

# fenaco and World Food System Center program on research in Smart Sustainable Farming

## **Call for Proposals**

**Call 2: open from 02 February to 31 March 2023**

Zurich, January 2023

## 1. Background and scope

The fenaco cooperative and the World Food System Center of the ETH Zurich are expanding the existing partnership in the sense of a long-term cooperation in the field of Smart Sustainable Farming. To fuel this partnership, fenaco has provided to ETH Zurich 1.2 million CHF of research funding to perform projects of interdisciplinary research in the field of agriculture and food systems at the doctoral and postdoctoral level. The aim is to develop new, applicable knowledge in the field of sustainable agriculture and new technologies (like artificial intelligence, data science and/or robotics). The focus is on collaboration between research and practice as well as interdisciplinary, solution-oriented research approaches. The program is structured around annual calls in 2022, 2023 and 2025 that will fund 3 projects per call of in general 2-4 years duration, with a maximum budget of 200'000 CHF per project.

## 2. Call topics

This call is intended to facilitate projects with the aim of developing knowledge, technologies and innovative methods and processes that combine the expertise available at ETH Zurich in the fields of agronomy, agroecology, breeding, robotics, data science, AI, economics and management in the best possible and most profitable way. The focus of these joint projects is on Swiss agriculture. However, generated knowledge and experiences are also applicable to other geographical or agro-climatic contexts.

All projects that are based on an interdisciplinary research approach and that address one or more of the following topics are invited to submit projects:

- Reducing the footprint of agricultural production
- Strengthening the quality of products and improving transparency along the production process
- Improving the competitiveness of sustainably produced products
- Strengthening biodiversity
- Reduction of the climate impact of production and strengthening the resilience of agricultural production to climate change.

The interdisciplinary research approach should combine at least two research groups, ideally combining an agronomic perspective with a technical, computational, data-based, or socio-economic perspective. Projects representing or containing feasibility studies, proof of concepts and milestone driven projects are encouraged.

We also encourage using the experimental infrastructure available at ETH Zurich relevant to these research fields, in particular AgroVet Strickhof and the ETH Research Station for Plant Sciences.

If you are planning to submit a proposal, you are strongly encouraged to join our **on-site Workshop** jointly organized by WFSC and fenaco on **16 February 2023, at 13:00** at **ETH HG E 41**. The workshop brings together interested researchers from different

disciplines (AI, robotics, agricultural science) with representatives of fenaco to discuss topics and enable a co-creating of project proposals.

### **3. Eligibility**

To submit a proposal to this call, the Principal Investigator (PI) must be a researcher of ETH Zurich. Direct funding is restricted to ETH Zurich WFSC members. RESC Non-ETH Zurich WFSC members can be co-applicants and their expenses can be covered for project costs (consumables, equipment, services, etc.) but they cannot receive funding for scientific personnel (doctoral students, postdocs, etc.).

Eligible are Professors, Senior Scientists and Senior Assistants (“OberassistentInnen”). The PI must thereby be an ETH Zurich employee with at least a 50 % position, which must be guaranteed for the intended duration of the project. Doctoral and/or postdoctoral students funded by this program must be supervised either by the PI or a co-applicant.

This call is intended to support interdisciplinary approaches that combine different methods and disciplines. For this reason, a co-applicant from another discipline is highly encouraged. However, external (non-ETH Zurich) co-applicants cannot receive funding from this program.

Proposals submitted to this call will only be considered if they fit to one (or more) of the topics outlined in Section 2.

If applicable, relevant ethical, legal and social considerations should be included in the proposal. The prospective research must also comply with the existing ethics regulations and adhere to the principles of research integrity valid at the ETH Zurich.

### **4. Duration and Funding**

The maximum funding duration per project is 3-4 years for doctoral students and 2 years for postdoctoral researchers. Costs will be covered for an amount up to 200'000 CHF per project.

The following costs will be covered for research projects:

- Salaries for postdoctoral researchers or for doctoral students (based on ETH Zurich standard salary rates at the time of submission)
- Travel
- Consumables
- Education, outreach, communication and implementation activities

Eligible costs must be directly linked to the project and must be justified in the proposal. Salaries of the applicants and the co-applicants are not eligible for funding. Funding cannot be used for the purchase of new equipment or replacement costs of laboratory and field equipment.

Financial accounts must be administered at ETH Zurich.

The available funding is not divided between specific topics but will be awarded to the best projects. Funding will be allocated at the start of the project for the full duration of the project.

The WFSC is compensated for project coordination, interaction, communication of project results and the organization of workshops allowing to inform about the projects and the program (5% of the project costs, to be added in the project budget).

## **5. Deadline for proposals and submission procedure**

The deadline for the submission of project sketches is: 31.03.2023

Email address for submission: [wfsgrants@ethz.ch](mailto:wfsgrants@ethz.ch)

Applications and supporting documentation must be written in English using the proposal template enclosed and must be submitted electronically as a single file in PDF format.

The Evaluation Committee (EC) will make select proposals in a two-stage approach.

(I) At the first stage, projects are selected based on a short project sketch of max 2-3 pages (see separate template).

This description needs to include information on the scientists/research group(s) involved (interdisciplinary project teams are encouraged); as well as a short description of the project idea covering elements such as e.g. research objectives, duration of the project and rough estimation of costs;

(II) At the second stage, applicants selected in the first stage are invited to hand in a project proposal (see separate template).

The proposal needs to include

- A cover sheet in which the main applicant is identified, and basic information is given (position, institution, address, email) and in which the title of the project, funds requested and key words/disciplines as well as the duration of the project are indicated. All co-applicants associated with the proposal must also be clearly identified.
- An executive summary (maximum 400 words)
- A budget outlining the requested funds and justification
- The scientific proposal, including the state of research, the research goals and the research plan, expected milestones, as well as a list of literature references. The research plan should include sufficient scientific and technical details for the reviewers to be able to evaluate the proposal as a whole. The scientific proposal should not exceed 10 pages per proposed project (A4, Arial font, size 11, 1.15 line spacing).
- CVs and relevant publications from the applicants and relevant involved researchers.

The EC evaluates the proposals and makes the final decision by consensus. In case this is not possible, a majority of the members decide.

**The submission and evaluation process will follow the following schedule:**

Stage	Start date	End date
Call open	01.02.2023	31.03.2023
<b>Workshop</b>		16.02.2023
Submission project sketch		31.03.2023
1 <sup>st</sup> evaluation round	31.03.2023	30.04.2023
Decision on first round communicated		not after 01.05.2023
Submission project proposal		15.06.2023
2 <sup>nd</sup> evaluation round	15.06.2023	15.07.2023
Final Decision Communicated*		not after 17.07.2023
Start of research projects*	Sep-Dec 2023	

\*Please note that dates for the final decision and start of research may be subject to change.

## **6. Evaluation Committee (EC)**

All projects submitted to this call will be reviewed by the specially created Evaluation Committee, which consists of two representatives of fenaco, three representatives of ETH Zurich and one external person from science.

As a rule, the proposals will be evaluated by the EC. The projects will be evaluated according to the evaluation criteria in Section 7. Where appropriate, the EC may consult external scientific reviewers to evaluate a proposal. In the case where EC consults external reviewers, the timeline defined in the table below is no longer applicable as the 2<sup>nd</sup> evaluation round would last longer than indicated. In such cases, the project applicant will be informed, and the announcement of the final decision will be later.

The EC will make its funding recommendation to the Vice President Research and Corporate Relations at ETH Zurich, who make the final funding decision.

Notification of the decision will usually be given within three to four months of the submission deadline. Projects may start immediately after approval and at the latest within four months after the reception of the decision letter.

## 7. Evaluation Criteria

Proposals will be evaluated according to two criteria blocks, namely program criteria as well as against scientific criteria.

Research Program Criteria:

- a. Relevance – How relevant is the proposed project for the program?
- b. Fit to topics of the call – Does the proposed project fit to at least one topic of the call?
- c. Interdisciplinarity – Is the proposed project interdisciplinary?
- d. Transferability – How can the outcome of this project be put in practice?

Scientific Criteria:

- a. Scientific Excellence – Does the proposed project demonstrate high scientific quality? How well conceived, organized and state-of-the-art is the proposed activity?
- b. Originality – Is the proposed project creative and original?
- c. Interdisciplinarity – What is the added value of the interdisciplinary structure of the project? How appropriate is the combination of disciplines? What is the scientific added value from the partners to the project team?
- d. Potential Impact – What is the science and practical impact of the project on the challenges addressed?
- e. Feasibility – Does the project have a reasonable chance of succeeding in terms of resources, management and organization and what difficulties can be expected?
- f. Competence – What is the relevant experience of the project team in the research field of the proposed project?

Based on the criteria listed above, projects will be graded using the following scale:

**A: Outstanding | AB: Excellent | B: Very Good | BC: Good | C: Average | D: Poor**

Projects that are awarded an overall grade of A will be funded as a first priority. Projects receiving a D in one or both criteria blocks will not be funded.

## 8. Project deliverables, monitoring and outreach

The project teams are expected to report annually on the progress of the project, the results achieved and the project budget. The Evaluation Committee will be assessing the yearly scientific and financial reports for each project.

A final report is due upon completion of the project, including all relevant outcomes (dissertations, publications, patents, etc.). The WFSC manages the reporting process and prepares the necessary documents and templates.

In cases where the project results are made accessible to a larger public, outreach, dissemination, communication, or educational activities can be developed in consultation and collaboration with the project team and the team of the WFSC executive office.

## **9. Communication and Contact**

Any notice or communication to be given within the framework of this Call shall be forwarded to the following contact persons

For general enquiries related to the call, topics and collaboration, please contact:

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