

COMMERCIAL ALGAL PRODUCTS

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STRATEGIES TO GROW YOUR BUSINESS

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In this case study, CPL Business Consultants was engaged by a well-funded start-up to give an overview of commercial algal products and make recommendations for its growth strategy.

Our client had a technology to convert effluent CO₂ into algae. The core concept was to produce algae for biofuel. In addition, the client wanted to produce algae for products of greater value. This approach would allow the client to design and construct facilities on a smaller scale, effectively demonstrating the concepts and engineering while simultaneously generating larger revenues and margins. The client was considering the production of both micro-algae and macro-algae or seaweeds and required guidance on its strategy.

CPL's comprehensive and detailed report and fact-based analysis gave the client a broad overview of all available options. Our strategic recommendations, backed by the information provided, enabled the client to proceed with confidence.

Click here for a PDF of [the contents of the study](#) or look below for an outline.

COMMERCIAL ALGAL PRODUCTS

- Objective
- Method
- Principal Findings
 - Edible seaweed
 - Hydrocolloids
 - Agar
 - Alginate
 - Omega fatty acids
 - Coenzyme Q10
 - Spirulina and Chlorella
 - Cosmetics
 - Astaxanthin
 - Beta-Carotene
 - Fertiliser and Animal Feed
- Conclusions
 - Edible seaweed
 - Agar
 - Alginate
 - Carrageenan
 - Omega fatty acids
 - Coenzyme Q10
 - Spirulina and Chlorella
 - Cosmetics
 - Astaxanthin
 - Beta-Carotene
 - Animal Feed and Fertilisers
- Recommendations and Opportunities

Success Factors and Barriers to Entry

Seaweed based ingredients

- Marine Industries Global Market Analysis
 - Introduction
 - World Market
 - Challenges
 - The Long-Term – 2010 Onwards

Human Food

- Chondrus crispus (Irish moss) as food
- Dulse
- Edible Seaweed Products in Japan
 - Nori
 - Kombu / Konbu
 - Wakame
- Abalone
 - Background
 - Worldwide Abalone Farming

Agar

- Introduction and background
 - History of agar
 - Agarophytes and agar production
 - Properties of agar
 - Manufacture of agar
 - Application of agar
- 2 contact reports
- Agar producers

Alginate

- Markets and production
 - Introduction
 - Uses of alginate
 - Alginate in food
 - Textile uses of alginate
 - Other Uses
 - Seaweed supply
- Contacts
 - Production
- Costs
 - Introduction
 - Alginates Process Flow Diagram
 - Assumptions

- Alginate Costs

Carrageenan

- Introduction to carrageenan
 - Product Description
 - Process – from Shemberg
 - Market
 - Food Applications
 - Personal Care and Pharmaceuticals
 - Cosmetics
 - Industrial Markets
- 2 contact reports
- Carrageenan costs
 - Introduction
 - Refined Alcohol Precipitated Carrageenan
 - Refined Alcohol Precipitated Carrageenan
 - Refined kappa carrageenan costs
 - Refined Gel Press Carrageenan
 - Refined gel press carrageenan costs
 - Semi-refined Carrageenan or PES
 - Semi-refined carrageenan costs

Marine Algae and Health

- Summary
- Review of the Scientific and Historical Literature
- Seaweed as a source of Nutrition – November 2006 PPT presentation

Omega 3

- Background
- Market
- Global Omega-3 algal oil market
 - Market
 - Target sectors
 - Players and Products
 - Regulatory
 - Intellectual Property
 - Value chain
- 3 contact reports
- Patents
 - Patents relating to omega-3 in infant formulations
 - Patents involved in the Martek – Lonza lawsuit
- News

Coenzyme Q10

- Introduction
- The Market & Players
- Regulatory
- The Future and Opportunities
- Conclusions
- News

Anti-virals from Seaweed

- Introduction
 - Fucoidans
 - Anti-viral effects
- Products
 - Carraguard
 - Gigartina Red Marine Algae
 - Green Sun
 - Viracle
- 8 main players
- Research papers
- News

Dietary Supplements

- Overview of Dietary Supplements
 - Definitions
 - Product Categories
 - Distribution Channels
 - Market Structure
 - Product and Brand Differentiation
- Markets and Trends
 - Market Drivers
 - Success Factors
 - Barriers to Entry
- Products and Players
 - Products
 - Players
- Regulatory
 - US
 - EU

Spirulina and Chlorella

- Background
- History
- Market
- Uses
- 16 Players, Products and Prices

- Processors and Traders
- Spirulina Production
- 2 Contact Reports
- News

Overview Of Global Cosmetics Industry

- Markets And Trends
- Main Players
- The Characteristics of the Cosmetics/Personal Care and Supply Industry
- Opportunities for Algal Products in Cosmetics/Cosmeceuticals
 - Barriers to Entry
- Regulatory
 - Regulation of Cosmetics in the EU
 - Regulation of Cosmetics in the USA
 - Regulation of Cosmetics in Canada
 - Regulation of Cosmetics in Japan
- News

Astaxanthin

- Background
- Market
- Trends
- 6 Players, Products and Prices
- Scientific Research
- The production of natural astaxanthin from *haematococcus pluvialis*
- 6 Contact reports
- News

Beta-Carotene

- Summary
- Introduction
- Markets
- Uses
- Production
 - Natural
 - Synthetic
- Products
 - Natural beta-carotene
 - Synthetic beta-carotene
 - Dietary Supplements
 - Pharmaceutical preparations
 - Cosmetic Products
- 15 Players
- Prices
- News

- Prices from 3 Contacts

Fertiliser and Animal Feed

- Introduction
- Fertilizers, Soil Conditioners and Biostimulants
- Animal Feed
- 6 Products and Players
- Seaweed product prices
- Markets in Agriculture & Horticulture
- Products
- Animal feed Products
- 4 Contact Reports
- News Articles
- Patents

Other ideas for things to do with Algae

- 5 ideas

8 Partnerships and collaborations

Appendices

Nutrients and Bioactives in Seaweeds

Scope of the seaweed industry

- Introduction
- Classification of seaweeds
- Sources and uses of commercial seaweeds
 - Seaweed as food
 - Extracts from seaweeds – hydrocolloids
 - Other uses of seaweed

Review of Marine Macroalgae Aquaculture

The Seaweeds Industry – Philippines Country Report

- Background of the Industry
- Uses of the Industry's Products
- Supply
 - World Production
 - Domestic Production
 - Importation

- Demand
 - Foreign Demand
 - Domestic Demand
- Marketing System
 - Product Form
 - Distribution and Prices
 - Key Players in the Industry
- Government Support and Incentives
- SWOT Analysis
- Problems and Constraints
- Conclusion

Commercial uses of wild and traditionally managed plants in England and Scotland

- Introduction
- Seaweeds
- Food
 - Laver (*Porphyra umbilicalis*)
 - Management and harvest
 - Employment
 - Threats
 - Other food species
 - Future outlooks and opportunities
- Soil improvers and animal feed
 - Maërl
 - Management and harvest
 - Employment
 - Threats
 - Other species used for soil improvers
 - Future outlook and opportunities
- Cosmetics, toiletries, medicinal and chemical uses

Seaweed Harvesting in Ireland

Strategic review of the Feasibility of Seaweed Aquaculture in Ireland

FAO Paper on Seaweed

Astaxanthin: Chemistry and Applications

Astaxanthin: Eco-Efficiency Analysis

- Contains Schematics for Fermentation and Algal Production

Commercial Applications of Microalgae

51 Tables & 29 Figures

Have a look at our [PowerPoint Introduction](#) and [Brochure](#) describing deliverables, differentiators and case studies. You can also review [eight case studies](#).