EU CAP NETWORK

APRIL **2024**
ISSUE NR 10

Agrinnovation

Collaboration for a sustainable and circular bioeconomy in Europe's rural areas

- → Away with waste: Innovative solutions for more efficient resource use
- → Horizon Europe: Multi-actor projects addressing rural challenges
- → EU CAP Network cross-visits inspire insights and new connections

SLOVENIA: Wood-based waste for mushroom production

06

FRANCE: Farmer collective turns biomass into renewable energy

11

FINLAND - ESTONIA - LATVIA: Cross-country cooperation for sustainable silage

15

ISSN 2363-2143

Funded by the European Union

Table of contents

Welcome

The European Commission's 'long-term vision for the EU's rural areas' aims to foster the socio-economic development of rural communities, enhance the quality of life and promote sustainable agricultural practices. This vision will address challenges such as rural depopulation, improve access to services and promote economic diversification in rural areas. A key aspect to ensure resilient rural communities is the sustainable use of natural resources.

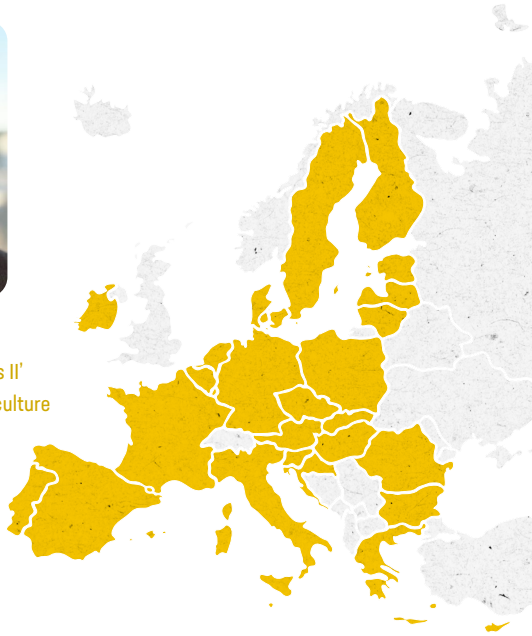
This edition of Agrinnovation showcases inspiring case studies from a range of innovative projects, including EIP-AGRI Operational Groups and Horizon Europe networks. It features innovative voices from across the EU and highlights best practices that engage rural communities in improving the management of natural and circular bio-based resources to inspire and build harmonious ecosystems where rural landscapes thrive in symbiosis with nature.

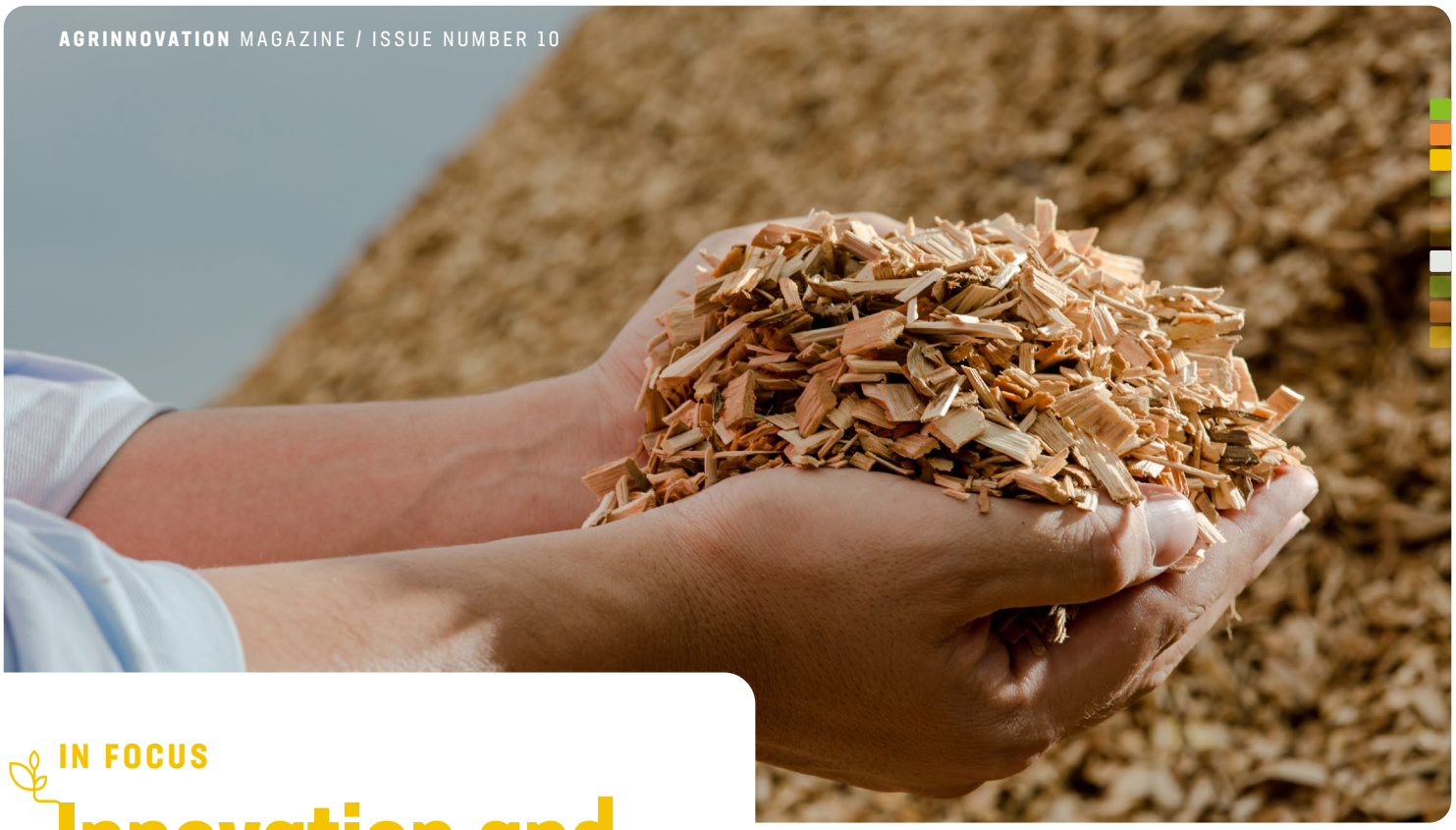
Agricultural innovation is not merely a buzzword. It is a commitment to harnessing the regenerative potential of our natural surroundings. This covers circular bioeconomy models that promote responsible resource management and the optimal use of waste and by-products. It also includes innovative solutions that can revolutionise farming practices helping farmers, foresters, researchers and entrepreneurs develop pathways that both increase productivity and promote environmental stewardship.

This edition highlights innovative approaches to water conservation, regenerative farming practices and the use of renewable energy sources in rural areas. It also demonstrates the pivotal role that innovation plays in optimising the use of resources, generating value from waste and establishing a circular bioeconomy framework that benefits farmers, foresters, rural citizens and the environment.

Thank you for joining us in this endeavour, where innovation meets agriculture and sustainability becomes a driving force of progress. Happy reading!

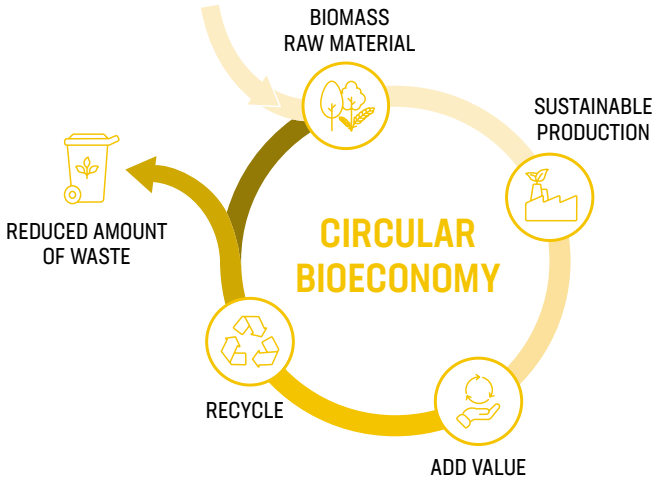
MARIO MILOUCHEV
Director 'CAP Strategic Plans II'
Directorate-General for Agriculture and Rural Development, European Commission





IN FOCUS

Innovation and collaboration for a sustainable and circular EU bioeconomy



The circular bioeconomy offers many opportunities to improve the lives of farmers, foresters and rural communities across the EU.

The Common Agricultural Policy (CAP) encourages the sustainable use of bio-based side streams from agriculture, food production, forestry and related sectors. This can create new value chains and business models tailored to producers' needs, providing diversified income, value-added products and more resource efficiency. By creating jobs, circular bioeconomy initiatives can build vibrant rural areas and mobilise producers to take climate action in support of the green transition.

Research and innovation are key to unlocking the potential of the circular bioeconomy. By working with farmers, foresters and rural communities, innovative solutions can be made accessible to all. EIP-AGRI Operational Groups can play an active role in creating new cooperation models and testing new technologies in practice.

→ Learn more about the **EU Bioeconomy Strategy** and the **Long-Term Vision for Rural Areas**

From wood waste to carbon content

Italian Operational Group 'Res4Carbon' has explored new uses for residues from the wood energy chain. Residual wood chips from sieving, unburnt biochar and residual ash from burning woody biomass have been used as a resource for producing a new type of nutrient-rich fertiliser with high carbon content that can help increase soil fertility.

The ERIAFF network stimulates cooperation between European Regions for Innovation in Agriculture, Food and Forestry. Its working groups on **Forested Regions** and **Bioregions** support the development of European and regional policies, and highlight relevant initiatives for regions with an interest in forestry and the bioeconomy.

Woolen granules for fertilisation

What a waste! Did you know that almost 90% of all wool from Estonian sheep is either dug into the ground, burnt or taken to a landfill? To revalue brushed sheep wool, an Estonian organisation is developing the raw material into high-quality pellets for fertilisation and soil improvement.

For most sheep farmers, wool shearing is no longer cost-efficient. Estonian organisation 'Mää' (pun intended) wants to re-value sheep wool both for breeders and consumers. Residual wool is processed into pellets that can be used for long-term fertilisation in hobby gardening. Wool pellets are an effective snail repellent and they form a good heat insulator that helps retain moisture when mixed with soil or used as mulch.

"We wanted to create a quality product with a small ecological footprint."

SANDER VESKIMEISTER
Coordinator

"The wool is processed close to the place of shearing to keep transport costs down. All useful properties in the wool are preserved. Our customers find soil mixed with wool pellets more pleasant to work with. For us, their enthusiasm is the most important confirmation that we are on the right track," says coordinator Sander Veskimeister.

→ **More information on the project website**

The **Biocluster Finland initiative**, led by the town of Haapavesi, is paving the way for the country's green transition. The initiative encourages networking and collaboration in Finland's sparsely populated areas through a network of 50 national companies from the bioeconomy sector. The network shows that sharing knowledge at the national and European levels is key to improving resilience and reaching carbon neutrality.

On-farm waste takes on new role in mushroom production

The disposal of wood-based agricultural waste, such as wood chips or straw, has a high environmental impact when burnt or left as waste, and its conversion into added-value products can be costly. An Operational Group from Slovenia has explored cost-effective ways to use this lignocellulosic waste as a substrate for growing edible and medicinal mushrooms.

"Mushrooms thrive on this type of biomass. What is waste for the farmer forms an excellent basis for cultivating high-quality mushrooms. Following successful trials, we are now establishing a permanent edible mushroom production on two farms."

TOMAŽ LANGERHOLC
University of Maribor

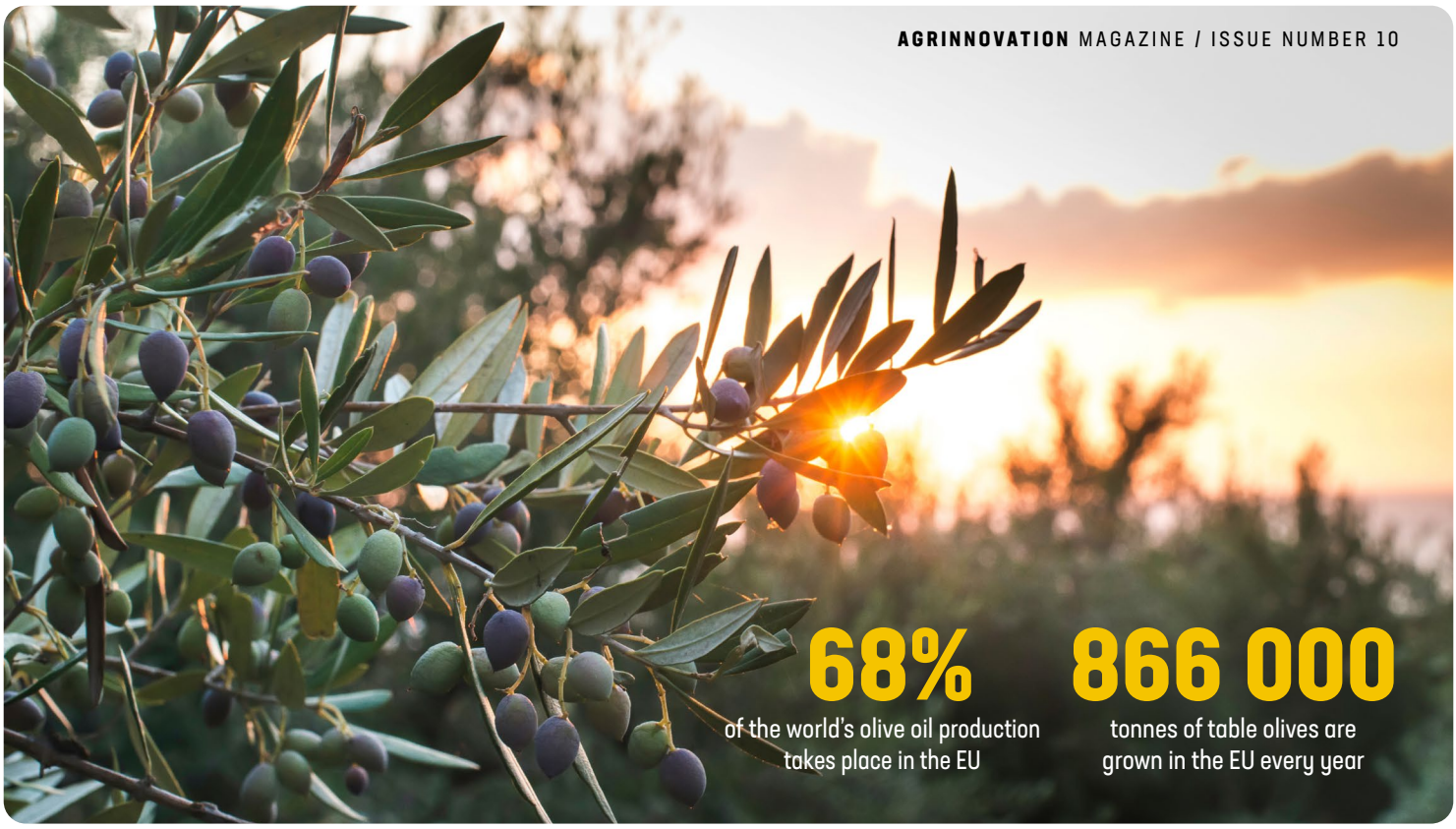
On three other farms, the spent mushroom substrate will be tested as fertiliser for organic tomato production. This can highlight new opportunities for farmers to diversify and close the loop on the farm.

→ **More information in the EIP-AGRI project database**

Circular prospects for sugar beet producers

The EU is the largest producer of sugar beet, supporting over 140 000 growers. Faced with global overproduction and price pressures, it is important to maximise all potential income sources from beet production and extract value from its by-products.
Under the Circular Bio-based Europe Joint Undertaking (CBE JU), the AFTERBIOCHEM project is developing an all-in-one biorefinery to transform sugar beet pulp and molasses into bio-based molecules for various industrial applications. This includes building blocks for the fragrance and pharmaceutical industries, skincare applications, food and feed additives, and chemicals such as paints or lubricants. These value chains can contribute to a sustainable circular bioeconomy in Europe.

→ **More details on the project website**

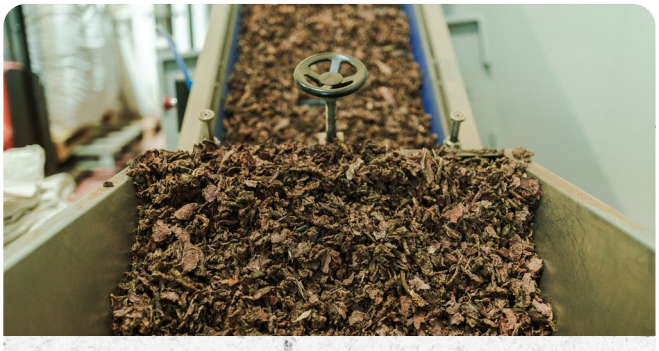


Bio-based value from the olive sector

The EU is the lead producer, consumer and exporter of olive oil. It takes up 68% of the world's olive oil production and grows about 866 000 tonnes of table olives every year. Many people love olives because of their delicious taste and health benefits, but there is value in olive waste too. The European olive sector increasingly uses olive by-products as a starting point to set up new bio-based value chains.

Olive trees cover about 4.6 million hectares in Europe, mainly concentrated in Spain, Italy, Greece and Portugal. In several olive-producing countries, innovative projects, such as EIP-AGRI Operational Groups and projects from the Circular Bio-based Europe Joint Undertaking (CBE JU) are exploring the potential of olive by-products to develop circular solutions with added value[1].

[1] Data: Agri-food Data Portal; Eurostat.



A new life for olive leaves

Olive oil production in the Mediterranean Basin results in about 4.5 million tonnes of olive leaves being left in fields and olive mills each year. The EU-funded CBE JU project 'OLEAF4VALUE' is exploring ways to turn this residue biomass from primary olive production into added-value solutions for international market applications.

Olive leaf biomass is rich in bioactive components. The extracts can be developed into valuable ingredients for the food, feed, chemical, cosmetic and pharmaceutical industries. OLEAF4VALUE is setting up six value chains, based on the best application for each type of biomass. This ranges from antioxidants to boost the immune system, feed additives to enhance animal health and reduce the use of antibiotics, treatments for illnesses such as diabetes, and anti-inflammatory skincare tinctures.

→ **More details on the project website**

Turning olive oil residues into value for farms and mills

The Italian Marche region produces many fine olive oils from a range of olive varieties. However, current production processes still result in large quantities of waste that must be managed. An Operational Group project has developed circular solutions to turn olive oil by-products into added value for the agri-food and baking sectors.

Many olive producers press olive oil from local cultivars, allowing them to offer a high-quality oil while supporting olive grove biodiversity in the process. However, local olive varieties tend to yield less oil (10-15% of the total amount of pressed olives) while all residues still need to be disposed of.

An Operational Group has found ways to turn olive oil residues, so-called olive pomace, into resources for farms and olive mills. Their collaboration has focused on the 'Piantone di Mogliano' cultivar, listed in the 'Regional Biodiversity Register'.

The process first separates the kernels and woody residues from the remaining olive pomace. These are dried through infrared radiation (IR), which is more energy-efficient and has a lower environmental impact compared to traditional methods, without compromising product quality. The result is a fuel with a high heating value that is used within the project to heat the oil mill, a partnering dairy farm and the ovens of the partnering bakery.

The solid residues of the pomace are rich in polyphenols and fibre. They have been developed into a fertiliser, a cattle feed that goes to the buffaloes of the dairy farm and as an ingredient in a line of baked products. Thanks to IR radiation, baked goods keep their healthy components and gain a longer shelf life.

→ **More information in the EIP-AGRI project database**

IN FOCUS

Investing in renewable energy for vibrant rural areas

Renewable energy plays a crucial role in reducing greenhouse gas emissions and combating climate change. Investing in clean energy can make farmers, foresters and rural communities less dependent on fossil fuels. The transition to renewable energy can also stimulate innovation, jobs and business opportunities, and contribute to thriving rural areas across the EU.

The production and use of energy accounts for over 75% of the EU's greenhouse gas emissions. Decarbonising the EU's energy system is therefore critical to reach the 2030 climate objectives. The CAP for 2023-2027 offers many opportunities to introduce renewable energy or promote energy efficiency on farms and in rural communities.

→ Read about the **EU's Green Deal targets for a clean energy transition**.

Sustainable energy fuelled by communities

In the face of rising energy prices and climate challenges, 'Bioenergy Villages' use community collaboration as the key to becoming less dependent on fossil energy and more invested in a sustainable use of local resources.

In a bioenergy village, a rural community jointly sets up a bioenergy plant using biomass from local agriculture or forestry. The produced renewable energy can cover 50% of the village's heating requirements and ten times its electricity needs. The surplus energy is fed back into the public grid.

Various bioenergy villages have been set up in the EU, in different models and with diverse funding. In Germany, around 180 bioenergy villages have already been established. In the region of Göttingen, the model was scaled up with the support of LEADER, national and local funding. This has led to four new power plants in the area. The success of this model relies on a close collaboration between villagers, farmers, Local Action Groups and municipalities. Each village has its own business plan and cooperative to run the project.

"The high level of participation helps to diversify income and increase energy independence in rural areas. Farmers get long-term price stability for their biomass, and millions of tons of CO_2 emissions are saved every year."

ANKE WEHMEYER
German LEADER Association

→ More info: **bioenergiedorf.fnr.de**

Future-proofing farms through solar energy

Most farmers have a lot of roof space. This puts them in an ideal position to generate power for their farms by installing solar panels. For Irish farmers, tax write-offs and grant aid under the CAP are now making solar energy more attractive than ever.

Many farmers are considering the use of renewable energy to keep energy costs down and make their farms more self-sufficient and resilient. Irish farmers can benefit from the Solar Capital Investment Scheme (SCIS) under the Targeted Agricultural Modernisation Scheme (TAMS), funded under pillar II of the CAP. This includes grant aid for on-farm infrastructural investments and for installing solar panels and battery storage systems. With beneficial tax write-offs, combining solar installations on farm rooftops with battery storage and an on-farm water-heating system can result in a net return on investment of up to 57% per year.

John Murphy owns a solar-powered dairy farm in County Cork. With 32 panels, he produces 10 000 kW a year. He uses 70% of the generated energy on his farm while 30% is sold back to the grid.

"Thanks to TAMS aid, I only paid a third of the installation cost. I'm saving on my electricity consumption from the grid, the maintenance cost is very low, and my system will have a long lifespan of 25 to 30 years – so the benefits can even be enjoyed by the next generation."

JOHN MURPHY
Dairy farmer, Ireland

From farm to city grid: French farmer collective turns agricultural waste into added value

In the French region of Normandy, an Operational Group has given farmers a central role in the establishment of a biomethane plant, turning agricultural waste into renewable energy for the local city grid.

In the Operational Group, a collective of 37 farmers has teamed up with an industrial agribusiness company, a local agricultural school, the Chamber of Agriculture and a pet food company. The partnership has set up a collective anaerobic digestion unit that produces biomethane from local biomass.

The farmers supply waste materials, such as manure, grass silage and surplus or low-quality fodder to the plant, where it is turned into biogas and further purified into biomethane. This renewable natural gas is then reinjected into the gas network of the city of Vire. The excess heat of the nearby pet food company is circulated into the plant where it is used in the digestion process.

Feeding green biomethane into the public grid can substantially help reduce CO_2 emissions. Antoine Herman, Director of agribusiness company Agrigaz, is proud that farmers also benefit: "Our local farmers can now make good use of their excess biomass. Part of the plant's digestate is turned into high-quality fertiliser that they can use on their fields. This helps them cut the use and costs of chemical fertiliser, which also contributes to reducing greenhouse gas emissions. Our collaboration strengthens the competitiveness of their farms. In a few years' time, we hope to also reach more favourable economic returns."

→ **More information in the EIP-AGRI project database**

→ **Watch the video.** Belgian farmer Joris joined an Operational Group to improve the quality of his on-farm biogas installation.

→ Find all **results from the EU CAP Network Seminar 'Smart circular farming to address high energy and fertiliser prices'**.

Innovation across borders

Operational Group cross-visits inspire new insights and connections

In their efforts to improve circular and sustainable soil management, the Italian Operational Group 'TInnoGePra' always welcomes views and expertise from others working on similar topics. The project's participation in the EU CAP Network cross-visits for Operational Groups has similarly resulted in valuable insights, new connections and prospects for future collaboration.

TInnoGePra demonstrates the benefits of regenerative soil practices, allowing fruit and vegetable producers to make more efficient use of natural resources. At the EU CAP Network cross-visits for Operational Groups, first organised in June 2023, TInnoGePra welcomed other Operational Groups working on the same topic to their field site.

At the project's kiwi orchard, participants witnessed the demonstration of innovative techniques in circular and organic soil management.

Researcher Alba Mininni explains: "By using green waste compost from shredded crop residues or by applying no-till practices and precision irrigation, farmers can lock in more carbon and improve soil fertility and quality. This lets them reduce waste, close nutrient loops and create more resilient and competitive systems."

Alba continues: "It is important to share knowledge with other innovative projects with different expertise to discuss how to manage common challenges. It was also the start of a new cooperation. We have taken steps to jointly prepare a project proposal for a future Horizon Europe call."

→ **Watch the video:** 4 good reasons to join EU CAP Network cross-visits.

→ Interested in soil? Keep an eye on the **Focus Group on regenerative agriculture for soil health**.

Apply to future Operational Group cross-visits

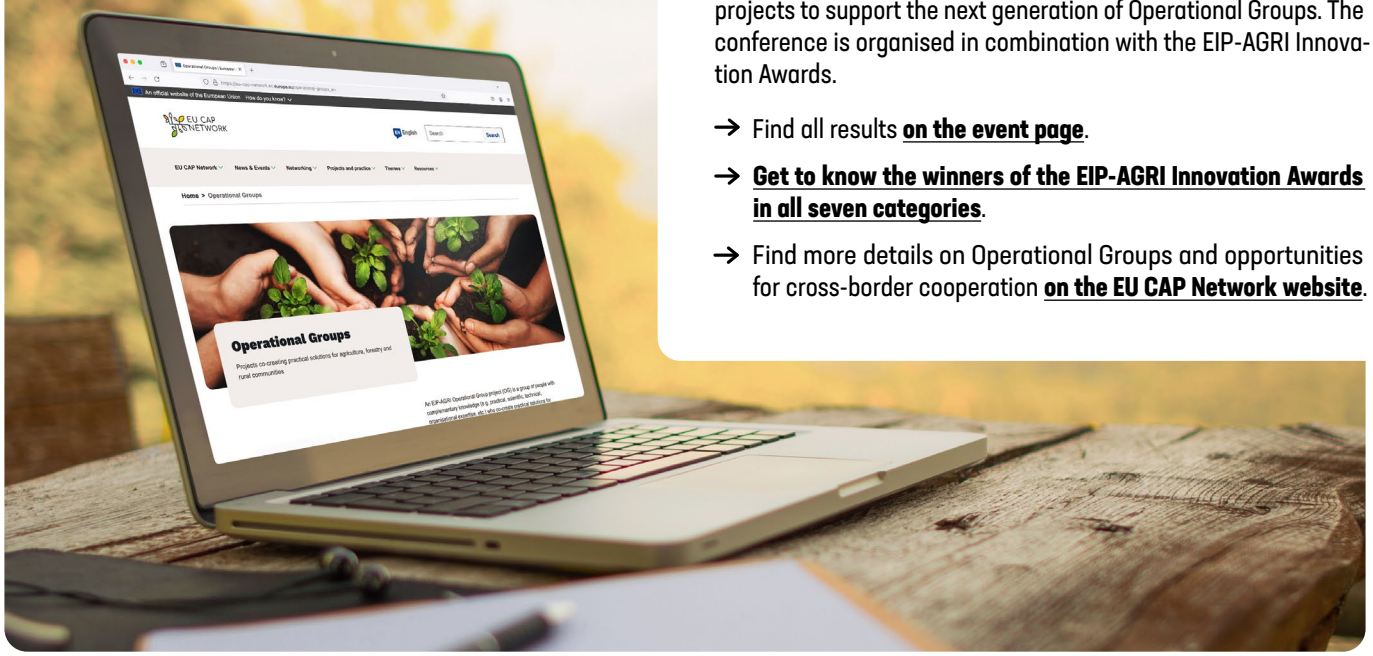
EU CAP Network cross-visits are a new type of networking activity for innovation and knowledge exchange, including EIP-AGRI. Operational Groups from at least two countries, working on a specific theme, join field visits to share expertise and make connections for future collaboration.

- → **Subscribe to the Innovation and Knowledge exchange | EIP-AGRI newsletter** to hear about future calls for participation, possibilities to propose topics or host cross-visits on your project site.
- → See all results from the cross-visits on **circular and organic soil management** and **organic farming supply and value chain optimisation**.

A Latvian Operational Group has developed an innovative technology to turn powdered sauerkraut juice, a by-product of fermented cabbage, into high-quality raw materials for the food, pharmaceutical (food additives) and cosmetic industries. The technology allows for a more efficient use of agricultural resources, giving farmers opportunities to diversify their income and produce more sustainably with zero waste.

3 400+

EIP-AGRI Operational Group projects
(since 2014)



Celebrating more than 3 400 Operational Groups

EIP-AGRI Operational Groups have been a key tool in boosting innovation and knowledge exchange across EU agriculture, forestry and rural areas since 2014.

The EU CAP Network conference 'EIP-AGRI Operational Groups: Innovation in practice' (May 2024) celebrates more than 3 400 projects to support the next generation of Operational Groups. The conference is organised in combination with the EIP-AGRI Innovation Awards.

- → Find all results **on the event page**.
- → **Get to know the winners of the EIP-AGRI Innovation Awards in all seven categories**.
- → Find more details on Operational Groups and opportunities for cross-border cooperation **on the EU CAP Network website**.

IN FOCUS

Optimising on-farm nutrient management

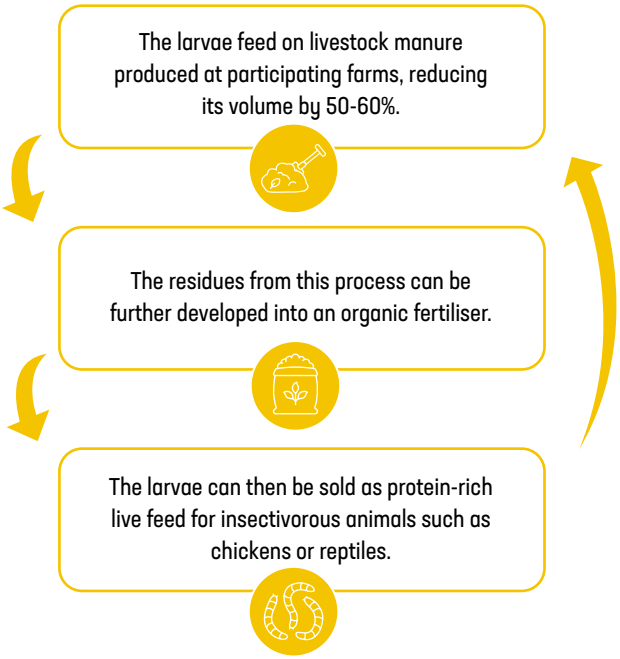
Excess use of nutrients from animal manure or fertiliser can form a major source of air, soil and water pollution, negatively impacting our climate and biodiversity. Through the CAP, the European Commission is supporting the sustainable use of fertilisers to help farmers maintain productivity while reducing pollution. Precision fertilisation, sustainable farming practices and recycling organic waste into renewable fertilisers will be promoted, especially in areas with more intensive livestock farming.

Member States can give support through dedicated investments and research, advisory services, the use of EU space technologies, decision support tools and innovation through EIP-AGRI Operational Groups.

All EU farmers will be able to use the digital **Farm Sustainability Tool for Nutrients (FaST)** to support their decisions in crop fertilisation for cost-efficient and optimised nutrient management.

Fly larvae convert livestock waste into feed and fertiliser

An Italian Operational Group has teamed up with local farmers to test the use of black soldier fly larvae to convert organic livestock waste in a low-cost and sustainable way.



Through mobile bioconversion units, all participating farmers can grow larvae directly on the farm. Waste materials do not need to be transported, which reduces costs and emissions. The project offers opportunities to dispose of waste while diversifying production, which can help make farms more competitive and sustainable.

→ Get more info **in the EIP-AGRI project database**.

The **Focus Group on nutrient recycling** discussed ways to improve nutrient recycling in agriculture, with attention to bio-based fertilisers and useful management tools.

Cross-country cooperation for sustainable silage

Producing silage is one of the options that livestock farmers have to make sure their animals have nutritious feed in winter when fresh pasture isn't available. To address silage-based nutrient leaching, the Interreg project 'Sustainable Silage' is testing agri-environmental measures directly on Finnish, Estonian and Latvian farms.

While silage is highly nutritious, fermentation processes can cause effluents to leach, seriously polluting water bodies and reducing the nutritional value of the feed.

"We need to look at the whole chain – from growing silage to storing it, and finding ways to reuse silage plastic and effluents. Farmers need practical guidelines that are applicable to their farms."

SILJA LEHTPUU
Project coordinator

"We have set up trials on 25 pilot farms and we are organising field days and exchange visits to demonstrate innovative farming practices. We have, for instance, discussed which types of grass varieties lead to good quality silage, how to adapt to difficult weather conditions, or which production techniques have the best environmental and economic results."

Silja concludes: "We need to address this in cross-border cooperation because national efforts alone are not sufficient. By 2025, about 200 farmers in Estonia, Latvia and Finland will have gained new usable knowledge on how to reduce silage effluent leaching."

→ **More details on the project website**.

Farmers test digital tools to reduce nitrate pollution

Farmers are often in the driver's seat for innovation. The same is true for a cooperative of 140 berry growers in the Spanish region of Andalusia. By sharing knowledge on digital tools for more efficient water and fertiliser management, the cooperative has successfully implemented more sustainable ways of managing the nutrition of their crops.

Farmer cooperative 'Costa de Huelva' (CoopHuelva) works close to one of the most important national parks in Europe. Since 2019, farmers have taken action to optimise the nutrient management of their crops and avoid nitrate contamination in the water of the nearby aquifer.

To reduce nutrient leaching, the cooperative has installed sensors that provide real-time information on the plants' nutritional status and potential losses, soil temperature and humidity. The technology was tested with a selection of farmers from the cooperative, giving them reliable decision support tools to adjust their irrigation and fertilisation on a daily and weekly basis.

Following positive trial results, the tools were promoted to all farmers and advisors in the cooperative. Technical advisors were intensively trained to understand each tool and advise farmers accordingly. An experimental farm was established to demonstrate good practices.

Farmer and advisor Rafael Alvarez of agritech company Verde Smart confirms: "The situation is a win-win: farmers can save up to 30-50% in water and nutrient costs while reducing nitrate pollution. Yields and fruit quality have improved, and farmers receive more marketing options linked to sustainability. Plans are made to make the digital tools available to all farmers in the entire cooperative area, improving fertigation on a larger scale."

"The work of this cooperative shows how innovation can lead to more sustainability and benefits for farmers. We hope that others across the EU can learn from our experience."

RAFAEL ALVAREZ
Expert in the Focus Group on digital tools for sustainable nutrient management

→ Find more good practices in the **Focus Group report**.
→ **Watch**: Flemish farmer Karin supports the use of digital tools to improve on-farm nutrient management.

EU CAP Network Focus Groups

Every year, three EU CAP Network Focus Groups tackle specific themes facing farmers, foresters or rural areas. Each group of 20 experts identifies problems, best practices and solutions, and proposes research needs from practice and ideas for future EIP-AGRI Operational Groups.

Since 2013, 49 Focus Group topics have been discussed, including circular horticulture, fertiliser efficiency, forest biomass, industrial crops, renewable energy on the farm and many more.

What's new?

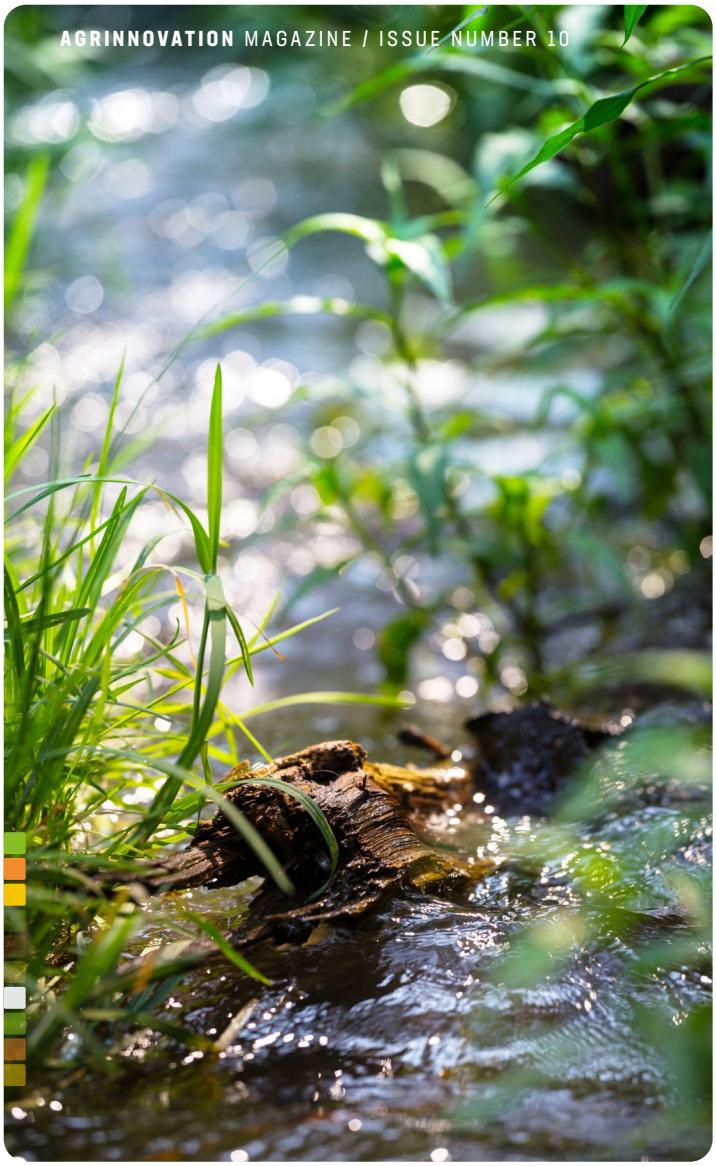
Three Focus Groups are completing their work in summer 2024:

- ✓ **Regenerative agriculture for soil health**
- ✓ **Crop associations including Milpa and protein crops**
- ✓ **Competitive and resilient mountain areas**

→ Find all Focus Group results **on the EU CAP Network website**.

→ **Subscribe to the newsletter on innovation and knowledge exchange | EIP-AGRI** to stay posted on new results and upcoming calls for Focus Group experts.

In June 2023, the EU CAP Network organised the first 'ad-hoc expert meetings', inviting national experts on a specific topic to share their ideas and expertise. In this case, the meetings helped shape the topics of three upcoming Focus Groups, but they may also be organised for other events. Keep an eye on the Innovation and Knowledge exchange | EIP-AGRI newsletter to hear about new calls for participation.



IN FOCUS

Solutions for sustainable water management

Climate change has a severe impact on European farming, forestry and rural areas. Extreme weather events, drought and changing rainfall patterns are making fresh water an increasingly scarce and precious resource.

Without adaptation to climate change, drought and floods will cause increasingly severe impacts, with annual economic losses that could amount to billions of euros in Europe alone. Several innovative projects are exploring ways to create more resilient, circular water systems in natural ecosystems or on farms.

→ Water management is a priority in the **European Green Deal**, the **EU Strategy on Adaptation to Climate Change**, the **Circular Economy Action Plan** and **EU Mission 'Restore our oceans and waters'**.

Balancing water and nutrient flows in catchment areas

Changing rainfall patterns are making river catchment areas increasingly vulnerable to flood risk. The 'VALUTA 2' project has set up a range of nature-based measures to manage water and nutrient flows in three river basins in southern Finland.

Flooding in catchment areas can lower the quality of nearby agricultural fields, cause erosion, and lead to nutrient run-off and water pollution.

In cooperation with local landowners, VALUTA 2 has constructed wetlands and so-called 'two-stage channels' in the project area. These allow a continuous water flow and let flooding water rise to the channels' floodplains instead of directly to the fields. Straight channels were restored to their natural meandering form. All these structures help balance water flow and retain excess nutrients, reducing flood risk and pollution.

→ Visit **the project website**.
→ More inspiration in the **results from the EIP-AGRI Focus Group 'Nature-based solutions for water management under climate change'**.

→ **Watch**: A Swedish project restores wetlands and natural structures to tackle flooding and nutrient loss.

Circularity in the meat industry

Animal slaughtering is a water-intensive industry. Horizon project Water2REturn has developed a process to recover the nutrients in wastewater from slaughterhouses and turn them into value-added products for the farming sector.

Water2REturn's treatment lines are tested at the slaughterhouse 'Matadero del Sur' in Salteras, Spain. At this demonstration site, wastewater is treated while nutrients are recovered, obtaining nutrient concentrate, hydrolysed sludge and algal biomass as secondary raw materials. These are developed into an organic fertiliser and two biostimulants – to improve plant growth, stress tolerance and crop quality – ready to be commercialised.

"The treated water can be reused, saving water and costs. The variety in recovered raw materials allows us to develop quality products for farmers, helping them reduce their dependency on chemical fertiliser, and create new business opportunities in the circular economy," says project coordinator Pilar Zapata.

→ **More information on the project website**.

Cultivating cranberries requires a lot of water. To adapt cranberry production to local soil conditions, a Polish Operational Group has tested the use of innovative additives that can increase water retention in the soil.

→ Find out more in **the EIP-AGRI project database**.

The EU CAP Network Workshop 'Circular water management' (March 2024) was dedicated to good practices in reusing and recycling water for agricultural production.

→ Find all results **on the event page**.

Addressing rural challenges through Horizon multi-actor projects

Horizon Europe is the EU's largest source of public funding for research and innovation. Horizon multi-actor projects, including thematic and advisory networks, specifically focus on co-creating innovative solutions, making the results more likely to be taken up in practice.

Horizon projects with a 'multi-actor approach' are based on the interactive innovation model. This implies that partners with complementary expertise work closely together to develop solutions for real challenges facing farmers, foresters, advisors or rural communities. By working with and for practitioners from the very start, the knowledge that is developed is more ready to be applied in practice.

Over three years, the Horizon multi-actor project 'BRANCHES' has collected and shared innovative bio-based methods and technologies, research results and initiatives from the European rural bioeconomy. The result is a collection of 65 best practices in biomass supply chains from agriculture, forestry and rural areas, such as:

- ✓ Non-timber forest products as market possibilities (Finland)
- ✓ Grass factory: From meadow grass to innovative materials (Germany)
- ✓ A biobaler for harvesting biomass of agricultural and forestry origin (Poland)

→ See all results **on the BRANCHES website**.

"By sharing knowledge on ways to reduce costs or improve the efficiency of bio-based supply chains, we want to make it easier for other countries working in the circular bioeconomy to introduce them."

JOHANNA ROUTA
BRANCHES coordinator

The EU CAP Network Brokerage event 'Accelerating the innovation process through Horizon Europe multi-actor projects' helped prepare quality proposals for Horizon Europe calls with a multi-actor approach.

→ **Find all event results on the EU CAP Network website**.

Green building bricks to boost the rural bioeconomy

The region of Apulia is the largest producer of durum wheat in Italy. With this in mind, a start-up company has developed eco-friendly building bricks made from straw, turning wheat by-products into a resource for a greener construction market. The creation of a new sustainable bio-based supply chain benefits the building sector and farmers, as well as consumers.

Wheat straw is a commonly available by-product of cereal production, particularly in the south of Italy and the region of Apulia. Start-up 'Prespaglia' uses this straw in combination with clay and hydraulic lime to produce bio-bricks that are fully recyclable and biodegradable.

The modular bricks can be used for building interior and exterior walls in line with green architecture. They offer high levels of heat and sound insulation, are resistant to fire, and are even earthquake-proof due to their light weight. For consumers, this means more environmentally friendly and energy-efficient homes.

The production of eco-bricks forms a new bio-based supply chain that supports the growth of a greener building sector. It involves lower labour and production costs, contributes to reducing greenhouse gas emissions and strengthens the EU circular economy.

Using cereal straw opens new sustainable markets with more opportunities to enhance a rural residue that is commonly available, not only in the south of Italy but worldwide.

Our supply of straw for eco-bricks comes entirely from a local basin, amounting to around 10 tonnes per year. For cereal farmers, this can create additional revenue from straw sales, of which the waste can now be turned into a high added-value resource.

→ Find more details and other inspiring examples on the **BRANCHES website**.

Advisory networks speeding up innovation in practice

Horizon Europe advisory networks are specific types of multi-actor projects. They connect advisors across the EU into a European network, focusing on a specific theme. Advisory networks help advisors stay up to date on cutting-edge knowledge and innovation, and foster opportunities for them to exchange expertise on how to tackle challenges or seize opportunities on farms, in forests and rural villages.

EU advisory network STRATUS started its work in February 2024. Project coordinator Marta Goñi Labat said: "STRATUS wants to connect advisors across Europe to speed up knowledge exchange on optimal fertiliser use and to support farmers in applying this knowledge in practice. This can help them reduce nutrient losses and environmental damage while maintaining soil fertility."

In three sub-networks on precision farming, bio-based fertilisers and soil quality, trained advisors will collect a total of 104 good practices and research innovations, refining this to at least 48 best practices. These will form the basis for on-farm demonstrations and training material that will support advisors in their advisory work. All results will be available **on the STRATUS website**.

- Advisory networks launched through previous calls include **COREnet**, **EU4Advice**, **AdvisoryNetPEST** and **OrganicAdviceNetwork**. New networks on forestry and sustainable livestock systems will be set up **following calls from 2024**.
- Browse results from the **EU CAP Network Brokerage event 'Get involved in Horizon Europe advisory networks'**.

Find out more about Horizon Europe multi-actor projects, advisory networks and other funding and collaboration opportunities **in the Horizon portal on the EU CAP Network website**.

Technical information

Managing editor:
Antonia Gámez Moreno, Head of Unit – Rural areas and networks, AGRI-D1, Directorate-General for Agriculture and Rural Development, European Commission

Contents and editing:
EU CAP Network – Support Facility for Innovation and Knowledge exchange | EIP-AGRI

Layout:
EU CAP Network – Communication and Logistical Support team

Photo credits:
Adobe Stock; Hartmut Berndt; EIP-AGRI Operational Group 'DIVAGRICOBIOMETHA'; EU CAP Network / Support Facility for Innovation and Knowledge exchange | EIP-AGRI; European Commission; Interreg Sustainable Silage; Viivi Kaasonen / WWF Finland; Mää; OLEAF4VALUE; Prespaglia; Jernej Slapsak; Sociedad Cooperativa 'Costa de Huelva' (Coophuelva) de Lucena del Puerto; Horizon Europe advisory network STRATUS; Water2REturn project

All editions of Agrinnovation magazine are **available for download online**.

You can also order a paper copy via the EU Bookshop: **bookshop.europa.eu**

Agrinnovation magazine is published in English, German and French and is available in digital format **on the EU CAP Network website**.

Manuscript finalised April 2024 | Luxembourg: Publications Office of the European Union, 2024

For additional information on the European Union: **europa.eu**

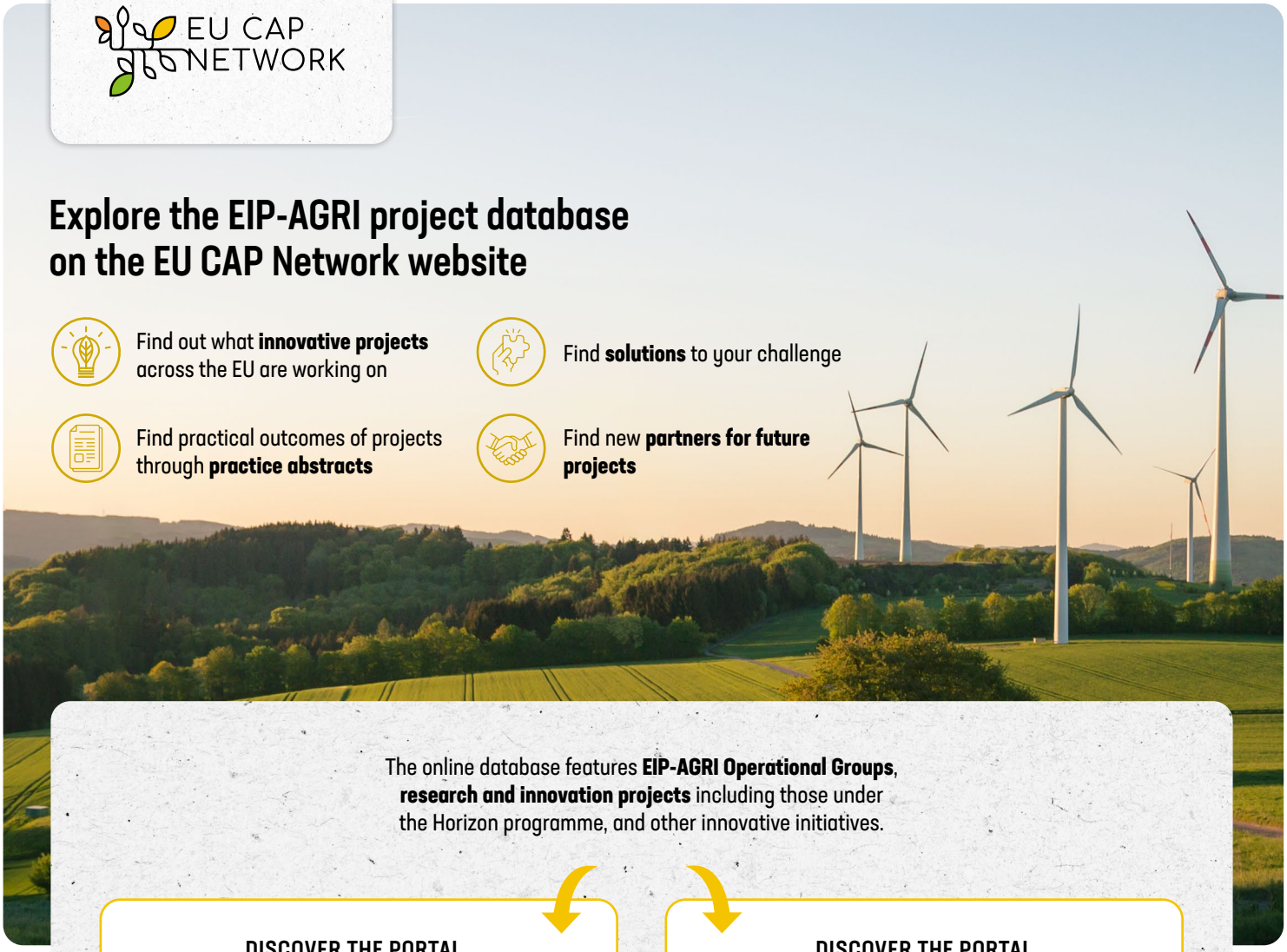
Publications Office of the European Union

Print
ISBN 978-92-68-11673-9 ISSN 2363-2135
DOI: 10.2762/912 KF-AM-24-001-EN-C

PDF
ISBN 978-92-68-11671-5 ISSN 2363-2143
DOI: 10.2762/112538 KF-AM-24-001-EN-N

EU CAP NETWORK

Explore the EIP-AGRI project database on the EU CAP Network website



- Find out what **innovative projects** across the EU are working on
- Find **solutions** to your challenge
- Find practical outcomes of projects through **practice abstracts**
- Find new **partners for future projects**

The online database features **EIP-AGRI Operational Groups**, **research and innovation projects** including those under the Horizon programme, and other innovative initiatives.

DISCOVER THE PORTAL

EIP-AGRI Operational Groups

- How do Operational Groups create practical, innovative solutions for real needs from practice?
- Learn about funding and collaboration opportunities.
- How do innovation support services help find partners, prepare projects, communicate effectively and share results?
- Benefits of knowledge exchange and collaboration across borders.
- How does your country support Operational Groups?

→ **Learn more about EIP-AGRI Operational Groups**

DISCOVER THE PORTAL

Horizon Europe

- How can Horizon Europe help farmers, foresters and rural communities?
- How can you apply to Horizon calls?
- Learn more about Horizon multi-actor projects including thematic and advisory networks.
- Get details on the Mission Soil's living labs and lighthouses.

→ **Learn more about Horizon Europe**

→ **Browse the EIP-AGRI project database**

Visit the EU CAP NETWORK Website

eu-cap-network.ec.europa.eu

Follow the EU CAP NETWORK on social media

Publications Office of the European Union