

Why do research and innovation on agroecology and organic farming matter?

Agroecology and organic farming are approaches with potential to accelerate the transition to sustainable farming and food systems and to contribute to achieving key commitments made in the European Green Deal and its farm to fork strategy and biodiversity strategy for 2030. These approaches put more emphasis on crop diversification and soil management to reduce the use of external inputs. They rely on interactions between plants and/or animals and other organisms, above and below ground, and increase the provision of ecosystem services such as pollination, biological pest control, nutrient cycling and hydrological services, which are highly context-specific and not yet well known. They have the potential to simultaneously address the social, environmental, climate and economic challenges of the agricultural sector, and increase its resilience. Moreover, cooperation with other parts of the food and non-food supply chains is needed to develop solutions and business models adapted to the context-specific challenges.

Research and innovation are key to advancing agroecology and organic farming in Europe. The EU is boosting its support for research in these areas, in line with the European Green Deal targets. Research projects are improving our understanding of the practical implementation of these approaches, along with their environmental, climate, economic and social benefits. This is contributing to building a robust R&I system for agroecology in Europe, which will be further consolidated through a Horizon Europe partnership on agroecology, to be tentatively launched in 2024. The partnership is expected to underpin the agroecology transition in Europe by enhancing the knowledge base and delivering the necessary context-specific solutions and tools.

Agroecology and organic farming in Horizon 2020 and Horizon Europe



CORDIS search keywords

agroecology, agro-ecology,

organic farming



EU projects/topics

55 Horizon 2020 projects

59 Horizon Europe topics



EU contribution

€ 316 million

€ 490 million

Figures comprise Horizon 2020 Societal Challenges 2 and Horizon Europe Cluster 6 projects, including Work Programme 2023-2024.



Success stories about agroecology and organic farming

Crop diversification and mixed farming

EU-funded research is helping to achieve the full potential of diversifying cropping systems. Research demonstrates that crop diversification can increase productivity while decreasing the need for chemical inputs. Research projects such as [Diversify](#), [Diverfarming](#), [Diverimpacts](#), [Remix](#) and [IWMpraise](#) have developed decision support tools for advice on crop combinations and management, including as alternatives for pest control. Research is helping to boost the sustainable development of legume production in Europe. This has been the objective of research projects and thematic networks such as [Legumes Translated](#), [LegValue](#), and [TRUE](#). Key outcomes include the creation of the Legume Hub, the Legume Innovation Network (LIN), and decision support systems for value-chain-wide sustainability assessment and knowledge sharing. The research projects [Stargate](#), [Afinet](#), [Mixed](#) and [Agromix](#) are helping us understand how agroforestry could offer an opportunity for land use to become part of the solution to climate change and land degradation.

Organic farming

EU-funded research is helping to boost organic farming in Europe. The research projects [Liveseed](#), [Ecobreed](#), and [Bresov](#) are increasing the availability and quality of organic seeds, and developing resilient new cultivars and crops. Research is facilitating the adoption of alternatives to phase out the use of contentious inputs in organic farming. The projects [Organic-Plus](#) and [Relacs](#) have identified promising phase-out pathways for some of those inputs. Promoting the exchange of knowledge among farmers, farm advisers and scientists is a key objective of EU-funded research focusing on organic farming. The project [OK-Net Arable](#) set up the Organic Farm Knowledge (OFK) platform to make information accessible to farmers. The project [OK-Net EcoFeed](#) has helped organic farmers move towards using 100% organic feed, and [PPILOW](#) is developing solutions to improve animal welfare in organic farming. The EU is also supporting the coordination of European transnational research in organic food and farming through [Core Organic](#). The organic sector is also addressed in several other EU-funded research projects focusing on a wide range of aspects.

Ecosystem services

Research is helping European farmers with the knowledge and tools they need to maximise the ecosystem services obtained from agricultural production. Developing innovative tools to help farmers capitalise on nature and biodiversity and to integrate biodiversity into farming practices is at the core of the research projects [EcoStack](#), [Showcase](#), [Framework](#), and [Biovalue](#). Research is helping to identify sustainable systems based on permanent grasslands through projects such as [Super-G](#). The projects [Console](#), [Effect](#) and [Contracts2.0](#) have developed tools to make payments-for-results schemes more attractive to farmers. Identifying the drivers behind the development of ecological farming, and analysing its socio-economic benefits and challenges, have been at the core of research projects [LIFT](#) and [UNISECO](#).

Horizon 2020 and Horizon Europe collaborative projects on agroecology and organic farming

Follow the [CORDIS link](#) for more information on the start-end date, EU contribution, coordinator and results.

List sorted by ascending start date. Non exhaustive list complementing the projects on previous page, sorted by ascending start date.

Acronym	Project	CORDIS
BIOFRUITNET	Sharing knowledge between Europe's organic fruit farmers	862850
FERTIMANURE	Innovative nutrient recovery from secondary sources	862849
ALL-READY	The European Agroecology Living Lab and Research Infrastructure Network: Preparation phase	101000349
AE4EU	Agroecology for Europe	101000478
DIGITAF	DIGItal Tools to help AgroForestry meet climate, biodiversity and farming sustainability goals	101059794
REFOREST	Agroforestry at the forefront of farming sustainability in multifunctional landscapes in Europe	101060635
INNOBREED	Innovative Organic Fruit Breeding and uses	101061028
D4AGECOL	Digitalisation for Agroecology	
Agroecology-TRANSECT	Trans-disciplinary approaches for systemic economic, ecological and climate change transitions	101060759
Grazing4Agroecology	European Network to promote grazing and to support grazing-based farms	101059626
OrganicTargets4EU	Transformation scenarios for boosting organic farming and organic aquaculture towards the Farm-to-Fork targets	101060368
LIVSEEDING	Organic seed and plant breeding to accelerate sustainable and diverse food systems in Europe	101059872
OPERS	European Thematic Network for unlocking the full potential of Operational Groups on alternative weed control	101060591
LEGUMINOSE	Legume-cereal intercropping for sustainable agriculture across Europe	101082289
INTERCROPVALUES	Developing Intercropping for agrifood Value chains and Ecosystem Services delivery in Europe and Southern countries	101081973
ALLIANCE	towards enhanced data Integrity and verAcity, interoperability, traNsparenCy, and tracEability	101084188
PRAECTICE	Potentials of Agroecological practices in east Africa with a focus on Circular water-energy-nutrient systems	101084248
NATAE	Fostering agroecology transition in North Africa through multi-actor, evaluation, and networking	101084647
CIRAWA	Agro-ecological strategies for resilient farming in West Africa	101084398
CANALLS	Driving agroecological transitions in the humid tropics of Central and Eastern Africa through traNsdisciplinary Agroecology Living LabS	101083653
PATH2DEA	Paving the Way towards Digitalisation Enabling Agroecology for European Farming Systems	101060789
AF4EU	Agroforestry Business Model Innovation Network	101086563
GOFORESTS	European innovation partnership network promoting operational groups dedicated to forestry and agroforestry	101086216
BIOMONITOR4CAP	New results-based policies in the European agricultural landscape	101081964
THEROS	An integrated toolbox for improved verification and prevention of adulterations in organic and geographical indications food supply chain	01083579
AGROSUS	Agroecological strategies for sustainable weed management in key European crops	101084084
GOOD	AGrOecOlogy for weeDs	101083589
CONSERWA	Evidence-based support for transition to agroecological weed management in diverse farming systems and European regions	101081802



Relevant sources of information supporting agroecology and organic farming

Agroecology and organic farming under EIP-AGRI activities

Other instruments and other programs, like the 'European Innovation Partnership for Agricultural productivity and sustainability (EIP-AGRI), also help maximise the adoption and development of agroecology and organic farming. Relevant EIP-AGRI Focus Groups and other networking activities include:

- Agroforestry: woody vegetation
- Non-chemical weed management
- Biodiversity on farmland
- Carbon storage in arable farming
- Mixed farming systems
- Nutrient recycling
- Organic farming
- Permanent grassland
- Enhancing the biodiversity on farmland through high-diversity landscape features
- Workshop 'Cropping for the future: networking for crop rotation and crop diversification'

Other Horizon Europe Work Programmes

- **HORIZON-INFRA-2021-SERV-01:** 'Integrated SERvices supporting a sustainable AGROecological transition' – [AGROSERV](#)

In the pipeline and future funding opportunities

Future European R&I partnership on agroecology

- **HORIZON-CL6-2023-FARM2FORK-01-1:** European partnership on accelerating farming systems transition – agroecology living labs and research infrastructures

In 2023 - 2024, the EU will launch a large research and innovation partnership focusing on agroecology, under which the EU will work hand-in-hand with the Member States, Associated Countries and key stakeholders. The [partnership](#) will support transnational research on the challenges and potential of agroecology in addressing environmental, climate, social and economic dimensions of sustainability. The indicative total EU contribution for the entire duration of the partnership is €150 million. EU-funded projects [ALL-READY](#) and [AE4EU](#) are helping to lay the building blocks of the future partnership.

The Horizon Europe 2023-2024 Work Programme includes at least 25 topics relevant for agroecology and organic farming, for a budget of more than EUR 270 million. Relevant topics include:

- **HORIZON-CL6-2024-BIODIV-01-7:** Reintroduction of landscape features in intensive agricultural areas
- **HORIZON-CL6-2024-BIODIV-01-6:** Promoting pollinator friendly farming systems
- **HORIZON-CL6-2024-FARM2FORK-02-1-two-stage:** Increasing the availability and use of non-contentious inputs in organic farming
- **HORIZON-CL6-2024-FARM2FORK-02-2-two-stage:** Sustainable organic food innovation labs: reinforcing the entire value chain

ISBN 978-92-68-03231-2



#AgriResearch