Demonstration of a biorefinery technology for the production of green chemicals from grass silage

GRASSFinery

The GRASSFinery project pushes a new technology which has been developed over the last years in a series of applied R&D projects in Austria actively into the market. GRASSFinery has the overall objective to demonstrate a new highly innovative processing technology to produce green chemicals out of grass silage. The array of products involves high grade amino acid (AA) mixtures, lactic acid (LA), sugar and sulphates. The project demonstrates the processing and brings the products onto the market. There is a strong focus to develop and deploy high grade amino acids from grass for human food applications. The GRASSFinery consortium consist of six partners: BIOFABRIK Green Refinery GmbH is a technology up-taker which has been developing a strong business model to commercialize the technology and products. It has been operating a central green biorefinery (CGB) to produce the specified end bulk chemicals. Two operating companies called BIOFABRIK GR1 & GR2 operate primary processing (PPUs) units next to biogas plants to supply a concentrated intermediate to run a CGB for end product separation. ANONA is a food company which develops within GRASSFinery specific food products containing amino acids from grass for the market. Partner ENERGIEINSTITUT is process consultant and responsible for LCA. TBW RESEARCH is an applied R&D company which manages the GRASSFinery project to enhance project output and results. TBWR is also process consultant.

Results

A primary processing unit (PPU1) was built in Blíževedly (CZ) next to a biogas plant. It has been operated to produce the concentrated grass silage juice as an intermediate product. The Central Green Biorefinery (CGB) was built at the premises of the coordinator Biofabrik Green Refinery in Dresden and has been in operation since August 2016. Automatization of processing was established also as an additional polishing process for the key product AA-mixture. Different products have been generated from grass such as (i) a fertilizer called Blattwerk pure, (ii) a food grade amino acid mixture called AMINEON containing a high rate of BCAAs and (iii) a special "all-in food supplement product" launched under the name Ultrafood. In addition AMINEON has been tested and evaluated for a variety of food product applications as an additive. To date there is an open legal issue whether or not grass derived amino acids can be used for human food products. This essential question is tackled within GRASSFinery.

Partners and coordinator

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Budget

Overall budget: 3.018.522,00 € (EU contribution: 50,00 %)

In brief

Sector: Greening Business

Duration: 02/09/2014 to 28/02/2018

Contract number: ECO/13/630206

Website: [http://www.grassfinery.eu/](http://www.grassfinery.eu/)


Links
[7] [https://www.biofabrik.com/green-refinery/bioraffinerie/](https://www.biofabrik.com/green-refinery/bioraffinerie/)