DeliSoil

Delivering soil improvers from circular food production processes to boost soil health

Practice Abstract 4

# Generation and Valorisation of Food Industry Side Streams in Finland


## Summary

DeliSoil project aims to convert food processing side streams (by-products or waste materials generated during production processes, which can potentially be reused or repurposed into valuable resources) into soil improvers and fertilisers. In order to achieve this goal, it is crucial to identify the status of side stream production and valorisation.

In Finland, the food industry is the fourth largest industrial sector. The food industry employs around 40,000 people, and in 2023 there were approximately 2,600 companies in the food and beverage industry. The food industry side streams in Finland correspond to a total of more than 400,000 tonnes of biomass from different food industries. The largest share of sidestreams is generated in the processing of dairy products. The meat, fish and vegetable processing industries also produce large amounts of by-products each year. However, it is important to note that the data on the production of side streams only include larger industrial actors, excluding small industries such as bakeries.

In Finland, the considerable distances between regions pose challenges for making full use of by-products and waste streams, known as "side streams." These distances increase the costs and logistical complexity of collecting, transporting, and processing these materials, making it harder to turn them into valuable resources effectively.



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## Country:

Finland


## Keywords:

Soil health
Circular economy
Value chains


## Stakeholders:

Policy Makers
Industry
Research

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## Practical Recommendations

Currently, the valorisation of food industry side streams into fertiliser products is mainly based on conventional processing technologies such as anaerobic digestion and composting. The majority of food industry side streams are currently used as value-added products, i.e. animal feed, fertilisers and soil improvers in agriculture and landscaping, but also as raw materials for other products.

However, there is still a need to develop the processing of side streams in Finland. There is high potential for the production of value-added products through more innovative use of side streams to improve the recovery of organic matter and nutrients and their use in agriculture and food production.

## Needs addressed by the practice

Knowledge on the current status of food industry side stream generation, utilisation and valorisation. Helping food producers find circular solutions to increase the value of their side-streams.


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## About DeliSoil

**The EU-funded DeliSoil project is a four-year initiative that aims to transform food industry byproducts into safe, sustainable, and tailored soil improvers. This project addresses two pressing challenges: the poor recycling of industrial food processing byproducts and the degradation of soil health.**

**By harnessing a circular approach, DeliSoil will contribute to improving soil health and productivity, supporting the EU Mission "A Soil Deal for Europe" and the Farm to Fork Strategy, as well as other Circular and Bioeconomy Strategies and Plans.**


Funded by the European Union

Funded by the European Union under the Horizon Europe Programme, Grant Agreement No. 101112855 (DeliSoil). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them. Swiss partners (FiBL) have received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).