courses, soft skills, etc.).

International students make up 43 percent of the faculty's doctoral students and a large number of postdocs (data on these is currently being collected). In terms of professorships, three out of the forty-nine professors come from abroad, still some way off the 15 percent target set in the central Internationalization Strategy.

Challenges

- The international visibility of the faculty as a whole is limited despite running working groups and activities with a strong international element
- Recruiting and retaining professors from other countries
- Ensuring sufficient mobility for doctoral students and postdocs
- Upskilling German researchers

Objectives

- Increase the international visibility of the faculty as a whole
- Increase flexibility to make the faculty more attractive to international researchers
- Improve the fundamental well-being of international researchers

Measures

- Recruiting professors and postdocs from abroad
- Inviting visiting professors to the faculty
- Communicating language expectations clearly with regard to specific recruitment processes
- Providing extra support during transition periods for language-learning (three years, extra staff)
- Continuing to permit the use of Zoom in recruitment processes and the defense of doctoral theses
- Providing mobility support to doctoral students and postdocs
- Organizing conferences jointly with partners (promoting e.g. the DigiCrop format)
- Offering more social activities involving postdocs and doctoral students, potentially together with BIGS depending on the results of a needs analysis
- Promoting the mobility program for academic staff
- Promoting the use of the University of Bonn Central Translation Service for publications
- Introducing an onboarding document for new international staff

2. Action area 2: Internationalization of study offerings and teaching

The internationalization of study offerings and teaching has made huge progress in recent years. The numbers of outgoing students from the faculty and of international students in the faculty have both grown, as has the number of programs taught in English. However, most offerings are at MSc level and form part of the three well-established MSc programs (Agricultural and Food Economics, Agricultural Science and Resource Management in the Tropics and Subtropics, and Geodetic Engineering), meaning that they are open to both exchange students and international students participating in degree programs in German. At BSc level, the faculty recently allowed elective modules and examinations to be taken in English. B2-level English has become an entry requirement for German-language programs too, which can pose an obstacle to international students (e.g. from China) who have sufficient knowledge of German but lack English skills. As part of the re-accreditation in 2020, the mobility windows were transformed into flexibility windows so that up to 30 ECTS, e.g. from semesters abroad, could be selected and recognized. The percentage of international students on the international MSc programs is high at over 80 percent, while 13 per cent of the faculty's total students come from abroad (2021/2022).

There are currently 36 partner universities in the Erasmus Programme offering a total of 128 spaces per year, with the Scandinavian countries as well as the Netherlands, Spain, Austria and the Czech Republic seeing the highest demand (see Figure 2 in Appendix 2). The number of incoming Erasmus exchange students



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ranges from 14 to 20, while the number of outgoing students is between 30 and 40 per year (see Figure 1 in Appendix 2).

The limited number of courses taught in English at BSc level and in the animal and nutritional sciences dissuade incoming exchange students (Erasmus) from enrolling at our faculty, especially those from countries in high demand among outgoing students (Scandinavia, the Netherlands, etc.). This is causing an imbalance between incoming and outgoing exchange students, jeopardizing the faculty's existing cooperation agreements with its partner universities in Europe and making it harder to put new ones in place. Nevertheless, a new agreement was signed in 2021 with the Norwegian University of Life Sciences, which was met with a very good response from the faculty's students. To teach more courses in English, the faculty is aiming to step up its international recruitment and attract visiting professors. The paucity of courses taught in English also leads more Erasmus students to do an internship (research visit, research work on their BSc/MSc thesis) at our faculty, which is an attractive option for professors and working groups and can easily be done in English.

The funding for two of the international MSc programs is soon to come to an end, and they are currently looking for alternative solutions so that excellent students from the Global South will still be able to study in Bonn and to maintain the quality and diversity of the programs. Marketing and alumni concepts for all three programs are currently being developed alongside this search for funding options.

The International Affairs Unit at the Faculty of Agriculture provides students and interns with organizational support and a program of welcome, social and cultural events. Two social tutors were brought on board in 2020 to assist the program with weekly meetings and readily accessible events, and the faculty also organizes an integration program two or three times a semester, offering activities such as welcome events, a Christmas party, a visit to the Siebengebirge mountains and an evening at a German-language opera. One aim of the social program is to enable the international students from the three different MSc programs to get to know

one another. The social program has been very well received by students. The coordinators of the individual MSc programs have also come together in regular meetings to establish an active communication channel, share examples of best practice in marketing and alumni work and spend whole days coordinating their programs. The services offered by the International Office for assigning “study buddies” and language integration (German courses) are promoted.

Challenges

- International recruits delivering teaching in German and German staff delivering teaching in English
- Low numbers of incoming international exchange students
- Maintaining and expanding partnerships for student exchange to benefit students already at the University of Bonn
- Maintaining and increasing the attractiveness of study programs for top international students

Objectives

- Increase the number of incoming exchange students
- Secure funding to maintain a high level of support for international students
- Increase the portfolio of international master’s programs

Measures

- Increasing the percentage of courses in the BSc programs that are taught in English
 - Developing teaching partnerships at international level (sharing modules—either selected online modules or running an instructor exchange)
 - Recruiting English-speaking visiting professors and lecturers
- Searching for alternative funding sources for the MSc programs and developing alumni and marketing concepts for the three programs
- Maintaining and expanding Erasmus partnerships, especially with countries in high demand among outgoing exchange students
- Maintaining and enhancing the good support system and social tutoring for international students
- Reserving spaces on language and integration courses run by the International Office and organizing in-faculty courses on demand (through the International Office)

3. Action area 3: Framework for internationalization

Most administrative processes at present require German language skills. Technical and administrative staff often do not have the capacity to handle administrative matters in English and thus require translation support.

The translation of key documents such as examination regulations, doctoral degree regulations, application forms and guidelines is ongoing, and various documents are already available in English. Most emails within the faculty and between the dean’s office and the faculty are written in German, which leaves international staff excluded and limits their participation in the faculty’s decision-making processes and development.

Although committee and faculty meetings are held in German, one first step toward a language shift will be to provide PowerPoint slides in English, and the next faculty retreat is planned as a trial in an international format. The faculty day in 2022, which brought together all agricultural faculties in Germany and was a good platform for learning about examples of best practice, provided an opportunity for the Faculty of Agriculture to establish contact with its counterpart at the University of Gießen, a faculty that is well advanced with the internationalization of its administration.

The faculty established two new international affairs posts in 2020, both part-time positions. The holder of the first (50 percent full-time equivalent (FTE)) deals with all international affairs at faculty level, while their colleague (25 percent FTE) serves as Erasmus Coordinator to support overall international matters. Both are responsible for strategic development, taking care of student mobility (advice), supporting international students and staff, upholding partnerships and liaising with the International Office.

Challenges

- Administrative processes and documents are in German
- Staff lacking the necessary foreign-language and intercultural skills
- Sharing information from the International Office within the faculty

Objectives

- Increase availability of key documents and communications in English
- Improve language skills of administrative staff
- Increase communication between International Office and faculty

Measures

- Developing guidelines for writing emails in English (invitations, memos, etc.)
 - Creating automatically generated bilingual emails; introducing staff to machine translation
 - Making more use of English-language PowerPoint slides in committees
 - Translating key documents into English > to be prioritized depending on demand
 - Advertising Erasmus Staff Mobility within the faculty
- Introducing intercultural training for technical and administrative staff
- Organizing a faculty retreat with an international focus/format
- Launching an International Affairs Unit newsletter and giving updates on International Office issues at faculty meetings

4. Action area 4: Strategic partnerships

The Faculty of Agriculture has numerous formal and informal cooperation arrangements around the globe via joint projects, inter-institutional memorandums of understanding (MoUs) or the personal contacts of its members. Alongside the 36 Erasmus agreements with European universities mentioned under action area 2, there are also many MoUs in place with non-European universities, while professors and researchers make use of their own networks to send students, doctoral students and postdocs on exchanges or collaborate in other ways. The International Affairs Unit is currently working to record these formal and informal cooperation arrangements and aims to publish them on its web page so that the information is collated and available to students and faculty members. Besides universities, these networks include other research institutions (e.g. CGIAR Centers and private research units) and companies as well.

Amongst the University of Bonn's strategic partner universities (St Andrews, Waseda, Melbourne, Emory Hebrew, Ghana), the Faculty of Agriculture only maintains close links with the University of Melbourne (through the JUMPA joint PhD program and small-scale grant projects) and the Hebrew University of Jerusalem (through small-scale grant projects). Its strongest ties are with Wageningen University in the Netherlands, the Swiss Federal Institute of Technology (ETH) Zurich in Switzerland and the University of Illinois Urbana-Champaign in the US, especially but not exclusively via the research and project activities of the PhenoRob Cluster of Excellence. The Faculty of Agriculture thus currently considers these three partners to be its strategic partners, worthy of special attention at faculty level. The faculty intends to adopt a double-track approach to partnerships by strengthening relationships with the three strategic partners identified while also keeping up the many looser cooperation arrangements maintained by and required for the faculty's wide range of projects

and activities within its various research fields. A potential strategic partnership with the University of Saskatchewan in Canada in the field of agricultural sciences is currently also under discussion.

Most of the faculty's contacts and networks are based in the Global North (US, Canada, Australia, Netherlands, UK, France, Bulgaria) as well as in China and in East and West Africa. The Global South is comparatively underrepresented among the faculty's partnerships, and it intends to expand its network into this region in the future. For the moment, the Future Rural Africa and One Health (ZEF) CRCs as well as other small-scale projects in African, Asian and South American countries provide links with the Global South.

Challenges

- Little awareness of who our important international partners are
- Little awareness of the wide network of institutional and individual contacts and personal relationships that also help shape the faculty's international profile
- Lack of a full overview at faculty level leads to limited synergy effects and little awareness of how international we already are

Objectives

- Forge further strategic partnerships to hone our profile and set a clear focus on core activities with wider faculty participation
- Raise the profile of our international research partners and activities
- Document and promote active international networks at faculty level

Measures

- Identifying and promoting strategic partners and developing specific core activities
- Defining a (small) set of strategic partners for now: Wageningen University, ETH Zurich, University of Illinois Urbana-Champaign
- Developing processes to add (and eliminate) strategic partners over time (evaluation of existing and potential new strategic partners)
- Creating programs to lend targeted support to the relationship with strategic partners (collaborating on research and teaching, writing joint grant applications, etc.)
- Preparing a list of all partner institutions and a map of MoUs with the faculty/institutes, published on our website and illustrated on a "living map"
- Making better use of exchange programs together with strategic and other international partners: promoting/developing blended mobility options (Erasmus), study visits (German Academic Exchange Service (DAAD)), etc.

5. Action area 5: Collaborations in the international city of Bonn

The Faculty of Agriculture works closely with the various international organizations based in Bonn, especially with the Center for Development Research (ZEF), many of whose doctoral students are enrolled in the Bonn International Graduate School for Development Research and with whom joint events and courses are organized. Similar activities are conducted with the United Nations University (UNU), and the orientation day and language courses have been organized jointly. Collaborative research projects have involved the European Forest Institute (EFI), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the European Centre for Medium-Range Weather Forecasts (ECMWF). Experts from the Faculty of Agriculture frequently spend time at international organizations and vice versa, and details of internships and job opportunities are communicated. The DAAD has close links with the Faculty of Agriculture through the review services offered by professors and the funding of scholarships for the prestigious MSc in Agricultural Sciences and Resource Management in the Tropics and Subtropics (ARTS), which has been part of its EPOS program for the past 18 years.

Other important institutions are the Bonn International Center for Conflict Studies (BICC), the German Institute of Development and Sustainability (IDOS) and the various UN secretariats.

Challenges

- International environment taken for granted; not much is advertised

Objectives

- Raise the profile of our activities within the international environment in Bonn with
 - The Center for Development Research (ZEF)
 - The United Nations University (UNU)
 - The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
 - The European Centre for Medium-Range Weather Forecasts (ECMWF)
 - The European Forest Institute (EFI)
 - The German Academic Exchange Service (DAAD)
 - The Center for Earth System Observation and Computational Analysis (CESOC)

Measures

- Adding information to our web page about the institutions, links and activities
- Continuing activities and including experts in teaching

MASTHEAD

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