



DIGITAL PREVIEW
25 MARCH 2021

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Microalgae cultivation:
market, production and research updates presented at AlgaeFarm.

As part of the AquaFarm and NovelFarm digital preview, for the first time the Italian market data for the country and some European and global estimates are illustrated.

March 31, 2021. **The Italian market demand for dried microalgae reaches the amount of more or less 200 tons per year, for uses ranging from food and nutraceuticals to cosmetics and pharmacopoeia to fish feed.** Only less than 13% of demand can be now satisfied by domestic production, three quarters of which are concentrated on spirulina and in the hands of about ten companies. The Italian value chain also includes some companies that produce components, such as photobioreactors, or turnkey cultivation plants. These are some of the data provided exclusively by **Alberto Bertucco**, president of AISAM, the Italian Association for the Study and Applications of Microalgae, and **Liliana Rodolfi**, professor at the University of Florence, during the presentation of the new AlgaeFarm project, as part of the Digital Preview of AquaFarm and NovelFarm at Pordenone Fiere.

The Italian market requires high quality, but domestic suppliers face competition from more structured European companies (from France and Spain notably) with comparable offers, but above all from the Far East, "certified organic" but with prices that are a fraction of those charged for European organic spirulina.

On worldwide and European levels, the market is more developed even though it started, as far as the industrial research is concerned, in the 1980's at the same time as the Italian one, which did not really take off until the last decade. **Estimates on world production are quite variable, from a minimum of 25,000 tons / year to a maximum of 130,000**, divided between about twenty genera on microalgae, each with several species. 50 to 90% of the quantities, depending on estimates, are concentrated on two genera, spirulina and chlorella. The global value well exceeds one billion dollars and is characterized by a very high price per kg which makes it value-relevant although in quantity it is not comparable to the contiguous sector of **macroalgae which produces 4.6 million tons every year**. It should be noted, however, that it is estimated that the **potential** demand in some sectors, such as the production of fish feed, is very high, one million tons only for the one mentioned.

If we compare the European market to the world one, the continent remains marginal on the production front. The total, according to **EABA** (European Algal Biomass Association) reaches 500 tons, with just under half of those concentrated on spirulina and chlorella. Prices vary a lot, like quality, even within the



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same genus. **In total, the market value is around 500 million euros, with an average year-on-year growth of 10%.** The prospects are brighter if one considers the end uses of biomass. Excluding proteins, extracted from spirulina and chlorella, other obtainable substances have very high market prices, ranging from 200-600 dollars per kg for fatty acids up to 45,000 dollars per kg for fucoxanthin, a powerful anti-inflammatory, today extracted at lower purity levels from some brown multicellular algae.

Research, both basic and industrial, today focuses **on improving the productivity of cultivated microalgae**, in particular through the greater efficiency of the photosynthesis process, on which the physiology of most genera used on an industrial scale is based. The attention is especially focused on light sources that emit the frequencies best used by different genera. A second research field aims to **optimize the productivity of microalgae throughout the entire volume of water in which the crops are contained**, avoiding concentrations that may create shadowy areas where the organisms growth stops.

The topics presented and others will be included in the **AlgaeFarm agenda scheduled for 9 and 10 June**, an initiative illustrated by **Lucia Prosdocimo**, Project manager of the event.

Conference recordings will soon be available on the websites www.aquafarmexpo.it and www.novelfarmexpo.it.

***AquaFarm** is the international exhibition-conference dedicated to **aquaculture and sustainable fishing industry**. **NovelFarm** is the most important Italian event entirely dedicated to the **new cultivation techniques**, to soilless and vertical farming. This year is complemented by **AlgaeFarm**, an event dedicated to technologies and applications in **algae cultivation**.*

More informations:

AquaFarm www.aquafarmexpo.it/en/

NovelFarm www.novelfarmexpo.it/en/

AlgaeFarm: [link to the dedicated page](#)

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