

# Green protein to replace soy in feed

## Main results / outcomes

- The full-scale biorefining plant at the Danish farm Ausumgaard produces green protein, intended to replace soy in feed for monogastric animals like pigs and poultry.
- Green protein is extracted from clover grass through biorefining processes, with the objective of utilizing it as a feed ingredient.
- The amino acid composition of green protein makes it highly suitable for one-stomached animals, allowing it to serve as a substitute for imported soy in animal feed.
- Feed trials involving grass protein for organic pigs have demonstrated that grass protein concentrate can offer equivalent feed value to soy cake.

## Practical recommendations

- Raw material production, harvesting, and logistics play a significant role in the economy of green biorefining and deserve considerable attention.
- The quality of processed grass is crucial, as suboptimal quality can result in low yields of protein concentrate. However, the fiber fraction can still be utilized for cattle feed or biogas production.
- Grass protein from Ausumgaard was incorporated into feed mixtures for pigs during autumn 2022, and the pigs showed a positive response to it, indicating its potential as a viable feed ingredient.

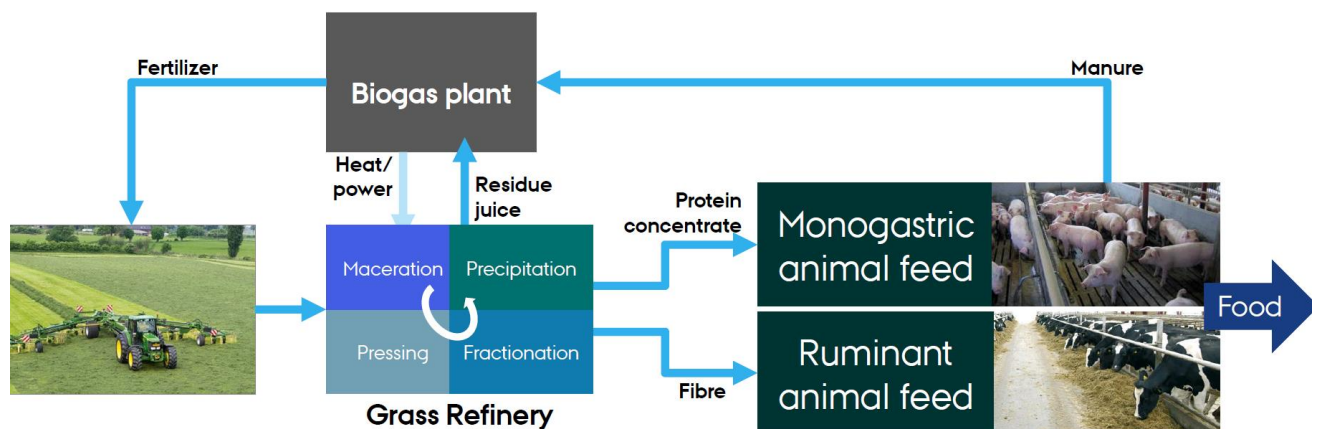


Figure 1: The green protein concept (Morten Amby-Jensen)

## Further information

<https://www.agrofossilfree.eu/2023/03/09/green-protein-extracted-from-clover-grass-case-study-in-denmark/>  
<https://biorefine.dk/p/produktion>  
<https://ausumgaard.dk/>

## About this abstract

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**AgroFossilFree** is a H2020 multi-actor project that will evaluate the current status in EU agriculture regarding energy use and assess existing needs, allowing farmers to optimize agricultural production through more efficient energy use and reduced GHG emissions, resulting in economic, agronomic and environmental benefits. AgroFossilFree will create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The project is running from October 2020 to September 2023.

**Website:** [www.agrofossilfree.eu](http://www.agrofossilfree.eu)



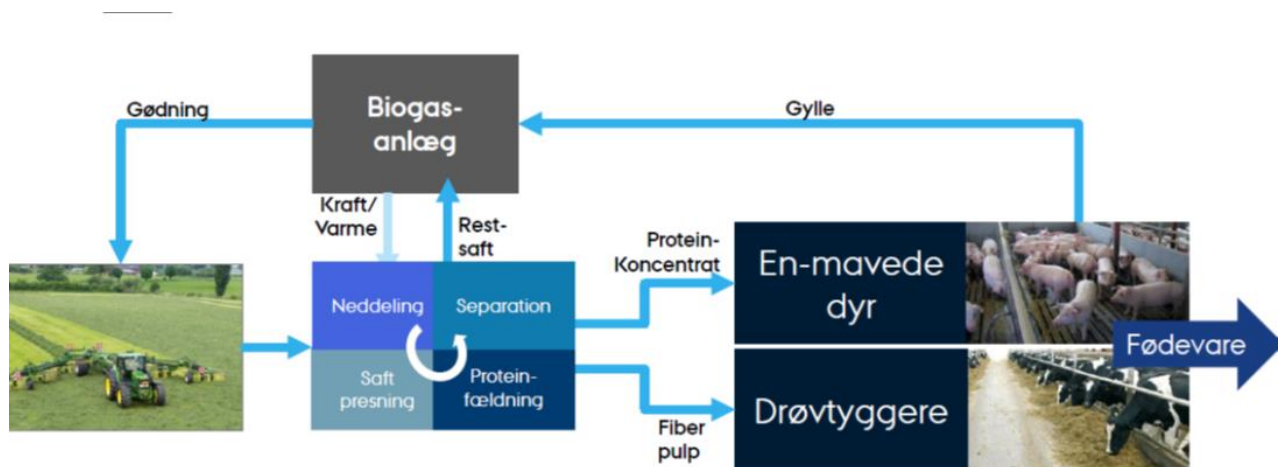
# Grøn protein til erstatning af soja i foder

## Resultater

Fuldskala bioraffineringsanlæg på den danske gård Ausumgaard producerer grønt protein, der bruges til at erstatte soja i foder til en-mavede dyr som svin og fjerkræ. Grønt protein er et protein udvundet af kløvergræs ved bioraffinering med det formål, at bruge det som foderingsrediens. Det grønne protein har en aminosyresammensætning, der gør det særligt velegnet til en-mavede dyr, og det kan derfor bruges i stedet for importeret soja. Foderforsøg med græsprotein til økologiske grise har vist, at græsproteinkoncentrat kan have samme foderværdi som sojakage.

## Praksis og anbefalinger

Råvareproduktion, høst og logistik udgør en væsentlig del af økonomien for grøn bioraffinering. Denne del skal have stor fokus. Hvis kvaliteten af græs ikke er optimal, vil udbyttet af proteinkoncentratet blive for lavt. Fiberfraktionen kan bruges til kvægfoder eller bruges til biogas. I løbet af efteråret 2022 er græsprotein fra Ausumgaard blevet anvendt i foderblandinger til grise, og grisene kunne lide det.



Figur 1: Grøn protein koncept (Morten Amby-Jensen)

## Yderlig information

<https://www.agrofossilfree.eu/2023/03/09/green-protein-extracted-from-clover-grass-case-study-in-denmark/>  
<https://biorefine.dk/p/produktion>  
<https://ausumgaard.dk/>

## Om dette abstrakt

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**Dato:** March 2022

**AgroFossilFree** er et EU Horizon 2020 projekt, der skal evaluere den nuværende status i EU's landbrug med hensyn til energiforbrug og vurdere eksisterende behov, således at landmændene får mulighed for at optimere landbrugsproduktionen gennem mere effektiv energianvendelse og reducerede drivhusgasemissioner. Dette vil resultere i økonomiske, agronomiske og miljømæssige fordele. AgroFossilFree vil skabe en ramme, hvorunder centrale interessenter kan samarbejde om at evaluere og fremme de aktuelt tilgængelige fossil-frie energiteknologier og -strategier (FEFTS) indenfor EU's landbrug. Projektet løber fra oktober 2020 til september 2023.

**Website:** [www.agrofossilfree.eu](http://www.agrofossilfree.eu)



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