

Europe's shift to "grass" keeping away from American soybeans

Director of Kyodo News Agrilab Hayato Ishii

2022.08.12

With the growing trend toward "Green agricultural production", there is a growing movement to break away from dependence on soybeans produced in the Americas as a source of feed for livestock in Europe. Surprisingly, "grass" is the key as protein to replace meat and soybeans. (Photo: A rural area in Denmark that focuses on grass as a source of protein = Central Jutland)

Targeted livestock industry

The livestock and meat industry requires a large amount of grain and water, and includes many problems such as tightening grain supply, treatment of excreta or manure, and emitting a large amount of methane gas.

The World Economic Forum (WEF) released a white paper "Meat: The Future (2018)" It sternly condemns, stating that "the livestock industry emits a large amount of greenhouse gases, and the agricultural land used to grow livestock feed is the biggest driver of deforestation and leads to biodiversity loss" The bottom line is "Conventional protein supply systems are not an option for the future."

Of course, there are counterarguments from the livestock industry, but there is a growing awareness that the livestock farming is not sustainable, and the market for alternative meat made from soybeans and other vegetable proteins has already begun to expand, including in Japan. In the future, the practical application of cultured meat that proliferates from cells is likely to advance.

Protein self-sufficiency strategy

In response to this global trend, there is a growing movement to reevaluate grazing in Switzerland, Germany, and the Netherlands. Among them, Denmark has a strong sense of crisis and reacts urgently. This is not only because dairy farming and pig farming are the country's key industries, but also because the public's awareness of the global environment is extremely high. Positioning the livestock industry as the "Achilles heel of the agricultural sector," Danish agricultural organizations,

governments, companies, research institutes, etc. are working together with the aim of shifting to sustainable and innovative production.

One of the goals is the completely self-sufficient protein strategy that started in 2018. Under the slogan of “soy-free” The annual import of 1.7 million tons of soybeans will be reduced to zero. The reasons for not using soy are concerns about environmental damage and genetically modified crops. "Only 20% of South American soybean imports can be proven to be free of deforestation. And among North American soybeans, non-GMO soybeans are in limited supply and expensive." DLF, the largest manufacturer of high-end lawn seeds, focuses on grass as a protein source and works on breed improvement = the company's test farm, June 26, 2022)

From soybeans to grass

Are there other powerful vegetable proteins besides soybeans? “Grass is the key,” says Stig Odershede, head of public relations at DLF (Roskilde), the seventh-largest seed company in the world, owned by a cooperative of Danish forage farmers. Grass accumulates more biomass per acre of farmland than wheat, corn, soybeans, etc., and because it is a perennial plant that grows over the course of the year, a series of farming operations of plowing, sowing seeds, and harvesting every year is unnecessary. The labor force, fertilizer, and fuel to be input can be greatly reduced. So the environmental load is small and the biodiversity is also rich.

(Related article: New rice cultivation for overwintering, for small-scale cultivation)

(Poaceae turf, cover to prevent crossbreeding and improve varieties)

The company jointly invested with a leading Danish agricultural cooperative company in order to established BioRefine Denmark, Inc (Nybrovej), that started operation of a plant to extract protein from grass last year. The company's factory near the west coast of Jutland receives organic clover and alfalfa from the surrounding 3,000-hectare farms. At full capacity, it will be able to produce 7,000 tons of protein per year. After removing the protein from the grass, the pomace is used to extract the fibers and process them into cloth. He is also researching the use of by-products, such as using the remaining liquid as fuel for biogas, saying, "There is no waste at all," said CEO Vagn hundeboll

Ahead of this, in September 2020, the country's first factory to extract protein from

grass began operating in Ausumgaard, in the northern part of the Jutland peninsula. Led by Vestjyllands Andel in cooperation with agricultural extension organizations and research and development organizations produces 1500 tons of feed containing 52% protein made from clover and other grasses. The union's chief executive officer, Steen Bitsch, said, "We need to diversify the source of protein and increase the ratio of grass, given the unstable logistics due to the Covid 19 and the war in Ukraine." he says.

(Stig Odershede, Director of Public Relations, DLF, who emphasizes the potential of grass)

Peas and fava beans

Among protein self-sufficiency strategies, while grass is the key to feed, faba (left in the photo) and yellow peas (right) are attracting attention as food. "Organic Plant Protein" (Hendensted) on the east coast of the central part of the Jutland has commercialized meat alternatives using vegetable protein other than soybeans under the brand "Plant Mate". Owners, Fie Graugaard and Ulrich Kern Hansen, sold their organic meat company, saying "we are destroying the global environment with too many livestock." The plant-based protein factory was put into operation in the following year. It supplies 400,000 meals a day, 76% of which is exported mainly to Europe such as France, and has become one of the major plant base meat suppliers in just three years since its establishment.

"In order to make a smooth transition from meat to meat, it's better to provide it in a form that people are accustomed to, both in terms of nutrition and taste," said Mr. Hansen. All ingredients are organic and additive-free. (After cooking, the substitute meat is almost indistinguishable from conventional meat in terms of taste and texture.)

When the factory operates at full capacity, it will need 6,700 hectares of peas and 1,300 hectares of fava beans. The cooperation of surrounding farmers is essential, but he is confident, saying, "Demand for plant-based organic food is very strong, especially among young people, and it is in line with the policy goals of the United Nations and the European Union."

Suggestions for Japan

The market for meat alternatives has been expanding in Japan over the past few years, but most of them are made from soybeans grown in the Americas. It differs greatly from Denmark's strategy in terms of breaking away from dependence on imported soybeans and targeting a self-sufficiency ratio that focuses on the nutrient of protein.

(Related article: Food self-sufficiency rate to be considered in terms of nutrients)

Brazil and other countries argue that "increase in soybean production and deforestation are irrelevant" and "we are fulfilling our responsibility for global food supply."

The reason for Danish "soy-free" isn't only SDGs, but also Free Trade Agreement (FTA) Once, FTA between EU and the Southern Common Market (MERCOSUR), will take into effect, imports of South American soybeans will increase, and the feed will be depend on America.

The moves in Europe do not apply to Japan as they are, but as the integration of the supply chain from production to consumption progresses, if consumers become more aware of the link between the use of soybeans and deforestation, Japan's livestock and meat industries will also be targeted and forced to respond. (Report and pictures by Hayato Ishii)