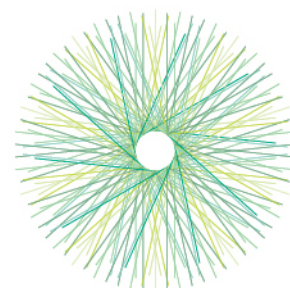


# Press article

## Circular bioeconomy

APRIL 2020



eip-agri  
AGRICULTURE & INNOVATION

### Press article long article

## Small-scale on-farm biogas plants

**An Irish Operational Group is running a pilot demonstration programme for small-scale, on-farm biogas facilities to reduce climate change impact**

**“Biogas presents a great opportunity for direct on-farm action to reduce the impact of climate change related to agriculture, there are also many other environmental and practical benefits” says Seán Finan, CEO of the Irish Bioenergy Association (IrBEA) and Project Leader of the Operational Group Small Biogas Demonstration Programme (SBDP). “However, biogas production is not widely deployed in Ireland, especially not at farm level.” SBDP will develop innovative on-farm small-scale biogas production by providing support and a capital contribution to three demonstration facilities. Following a circular economy model, each on-farm biogas facility will be fed with feedstock from the farm and satisfy an energy demand on-farm or in the vicinity.**

Irish agriculture is experiencing significant intensification particularly in dairy, pigs and poultry. There is a need for agriculture to reduce its emissions. Furthermore, recent Environmental Protection Agency reports on freshwater quality highlight that agriculture is one of the main culprits for deteriorating water quality. “Irish agriculture is making strides to reduce its climate and environmental impact through a number of national initiatives such as [Origin Green](#) and [Dairy Sustainability Ireland](#), however there is a need for specific tools. Small-scale biogas is seen as one potential tool” says Seán Finan.

On an international scale, anaerobic digestion is a commercially available technology. The handful of biogas production projects in Ireland tend to be medium to large scale plants which process a high proportion of non-farm waste and produce electricity for export to the grid. “Farm-scale biogas projects tend to be smaller and use only waste from the farm” says Noel Gavigan, Irish Bioenergy Association and Project Manager for SBDP. “There are many barriers to overcome, including knowledge-gaps, and availability of cost-effective solutions at smaller scale, availability of feedstocks and use for the biogas.”

The Operational Group SBDP will carry out testing to understand how biogas can lead sustainability improvements at farm level. On the three farm-scale biogas demonstration sites which will be constructed, SBDP will demonstrate what level of capital support is required to make this scale of biogas facility economically viable.

The biogas facilities will offset their existing fossil fuel bill to satisfy energy needs such as heating for animal housing or electricity costs with the biogas produced. They will also use the digestate material as a biofertiliser to improve soil fertility and reduce the use of chemical fertiliser. They will work closely with technology providers to identify small-scale technology solutions for on-farm use.

Data will be gathered from the demonstration facilities on the potential reduction in farm greenhouse gas emissions, it will be analysed and shared throughout Ireland through a series of events. SBDP will also demonstrate sustainability improvement through a range of farm indicators including nutrient uptake, soil fertility and overall farm carbon footprint.

SBDP opened a call to identify the farms for the demonstration sites. Over 260 farmers completed an expression of interest and the applications are currently been processed.

“We want to support awareness among the farming community of the increasing challenges agriculture faces in relation to climate change and how biogas can be part of the solution” concludes Seán Finan.

## Press article short article

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**“Biogas presents a great opportunity for direct on-farm action to reduce the impact of climate change related to agriculture, there are also many other environmental and practical benefits” says Seán Finan, CEO of the Irish Bioenergy Association (IrBEA) and Project Leader of the Operational Group Small Biogas Demonstration Programme (SBDP).**

Irish agriculture is experiencing significant intensification particularly in dairy, pigs and poultry. There is a need for agriculture to reduce its emissions. “Small-scale biogas is seen as one potential tool to reduce environmental impact” Seán Finan explains.

On an international scale, anaerobic digestion is a commercially available technology. “However, biogas production is not widely deployed in Ireland, especially not at farm level” says Seán. SBDP will carry out testing to understand how the production of biogas through a circular economy model can lead sustainability improvements at farm level. The partners will provide support and a capital contribution to three farm-scale biogas demonstration projects. They will demonstrate what level of capital support is required to make this scale of biogas facility economically viable.

The three biogas plants will be constructed and will use their own feedstock from the farm. They will offset an existing fossil fuel bill with the biogas produced and use the digestate material produced from the biogas process as a biofertiliser to improve soil fertility and reduce the use of chemical fertilisers.

SBDP opened a call to identify the farms for the demonstration sites. Over 260 farmers completed an expression of interest for consideration for capital support and the applications are currently been processed.

### Project information

Contact person: Seán Finan, 00353 87 4146480, [seanfinan@irbea.org](mailto:seanfinan@irbea.org)

- Project website: [www.irbea.org/farmbiogas](http://www.irbea.org/farmbiogas)
- Project poster: [wordpress-63273-649646.cloudwaysapps.com/wp-content/uploads/2019/02/Small-Biogas-Demonstration-Programme-SBDP-NRN-Website.pdf](https://wordpress-63273-649646.cloudwaysapps.com/wp-content/uploads/2019/02/Small-Biogas-Demonstration-Programme-SBDP-NRN-Website.pdf)
- Twitter: <https://twitter.com/farmbiogas>

The Small Biogas Demonstration Programme is an Operational Group funded by the Rural Development Programme for Ireland. More information on the Operational Group can be found in the [EIP-AGRI project database](#).

### EIP-AGRI contact

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## Pictures

Click on the pictures to download the high-resolution version. The pictures are free for use.



The recent Operational Group Small Biogas Demonstration Programme will carry out research to understand how biogas can lead sustainability improvements at farm level.



The Operational Group opened a call to identify the farms for the demonstration sites. 461 farmers showed their interest by attended information meetings.

## More EIP-AGRI information on circular bioeconomy

The EIP-AGRI has done many different activities related to circular bioeconomy:

- [Focus Group circular horticulture](#) – [Focus Group report](#) – [factsheet](#)
- [Focus Group renewable energy on the farm](#) – [Focus Group report](#) – [factsheet](#)
- [Focus group reducing food loss on the farm](#)
- [Workshop on bio-based economy](#) – [Focus Group report](#) – [factsheet](#)
- [Workshop on circular economy](#) – [Workshop report](#) – [factsheet](#)
- [Workshop Opportunities for farm diversification in the circular bioeconomy](#) – [Workshop report](#)

The [Agrinnovation magazine 2019](#) focused on the circular bio-economy (available in English and Greek – French and German version available soon)

**The EIP-AGRI Service Point launches a social media campaign on circular bioeconomy early May 2020 to highlight the outcomes of different EIP-AGRI related activities, inspirational ideas, research needs. The May EIP-AGRI newsletter will focus on circular bioeconomy.**

## Green deal: Circular Economy Action Plan

The European Commission adopted on 11 March 2020 a new [Circular Economy Action Plan](#) - one of the main building blocks of the European Green Deal, Europe's new agenda for sustainable growth.

With measures along the entire life cycle of products, the new Action Plan aims to make our economy fit for a green future, strengthen our competitiveness while protecting the environment and give new rights to consumers. The new Plan focuses on the design and production for a circular economy, with the aim to ensure that the resources used are kept in the EU economy for as long as possible.

## Horizon 2020 multi-actor projects working on circular bioeconomy

- **AGRIFORVALOR** - Bringing added value to agriculture and forest sectors by closing the research and innovation divide to valorize and exploit sidestream biomass resources from agriculture and forestry
- **AgroCycle** - Sustainable techno-economic solutions for the agricultural value chain
- **AGROinLOG** - Demonstration of innovative integrated biomass logistics centres for the Agro-industry sector in Europe
- **AQUACOMBUNE** - Integrated on-farm Aquaponics systems for co-production of fish, halophyte vegetables, bioactive compounds, and bioenergy
- **Circular Agronomics** - Efficient Carbon, Nitrogen and Phosphorus cycling in the European Agri-food System and related up- and down-stream processes to mitigate emissions
- **ENABLING** - Enhance New Approaches in BioBased Local Innovation Networks for Growth
- **FERTIMANURE** - Innovative nutrient recovery from secondary sources - Production of high-added value FERTILISERS from animal MANURE
- **GO-GRASS** – Grass-based circular business models for rural agri-food value chains
- **LEX4BIO** - Optimizing Bio-based Fertilisers in Agriculture - Knowledgebase for New Policies
- **NoAW** - Innovative approaches to turn agricultural waste into ecological and economic assets
- **Nutri2Cycle** - Transition towards a more carbon and nutrient efficient agriculture in Europe
- **NUTRIMAN** - Nutrient Management and Nutrient Recovery Thematic Network
- **SuWaNu Europe** - Network for effective knowledge transfer on safe and economic wastewater reuse in agriculture in Europe

Find out more about these projects at the [multi-actor projects webpage](#) at the EIP-AGRI website > Water, nutrients and waste

**Multi-actor projects** are projects in which end users and multipliers of research results such as farmers and farmers' groups, advisers, enterprises and others, are closely cooperating throughout the whole research project period.

**Thematic networks** are multi-actor projects which collect existing knowledge and best practices on a given theme to make it available in easily understandable formats for end-users such as farmers, foresters, advisers etc.

## Other Operational Groups working on circular bioeconomy

The [EIP-AGRI Innovative projects catalogue](#) (128MB) includes 27 projects, including Operational Groups, working on circular bioeconomy.

**77 Operational Groups working on circular bioeconomy** are available in the EIP-AGRI Operational Groups database (update 13 March 2020)

- [France](#): 1
- [Germany](#): 4
- [Ireland](#): 3
- [Italy](#): 21
- [Latvia](#): 2
- [The Netherlands](#): 15
- [Portugal](#): 10
- [Slovenia](#): 1
- [Spain](#): 18
- [Sweden](#): 2

## Inspirational ideas on circular bioeconomy

Belgium	<a href="#"><u>Tomato grower and fish farmer create profits through water re-use and energy exchange</u></a>
France	<a href="#"><u>Turning waste into a resource</u></a>
France	<a href="#"><u>Setting up short wood supply chains using hedgerows</u></a>
Finland	<a href="#"><u>Biovakka, Manure management to produce biogas and nutrients in Finland</u></a>
Finland	<a href="#"><u>A grain dryer which is both energy and time efficient</u></a>
Finland	<a href="#"><u>Birch sap tapping in Finland</u></a>
Finland	<a href="#"><u>Improving forestry value chains in Finland</u></a>
Ireland	<a href="#"><u>Irish potato company prevents food loss on the farm</u></a>
Italy	<a href="#"><u>Italian farmers develop circular economy for clean electricity</u></a>
Italy	<a href="#"><u>Plant-based bioproducts to boost regional development</u></a>
Italy	<a href="#"><u>Farming for energy</u></a>
Italy	<a href="#"><u>Agreegreen: Models for managing woody biomass</u></a>
The Netherlands	<a href="#"><u>Farmers grow high-yield energy grass near Amsterdam Schiphol Airport</u></a>
The Netherlands	<a href="#"><u>Towards a circular horticulture system</u></a>
Spain	<a href="#"><u>Cork for 3D printing</u></a>
EU	<a href="#"><u>The Platform for Knowledge Based Bio-Economy relevant ERA-NETs</u></a>
EU	<a href="#"><u>Aquaculture + hydroponics = aquaponics</u></a>
EU	<a href="#"><u>Fertile circularity</u></a>

## EIP-AGRI

The European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) is one of five EIPs which have been launched by the European Commission in a bid to promote rapid modernisation of the sectors concerned, by stepping up innovation efforts. The EIP-AGRI aims to foster innovation in the agricultural and forestry sectors by bringing research and practice closer together – in research and innovation projects as well as via the EIP-AGRI network.

EIPs aim to streamline, simplify and better coordinate existing instruments and initiatives, and complement them with actions where necessary. Two specific funding sources are particularly important for the EIP-AGRI: the EU Research and Innovation framework, Horizon 2020, as well as the EU Rural Development Policy.

- [EIP-AGRI Brochure on the EIP-AGRI Network \(2015\)](#) (EN – BG – DE – ES – FR – GR – HU – IT – PT – RO)
- [EIP-AGRI Brochure on Funding opportunities under Horizon 2020 – Calls 2020 Calls](#) (EN)
- [EIP-AGRI Brochure on Horizon 2020 Multi-actor projects](#) (EN – BG – DE – FR – SI)
- [EIP-AGRI Brochure on Thematic Networks under Horizon 2020](#) (EN – BG – DE – ES – FR – HU)

## EIP-AGRI Operational Groups

- 98 rural development programmes provide support to EIP Operational Groups \*
- Over 3200 Operational Groups are expected to be established under the approved RDPs (2014 – 2020)
- Over 1000 Operational Groups projects have been selected for funding and are currently ongoing (or already finished)\*

\* Information officially submitted to the European Commission by RDP managing authorities (September 2019)

EIP-AGRI Operational Groups **are groups of people who work together in an innovation project funded by Rural Development Programmes (RDPs)**. They bring together partners with complementary knowledge. The composition of the group can vary according to the theme and specific objectives of each project. Farmers, advisers, scientists, businesses or other relevant partners work together to find practical solutions for specific

problems facing people in the European farming and forestry sectors. Farmers and foresters need to be closely involved throughout the project to ensure that the innovative solutions are relevant and likely to be quickly applied in the field.

Find out more in the [EIP-AGRI brochure on Operational Groups](#). The brochure on Operational Groups is available in English, Bulgarian, Czech, French, German, Greek, Hungarian, Portuguese, Romanian, Slovak, Slovenian and Spanish

Operational Groups can benefit from networking and collaborating with organisations from outside their partnership and from other regions and countries, such as other Operational Groups, research projects, farmers' organisations or local authorities and European knowledge networks. Read the [EIP-AGRI Brochure 'Operational Groups – Collaborate to innovate'](#). It shows some examples of successful collaboration. It provides Operational Groups with inspiration and tools for further knowledge exchange within the EIP-AGRI network. This brochure is available in English, Latvian, Romanian and Slovenian.

Check out the '[Operational Groups](#)' dedicated section on the EIP-AGRI website, including:

- More than 1300 Operational Groups are available in the database
- detailed information on how to set up Operational Groups, on supporting networks and relevant EIP-AGRI seminars and workshops
- links to results and contact details of ongoing Operational Groups in the [EIP-AGRI database](#)
- a [list of all RDP Managing Authorities](#)

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