



January - February 2024

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Dear circular economy enthusiast,

As February unfolds, our latest Bulletin is here, bringing you all the latest updates and relevant news from our community. Stay in the loop and explore the highlights as we navigate the happenings together.

This month we are happy to welcome the ALFA project in our network. This project, funded by the EU through the Horizon Europe program, aims to promote the adoption of biogas systems in the livestock farming sector. Discover more about the ALFA project below.

After the ESNI Conference in September and the launch of the ESNI Community, the community has now set up 4 Working Groups as core part of the initiative. These groups are led by European projects, discussing major challenges with an impact on the nutrient recycling and recovery. You can read more about it in this newsletter. The webinar about 'Quality and risk assessment of Biobased Fertilisers' of the Working Group on Agronomic Performance is coming to you on the 15th of February from 10:00 AM to 12:00 AM. Check below to find more information!

Still, breaking news from several projects of our community will enrich your reading and make you aware of their latest developments and results.

And last but not least, do not forget to take a peek at publications and events we chose for you.

We wish you a pleasant reading!

The BCE Team

Our latest updates will be waiting for you at @Bioref_Cluster and www.biorefine.eu. See you there! You wish to share any news with us? Get in touch! info@biorefine.eu

Biorefine community

The ALFA project joins our community!



We are very happy to welcome the ALFA project in our community.

ALFA has the objective to help unlock the EU's biogas production potential by fostering the adoption of technologies using manure to produce biogas, thus helping increase the adoption of renewable energy sources in the EU and helping reduce emissions from untreated animal waste.

Read more [here](#).

Biorefine community

The ESNI Community has established four Working Groups to address key challenges in nutrient recycling and recovery.

As core part of the initiative, the ESNI Community set up four Working Groups, led by European projects, discussing major challenges with an impact on the nutrient recycling and recovery. At present, the following Working groups are active:



- Technologies for nutrient recycling coordinated by FERTIMANURE;
- Agronomic performance of fertilising products coordinated by LEX4BIO;
- Sustainability assessment coordinated by NOVAFERT;
- Policy coordinated first by NUTRI2CYCLE and currently led by RENU2CYCLE.

Read more about the Working groups [here](#).

Project news

The BioDEN project presents new results: P-recovery of liquid fraction of digestate.



The main innovation goal of the BioDEN project is to realise a thorough valorisation of the nitrogen- and phosphorus-rich digestate from anaerobic digestion into existing and new bio-based fertilisers. One of the paths investigated within the project is the recovery of phosphorus from the liquid fraction of the digestate. Both struvite crystallisation and adsorption on Fe-modified biochar are investigated.

Read more about the results [here](#) and view the pilot scale crystalliser [here](#).

Project news

NOVAFERT is conducting a survey to better understand the alternative fertilisers market!

NOVAFERT aims to orientate the production and the application of alternative fertilising products according to the best environmental performances, by establishing methodological guidelines for the assessment of alternative fertilising products' production, storage, distribution and application.

Fill in the survey [here](#).



Project news

The FOLOU project has counted apples and checked apple quality with drones and AI!

Ghent University researchers counted apples in 5 Jonagold orchards in Belgium and Northern France, revealing significant food losses.

They've employed drones to capture detailed canopy images, laying the foundation for training an AI model. Their goal is to automate apple recognition, distinguishing between good and poor quality.

Read the news article [here!](#)



Good quality



Medium quality



Bad quality

Project news

CHEERS partners meet for the General Assembly in Alovera!

In the pursuit of a sustainable brewing industry, the CHEERS consortium gathered once again for its second General Assembly during 25th – 26th of January, this time in Alovera, Spain.

[Read more about it here!](#)



Project news

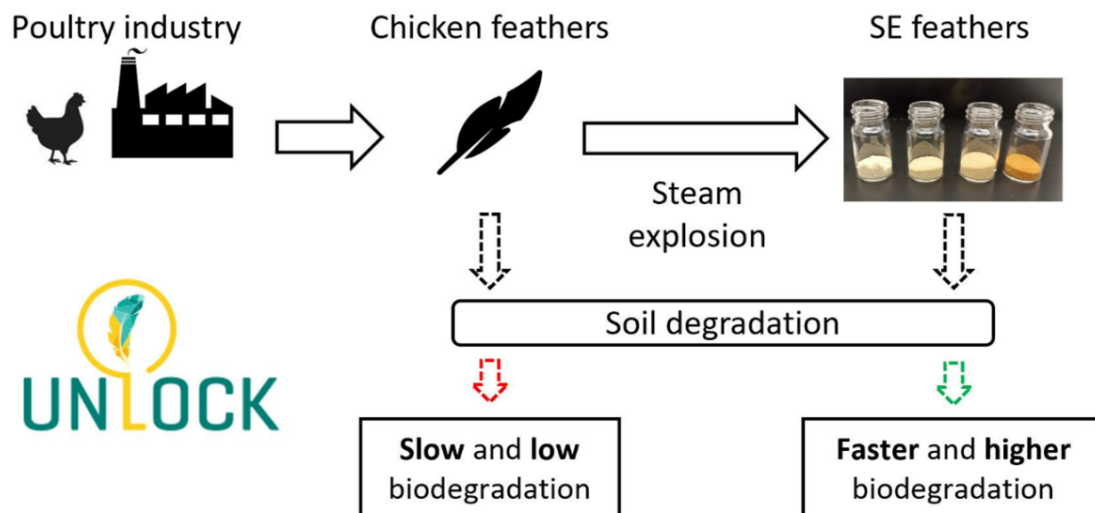
UNLOCK has published an article about 'Enhanced Biodegradability in Soil of Chicken Feather by Steam Explosion for Potential Application in Agricultural Biodegradable Plastics'.

Feather waste is a major issue from an economic and environmental point of view. Even though there are already routes for the valorisation of feathers into fertilisers and feather meal, these are considered to have low added value. For more attractive applications, for example in agricultural biodegradable plastics, higher and faster degradability in soil is required. To face this challenge alternative approaches to accelerate biodegradation and disintegration processes are needed. In this context, steam explosion appears as an effective technology to modify the structure of feather and improve its soil degradability.

In this work, chicken feathers were treated by steam explosion and the effect of treatment on their structure and physico-chemical and thermal properties were evaluated. Finally, the effect of the process conditions on the disintegration and biodegradation in soil of feathers was also investigated, finding an increased degradation in soil of steam explosion treated feathers. These results open up the possibilities of using feather waste as a component for environmentally

friendly agricultural bioplastics that can be degraded in-situ in soil.

Read the article [here](#).

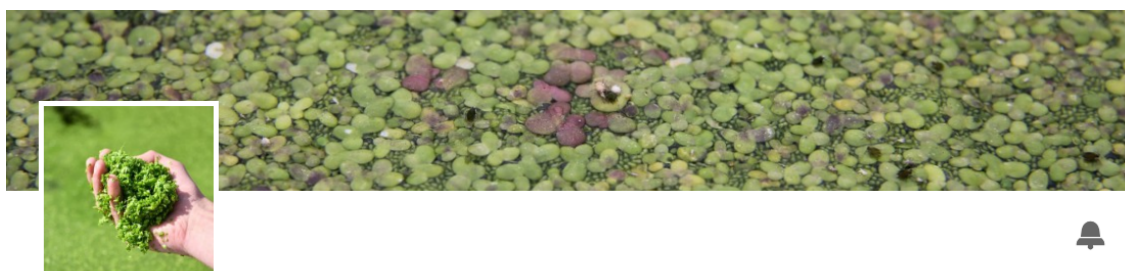


Project news

The European Duckweed Network: Facilitating duckweed innovation by bringing people together and sharing knowledge!

Seven Flemish research groups and two European partners joined forces to coordinate a European Duckweed Network funded by the Research Foundation-Flanders and Universities Wales. The objective of the network is to facilitate multi-disciplinary collaboration and knowledge transfer within Flanders and Europe to promote the further development of duckweed cultivation for a more sustainable future. This page brings the network of industries, academia and enthusiasts together.

Check out and follow the page [here](#).



The European Duckweed Network

Facilitating duckweed innovation by bringing people together and sharing knowledge

Onderzoeksdiensten · 56 volgers · 2-10 medewerkers

Project news

Learn more about The BLOWILL project by watching their video on 'Growing green harnessing willow and fungi'!

The BLOWILL project is posting videos about their research. One of them is about 'Growing green harnessing willow and fungi', but there are many more!

Watch their videos [here](#).

Project news

Discover new developments from the SEMPREGIO project in their case study on Innovative Biogas Technologies.



The third case study of SEMPREGIO embodies a European Biomethane Innovation Ecosystem (EBIE) facing challenges such as discontinued incentives and elevated maintenance expenses, which render it difficult for smaller biogas producers to maintain operations. The aim within Case Study 3 is to pioneer and showcase inventive biogas upgrading technologies. These technologies facilitate the enhancement of existing biogas and biomethane facilities, particularly those operating at lower capacities, which are at risk of ceasing operations due to discontinued incentives or rising feedstock costs.

Read more about the developments in this case study [here](#).

Food for thoughts

F-CUBED - [Continuous Hydrothermal Carbonization of Olive Pomace and Orange Peels for the Production of Pellets as an Intermediate Energy Carrier](#)

Re-Source Lab - [Influence of biochar addition and plant management \(cutting and time\) on ryegrass growth and migration of As and Pb during phytostabilization](#)

MicroAlgae 4.0/MAB 2.0 - [Towards Optimisation of Microalgae Cultivation through Monitoring and Control in Membrane Photobioreactor Systems](#)

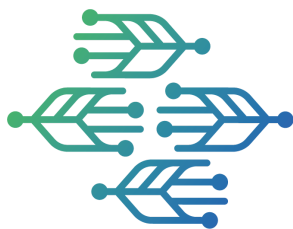
Event

EU-FarmBook project - Launch of open-access online platform 8th of February 2024 - online

Are you a farmer, a forester, or another rural stakeholder?

The EU-FarmBook project is launching its open-access online platform on the 8th of February at 10:30AM. Join them to explore the platform's features, insights for coordinators, and a glimpse into the future of agricultural innovation. Register and be part of this insightful occasion!

Register and read more [here](#).



EU-FarmBook

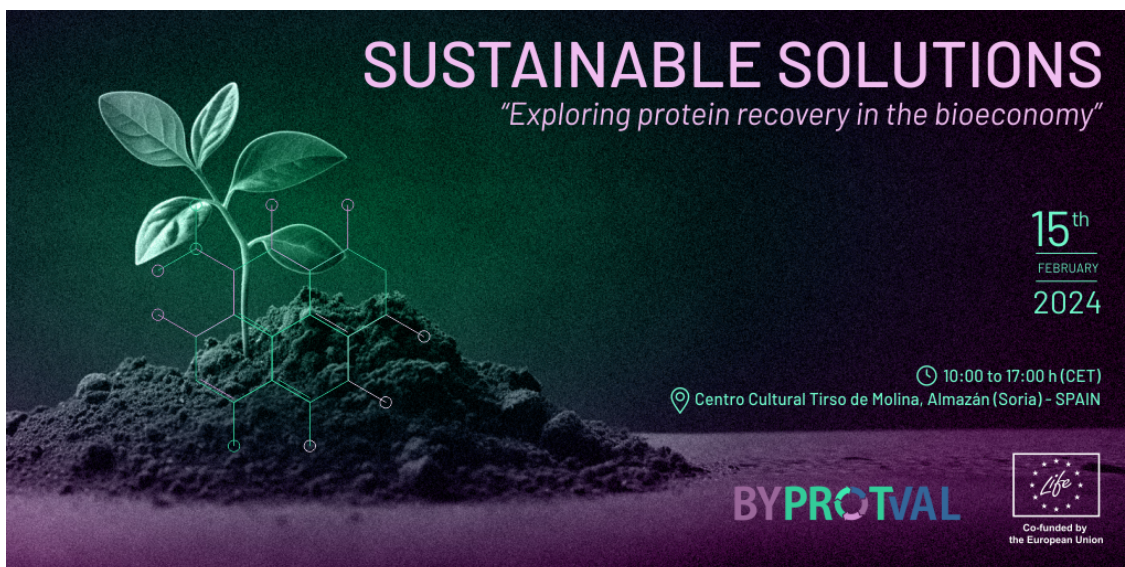
Event

LIFE byProtVal - Sustainable Solutions: Exploring Protein Recovery in the Bioeconomy

15 February 2024 - Tirso de Molina Cultural Center, Almazán, Soria, Spain.

This event will be an opportunity to interact with main authorities, professionals in bioeconomy and circular economy strategies gathering industrial experiences in rendering plants, bioprocesses technologies, impact perception, policies perspectives and exchange of good practices from other European projects related with protein valorisation. The event is mainly aimed at companies, research centres and government agencies and will be attended by representatives of the European Commission and partners of the several projects presented at the event. The session will also include a networking space and a visit to the plant developed in the project, with the aim of promoting possible collaborations between participants and exchanging industrial experiences and transferring project results.

[Continue reading](#)



Event

Webinar | Quality and risk assessment of Biobased Fertilisers 15 February 2024 - online

The ESNI Working Group on Agronomic Performance, together with the LEX4BIO project, invites you to join the webinar on the quality and risk assessment of Biobased Fertilisers (BBFs).

Read the agenda and register [here](#).



Event

FOLOU webinar - Defining Food Loss in the European Union Framework - Challenges and Significance 14 March 2024 - online

The FOLOU project is organising three webinars on Food Loss. The first one is about 'Defining Food Loss in the European Union Framework'. This meeting will present and discuss the food loss definition, addressing grey areas and seeking collaborative solutions.

[Continue reading](#)

Funded by the European Union

FOLOU

Meeting 1 of 3

Unveiling the Essence
Defining Food Loss in the European Union Framework - Challenges and Significance

The EU's initiative to quantify food waste is widely recognized, but there's a notable oversight regarding unharvested food, often neglected in monitoring. The lack of reliable data on this issue is a concern. We acknowledge the need to bring attention to this overlooked matter, quantifying its extent, and proposing effective solutions.

A crucial first step is refining the concept of food loss, distinct from the EU's "food waste" terminology. Our proposal within the FOLOU project seeks to address this gap, offering a new definition encompassing all currently omitted food discards.

The upcoming meeting will present and discuss this definition, addressing grey areas and seeking collaborative solutions.

Join our first meeting

DATE
March 14th, 2024

TIME
11.00h - 13.00h (GMT+1)

About FOLOU

www.folou.eu

Folou_eu

FOLOU



Event

ManuREsource - International conference on manure management and valorization **20-21 March 2024 - Antwerp, Belgium**

ManuREsource is an international conference stimulating the exchange of experiences between regions on the policy measures taken for coping with manure surpluses, both in terms of manure management in a broad sense, and more specifically in terms of manure treatment. Its sixth edition will take place in March, organised by VCM, Ghent University, Inagro and NCM.

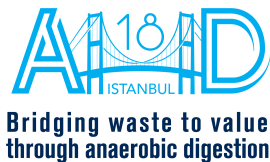
[Continue reading](#)

Event

NERM - Nutrients in Europe Research Meeting **16-17 April 2024 – Brussels & online, Belgium**

NERM (Nutrients in Europe Research Meeting) is organised by ESPP, FERTIMANURE, LEX4BIO, RUSTICA, SEA2LAND and WALNUT. NERM will discuss key outcomes of recent nutrient recycling R&D under Horizon 2020, other EU -funding programmes; roadmap for future nutrient recycling R&D needs; nutrient recovery technologies and recycled fertiliser production, among others.

[Continue reading](#)



Event

IWA AD18 - World Conference on Anaerobic Digestion (18th edition) **2-6 June 2024 – Istanbul, Turkey**

The 18th World Congress on Anaerobic Digestion is one of the most important international events in anaerobic technologies, where the latest developments and innovations in the field of anaerobic technologies will be discussed by academicians, researchers, representatives of the public and private sectors around the world. The event includes workshops, keynote lectures, interactive discussions, exhibitions, technical tours and social events.

[Continue reading](#)

Save the date

ESNI CONFERENCE 2024

18-20 September 2024 – Brussels, Belgium



SAVE THE DATE!

The ESNI conference of 2024 will take place in September 2024! Keep the dates of Friday 18, Wednesday 19 and Friday 20 September free in your calendar for this next edition. More info will follow soon!

The Biorefine Cluster is supported by the European Biogas Association (EBA), a no-profit organisation which advocates for recognition of biomethane and other renewable gases as sustainable, on demand and flexible energy sources that provide multiple knock on socio-economic and environmental benefits. Learn more [here](#)



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