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Seaweed may hold the key to reducing salt in foods without affecting the shelf life and taste of the product, according to a new project from the UK.

Researchers at Sheffield Hallam University, working in collaboration with Seagreens, are exploring the potential of seaweed granules to replace salt (sodium chloride) in processed food.

"This will change the food industry, undoubtedly," Dr Andrew Fairclough told FoodNavigator.com.

The seaweed granules are manufactured from cold water brown seaweed harvested off the coast of Norway. Seagreens, the company behind the granules, is a joint Anglo-Norwegian venture.

Dr Fairclough, who is leading the project, said: *"Seagreens came to us with a proposal for using their wild Arctic wrack seaweed granules as an alternative to salt, but wanted to find out more about how this would affect foods, in particular their shelf life.*

"Our research has found that as well as maintaining the taste of the food, the seaweed granules reduce the numbers of certain micro-organisms thereby helping to, lengthen its shelf life in a similar way to salt."

Salt is of course a vital nutrient and is necessary for the body to function, but campaigners for salt reduction, like the Consensus Action on Salt and Health (CASH) consider the average daily salt consumption in the western world, between 10 and 12g, far too high.

Numerous scientists are convinced that high salt intake is responsible for increasing blood pressure (hypertension), a major risk factor for cardiovascular disease (CVD) - a condition that causes almost 50 per cent of deaths in Europe.

The pressure has been mounting on food manufacturers to reduce the salt content of their foods and the UK's Food Standards Agency's (FSA) recommendation of six grams of salt per day for the general population is understood to be more a realistic target for the next five years than the ideal healthy limit.

The Seagreens granules are reported to contain a balance of mineral salts including sodium at around 3.5 per cent, instead of 40 per cent typically found in salt.

Early stages

Dr Fairclough told this website that the research was still in a relatively early stage, but a lot of investigation has already been carried out to prove the safety of the granules in terms of microbial load, and levels of organic pollutants and heavy metals.

"The areas where the seaweed is harvested are very clean," he said. *"So we have no concerns about the safety."*

In the UK, Ireland and the USA, over 80 per cent of salt intake comes from processed food, with 20 per cent of salt intake coming from meat and meat products, and about 35 per cent from cereal and cereal products.

Yet salt reduction remains a major challenge, not only in terms of taste but also formulation, as salt is a vitally important compound in food manufacturing.

In processed meat products, for example, salt is involved in activating proteins

to increase water-binding activity, improving the binding and textural properties of proteins, and helpings with the formation of stable batters with fat.
Dr Fairclough said that research in sausage-like meat products has been performed following industrial interest, and significant interest from the bakery sector had also been received.
Simon Ranger, chief executive of Seagreens, said: *"Seaweed has now been clearly demonstrated that it not only matches salt in terms of food flavouring and its comprehensive nutrient profile, but it can also effectively extend the shelf life of food, make it a real winner for improving the taste and quality of our food on a much wider basis in future."*
The studies relating to the seaweed granules had not yet been published in peer-review journals, but this would occur in the future, said Dr Fairclough.