



Seaweed Fun Facts



1. Most of the world's oxygen (between 70% and 90%) comes from seaweeds and other microscopic algae.
2. Seaweeds support primary production levels that are 6-10 times greater than the most intensive land-based agricultural systems
3. It is estimated that there are nine times more microscopic algae and seaweeds in the oceans than there are plants on land.
4. Together with microscopic algae called phytoplankton, seaweeds (macroscopic algae) are responsible for most of the primary production in the oceans and, therefore, form the basis of many food chains in coastal oceans.
5. Seaweeds are amongst the fastest growing organisms on the planet. For example, under optimal conditions, the giant kelp *Macrocystis pyrifera*, can grow nearly a metre a day – attaining lengths in excess of 50m.
6. Seaweeds absorb minerals directly from the water around them and are thought to be the single most nutritious foods that you eat. Rich in trace elements and vitamins, many of them frequently contain more protein than meat and more calcium than milk.
7. Due to its high micronutrient contents, kelp is widely used as fertilisers and as plant growth stimulants.
8. Kelp is harvested as a feed and nutritional supplement for commercially farmed animals.
9. Ancient Greeks Used It For Healing Purposes: Long before we were putting seaweed in our skincare lines, the Ancient Greeks were using it in their heated baths to draw out toxins from the body and rejuvenate their skin. This was known as Thalassotherapy (Thalasso is Greek for 'sea') and the Greeks believed it could restore good health and cure illness.
10. It Tastes Like Bacon!: Are you thinking about going meatless? We've got good news for you. Researchers at Oregon State University grew a strain of seaweed that tastes like bacon when it's fried. Not only does it taste delicious, but this patented strain of seaweed has twice the nutritional value of kale. The discovery, made in 2015, has opened doors in the vegan and vegetarian market. This seaweed bacon is not just vegan-friendly, but also gluten-free, low carbohydrate, organic, and sustainable. We now have a delicious and healthy alternative to bacon, all thanks to seaweed!
11. Seaweed has unique mineral content: By weight, about 34% of dried seaweed is comprised of minerals, making seaweed one of the best sources for these nutrients. They contain all of the minerals required by the human body, including both the macro minerals (calcium, magnesium, potassium, phosphorus, chloride, sulfur, and sodium) and trace minerals (including zinc, copper, and iron).
12. There are over 12000 seaweed species!
13. Having a seaweed forest covering 9% of the ocean would absorb more CO₂ than human activities produce.
14. Seaweeds are not plants - they are a type of algae. They have no roots, leaves or stems to transport water or nutrients. Instead each cell derives what it needs directly from the seawater around it. The only similarity between seaweed and land plants is that both rely on sunlight to create energy through photosynthesis.

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15. Some seaweeds reproduce by producing spores that actually have tiny “flippers” and swim away from the parent.
16. Seaweed has elements that help turn liquids into gels, used in everything from ice cream to toothpaste.
17. Marine studies suggest that up to 85% of plant life is found in the ocean.
18. New Zealand’s largest seaweeds are collectively called kelps and belong to the brown group.
19. The country’s largest kelp is *Macrocystis pyrifera*, known as bladder kelp in New Zealand, but giant kelp elsewhere. It can grow to 50 metres in length and 100 kilograms in mass.
20. Common kelp (*Ecklonia radiata*) is the preferred food of kina (*Evechinus chloroticus*), which sometimes mass together and munch through an entire forest.
21. Asian kelp (*Undaria pinnatifida*) arrived in New Zealand waters in the 1980s and quickly made itself at home in sheltered harbours.
22. *Undaria* is unwelcome in New Zealand as it can change the structure and composition of native marine communities.
23. Bull kelp or rimurapa (*Durvillaea* species) is the most striking seaweed of the exposed coasts.
24. Bull kelp can grow up to 10 years old.
25. Māori traditionally used a few species of red and green seaweed as food, and bull kelp or rimurapa, with its inflatable blades, for storage.
26. Karengo is the most commonly eaten seaweed.
27. Māori made bags called pōhā by splitting open the blades and inflating them.
28. Karengo was an important supplement to the winter diet of Māori because of its high nutritional value – up to 30% protein, and rich in vitamins and iodine.
29. Dried karengo was sent to members of the Māori Battalion in the Middle East during the Second World War.
30. New Zealand agar proved to be of very high quality and has been commercially produced since 1943. Today most of the seaweed is collected from south Wairarapa and then sent to Ōpōtiki where the agar is extracted.
31. Marine farmers harvest approximately 300 tonnes of beach-cast and free-floating giant kelp every year in order to feed young pāua.
32. New Zealand has 850 native seaweeds, a third of which are endemic.
33. As the first organism in marine food chains, they provide nutrients and energy for animals – either directly when fronds are eaten, or indirectly when decomposing parts break down into fine particles and are taken up by filter-feeding animals.
34. Red and green seaweed evolved earlier than brown seaweed.
35. Seaweed can pass through life stages so distinct that, in the past, they have been mistaken for separate species.
36. The record is held by a calcareous red seaweed that was found at a depth of 268 meters, where only 0.0005 percent of the sunlight penetrates.
37. Depending on the species, fresh seaweeds are 70–90 percent water by weight.
38. Some species have air-filled bladders, which ensure their access to light by holding them upright in the water.
39. Some types of seaweed even have specialized bladders that allow it to float.
40. Like plants, seaweed depends on sunlight to create energy through photosynthesis and has simplified leaf and root structures that help anchor it in place.
41. Seaweeds are not plants.
42. Taller types of seaweed use asexual reproduction, creating small spores that swim away from the parent, establish themselves in new locations, and grow into individual

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organisms. Other types create male and female cells that join and produce a new organism, similar to the way that moss reproduces.

43. Green algae grows only three feet long at the most, and is most useful for sea creatures, who eat and hide in it.
44. Red algae has the most applications to human industry.
45. Brown algae includes the kelp family and grows by far the largest out of the three varieties.
46. Red algae is harvested in large quantities to produce a vegetable gelatine used in a large number of foods and cosmetic products.
47. Some of the larger kelps are also used to create fertilizers, medicines and dietary chemicals.
48. Traditional Japanese and Chinese medicine were using seaweeds as ingredients for medicines and therapies as long ago as 300BC (2300 years ago).
49. A seaweed diet is linked to an increased life expectancy, Japanese Okinawa diet (low salt, high seaweed).
50. Excessive intake of dried seaweed has been reported to cause carotenoderma (yellowing of the skin).

