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Ingrid van der Meer does research on water lentils as a new and sustainable food crop.

Water lentils as a new so

Ilse Bastmeijer, founder of the Goeie Grutten foundation, would like to see water lentils on the menu within a year or two. These protein-rich plants could contribute to the much-needed global protein transition. That is why the foundation supports Wageningen's water lentil project, which is harnessing all the relevant knowledge to launch this novel food on the market.

TEXT ANJA JANSSEN

As soon as Ilse Bastmeijer had set up the Goeie Grutten foundation, which aims to improve access to healthy, sustainable food, she came knocking at University Fund Wageningen's door in search of projects to support. 'Sustainable nutrition is an important theme of ours, so I thought: we should go to Wageningen.' After exploring the territory, evaluating project proposals and talking to the researchers involved, Bastmeijer chose the water lentil project run by Ingrid van der Meer and Jurriaan Mes. 'We think the protein transition is important, and they had set up their project very thoroughly and systematically, with clear milestones and assessable goals,' says Bastmeijer. University Fund Wageningen played the role of account manager in this process.

Water lentils, more commonly but less appetizingly known as duckweed, are a new source of protein that could facilitate the transition to more plant-based proteins in the food system. The little water plants contain 30 to 40 per cent protein and reproduce vegetatively by dividing, so they don't waste any energy and time on making flowers and seeds. 'By growing water lentils, you can produce six times more protein per hectare than with soya,' says Van der Meer.

Because the plants are not yet eaten by many people in Europe, they are counted as a novel food in the EU, which means they must first be proven to be safe for human consumption. To that end, an extensive dossier must be submitted to the European Food Safety Organization EFSA. Completing this dossier was the first task of the water lentil project funded by Goeie Grutten, which started in 2019.

Van der Meer and Mes had already done several important studies for the dossier, with funding from another foundation, the British Wellcome Trust. These included studies with volunteers who were served water lentils. The results were encouraging, says Van der Meer. Consuming the water lentils had no negative health effects. And in taste tests, the dishes containing water lentils were rated just as highly as dishes with spinach, which is very similar.

What had not been studied yet were possible allergens; this has been done over the past year in the project with Goeie Grutten. 'We didn't find any protein fragments in water lentils that matched known food allergens,' says Van der Meer. This means the dossier is as good as ready for submission by WUR to the EFSA. This is the first time WUR has submitted a dossier of this kind. 'In doing


PHOTO GJ VLEKKE


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‘You can produce six times as much protein with water lentils as with soya’

urce of protein

so, we make all the documents available, so that anyone else can continue working on this later.’

FROZEN WATER LENTILS

Meanwhile, the researchers are working on frozen products containing water lentils. ‘We have done tests using cubes of blanched and deep-frozen water lentils. You can buy spinach in the form of frozen cubes, and we think it would be easier for people to use water lentils in this form too.’ So the researchers have investigated how long you have to blanch water lentils for to get an optimal flavour and the lowest possible risk of microbial infection. They are also testing the product’s shelf life.
‘We are also going to develop ready-made products such as lasagne or *stamppot* [a Dutch mashed potato dish, ed.]. We’ll get tasting panels to evaluate them,’ says Van der Meer. Further important aspects are consumer acceptance of water lentils, and communication when you launch them on the market. There is a reason for choosing the name water lentils over duckweed, which tends to remind people of ditch water. ‘We would also like to know how you can entice people to try water lentils. Should you tell them about how sustainable the crop is, and how well it fits into the protein transition, or about all the useful nutrients water lentils contain, or should you just show them what nice little plants they are?’

Marketing is Ilse Bastmeijer’s profession. She is pleased that market research is part of the project. ‘I come from a supermarket family. My father started the Nettorama supermarket chain, so I have always had an interest in food. If I wasn’t looking at supermarkets when we were on holiday abroad, then I was testing products that purchasers brought in.’
Bastmeijer used to work in marketing at Superunie, a purchasing organization for supermarket chains, and then went on to start her own marketing firm. After a while she wanted a change from the profit sector, and came up with the idea of setting up a foundation in which she could combine her enthusiasm and knowledge with donations to good causes in the area of sustainable food. The foundation’s money comes from the Bastmeijer family’s capital. Bastmeijer’s aim is for the water lentil project to help further the protein transition. ‘The outcomes of the research and the products developed need to be usable by everybody. I hope as many organizations as possible will benefit from them.’ ■

www.wur.eu/duckweed


PHOTO GOEIE GRUTTEN

Ilse Bastmeijer

THE GOEIE GRUTTEN FOUNDATION

The Goeie Grutten foundation was established at the end of 2016 by Ilse Bastmeijer and her husband Bernd Voorsluijs. The foundation supports long-term projects working on responsible, healthy and varied nutrition and on the sustainable energy transition. Bastmeijer and Voorsluijs also founded the Goeie Grutten Impact Fund, with which they invest in businesses in these branches.
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