

# A guide to the seaweed industry

FAO  
FISHERIES  
TECHNICAL  
PAPER

441



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ISBN 92-5-104958-0

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## PREPARATION OF THIS DOCUMENT

**T**his Technical Paper is written for those who know little about the seaweed industry, but wish to know more. It has been written with a minimum of technical language and is designed to help those who are asked to make decisions concerning the seaweed industry when they have little background information to assist them. Such decisions may be about regulation of the various sectors of the industry, about assistance to it, or financial investment in it. This may involve people in bodies such as government agencies, development banks, national and international aid and development organizations, NGOs and financial institutions.

It may also be of value to marine scientists, or students of marine science, who wish to extend their knowledge of the macro-algae and their application in the food, hydrocolloid and other industries.

Then there are those people, many of whom the author has encountered over the last twenty years, who observe the vast quantities of seaweeds on coasts and in seas around the world and ask “What can be done with it and how could they profit by utilizing this natural resource?” This paper is a useful starting point for such entrepreneurs.

The first section – Introduction to commercial seaweeds – is recommended to all readers, especially those who need a brief overview of the industry. Readers with more specific interests can then move to the other sections, which deal with particular sectors of the seaweed industry. Here, sufficient detail is provided for the average reader, but for those requiring more information on particular topics, lists of useful references are given in the text.

### **Distribution:**

FAO Fisheries Department - Selected addresses

FAO Regional Fisheries Officers

## ACKNOWLEDGEMENTS

The author wishes to acknowledge the many people who contributed ideas and information. A special thanks goes to Hans Porse, of CP Kelco ApS, who used his extensive contacts in the industry and his own expertise to compile the tables of statistics – a difficult task in the seaweed industry.

Thanks also to the following, who contributed in various ways: Marcela Avila; Rafael Armisen; Pierre Arzel; Erick Ask; H.R. “Pete” Bixler; Paul Brady; Duika Burges Watson; A.A. “Ed” Cayer; Javier Fernandez; Joel Fleurence; Joanna M. Jones; P.P. Kirsch; David Luxton; Alan Millar; Gillies Mur; David Myslabodski; Masao Ohno; Klaus Rotmann; Peter Salling; Richard K. Searle; and Linda Theriault.

Finally a special thanks to the author’s wife, Jan, for her understanding and support during the writing of this paper.

Final editing on behalf of FAO and preparation for publishing was by Thorgeir Lawrence.

## ABSTRACT

Seaweed is a very versatile product widely used for food in direct human consumption. It is also an ingredient for the global food and cosmetics industries and is used as fertilizer and as an animal feed additive. Total annual value of production is estimated at almost US\$ 6 billion of which food products for human consumption represent US\$ 5 billion. Total annual use by the global seaweed industry is about 8 million tonnes of wet seaweed.

Seaweed can be collected from the wild but is now increasingly cultivated. It falls into three broad groups based on pigmentation; brown, red and green seaweed.

Use of seaweed as food has strong roots in Asian countries such as China, Japan and the Republic of Korea, but demand for seaweed as food has now also spread to North America, South America and Europe. China is by far the largest seaweed producer followed by the Republic of Korea and Japan but seaweeds are today produced in all continents.

Red and brown seaweeds are also used to produce hydrocolloids; alginate, agar and carrageenan, which are used as thickening and gelling agents. Today, approximately 1 million tonnes of wet seaweed are harvested and extracted to produce about 55 000 tonnes of hydrocolloids, valued at almost US\$ 600 million.

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A guide to the seaweed industry.

*FAO Fisheries Technical Paper*. No. 441.

Rome, FAO. 2003. 105p.

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