PRESS INFORMATION

Bio-based fertilisers counteract EU import dependency on mined resources

SUSFERT develops highly sustainable, bio-based fertilisers for supplying phosphorus and iron to crops. Replacement of conventional fertilisers decreases the dependency on imported, mined phosphate rock in the EU by 40%. The SUSFERT fertilisers valorise waste and by-products of several industries, and strengthen the circular economy.

(Dec. 4th 2018, Vienna/ Austria) EU agriculture depends heavily on the use of non-renewable, resource-intensive fertilisers to meet the ever rising demand for food and feed. Phosphorus as the major fertiliser component is a critical resource that is 90% imported into the EU as mined rock phosphate. On top of that, a major part of the nutrients applied as fertilisers gets leached out of the soil into the ground water because timing and dosage are inapt for plants. Innovative fertilisers developed within the BBI-JU (Bio-Based Industries Joint Undertaking)/ EU-funded SUSFERT project are based on renewable resources from side streams of wastewater treatment plants as well as pulp and paper industries. Furthermore, they incorporate microorganisms that are capable of transforming some forms of phosphorus that are commonly present in the soil to readily available forms for direct plant uptake.

Reducing soil and water contamination in the EU

We all need and crave food and at least within the last decades there was hardly a food shortage in European supermarkets. Yet, by using necessary fertilisers while farming we pollute our soil and water due to uncontrolled release of the components, forcing farmers to use an excess amount of fertilisers for optimal plant growth. Conventional fertilisers are also highly dependent on fossil phosphorus, 90% of which is mined abroad and imported into the EU. With yet again alarming climate reports experts are certain: We need to make more mindful use of resources and create more circular systems utilizing by- and waste-products instead of wasting natural resources. Various regulations were put in place to meet climate goals in the EU; leaders are now urging all Member States to enforce it swiftly.

One of the aspects of the regulations is security of food, feed, soils and water. “Keeping our soils healthy and productive or even improving them by using novel multifunctional and biodegradable fertilisers is our major goal. SUSFERT helps reaching these goals by researching better products while improving the re-use of waste- and by-products” says Günter Brader, Austrian Institute of Technology (AIT), scientific coordinator of the SUSFERT project.

Bioeconomy projects as job motors

Starting off in May 2018 this BBI-JU-funded bioeconomy project can rely on research and industry experts alike to create completely new components for fertilisers. The SUSFERT project develops cost-effective sustainable fertilisers with enzymatically modified lignin-based coatings for a more controlled release to be used in conventional but also in organic farming. “As one of the industry partners of the project we are profiting a lot from the knowledge and skills of our research partners. It is great to see many ideas put into action together, to be a part of reaching the big EU and global goals like saving the climate and keeping our soils clean together”, says Martin Mayer of Timac Agro Austria.

Besides these ecological aspects the eleven members of the SUSFERT consortium will also establish completely new value chains for fertilisers and fertiliser components by the end of the project. “Bio-based industries, which currently account for 8% of the EU’s workforce, could create one million new green jobs by 2030” say BBI-JU officials. SUSFERT estimates to create more than 100 new, permanent jobs in rural areas.

More information on SUSFERT

SUSFERT website: https://www.susfert.eu/
SUSFERT on Twitter: https://twitter.com/SUSFERT_BBI
SUSFERT on LinkedIn: https://www.linkedin.com/showcase/susfert/
SUSFERT newsletter: https://www.susfert.eu/news-and-events/newsletter/

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The SUSFERT Consortium

Project coordination and management
RTDS Group, AT (http://www.rtds-group.com/)

Scientific coordination
Austrian Institute of Technology (AIT), AT (https://www.ait.ac.at/en/)

Research partners
University of Natural Resources and Life Sciences (BOKU), AT (https://www.boku.ac.at/en/)
University of Antwerp, BE (https://www.uantwerpen.be/en/)

SMEs (small and medium enterprises)
AciesBio, SLO (https://www.aciesbio.com/)
ABiTEP, DE (https://www.abitep.de/index.php/en/home.html)

Industry
Agrana Research & Innovation Center (ARIC), AT (https://www.agrana-research.com/en/start/)
AGRANA Stärke, AT (https://www.agrana.com/en/)
Agro Innovation International Groupe Roullier, FR (https://www.roullier.com/en/)
Timac Agro Düngemittel, AT (http://www.at.timacagro.com/)
Sappi, NL/AT (https://www.sappi.com/)

Bio-Based Industries Joint Undertaking (BBI-JU)

The major SUSFERT funding body, the Bio-Based Industries Joint Undertaking (BBI-JU), is a €3.7 billion Public-Private Partnership between the EU and the Bio-Based Industries Consortium. Operating under Horizon 2020, this EU body is driven by the Vision and Strategic Innovation and Research Agenda (SIRA) developed by the industry. A strong European bio-based industrial sector will significantly reduce Europe's dependency on fossil-based products, help the EU meet climate change targets, and lead to more environmentally friendly growth.

The key is to develop new biorefining technologies to sustainably transform renewable natural resources into bio-based products, materials and fuels. This growing sector is expected to grow rapidly and create new markets and jobs, and is already attracting substantial investments in the US, China and Brazil. The EU has the industrial, research and renewable resources potential. It is now a matter of deploying it in a sustainable manner to compete in the global bioeconomy race. Visit the BBI-JU website at https://www.bbi-europe.eu/about/about-bbi!

To learn more about the bioeconomy and projects researching sustainable solutions join us on Dec. 7th 2018 at the 'Stakeholder Dialog Bio-Based Industry' in Vienna: https://nachhaltigwirtschaften.at/de/veranstaltungen/2018/20181207-stakeholderdialog-bbi.php.