

## Changing the menu in the cow barn

### BY-PRODUCTS FROM THE BIOETHANOL INDUSTRY USED FOR EXTRA PROTEIN IN DAIRY CATTLE FEED

Danish farmers have been calling for cheaper and more eco-friendly feed for dairy cattle, and the rapidly growing bioethanol industry is also looking for ways to make good use of their by-products. With this in mind, a team of Danish researchers, advisors and specialists have recently discovered that the by-products of producing bioethanol are an excellent protein feed, comparable to feeds such as soya and rape.

### Cheaper and more eco-friendly feed

The Danish research team were triggered by the needs of the farmers, by the ever-rising price of cattle feed, and by environmental considerations as a significant amount of feed is currently imported from outside of Europe. They found out that the substance which is left over when cereals such as corn, wheat, barley, rye and the like are converted into bioethanol, also known as 'distiller's dried grains with solubles' (DDGS), have great potential.



From now on, cattle may contribute substantially to lower costs and more eco-friendly farming by increasing the consumption of by-products of the bioethanol industry. Photo: LandbrugsMedierne

Mr. Jakob Sehested, Associate professor, Department of Animal Science/Animal Nutrition and Environmental Impact at the University of Aarhus, Denmark stated "In recent years, the lack of focus on the by-products of the bioethanol industry have caused their composition and quality to vary considerably. This has made it harder for farmers to use it in their feeding management and ensure the health and welfare of their cattle. However, the Danish team's project, supported by the Danish dairy farmers through the Dairy Levy Fund, is helping to turn this around: "Our new knowledge lets farmers combine different ingredients for a uniform compound feed that meets their quality requirements. At the same time, the costs are lower, and since less of the feed is imported from South America, the environmental accounts are greener" explains Mr. Sehested

### Spreading the knowledge among farmers

But of course the farmers need to use and dose these by-products correctly. Therefore these research results are currently being widely disseminated via trade magazines and seminars. The results are also directly fed into in the Nordic ICT feeding system called NorFor <http://norfor.info/> which Scandinavian farmers and advisors use for feed management on dairy farms.

## Focus on quality

Mr. Sehested collaborates with the Swedish company Lantmännen Agroetanol, who actually focuses on feed as a vital part of its offer, thus giving priority to a stable nutritional content.

"We prefer not to mention feed as a by-product, since we consider it a main product along with bioethanol", said Ms. Elisabeth Erichsen, feed manager at Lantmännen Agroetanol. She supported this view with the fact that 30 percent of the company's revenue is derived from products other than bioethanol, making it necessary also to improve the quality of the feed.

## Towards climate-friendly food and energy

Back in Denmark, Mr. Mads Helleberg Dorff Christiansen, chief adviser at Danish Agriculture & Food Council, welcomes the improvement of feed derived from the production of bioethanol:

"It helps us to further extend our insight and capacity when it comes to producing both energy and food in a climate friendly way. This is in harmony with the target established for the Danish food cluster to produce more without affecting the environment", Mr. Christiansen commented.

The project partners were Aarhus University; AgroTech: Knowledge Centre for Agriculture, Arla Foods; DLG Axelborg and the Swedish company Lantmännen Agroetanol.

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