The ERA-Net Cofund on Coordination of European Transnational Research in Organic Food and Farming Systems

Pre-Announcement of

CORE Organic Cofund Third Call 2021

'ORGANIC FARMING SYSTEMS FOR IMPROVED MIXED PLANT AND ANIMAL PRODUCTION'

Planned launch of the Call: 11 January 2021
Webinar for applicants: 19 January 2021
Planned closing date for submission of full proposals: 8 March 2021

Table of contents

The project receives funding from the European Union's Horizon2020 Research & Innovation Programme under grant agreement No. 727495, CORE Organic Cofund

1 Background

1.1. About CORE Organic Cofund Third Call 2021

In January 2021, CORE Organic Cofund will launch a third transnational Call for research project proposals based on national funds from participating countries. The CORE Organic consortium consists of 13 partners from 13 countries, which have committed to an indicative budget of 4.8 million €.

1.2. About CORE Organic Cofund Programme

CORE Organic (CO) is the acronym for ERA-NET "Coordination of European Transnational Research in Organic Food and Farming Systems". The ERA-NET Cofund instrument under Horizon 2020 is designed to support public-public partnerships between Member States (and associated countries) for the implementation and coordination of networking activities in different fields of research. The aim of CORE Organic is to improve the knowledge basis and innovation capacity necessary for supporting further development of organic food and farming as a way to respond to significant societal challenges in Europe's and global agriculture and food systems. The current CORE Organic Cofund ERA-Net is the continuation of the ERA-NETs CORE Organic I, II and Plus. More information is available on: http://coreorganiccofund.org

1.3. Rationale and scope of the Call

The EU has adopted ambitions targets to increase organic production as part of the European Green Deal indicated in the Farm to Fork and Biodiversity Strategies under the objective *of 25% of the EU's agricultural land under organic farming by 2030.* This high target of 25% organic set for 2030 entails specific knowledge and research needs that can be sustained through new and innovative solutions related to the organic sector addressed under the research Call on *'Organic farming systems for improved mixed plant and animal production*'.

The overall objective for the CO Cofund Third Call 2021 is that the proposed research projects support the further development of the organic sector in Europe and beyond. The expected impacts focus on organic food systems including mixed farming practices[1], supporting animal health and welfare, innovative cropping and production systems as well as feed production and biodiversity, aiming at accomodating the growing demand for more organic products, supporting the organic farming regulations, the Common Agricultural Policy (CAP), the EU Farm-to-Fork and the Biodiversity Strategies. The funded projects should present new and innovative solutions to environmentally friendly agriculture. Moreover, they should contribute to supporting human health, trade and job creation and the improvement of the general competitiveness of the agricultural sector.

[1] For further reference: EIP-AGRI Focus Group on Mixed Farming Systems: Final report. https://ec.europa.eu/eip/agriculture/en/publications/eip-agri-focus-group-mixed-farming-systems-final

The indicative Call budget outlined in the present CORE Organic Cofund Third Call 2021 Pre-Announcement is pending the final approval of national funding bodies. It will be published with the CO Cofund Third Call Announcement in January 2021.

2 Which thematic areas can be applied for?

The CORE Organic Call 2021 will provide funds for research under the topic **Organic farming systems for improved mixed plant and animal production**, organized in three sub-topics:

Sub-topic 1: Robust and resilient mixed animal farming systems;
Sub-topic 2: Support for robust and resilient crop production systems; and
Sub-topic 3: Eco-efficient production and use of animal feed at local level.

With a point of departure in systems thinking, research projects should combine knowledge with a cross-disciplinary and multi-actor approach in order to design robust and economically viable, healthy organic farming systems where food production and the environment thrive. They should include further development, testing and on-farm validation of innovative systems, as envisaged for example under 'living lab approach' and should encompass the different geographical and climatic conditions covered by the funding partners participating in the Call. Results should be able to reach end-users and be used transnationally - suitable and smart outputs and deliverables for dissemination are expected.

For a detailed description of the Call topic see Annex A.

3 Who can apply?

Institutions that are involved in research and/or innovation and operate in accordance with national rules, including farmers and companies, are invited to apply (when eligible from their national institutions). CORE Organic is aiming at a high degree of stakeholder participation by a multi-actor approach throughout the whole project. Cooperation between researchers, farmers, and companies is encouraged and attention will be paid to dissemination of research results into practice and among the end-users.

Research consortia must comprise of a minimum of three independent legal entities from a minimum of three different CORE Organic partner countries participating with funding in the specific topic. A list with the CORE Organic partners including the available funds per country and topics can be found in Annex B.

Research consortia are encouraged to consider good geographical coverage with regard to their main research question.

Applicants who are not eligible for funding by their national funding body or applicants from countries not participating in the Call are welcome in research consortia but will have to provide in-kind contribution. They will not be included in the required minimum number of partners in the consortium and they cannot be the coordinator of the project.
Such partners should state in advance the source of funding for their part in the project.

The maximum budget requested from CORE Organic funds is 1 million € per research proposal but in-kind contributions may be added on top of this amount.

A research group can only participate in one project proposal.

In early December a Partnering forum will be available for applicants who are interested to find partners for their project proposal. The link to the forum will be published in https://projects.au.dk/coreorganiccofund/core-organic-2021-call/

A complete list of the CORE Organic eligibility criteria (general and national) will be published with the Call Announcement in January 2021.

National eligibility criteria vary even between different funding bodies. Therefore, **it is mandatory for each applicant to consider the national regulations and contact their funding body for all further clarifications (Annex C)**. For example, whether costs or sub-contracting are in line with the national rules and priorities. The national funding rules and priorities will be published as part of the Call Announcement and will be available at https://projects.au.dk/coreorganiccofund/core-organic-2021-call/ when the CORE Organic Call is launched in January 2021.

Projects are expected to start in Autumn 2021 and be of maximum 36 months.

4 Coordinator of the research consortium

At the start of the application phase, each research consortium needs to appoint a project coordinator.

The project coordinator has the following role and responsibilities:

1. Lead the consortium throughout the application procedure and be responsible for the correct submission of the full proposal. The coordinator should be the one who submits the proposal in the provided online tool.
2. Ensure that all partners:
   - Fulfil the requirements stated in the Call Announcement and criteria as stated in the national annexes provided by the repective funding bodies.
   - Provide all necessary information and comply with all formalities as required, and
   - Participate actively in the proposal preparation, and ensure that the proposal meets a high standard of excellence, represents good value for money and meets all eligibility requirements.
3. Be fully responsible for the overall project coordination and be the central contact point for the CORE Organic consortium during the full life span of the research project, from application to successful completion in case of approval by the funding bodies.
4. Inform the CORE Organic Call Secretariat about any event that might affect the implementation of the project.

5. Ensure that all work is carried to a high standard and meets contractually bound milestones and deliverables presented in the full proposal and approved by the funding bodies.
6. Responsible for sharing all Call related information with consortium partners.
7. Responsible for monitoring data and timely delivery of project reports.

The project coordinator should have a general overview of the financial management of CORE Organic project funding that will be provided in project reports to the CORE Organic Secretariat. The detailed financial reporting of consortium partners will be handled directly between the national research institutions and national funding bodies in each participating country.

5 Time schedule, 1-step-procedure

The call will follow a 1-step competitive selection procedure of submitted full proposals (no pre-proposals submission is envisaged) following the time schedule below:

Table 1: Time schedule

Action	**Scheduled**
Publication of Pre-Announcement	30 November 2020
Launch of the Call	11 January 2021
*Webinar: Overview of the third Call 2021	19 January 2021
Closing date for submission of full proposals	**8 March 2021**
Full proposal peer-review/ Selection process	Until June 2021
Notification letters sent to applicants	July 2021
Contract negotiations	From July 2021 onwards
Start of projects (max.36 months)	**Autumn 2021**
End of projects at the latest	Autumn 2024

*Webinar: Overview of the Third Call 2021: At the Webinar, the Call content and the application procedure will be explained and all details will be announced in the Call Announcement in January 2021. The applicants will have the possibility to ask clarification questions. For those not attending, all material will be available on-line on the CORE Organic home page: **https://projects.au.dk/coreorganiccofund/core-organic-2021-call/**

Call Secretariat Contacts:

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6 Further information

All information necessary for the preparation and submission of the full proposal will be available on the CO Cofund home page: **https://projects.au.dk/coreorganiccofund/core-organic-2021-call/** at the launch of the Call. Applicants will have to register and submit their proposal in a dedicated online submission tool.

7 Annex A: Call topic description

The Call is open to all proposals which address the Call sub-topics and do not overlap with those previously funded by CORE Organic (http://www.coreorganic.org/ and http://orgprints.org/view/projects/eu.html) or others. Interested project consortia should apply to one sub-topic.

Call topic:

ORGANIC FARMING SYSTEMS FOR IMPROVED MIXED PLANT AND ANIMAL PRODUCTION

Sub-topic 1: ROBUST AND RESILIENT MIXED ANIMAL FARMING SYSTEMS

Rationale

Many organic animal farming systems have become increasingly specialised. From the initial economic advantage of specialisation, they have developed a relatively narrow economic and ecological base. Resilience is a core concept in organic farming at all levels and animal farming relies on the system‘s ability to adapt to e.g. outbreak of disease, feed prices, climate and legislation. Animals contribute to our food system and are considered sentient beings that should be provided with opportunities in accordance with their physiology, natural behaviour and well-being. In the organic principles, animal health comprises the physical and mental well-being of individual animals. Thus, animal health is not just the absence of disease but comprises immunity and resilience, the latter being the animal‘s ability to respond and react to its environment. Potentially, this can conflict with trying to accommodate other objectives such as improving biodiversity, reducing greenhouse gas emissions and reducing nutrient losses. Animal farming systems should be developed towards finding solutions and synergies

with multiple aims. Diversity is key and the underlying values are adaptation to and relevance within various contexts. In such systems, for example, the use of antihelmintics and antibiotics can be further reduced following societal expectations.

Scope

The focus is on the identification, exploration and assessment of different solutions and synergies to develop more robust and resilient mixed animal farming systems with multiple aims. We encourage development of multi-species animal farming systems and/or animal systems integrated with crop production, agroforestry and/or pastoralism. Hereby, potential ecological synergies can be exploited in all aspects of the farming system. Key elements could be outdoor living, longivity, natural behaviour, species-specific behaviour, species-specific feeding, local breeds and multipurpose breeds. Also, we encourage the improvement of existing mixed animal farming systems and the development of innovative forms of producing animals integrated with crops or agroforestry and/or pastoralism for production. The mixed animal farming systems should be assessed in different geographical regions with a focus on adaptation to local conditions. The analysis of these systems can potentially address production (including economy), management strategies, animal health and welfare as well as feeding strategies. Regarding feeding, we encourge the development of strategies with a point of departure in the animals‘ physiology and behaviour in addition to strategies where the animals are an integrated part of the cropping system. Also, we encourage the development of feeding strategies with potential synergies between animal species.

Possible output and potential impact

- Increased scientific knowledge of mixed animal farming systems, including mutual benefits for animal health and animal welfare.
- Improved guidelines for managing complex agricultural systems, including animal health and animal welfare management as well as feeding strategies;
- Assessment of alternatives to contentious inputs in mixed animal farming systems.

Sub-topic 2: SUPPORT FOR ROBUST AND RESILIENT CROP PRODUCTION SYSTEMS [2]

Rationale

The management of specialised and sometimes monoculture cropping systems generally require intensive use of energy, water, fertilizers and external inputs for pest and disease control. Plant based functional biodiversity, not always utilised, could help farming systems to reduce the dependency of external inputs, while still increasing economic sustainability. Simultaniously the number of consumers dedicated to a healthier lifestyle with less

[2] German funding body BMEL will exclusively fund research projects related to the (plant) breeding of berries. For further information, please consider the German national regulations attached to the final CO Call Announcement and contact German national contact point.

consumption of meat, more plant-based protein food and looking for nutritious food, is increasing. The challenge is to find practical ways to develop more robust and resilient agro-ecosystems for perennial and annual crops‘ production, in line with the principles that enhanced functional biodiversity would benefit the agricultural environment and responding to consumers' expectations. Innovative cropping and production systems could support the wellbeing of the agro-ecosystem and improve nutrient cycling by using new crop combinations *(i.e. intercropping, mixtures with various rooting depths, crops providing ecological services, crop diversification, inclusion of legume plants etc.)* as well as efficient use of resources and byproducts. They should improve the quality and stability of production and lead to lower production costs. Relevant research should result in diversified, stress-tolerant, multi-functional, robust and resilient cropping systems leading towards farming practices with reduced environmental and climate impact.

Scope

Organic crop fields including e.g. protein crops, vegetables, fruit orchards, olive groves, vineyards and berries productions still depend on inputs for fertilization and pest and disease control, resulting in a limited production of the agro-environmental services. Consumers expect high quality in terms of taste and nutritional content as well as high environmental protection and production standards, which encompasses agro-environmental and wider ecosystem services. There is a knowledge need on how to design and manage resource-efficient, robust and resilient crop production systems in order to reduce dependency on external inputs, and improve synergies with nature. One of the challenges is to understand how growers can make the best use of genetic diversity within and between crops, and of the natural biodiversity at field, farm and landscape levels. Many crops are exposed to a a variety of abiotic and biotic stressors where plant breeding can play a key role. Varieties should be robust in terms of resilience to climate stress as well as pest and diseases, quality properties, nutritional value and shelf life. Diversity can also be reached through the development of diversified organic farming including e.g. the production of grain legumes, pseudo-cereals, oil crops and others, in addition to classical crops.

Possible output and potential impact

- Providing cropping models/systems for more diversified, stress-tolerant, multi-functional, robust and resilient organic crops (including e.g. protein rich crops, vegetables, olive, grape, fruits and berries) productions in the open field;
- Testing existing or new mixtures of crop varieties suitable for organic production, increased biodiversity and ecosystem health maintenance – addressing relevant research and networking among breeders, research facilities, farmers, processors and retailers (following living laboratory approaches);
- Testing functional biodiversity for pest and disease control strategies;
- Ensuring closed nutrient cycles and improved efficiency in the use of resources and inputs.

Sub-topic 3: ECO-EFFICIENT PRODUCTION AND USE OF ANIMAL FEED AT LOCAL LEVEL

Rationale

Recycling of nutrients on farms or at regional level is challenged in large parts of the Europe and beyond. This is mainly due to economic reasons but also due to specialisation of farming systems. To a large extent, feed and animal production are concentrated in different regions, and animal feed, especially protein sources, are imported. We have a variety of surplus green biomass from crops or byproducts as well as blue biomass, which could be made available for feed, while at the same time, providing new options for nutrient recycling between farms and other parts of the food system. In addition, the EC policy on Circular Economy, points to the need for recycling of food waste in the form of animal feed. Organic animal farming systems, have an increasingly smaller economic and ecological base, thus threatening their capacity of resilience and putting consumer confidence at risk. Self-sufficency and local production of feed is an integrated part of the organic principles. New forms of bio-refinery and other techniques are emerging which may provide high-quality animal feed. However, their commercial and practical success depends on further joint technical and market development including animal feed experiments. In order to achieve this, a value chain approach is needed, which involves upstream and downstream partners cabable of interlinking skills, knowledge and disciplines.

Scope

According to the organic principles, there is a need to increase local production of animal feed crops and availability of proteins. The aim is to support the development of self-sufficient animal farming systems and overall sustainability of organic value chains. Local feed crops and other protein rich feed sources capable of replacing imported soybean products should be considered. For monogastric animals, attention should be paid to the availability of protein feeds of plant, marine or byproduct origin with an optimal amino acid composition. Using an agro-ecological and ethological approach, development of innovative cropping systems and methods for the production and processing of local feed should be considered. This entails growing new crops and more suitable varieties, re-designing crop rotations and intercropping. High-quality protein feeds from bio-refinery or other processes based on regional crops, crop residues and food byproducts as well as blue biomass (eg. mussels) may be included. On this basis, we encourage the concurrent development of innovative feeding strategies. The whole value chain should be taken into consideration including economic aspects that impact local animal farming systems. In addition, strengths and weaknesses of innovative systems of feed production must be analyzed, including bio-refinery processes. Furthermore, suggestions may be provided on how to develop these strategies for more sustainable feed and animal systems. Pertinent EU-legislation should be taken into account, especially EU-legislation relating to the use of food residues and other byproducts. Thus, project proposals must justify to what extent they will provide knowledge applicable under current regulation or knowledge relevant for policy development and science-based improvement of regulation.

Possible output and potential impact

- Improve eco-efficiency of organic animal farming systems by developing pathways for growing local feed;
- Re-design and develop cropping and feeding strategies with an innovative use of crops, grassland, forage, byproducts and other potential protein sources including methods and techniques for processing;
- Support for organic animal production by taking the whole value chain and related economic aspects into consideration that strongly condition local animal farming systems;
- Support for sustainable local farming systems and economies driven by organic animal production.

8 Annex B: Indicative Call budget

Indicative national budgets (in 1000 euros)

No.	Country	Partner	Contact person	Total funds	Mixed animal farming systems	Crop production systems	Production and use of animal feed at local level
1.	Algeria	MESRS	Hamza Merabet	100	X	X	X
2.	Bulgaria	BNSF	Milena Aleksandrova	307[3]	X	X	X
3.	Denmark	DAFA	Julia Gajo	400	X	X	X
4.	Estonia	MEM	Maarja Malm	100	X	X	X
5.	Finland	MMM	Suvi Ryynanen	300	NO	X	X
6.	Germany	BMEL	Katerina Kotzia	400[4]	NO	X	NO
7.	Italy	MIPAAF	Serenella Puliga, Alessandra Morganti	600	X	X	X
8.	Morocco	MENFPESRS	Abdelouahid Ezzarfi	200	X	X	X
9.	Norway	RCN	Nina Elisabeth Solheim	1000	X	X	X
10.	Poland	NCBR	Dominika Mickiewicz	600	X	X	X
11.	Romania	UEFISCDI	Adrian Asanica	500	X	X	X
12.	Slovenia	MKGP	Jana Erjavec	100	X	X	NO
13.	Turkey	GDAR	Aysen Alay Vural	200	X	X	X
	Total funds			**4.806.775 €**			

[3] Bulgarian funding body BNSF comitts 600.000 BGN with an equivalent amount of 306.775 €.

[4] German funding body BMEL will exclusively fund reserach projects related to the (plant) breeding of berries. For further information, please consider the German national regulations attached to the final CO Call Announcement and contact German national contact point.

9. Annex C: National Contact Points (NCP)

Country	Funding body	Name	Telephone	E-mail
Algeria	**Ministry of Higher Education and Scientific Research (MESRS)**	**Hamza Merabet**	+213 (0)21 27 88 18	h.merabet@mesrs.dz
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Estonia	**Ministry of Rural Affairs (MEM)**	**Maarja Malm**	+372 625 6250	maarja.malm@agri.ee
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Germany	**Federal Ministry of Food and Agriculture (BMEL) represented by Federal Office for Agriculture and Food (BLE)**	**Katerina Kotzia**	+49 (0)228 6845-3486	katerina.kotzia@ble.de
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Norway	**The Research Council of Norway (RCN)**	**Nina Elisabeth Solheim**	+47 452 25 496	nsf@forskningsradet.no

Country	Funding body	Name	Telephone	E-mail
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