Organic Knowledge Network
on Monogastric Animal Feed

OK NET ecofeed

Grass Protein – Ausumgaard

Kristian Lundgaard-Karlshøj

OK-Net EcoFeed Thematic Group Meeting, 26th of May 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773911.

Ausumgaard

Ausumgaards drift

- **1050 ha, Organic, Grass seed, Oil Rapeseed, Clover Grass, Cereals**
- **Chickens 500.000 pce.**
- **Bionaturgas – 9 mio. Nm3**
- **Fairs and 17.000 Visitors**
- **Windturbines 4x 3 MW, Vestas V112**
- **For rent: Buildings, houses, pigstables, storage**
- **Forest, buildings, garden - 100 ha**
- **Own small pig production and brand (200 pce per year)**
- **Experienced in participating in projects – mealworms, ….**
- **Flour (small scale)**
- **Small farmshop (mini ☺)**

OK NET
ecofeed

OK NET ecofeed

Ausumgaard – TEAM – Supporters ☺

Why grass protein at Ausumgaard

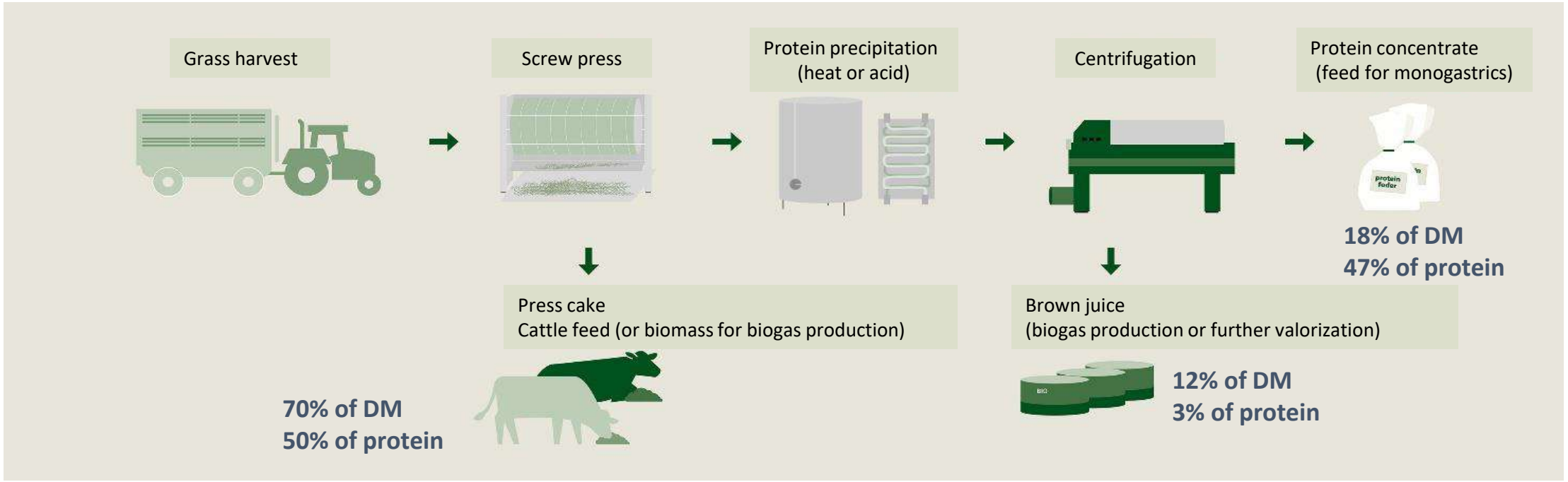
- We believe that traditional farm products have to change / transform in to products with more benefits – its been a while since we started with producing proteins based on milk and meat…. Maybe we have to think in new directions for producing proteins?
- Ausumgaard – we need to look for alternative proteins….
- What will the end consumer in 2020 dream of if they should ask for the perfect protein produced in the perfect way? – a good amino acid profile, efficient production in the matter of input / resources, using a minimum of clean drinking water, energy efficiency?
- Ausumgaard – we took part of a big project of producing mealworms…
- Ausumgaard – meeting interesting people and being aware that the new world will be fed with a number of new alternative proteins…. Grass Protein has potentials…. Speaking out loud
- Vestjyllands Andel saw our interest and understood our optimal setup for producing grass protein

Synergy at Ausumgaard

- We have the possibility to make synergy between organic plant production, biogas production and our strategy about sustainable businesses
- Our biogas plant does not use a lot of manure like other plants – we will benefit from having the brown juice from the grass
- The biogas plant will be able to help the use of the byproducts from the grass protein production (grass fibre, brown juice, suddenly occurred trash productions) – will guarantee eating everything, which is necessary if cows will not.
- Our organic plant production will love having more clover grass
- Maybe the way of harvesting clover grass for the protein production is cost efficient compared to traditional harvesting?
- Some of the keypersons in this project knows each other very well and trust in each other makes things efficient!

Production of Grass Protein

- Grass protein is produced in green biorefineries



Value chain in project setup

Field Ausumgaard → Factory Ausumgaard → Drying Vestjyllands Andel → Mixed in feed Vestjyllands Andel → Sold for Organic farmers

Harvesting Grass

Potentials - byproducts

- The grass fibre will maybe be more valuable for cows and biogas plants after being processed at the grass protein factory
- It is interesting to concentrate big volumes of “something” at one location… makes it interesting to think in new types of use and technologies!
- Will grass fibre be able to be used as the component for new sustainable building materials? - - Furnitures, insulation, noise reduction, feed for other animals, biomass for pyrolysis ….
- Will brown juice be added value because of sugar? Oil content? Others?

Potentials - Protein

- What is the real value of the protein? – amino acid profile, immune system, health, known origin
- What is the real value of producing protein on clover grass? - sustainability, local production, environmental value (CO_2, Nitrogen, biodiversity, known origin, ….
- Will humans be the target for grass protein?
- Will grass protein factories be farm based or big factories?
- How much clover grass will cover the farmland? 3%, 5%, 10%, 20%?
- Will grass protein someday be able to compete with conventional soy?

IFOAM EU GROUP

MAKING EUROPE MORE ORGANIC

FiBL

ICROFS

Internationalt Center for Forskning i Økologisk Jordbrug og Fødevaresystemer

ORGANIC RESEARCH CENTRE

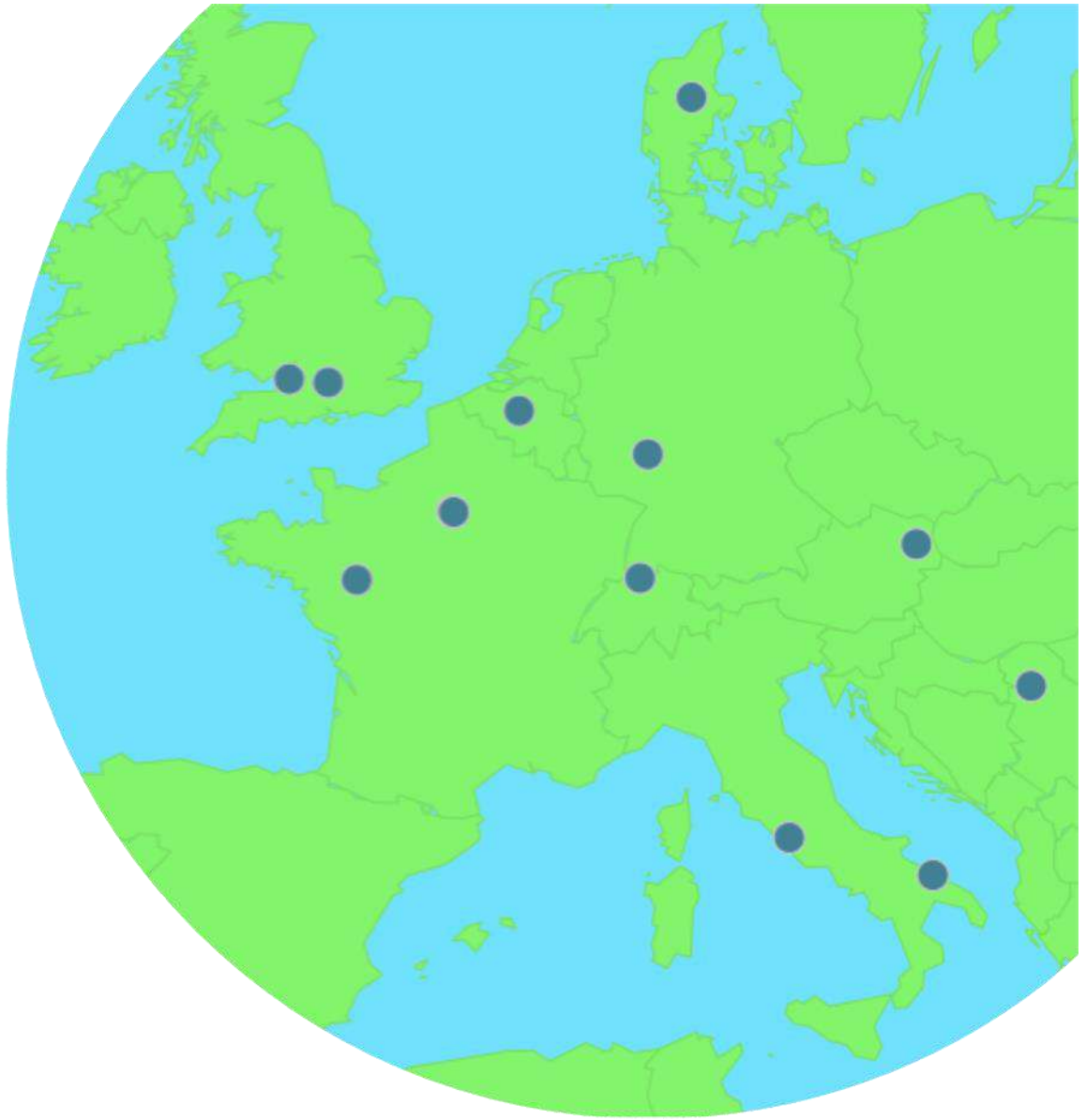
ELM FARM

ITAB

Bioland

AIAB

ASSOCIAZIONE ITALIANA AGRICOLTURA BIOLOGICA



SLU

ecovalia

Valor Ecológico - CAAE

Soil Association

DONAU SOJA

AGRICULTURES & TERRITOIRES

CHAMBRES D'AGRICULTURE PAYS DE LA LOIRE

UNIVERSIDAD D CORDOBA

CIHEAM

BARI

FNAB

Fédération Nationale d'Agriculture BIOLOGIQUE

ifip

institut du porc

ITAVI