

# PROTEIN DRINK FROM BEER INDUSTRY WASTE PRODUCTS

**Every year, the Dutch beer brewing industry produces vast amounts (0.5 million tons) of brewers' spent grain that contains around 30 per cent proteins. These proteins are currently mainly used as low-value animal feed. Thanks to a new process developed by Wageningen Food and Biobased Research, they can in future be used as food, increasing the value sevenfold.**

The new process has been developed in a research project involving Heineken brewery, feed company Duynie and WUR. The research will take three years and will cost a million euros.

The biggest challenge so far has been

**Thanks to a new process, the protein fraction can be used as food**

how to extract the proteins from the brewers' spent grain, explain WUR researchers Carl Safi and

Wim Mulder. Only a small fraction of the proteins are soluble in water and easy to isolate. In contrast, the majority are attached to non-soluble fibres such as cellulose, lignin and hemicellulose. So the proteins must be separated from the fibres. The researchers have now developed a method for cutting up the non-soluble proteins so that 90 per cent of them are made available. However, this protein extract also contains other ingredients such as sugars and minerals, so it needs to be purified too. Safi and Mulder have developed an innovative filtration process for that purpose. On an industrial scale, Duynie is going to process thousands of kilos of brewers' spent grain per hour into proteins. 'But you can also use the proteins to produce meat substitutes or vegan cheese,' says Safi. <sup>AS</sup>