

Why algae?

The Bellona Foundation has a long tradition in pointing towards technological solutions to environmental challenges. Many of the technologies that the Bellona Foundation has promoted in the past are now widely accepted as tools for the creation of a sustainable future. Now, the Bellona Foundation puts the spotlight on growth of algae.

Growth of algae in photobioreactors is a promising new technology which can deliver food, fodder and fuel while consuming CO₂. Algae can also be used in power plants.

Algae constitutes enormous amounts of biomass in the seas of the world, and have done so for a really long time. Old algae are part of the oil we consume today, giving us the problems of global warming.

The requirements for growth of algae are simple; it needs nutrients, water, sunlight and CO₂. If this is provided in a closed system of a photobioreactor, biomass will accumulate at an astonishing rate. This biomass of algae is rich in oil. Depending on the species of algae grown in the photobioreactor, 50% or more of the biomass will be oil.

The algae are harvested from the photobioreactor, and the oil is extracted. The oil can then be used for production of fuel. The remaining residue can be used for a multitude of purposes, for instance as animal feed or as a fertilizer.

In addition:

- You can feed the algae CO₂-emissions from fossil power plants. In this way the reduction of CO₂-emissions from the plant allows for a production of valuable oil-rich biomass.
- Algae can be grown in areas not suitable for traditional agriculture.
- Algae thrive on wastewater, and are robust towards many environmental variables.
- The production of biomass per unit of area is 30 times higher than traditional crops for production of biofuels.

The algae of the past have given us both oil and environmental problems. The Bellona Foundation believes that the algae of today can provide environmentally sound solutions for the future.

The Bellona Foundation is working together with the Dutch company AlgaeLink. AlgaeLink is a company at an early stage of commercialising the algae technology, working with companies like KLM.

If you are interested in The Bellona Foundations thoughts on the use of algae and other environmental issues we can be visited and contacted at:

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