

# Swedish pulses have great potential to become novel foods

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Can you produce new, plant-based foods from Swedish-grown pulses? This has been studied by Ferawati Ferawati in her dissertation in chemistry from Linnaeus University, in which she has studied the

properties and nutrient content of several different types of pulses, like yellow peas, faba beans and white beans. The results show that it is fully possible to use the protein from locally-cultivated pulses as, for instance, cheese and meat substitutes.

"The [food](#) industry could make changes to its production process that would make it possible to use local pulses in different types of foods. An increased consumption of pulses in Sweden would also be positive from a climate perspective as well as from a health perspective," Ferawati explains.

In her dissertation, Ferawati has studied the suitability of Swedish-grown pulses as the raw material for [new plant](#)-based foods or as ingredients in foods. She has done this by studying the properties and nutrient content in flour produced from locally-cultivated pulses; yellow peas, gray peas, faba beans and white beans. Ferawati studied how the pulses changed after having been prepared using different treatments, like, for instance, boiling, germination or roasting. After having extracted the protein from the pulses, Ferawati analyzed the nutrient compounds as well as the protein's thermal properties and its water-holding capacity.

She also studied how well-suited flour from pulses is to produce plant-based cheeses and [pulse](#) protein to produce [meat substitutes](#). Flour from roasted yellow peas and faba beans was used to produce cheese substitutes with a firm and sliceable consistency. The plant-based cheeses had a high content of dietary fiber and could, therefore, be categorized as functional foods. Meat substitutes with layered structure resemble to chicken or beef were also successfully produced using protein from Swedish yellow peas and faba beans.

## **Novel foods positive for health and the climate**

The results show that locally-cultivated pulses have great potential to be

used as raw material in the development of plant-based foods, like cheese and meat substitutes. What is more, such products could be used to increase the consumption of pulses in Sweden, which is currently very low.

"My research shows that it is fully possible for the [food industry](#) to make changes to its [production process](#) to develop new plant-based foods that are based on Swedish-grown pulses. This would be positive both for the climate and for public health. Hopefully, in the long term, a more pulse-based diet can also help improve the intake of dietary fiber and folate, which is currently below the recommended level in the Swedish adult population," Ferawati says.

**More information:** The development of novel foods from Swedish pulses: Raw material composition and processing effects: [www.diva-portal.org/smash/reco ... dswid=2208&pid=diva2%3A1593810&c=1&searchType=SIMPLE&language=sv&query=Ferawati+Ferawati&af=%5B%22hasFulltext%3Atrue%22%5D&aq=%5B%5B%5D%5D&aq2=%5B%5B%5D%5D&aqe=%5B%5D&noOfRows=50&sortOrder=author\\_sort\\_asc&sortOrder2=title\\_sort\\_asc&onlyFullText=false&sf=all](http://www.diva-portal.org/smash/reco...dswid=2208&pid=diva2%3A1593810&c=1&searchType=SIMPLE&language=sv&query=Ferawati+Ferawati&af=%5B%22hasFulltext%3Atrue%22%5D&aq=%5B%5B%5D%5D&aq2=%5B%5B%5D%5D&aqe=%5B%5D&noOfRows=50&sortOrder=author_sort_asc&sortOrder2=title_sort_asc&onlyFullText=false&sf=all)

Provided by Linnaeus University

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