

# Challenges of Danish agriculture 2

## Protein from the fields

By Masaru Yamada, the Japan Agricultural News

Producing protein from the fields. In Denmark, there is now a growing movement to promote domestic self-sufficiency in protein. The key is the use of perennial grasses, mainly legumes.

The key is the use of perennial grasses, mainly legumes, as a source of protein. Dr. Christian Jensen, head of the biotech development centre at DLF, an international grass and turf seed company headquartered in Denmark, explains.

'Legumes and other grasses can utilise nitrogen-fixing bacteria and produce protein efficiently. They also save fertiliser and do not need to be sown every year. It will be an effective tool to protect the global environment.'

Last year, a joint venture of three companies, including the company, established BioRefine, which extracts protein from grass, and the first commercial production in Europe began. The company plans to produce 7,000

tonnes of protein a year from 6,000 hectares of grassland in the western part of the country. Trucks full of cut

grass enter and leave the plant every day during the summer months. To ensure that the protein content in the

grass is not lost, it is brought to the factory within six hours of harvesting. The grass is a combination of various types of clover, as well as alfalfa and other grasses, in order to keep the plant's utilization rate stable.

The company's protein production also aims to reduce dependence on soya, of which Denmark alone imports

more than 1.6 million tonnes from South America and other countries where tropical forest destruction has been pointed out. Pigs are unable to digest and absorb the nutrients contained in grass, but the extracted protein can be used as an excellent feed ingredient. As the entire process, from the field stage, is carried out

under organic certification, the protein in the product can also be used for human consumption as organic food.

The use of grass as a solution to global environmental problems is spreading across Europe. Four European Union projects named 'Go Grass' have been launched in several Member States. The aim is to convert agricultural land unsuitable for cultivation into pasture and to process grass resources for use in high value-added products.

In 2017, 13 countries, including France, the Netherlands, Germany and Austria, agreed on the European Soya

Declaration, which includes the use of local resources. Subsequently, the French government announced a national strategy for the expansion of vegetable protein, with plans to increase the area planted with soya and

various legumes by 40%. Following the Russian invasion of Ukraine, all countries are keen to become

self-sufficient in protein.

'Protein in the field' has gone beyond a slogan and is about to take off across Europe.