

Seaweed

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Innovation in functional foods and drinks

Dr Craig Rose of **The Seaweed Health Foundation** explains how seaweed is being used as an ingredient in functional foods and drinks, to meet the most pressing market demands, and explores the huge scope for its future potential.

What is seaweed?

Seaweed is a hugely diverse group of over 10,000 species globally, and is extremely fast growing, sustainable and highly nutritious. Referred to scientifically as macro-algae, seaweeds are a part of the vast group of algae that grows in marine and fresh water all around the globe. Micro-algae, such as spirulina and chlorella are increasingly well known in functional foods, drinks and supplements, but are fresh-water algae and without many of the

properties of those seaweeds that grow in the oceans and which have distinct nutritional qualities.

What are the trends?

Often associated with Asian cuisine, seaweeds in the West are seeing a huge increase in interest, research and usage, and there is an emerging British seaweed industry driven by standards of harvest and production, research development and application.

In the past 15 years, there has been a 100% increase in media coverage of seaweed and around 200% increase in scientific publications on seaweed, which are strong indications of public interest and the potential of seaweeds to meet our most pressing demands.

Headlines from celebrity chefs such as Heston Blumenthal of 'Let's start taking seaweed seriously', and statistics such as '7/10 of the world's top restaurants have seaweed on the menu' really indicate the reintroduction of this forgotten food; not to mention seaweed's use in many mainstream products too.

The applications and benefits of seaweeds

Applications of seaweeds include fresh seaweed in salads and dried seaweeds for sushi wraps. However, these types of applications still remain largely in the realms of Asian foods, and at best in the West are sourced locally from small scale artisan production, which is not suited to mainstream applications and larger scale manufacture due to availability, sustainability and cost.

To introduce seaweeds more broadly, and gradually, into

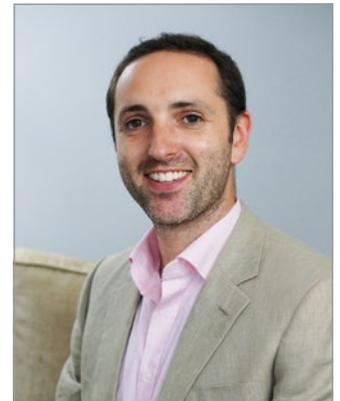
the diet, ensuring benefit from the multiple health attributes, **Seagreens** has been leading the market since 1997, supplying its organic seaweed as dried and milled products, produced to its Human Food Seaweed standards (patents pending).

Seagreens is used in a wide array of products from breads and pizzas, to supplements, smoothies and pet foods as an ingredient to address one of more of:

- **Broad nutrition:** In Seagreens seaweeds there are all the vitamin groups, all the essential fatty acids, high antioxidants and phenols, and all the minerals. For example just 1g has the same amount of iron as 7% of a full 90g portion of spinach, and the same calcium as 5% of a whole cheese sandwich. All from less than half a teaspoon of seaweed in a capsule, food or drink!

- **Iodine:** The majority of women in the UK are iodine deficient, which can impact the thyroid, metabolism and cancers. Seaweed is known as a rich source of natural iodine, with certain species being more suited to this than others. Seagreens has in just 1g as much iodine as three whole mackerel, and was used successfully in an iodine supplementation trial at **Glasgow University**.

- **Replacing salt and taste:** With most people eating too much salt, linked to heart disease, Seagreens seaweed is being used extensively as an effective salt replacer for flavour and



functionality in manufactured foods and condiments. Seaweed was highlighted by **Research Councils UK** as a 'Big Idea for the Future' for its use in salt replacement.

- **Weight management:** Research on Seagreens seaweed has demonstrated it makes you feel fuller for longer, and means you eat fewer calories without impacting the uptake of nutrients. This was published in the journal *Appetite* in 2012

- **Diabetes:** Seagreens is involved in research that demonstrates its seaweed can naturally help regulate the release of sugars to the blood, helping manage diabetes.

Seagreens seaweed is successfully used as an ingredient in a wide array of products from breads and pizzas, to supplements, pet foods, and smoothies such as in Nosh's Raw Smoothie Range. ■



Nosh's Raw Smoothie was a finalist in the recent Beverage Innovation Awards @drinktec



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