PRACTICE ABSTRACT NO. 8

SEA2LAND

FiBL Europe

Biofertilisers from fish by-products for organic farming

Main results

Organic farming imposes restrictions on the use of fertilisers, such as the exclusion of easily soluble mineral fertilisers. This may result in nutrient limitations in some cases. Bio-based fertilisers derived from fishery and aquaculture by-products are a valuable source of nitrogen, phosphorous and potassium. They present a sustainable solution to nutrient management in organic agriculture.

Practical recommendations

Eight different fertilisers were developed in SEA2LAND. Out of these, three products comply with the relevant legislation for EU organic production. These products, mainly consisting of fish proteins, valorise residues from fisheries and aquaculture, contribute to nutrient recycling, lower environmental impact and help reduce the EU's dependency on imported nutrients. Both, organic and conventional farmers are allowed to use these products when respecting certain restrictions. In particular, farmers should not apply them directly on edible parts of the plant and be sure to comply with applicable national legislation in the Member State.

Four other fertilisers developed in the project are currently not allowed for use in organic farming. Their non-compliance is mainly because of legal formalities, not because of fundamental non-compliance with the principles of organic farming. To bring more of these valuable, recycled fertilisers to market, more dialogue between the central stakeholders, such as farmers, advisers, policymakers and certifiers is needed.

Fish hydroloysates **Chitin-rich fertiliser** **Fish protein fraction**

Figure 1: Three fertilisers from fish by-products complying with EU organic production rules (Credits: Çağrı Akyol)

Further information

Report: Pedross P (2024). Evaluation of bio-fertiliser prototypes against their compliance with EU organic legislation. FiBL Europe.
Report: Zhang J & Akyol Ç (2023). Composition & quality report of tailor-made bio-based fertilisers. UGENT.

About this abstract

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SEA2LAND project is a collaborative Innovation Action(IA) funded by the EU in the frame of the Horizon 2020 programme. The project aims to provide solutions to help overcome challenges related to food production, climate change and waste reuse. Based on the circular economy model, SEA2LAND promotes the production of large-scale fertilisers in the EU from own raw materials. This solution is expected to reduce the soil nutrient imbalance in Europe. The project is running from January 2021 to June 2025.
Website: www.sea2landproject.eu

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