



MAINSTREAM BIO

MAINSTREAMING SMALL-SCALE BIO-BASED SOLUTIONS ACROSS RURAL EUROPE

REVOLUTIONIZING EUROPE'S RURAL REGIONS: CIRCULAR BIOECONOMY OPPORTUNITIES

WEBINAR 2: *SMALL-SCALE BIO-BASED SOLUTIONS FOR PRIMARY PRODUCERS*

Wednesday April 17th 2024, 11.00 CET



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Time	Topic	Speaker
11:00	Webinar Introduction	James Gaffey Co-director Circbio Research Group Munster Technological University
11:05	Mainstream Bio Findings: Small-scale bio-based solutions in practice	Bert Annevelink Senior Scientist Biomass Chains Wageningen Research
11:20	Grassa and Small-scale biorefinery case studies	Johan Sanders Founder/Advisor Grassa
11:30	Pilze-Nagy- Case study	Adrienne Nagy Managing director Pilze-Nagy
11:40	Insect Protein Case Study	Alvan Hunt CEO Hexafly
11:50	Panel Discussion	All
12:00	Follow up session: Interactive Q&A Session and moderated discussion with the presenters	All
12:10	Webinar Closure	James Gaffey Co-director Circbio Research Group Munster Technological University

Registration options:

Option 1: Registration Link:

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Option 2: Scan QR Code:

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Information

What the webinar is about?

The small-scale bio-based webinar will give an overview on its significance as well as potential benefits and impacts on the bioeconomy for the rural actors. It will highlight the upward field of biotechnology and new innovative solutions that use different bio-based systems to solve different challenges. Thru our case studies we will provide an insight into practical examples of how bio-based solutions can revolutionize industries, promote sustainability and rural economic growth.

Mainstream Bio Findings: Small-scale bio-based solutions in practice

One of the goals of the MainstreamBIO project was to develop a catalogue of small-scale bio-based solutions (technologies, business models and social innovations) to provide inspiration and guidance for rural actors. This presentation will give an overview of the content of this catalogue. This will be combined with some experiences from a support case in Ireland on small-scale anaerobic digestion that was recently finalized. Furthermore, a decision support methodology was developed in MainstreamBIO for matching available biomass and waste streams with market and technology information. This tool will be briefly illustrated as well.

Grassa and Small-scale biorefinery case studies

Biorefining enables us to use (every) component of grass at its highest value and at its highest availability. The Grassa process leads to a high value protein/ fiber product for cows, a protein product that can substitute soybean meal in pigs and poultry diets, a product that improves gut health and finally a mineral concentrate that can be used as organic fertilizer. It leads to a 50% increase of animal protein produced. Part of the protein can be used for human consumption. At 30 tons/ hour the process can be operated economically.

Pilze-Nagy- Case study

The Pilze-Nagy case study will highlight aspects of Pilze-Nagy's contribution to the development of the mushroom industry with specific insights into the technologies, procedures and innovations that the mycology and mushroom growing company uses in its day-to-day operations. Pilze-Nagy Ltd. specializes in horticulture, focusing on growing oyster mushrooms for distribution in both domestic and European markets. The company's head office and sites are located 5 km north of Kecskemét. With a growing area of about 15,000 m², a portion of the production is dedicated to organic methods. Pilze-Nagy is committed to reducing the environmental impact of mushroom production and promoting sustainable farming. To achieve this, the company has implemented a whole value chain based on wheat straw, known as a mushroom-biogas complex agrisystem. This innovative system effectively eliminates the organic waste produced during oyster mushroom cultivation, while also transforming the company into a decentralized renewable energy producer. Furthermore, the development allows for the multiple utilization of wheat straw as an agricultural by-product in both mushroom production and energy generation. Ultimately, the final material, the digestate, from the process is returned to the soil as a biofertilizer.

Insect Protein Case study

The insect protein case study will offer a deeper insight into the burgeoning field of insect-based protein sources and it will examine the rationale behind using insects as a sustainable protein alternative, highlighting aspects of their high nutritional value, low environmental impact and efficient feed to protein conversion.

Speakers

James Gaffey is co-Director of the Circular Bioeconomy Research Group (CircBio) at Munster Technology University. James is Principal Investigator (PI)/Co-PI or coordinator on over 10 EU and nationally funded circular bioeconomy research projects, including Biorefinery Glas, Farm Zero C, Bio4Africa, INFORMBIO, MainstreamBIO and many more. He is co-national team leader (co-NTL) on the International Energy Agency's IEA Bioenergy Task 45 collaborating with experts worldwide to understand the Climate and Sustainability Effects of Bioenergy within the broader Bioeconomy.

Bert Annevelink has been working as senior scientist biomass chains at the research institute WFBR in Wageningen since 2006. He holds an MSc Degree in Forestry from Wageningen Agricultural University, and a PhD in Agricultural Mathematics/Operational Research also from Wageningen Agricultural University. His main field of interest is logistics, production planning and scheduling. He contributed to many recent EU-projects, such as S2BIOM, AGROinLOG, BECOOL, MAGIC and MainstreamBIO. In all these projects he was working on designing and optimizing biomass value chains. Finally, Bert is Task Leader of the IEA Bioenergy Task42 'Biorefining in a Circular Economy'

Johan Sanders is an emeritus professor who worked at Fermentation from 1977 to 1993, now part of DSM working on food/farm/feed/enzymes/technology. His tenure as director of research at AVEBE, a company that produces potato starch, spanned from 1993 to 2001. He began his career in the field of bio-based economy as a professor at Wageningen University in 2002 and has been actively involved in projects related to nitrogen emission reduction and bio-based economy ever since. In 2008, he became one of the co-founders of the company Byosis, now a world player in the removal of ammonia during biogas production, and since 2014 he is also co-founder of the company Grassa, which is now in the phase of increasing from 3 tons/hour to 30 tons/hour of fresh grass leaves.

Adrienn Somosne Nagy, Ph.D., is a biologist specializing in biotechnology and bioeconomy. She is the managing director of PILZE-NAGY LTD, where she oversees the company's innovation, research, and development activities. Over the past 20 years, she has been involved in various international and Hungarian developmental projects related to bioenergy, biogas, agricultural waste management, and mushroom cultivation. Currently, she is participating in the MARGINUP and FARMTOPIA projects under Horizon Europe, and she also serves as a board member of the National Biomethane Biogas Green Energy Association.

Alvan Hunt

(2-3 sentence with speaker's info)













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The project

MainstreamBIO is an Horizon Europe EU funded project, which sets out to get small-scale bio-based solutions into mainstream practice across rural Europe, providing a broader range of rural actors with the opportunity to engage in and speed up the development of the bioeconomy. Recognizing the paramount importance of bioeconomy for addressing key global environmental and societal challenges, MainstreamBIO develops regional Multi-actor Innovation Platforms in 7 EU countries (PL, DK, SE, BG, ES, IE & NL). The project aims to enhance cooperation among key rural players towards co-creating sustainable business model pathways in line with regional potentials and policy initiatives. MainstreamBIO supports 35 multiactor partnerships to overcome barriers and get bio-based innovations to market with hands-on innovation support, accelerating the development of over 70 marketable bio-based products and services. Furthermore, the project develops and employs a digital toolkit to better match bio-based technologies, social innovations and good nutrient recycling practices with available biomass and market trends as well as to enhance understanding of the bioeconomy with a suite of educational resources building on existing research results and tools. To achieve these targets, MainstreamBIO involves 10 partners across Europe, coming from various fields. Thus, all partners combine their knowledge and experience to promote the growth of bioeconomy in a sustainable and inclusive manner.

Coordinator: **Q-PLAN INTERNATIONAL ADVISORS PC (Q-PLAN)**

Partner		Short Name
	Q-PLAN INTERNATIONAL ADVISORS PC	Q-PLAN
	MUNSTER TECHNOLOGICAL UNIVERSITY	MTU
	STICHTING WAGENINGEN RESEARCH	WR
 Institute of Soil Science and Plant Cultivation State Research Institute	INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY	IUNG
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