

SYLFEED



From forest to feed: enable the wood industry to bridge the protein gap

<http://www.sylfeed.eu>

Summary

Europe faces a major protein deficit, ranging between 80 – 70 percent in the past 40 years. This has to be covered by imports. However, as the world population grows, the demand for food will increase globally. The SYLFEED project will start to bridge this gap by upscaling a bio-refinery concept that can convert woody biomass into high-value Single Cell Protein (SCP) for use as animal feed, most notably in increasing fish production.

Type of Action:
Innovation Action -
Demonstration

Value Chain: Across VCs

Start date: 01 September
2017

End date: 31 August 2021
BBI JU contribution: €
10,892,598.89

Wood residues are abundant and highly sustainable, while SCP has an amino-acid profile close to that of fish, making them an excellent raw material in fish feed formulation. The SYLFEED project will create a demonstration plant with a capacity to process up to 15t/day of lignocellulose into SCP for use in aquaculture. This will demonstrate a synergy between forestry industry and protein fish feed market, creating new high value opportunities for the former and an alternative, sustainable, protein source for the latter.

Objectives

The overall objective of the SYLFEED project is to build a demonstration plant with the capacity of treating 15 tonnes of biomass per day, i.e. up to five thousand tons of biomass per year.

It also sets technological, socio-economic and environmental objectives:

- From a technological perspective, the project intends to reach recovery levels of sugars from biomass similar to those at the pilot scale. It will also prove the feasibility of continuous operation and integrated recycling loops in order to reuse more than 99% of phosphoric acid.
- From a socio-economic perspective, the project aims to provide a significant return on investment from the bio-refineries, to make it attractive to potential investors. It should also provide end-to-end mutual economic benefits between biomass providers, bio-refineries and fish feed producers
- From an environmental perspective, the

Expected impacts

The SYLFEED project aims to have the following impacts:

- Increase income for farmers and breeders by exploiting unused or underused residues.
- Allow fish farmers to access more competitive and sustainable products as price of fish meal increases.
- Reduce water and fertilisers consumption as well as of land use in comparison with current animal feed production, particularly fish meal from other fish and plant-derived (mainly soya) sources.



Project aims to reduce contributions to human-induced global warming compared to other protein sources, with combined lifecycle greenhouse gas emissions and other contributions less than 50 percent of alternatives. It will also minimise human-induced global warming in the protein production chain, by sourcing, extracting and transporting raw materials using the most sustainable options. Finally, it will have a lower water footprint compared to other protein sources as forestry materials do not require dedicated water usage

- Biométhodes SA (France)
- Norske Skog Golbey (France)
- Prayon S.A. (Belgium)
- Rise Processum AB (Sweden)
- MATIS OHF (Iceland)
- Föðurverksmiðjan Laxa hl. (Iceland)
- Skretting Aquaculture Research Centre
- Østfoldforskning AS (Norway)

Commitments Coordination

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Project coordination

Organisation name: Biométhodes SA (France)