

Star & Furrow

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'After you have sprayed horn silica on the plants and then 2-3 hours later you look and think they seem to appear different to the morning. I see the plants holding themselves quite differently. There is a sense of perking up.'

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Nutritious Seaweed

by *Simon Ranger*



Harvesting seaweed for use in the garden or as foodstuff is an age old tradition in Ireland and Scotland. Over the last years there has been a bit of a revival with seaweed and seaweed products finding a ready market as food supplements for humans and animals. Several biodynamic farms and gardens also use some form of seaweed on their land. One producer of seaweed is Seagreens who celebrate their 20th anniversary this year. In the following article CEO Simon Ranger looks at some of their successes as well as development of the **Nutritious Food Seaweed Standards**. (Ed)

In 20 years, Seagreens® has become the leading producer of our native seaweeds for human consumption. This small business was 10 when I last reported our progress in *Star & Furrow*. Our seaweed production was in transition from Norwegian Lapland to our second harvesting venture in a similarly remote location in Scotland.

From the beginning, Seagreens aimed to become both a commercially viable business 'to get a gram of the best seaweed into the population daily diet', and a vehicle for good 'to deliver goodness and value in all our relationships'. I juxtaposed the balance that seaweed can bring to nutrition, with the balance needed for responsible self-governance in business, politics, agriculture and other realms.

Continuing our quest for this ideal, we developed a strategy called 'the foundation of health' with three central goals: stimulate public interest; encourage involvement in our business by the various groups of people exposed to it, from consumers and farmers to health practitioners, food manufacturers and retailers; and retain a spiritual approach to commercial solutions.

In 68 years I have seldom navigated a straight path to any goal, veering off to one side or another, taking two steps forward and one back (sometimes three), and this decade has been no exception. My own errors of judgment, and the careless and sometimes baleful intentions of others, have required inordinate amounts of energy to retrieve the path, yet much has been achieved.

As *Star & Furrow* went to print in 2008, we were invited into a government sponsored research study to find a natural

replacement for sodium chloride (salt) in manufactured foods. A couple of years earlier, a British Nutrition Foundation scientist reported: 'the healthiness of a food alone seems to be an important determinant of food choice for only a small sector of the population. For this reason, implicit improvements in the nutrient profile of foods by the food industry are essential to have any substantial influence on public health'. Well our customers had been baking with Seagreens for years, for its comprehensive nutritional profile, including its mineral balance, and its umami effect

Alaria

on flavour.

The researchers at the Sheffield Centre for Food Innovation were so impressed by the results - particularly that its alkalinity gave bread a longer shelf life than salt - that they supported further studies. What other health benefits might accrue if Seagreens were included in many everyday foods? Ubiquitous health concerns such as cardiovascular disease, obesity, diabetes, digestive impairment and general nutritional imbalance, were finally on the agenda!

In the first nutrition studies to use whole food seaweed, Seagreens countered sodium imbalance, reduced body weight with no nutritional deficit; indicated benefits for diabetes and digestive health; and restored iodine sufficiency with no adverse effect on the thyroid.

In a five-year assessment of British research in 2012, UK Research Councils recognised Seagreens as a food ingredient, 'A Big Idea for the Future'. In the public interest, we now needed not only our own success, but a sustainable industry, to produce nutritious seaweed for human consumption from the abundant resources of the British Isles and Nordic region.

SEAWEED HEALTH FOUNDATION

With our research programme under way, in 2010 I set up a non-profit Foundation as a platform to introduce three pivotal 'ingredients' for such an enterprise: more research; public information; and quality standards.

To balance this development on our commercial side, we took Seagreens products to a huge organic festival in Chicago, and set up our first overseas sales partnership on the banks of Chesapeake Bay in the USA (www.seagreensonline.com).

At the invitation of the British Phycological Society,

we held our first annual conference in 2012 at the Natural History Museum in London, explaining our aims to a mixed audience of Seagreens business partners and aspiring seaweed businesses, and the following year launched a public event at the Royal Botanic Garden, Edinburgh. There is a video of the 2017 'Seaweed for Health' event at www.shf.today/edinburgh and another held in Devon, at www.shf.today/clovelly.

To get the Foundation off the ground and drive our research programme, I hired a young marine biologist, and to extend our commercial reach into new markets for our seaweed ingredients, a sizeable distribution business with sales offices in the UK and overseas.

These would prove to be costly decisions, a few years later. These individuals, despite appearances, shared none of our fundamental values, and, forming an unholy alliance with one of our venture partners, contrived to misrepresent our business model and steal a number of our customers. Three steps back!

At the time, having bolstered research and information, in 2013 we embarked on our third 'ingredient' project.

Understanding in 2014 and launched the Nutritious Food Seaweed Quality Assurance Scheme and Standard in 2016.

Nutritious Food Seaweed is rooted in the principles of biodynamic, organic and sustainable farming, with aspects of marine science, botany, nutrition, and conservation.

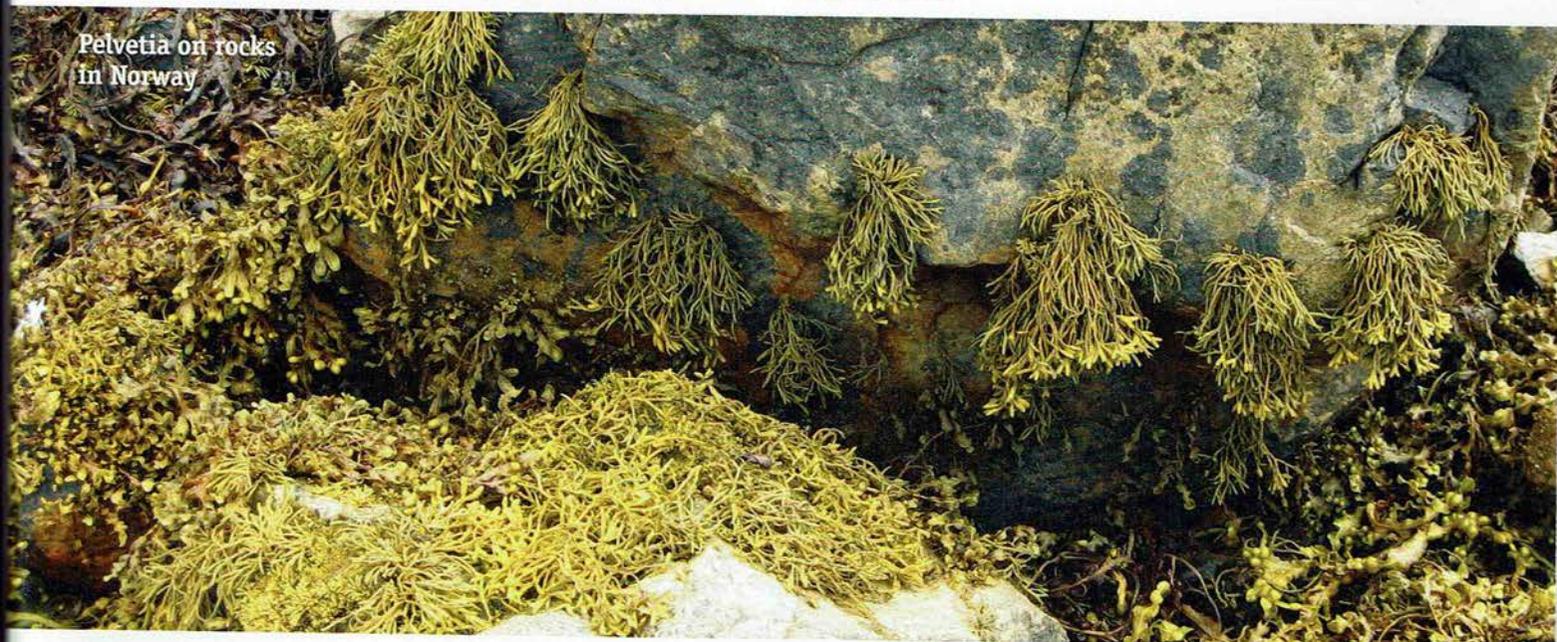
Seagreens®, which was the first organic seaweed producer in the British Isles to be certified to the new NFS Standard, with two further producers in the process of certification.

NUTRITIOUS SEAWEED IN THE DAILY DIET

Just over 20 years ago, HRH Prince Charles set up an organic food business to help his many charitable causes. Duchy Organics began with a plain oaten biscuit using oats from the Highgrove estate.

By 2016, sales exceeded 70 million in 30 countries, and last year a new oaten biscuit was launched containing 3% Seagreens® wild Wrack seaweed. It illustrates the sort of vehicle which can reach very large numbers of people in everyday foods.

Pelvetia on rocks
in Norway



NUTRITIOUS FOOD SEAWEED

Seaweed production is developing in Europe using methods ranging from traditional artisan collection, to industrial scale mechanical harvesting, and the cultivation of species through biotechnology. All this can be called 'wild harvesting'.

At the same time, seaweed continues to enter the human food chain, wild or cultivated, often a cheap by-product of industrial scale, high temperature processing for agriculture and alginate extraction, or as cut seaweed from unregulated, small-scale production of dubious quality and provenance. All of this can be called 'organic'.

At first glance, it is difficult for customers, whether manufacturers, retailers, or consumers, to determine the quality of these products, especially their nutritional value. It also makes it difficult for quality production to succeed. Yet markets will only grow through better quality production and if nutritional value reaches consumers.

Placing our know-how at the disposal of the Foundation, we began work with Biodynamic Association Certification (our organic certifying body), and other interested parties, to develop a dedicated standard, support producers of nutritious seaweed, and certify its quality for consumers.

The two organisations signed a Memorandum of

Clearspring produces a black pepper and seaweed oatcake, and there are now more than 100 products containing Seagreens on the shelves of health and natural food stores and supermarkets - from cheese, teas and soups, to Ayurvedic remedies.

Our business model has become a consortium, with partners at four harvesting locations, and in our markets - now extending to a dozen countries around the world. From 2 seaweeds in 1998, we offer 5 native species in 15 different forms, with many applications in human nutrition, animal health, and agriculture - all to the same standard. But it's still just the beginning.

A CONSORTIUM OF PARTNERS

Our consortium honours the independence of all the partners, the Seagreens® brand expressing the clearly defined values and behaviour that we aim to uphold in common.

We refer to the consortium as Seagreens International Partnership®, at the centre of which is its administrative body, the Seagreens Trust, in which the interests of our Partners and customers can be properly balanced and represented.

Elsewhere, quite independently, others are exploring the health potential of seaweed. Two scientific papers were published in 2015 and 2017, reviewing 25 years of international research.

The first concluded that dietary seaweed will 'ameliorate many of the risk factors associated with pervasive, non-communicable diseases including cardiovascular, obesity, hypertension, endothelial dysfunction, diabetes, and disproportionate cellular free radical production' - the focus of our research programme.

'Small amounts consumed in a variety of ways would be an optimal approach. Packed with protein, carbohydrates, and soluble and insoluble fibre, most macro-algae contain a wide range of vitamins. The mineral and trace element content was more than adequate to meet nutritional demands.'

The 2017 review focused on mental health. *'Neurodegenerative diseases are on the rise and poor nutritional regimes lead to serious health pathologies triggered by (these same) widespread and chronic risk factors. Seaweeds produced under controlled conditions offer boundless opportunities to satisfy the known requirement for brain health.'*

DRAWING CONCLUSIONS

Like any organisation, Seagreens will continue to have its strengths and weaknesses, opportunities and threats. Just as a nation or individual, we must steer a course between independence and co-operation.

There are binding agreements between our partners, but experience says the quality of human relationships counts for much more. As my grandfather once advised, *'choose your friendships carefully'*.

In business and in the public space, too much regulation and social engineering can inadvertently distort human behaviour, create artificial values, and even blind us to our own manipulation, so easily become a form of despotism.

In spite of the challenges - it must remain possible for us to see and work with the actual nature of things, and not some idealised form we control. We must remain 'open' in all directions.

The path onward and upward is not straight, nor is it easy, nor can it be the preserve of any individual or group. Rather it is the combined effort of many which, even unaware

of another's participation or intention, yet picked up from some physical media or unseen impulse, carries on the greater work.

Humility is the engine, selflessness the force, appreciation the essential prerequisite. These can remain just words, and producing a good product is not enough. Mustn't the production itself be good?

It seems a long time ago now, but a decade before Seagreens, I set up the Probono organisation at the London Business School, encouraging companies to open themselves to each other in an international culture for business and human development. Our manifesto was written by Professor Charles Hampden-Turner, DBA and recipient of the Rockefeller and Guggenheim Literary Fellowships:

'The call to create value at ever higher levels of complexity and sophistication, means the development of people and of products is one indivisible process, learned over a lifetime. True quality is integral. The products and services we design and offer are expressions of community, who its members are, what each one of us values and how much we care. Either business evokes from all of us the very best we can contribute, or continuing decline will shadow us and in that shadow none of us can succeed. The choice is ours.'

This is the long work which, with many friends, we will continue through Seagreens.

Simon Ranger is the founder of Seagreens and the Seaweed Health Foundation. For more information see: <http://www.seaweedhealthfoundation.org.uk> and <http://www.seagreens.co.uk>



**Nutritious
Food Seaweed**

BDA CERTIFICATION

Alaria



Known for nutrition

Seagreens® nutritious food seaweed is rich in vital minerals and micronutrients. In easy forms, it is widely used in nutritional therapy, and adds goodness and umami flavour to any meal.



Seagreens have been harvesting wild seaweeds for 20 years among remote islands in the British Isles and Nordic region, producing a uniquely certified nutritional profile, free from harmful allergens and contaminants, with nothing added or extracted. Seagreens can be used in all special diets including organic, kosher, halal, raw and vegan. Seagreens was the first seaweed food producer to be certified Organic in 1998 and to the Nutritious Food Seaweed standard in 2016. These products make it easy to include at least a gram of the most nutritious seaweeds in your daily diet, and in nutritional therapy. Many leading brands use Seagreens in their products too, in more than a dozen countries. Research into the health benefits of Seagreens has continued since 2007 and is published in international scientific journals.

Harvesting Seagreens - Loch Seatorah, Isle of Lewis 2013



Food Capsules & Food Granules

A unique blend of three of Seagreens wild Wrack seaweeds in fine-ground dried form, *Ascophyllum*, *Fucus* and *Pelvetia*, provides a comprehensive natural balance of nutrients. For everyday home and professional use as a daily dietary foundation, in special diets and many therapeutic protocols. All-vegetable Food Capsules in 2 jar sizes. Without capsules, the Food Granules are ideal in juices and smoothies or sprinkled into food. All product nutritional profiles on pack and our website.

www.seagreens.co.uk/foodcaps

Feed the Foundation of Health



Pet & Equine Granules

Seagreens human food quality *Ascophyllum*, exactly the same as our Culinary Ingredient product, but milled to a slightly rougher form, less expensive to produce and welcomed by all our animal friends. Full nutritional information and daily feed instructions on the jar. A jar will last a horse or 4 large dogs for a month.

www.seagreens.co.uk/petgrans



The Mineral Salt

Better for you than any kind of salt alone, this 50/50 blend of Seagreens *Ascophyllum* and unrefined sea salt in a glass shaker has "twice the flavor, half the salt". A complete natural food source of all the minerals and trace elements. Try it with everything from boiled eggs to salad dressings and in place of salt when cooking and baking. Seagreens has been helping reduce salt in manufactured foods since 2008³.

³ award-winning salt replacement research at Sheffield Hallam University 2008-12

www.seagreens.co.uk/minsalt



Iodine+ Capsules

Independent research at Glasgow University¹ showed Seagreens *Ascophyllum* improving iodine uptake in iodine-insufficient women with no adverse effect on thyroid function, and more prolonged than potassium iodide, commonly used to 'iodize' table salt. A daily vegetarian capsule provides approx. 350µg (micrograms) bioavailable iodine, additional micronutrients required for iodine metabolism, and no additives. Two Seagreens Food Capsules contain approximately the same amount of iodine but with a higher proportion of other nutrients. Upper tolerable limits for absorbed daily iodine are 600µg in the EU and 1100µg in the USA. Iodine contributes to normal thyroid, nervous system and cognitive function, the normal growth of children, normal energy-yielding metabolism, and the maintenance of normal skin. Also available from Napiers the Herbalists, Edinburgh as 'Napiers Hebridean Seagreens[®] Organic Kelp'.

¹published 2014 in the British Journal of Nutrition

www.seagreens.co.uk/iodineplus

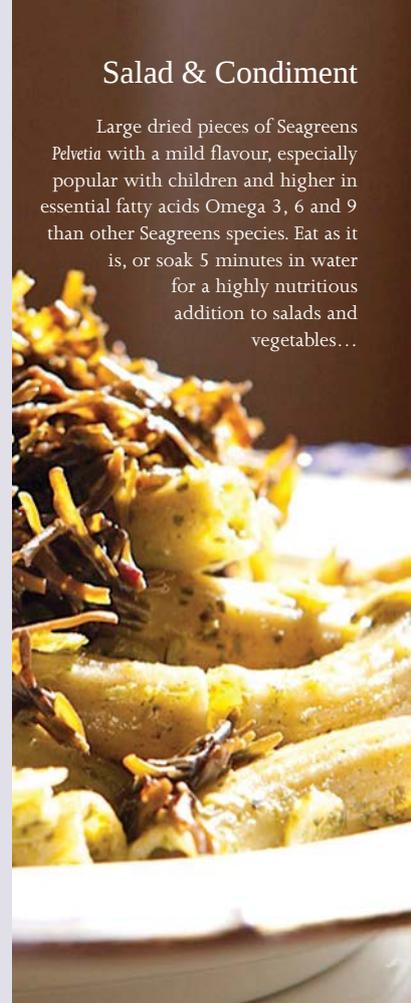


Culinary Ingredient

A classic to rival Marmite! Pure Seagreens *Ascophyllum* milled in grains about the size of ground pepper. Use raw in almost any dish from soups to home-baking! "Breakfasting on a slice of bread baked with ground up seaweed rather than salt could help burn more calories than half an hour on a treadmill" said the Daily Telegraph after research at Sheffield Hallam University² found Seagreens reduced hunger, with no adverse effect on nutrient uptake.

²award-winning research published in the Journal of Appetite, 2012

www.seagreens.co.uk/culinary



Salad & Condiment

Large dried pieces of Seagreens *Pelvetia* with a mild flavour, especially popular with children and higher in essential fatty acids Omega 3, 6 and 9 than other Seagreens species. Eat as it is, or soak 5 minutes in water for a highly nutritious addition to salads and vegetables...

Ask for Seagreens at your local health store or clinic.



The Mineral Bath

Relax, rejuvenate and remineralise using these large 'tea bags' of Seagreens *Ascophyllum* in your bath. The content is 100% Seagreens nutritious food quality and certified allergen free. Initially developed for use with skin conditions and special needs children. It leaves no stain or odour, and the packaging and contents are compostable.

www.seagreens.co.uk/minibath



Look on the pack for Seagreens[®] certified ingredients in many other products from brands like these.

Artisan Bread Organic • Bart Ingredients
Batchelors • Bioteekki • Clearspring
Exzo Teas • G&G Vitamins
Green People • High Spirit Equine
Judges Bakery • Key Pharm
Napiers • Natural Point
Natural Health Practice
Neal's Yard Remedies • Nosh Detox
Pukka Herbs • Raw Living
Regenerative Nutrition • Sainsbury's
Saladworx • Tisso • Viridian Nutrition
Waitrose Duchy Organic

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Sales help support the Seaweed Health Foundation