

Grass protein: The next plant base for alt-meat?

Netherlands-based plant-based protein specialist Schouten Europe and Dutch biotech startup Grassa are collaborating on a project to develop meat substitutes using protein from grass.



Henk Schouten, owner of Schouten Europe, and Rieks Smook, director of Grassa, seal the collaboration with a handshake. Source: Supplied

According to the companies, grass protein is a suitable alternative to soy, an ingredient now commonly used in meat substitutes. Schouten Europe and Grassa will be researching and testing the potential uses of grass protein in meat substitutes in the coming years.

“Grass protein has massive potential,” says Rieks Smook, director of Grassa. “Grass yields 2.5 times as much protein per hectare as soy. Grass supplies are readily available. Grass protein is a high-quality, local and scalable alternative to soy. When compared to other protein sources, it provides a huge reduction in the carbon footprint.”



Source: Supplied

Less nitrogen

“A cow converts only 30% of the grass protein into milk and meat. Seventy percent is converted into manure. Grassa removes some of the excess proteins from the grass beforehand. The residual product, processed grass, is eaten by the cow. In this way, the protein in grass is optimally utilised,” says Smook.

In addition to extracting 50% more protein from the same hectare of land, the nitrogen problem is also tackled at the source. The import of soy is replaced by grass protein and because of less protein in the processed grass, the cows emit less nitrogen (ammonia).



Source: Supplied

Protein transition

The term protein transition refers to the shift from the consumption of animal proteins to (more) vegetable and alternative proteins. “As a pioneer and innovator in the meat substitute market, we are always looking for interesting protein sources that can contribute to the protein transition,” says Henk Schouten, owner of Schouten Europe.

“We are very interested in protein from grass,” continues Schouten. “It is our ambition to use sustainable and local ingredients in our products. The partnership with Grassa is, therefore, a great step for our company. In the coming years, our product developers will investigate the applicability of grass protein in meat substitutes together with Grassa.”

Smook of Grassa adds, “We already collaborate within the animal feed sector and are very pleased that we have found an exclusive partner in Schouten Europe for the application of grass protein in human nutrition.”



Source: Supplied

In order to meet the need for vegetable protein, the European Union wants to become less dependent on the import of protein-rich crops such as soy and become more self-sufficient. In 2018, the European Commission called on the member states to develop a national protein strategy. Following the European Commission's protein report, the Dutch government presented the National Protein Strategy for the Netherlands in 2020.

The National Protein Strategy aims to increase self-sufficiency in new and plant-based proteins over the next five to 10 years, in a sustainable way that contributes to the health of humans, animals and the natural environment. The companies point out that Grassa's process is mentioned in the National Protein Strategy and is seen as a promising innovation to produce local plant-based protein.

The collaboration between Grassa and Schouten Europe is in line with this and provides a direct link with the human consumption of grass protein.



Source: Supplied

Novel food

Novel foods or ingredients are checked for safety by the European Food Safety Authority (EFSA) and only enter the market once they have been approved. Grass protein also falls under these so-called 'novel foods'. Grassa and Schouten expect approval for human consumption of grass proteins, hence the two companies are jointly investing in research and product development now.

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