

Seaweed connoisseur becomes association president

• **DR Thierry Chopin, Professor of Marine Biology at the University of New Brunswick in Saint John and featured speaker at last year's Aquaculture Today conference, became President of the International Seaweed Association (ISA) during the 19th International Seaweed Symposium, held in Kobe, Japan from March 26-31.**

• The ISA is an international organisation dedicated to the encouragement of research, development and commercialisation of seaweeds and seaweed products. The mission of the ISA is to promote applied phycology (the study of algae) on a global basis, and to stimulate interactions among researchers and industrialists involved in basic and applied biology, ecophysiology, biochemistry, molecular

biology, biotechnology, responsible resource management and conservation, and cultivation and processing of seaweeds (the macroscopic algae living in seawater) and their products.

The origin of the ISA and its series of symposia have, in fact, a lot to do with Canada, says Dr Chopin. It goes back to World War II, when the interruption of commercial shipping routes emphasised the worldwide need for gelling, thickening, binding, emulsifying, suspending, clarifying, protecting and stabilising agents, which, until then, had come mostly from Japan. The search for these products led to the global investigation of their sources, seaweeds, and the realisation that little was known about their geographical and quantitative distribution, composition and properties.

Transformed

The first conference on the utilisation of seaweeds was held at Dalhousie University, in Halifax, in September 1948. Soon thereafter the ISA began holding symposia every three years and all over the world; the last one in Kobe was the 19th. As the commercial potential of seaweeds transformed into realities in extremely varied applications (from your orange juice in the morning to your toothpaste in the evening, through the coating of the goblets at the water fountain in your office), it became obvious that harvesting of wild beds of seaweeds would soon not be enough to secure the increasing need for raw materials and large scale aquaculture of seaweeds emerged in the 1970s.

Presently, 92% of the world's seaweed supplies come from cultivation and seaweed aquaculture production (11.3 million tonnes worth US\$5.7 billion) represents 45.9% of the total mariculture production. Molluscs represent 43.0% and finfish only 8.9%. So, in many parts of the world, aquaculture is not synonymous with salmon aquaculture, as so often perceived in the western world. If, until the 1990s, the seaweed industry was dominated by the production of additives - such as agars, carrageenans and alginates used extensively in the food, brewing, textile, paint, photography, ceramic, paper coating, welding, drilling, bacterial and pharmaceutical, etc. industries - seaweeds for direct human consumption (nori for wrapping sushi and the sea-vegetables kombu and wakame) are now the main sources of revenues, comments Chopin. The sector of



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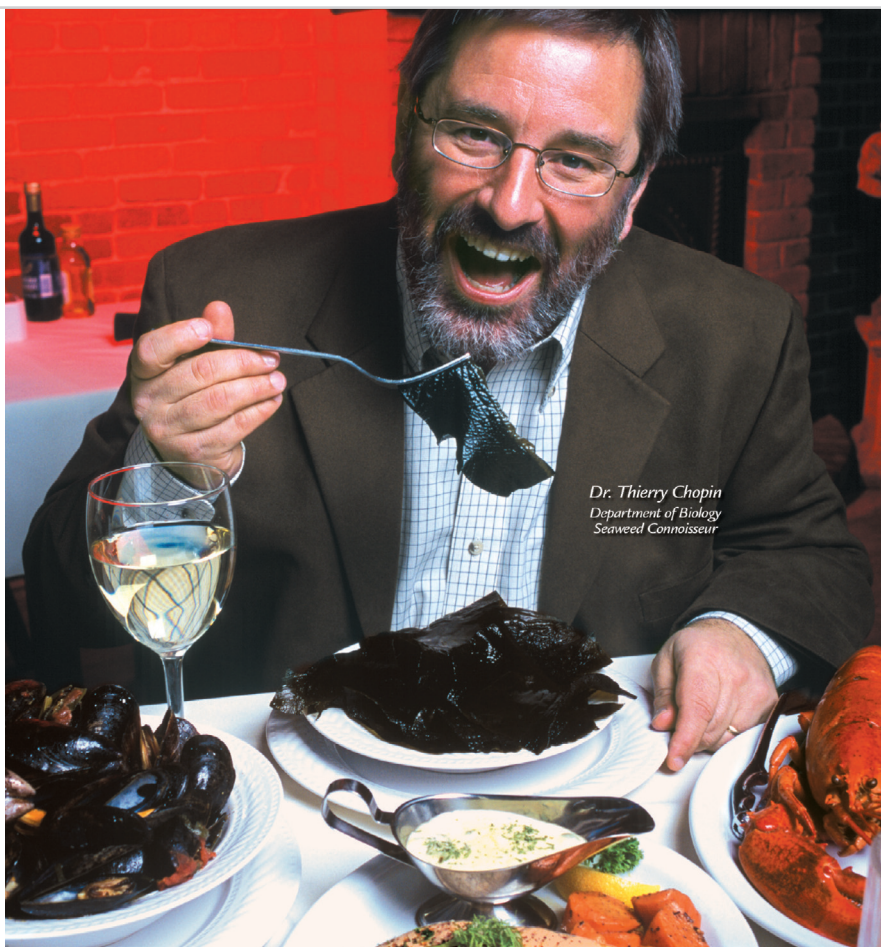
the industry manufacturing soil additives, agrichemicals (fertilisers and biostimulants), animal feeds, pharmaceuticals, nutraceuticals, functional foods, botanicals, cosmeceuticals, pigments, bioactive compounds, antiviral agents, etc. is also now in full development and considerable biotechnological advances have been made in the last decades.

Involved

Dr Chopin is involved with the cultivation of the large brown seaweeds, known as kelps, to develop integrated multi-trophic aquaculture (IMTA) systems in which salmon, mussels and kelps are co-cultivated to bring a balanced ecosystem approach to aquaculture. IMTA is based on an age-old, common sense, recycling and farming practice in which the by-products from one species become inputs for another: fed aquaculture of fish is combined with inorganic extractive aquaculture of seaweeds and organic extractive aquaculture of shellfish to bring environmental sustainability, economic diversification and social acceptability.

This R&D project, funded between 2001 and 2006 by AquaNet, the Canadian Network of Centres of Excellence for Aquaculture, and the New Brunswick Innovation Foundation, is now gearing towards the "C" (commercialisation), with the support of the Atlantic Canada Opportunities Agency, and is a collaboration between scientists at UNB Saint John and the DFO St Andrews Biological Station, the industrial partners Cooke Aquaculture Inc. and Acadian Seaplants Limited (one of the largest commercial seaweed growers/processors outside of Asia), the Canadian Food Inspection Agency, Environment Canada and the New Brunswick Department of Agriculture and Aquaculture.

Becoming the President of the International



*Dr. Thierry Chopin
Department of Biology
Seaweed Connoisseur*

Dr Chopin is a strong advocate of seaweed

Seaweed Association for the next three years (after three years as its President-Elect) is both a great honour and responsibility, says Dr Chopin.

"It is a recognition from both my academic peers and the seaweed industrial sector. The Symposium in Kobe, attended by 535 participants from 46 countries, showed how lively and how truly international in scope the seaweed research and industry community is. The trade show associated with the Symposium opened the eyes of many Westerners. Seaweed applications are so numerous. Japanese eat seaweeds every day at breakfast, lunch and supper, not in large quantities each time, but multiplied by 128 million people and you quickly get many tonnes," he says.

"Japanese people have a healthy diet; maybe one day the Western World will wake up!"

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