Algae control: how to preserve your water plan from algae?

Algae are present in every lakes and ponds.

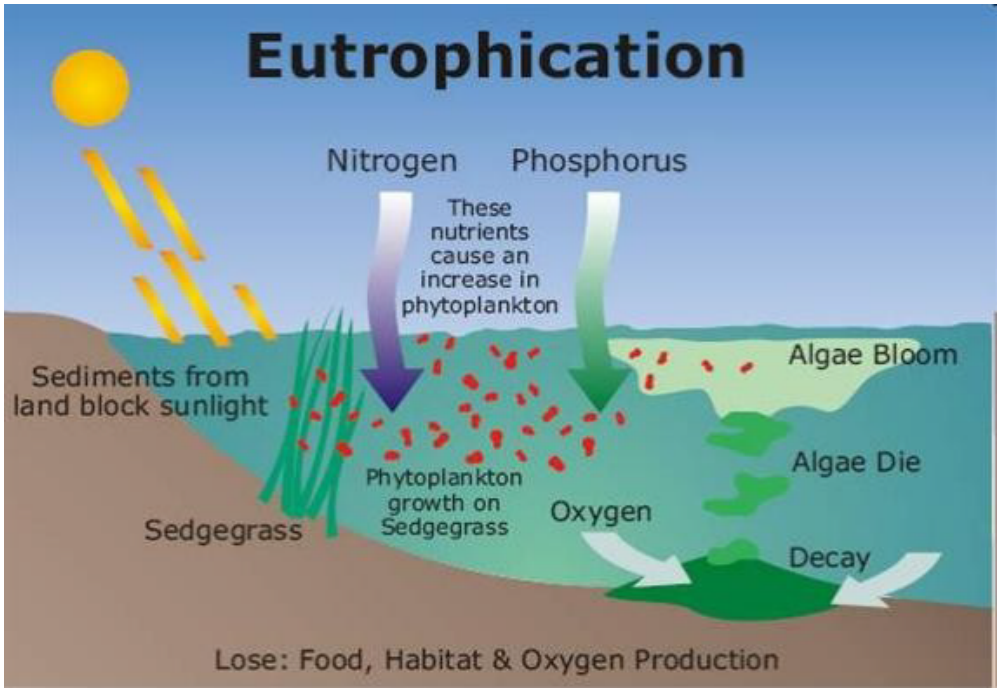
Even if they are mainly described like having a negative impact on the environment, algae are essential to the aquatic ecosystem food chain. Indeed, this food chain begins with the zooplankton which feeds itself with algae. Then, the zooplankton is eaten by fishes. Without these microscopic algae, the aquatic species could not live.

However, a too high quantity of algae into the aquatic spaces can have a negative impact on the ecosystem because their oxygen consumption will be too high and the oxygen will not be distributed to the rest of the aquatic ecosystem. That way, any other living species on the water plan will have difficulties to live and will disappear.

It is important to know that we index two major types of algae:

- The unicellular algae: they are microscopic algae. When there are too many of them, they use to blur water. The water plan appears as unclean and can engender sanitary issues for the aquatic species.
- The filamentous algae grow because of a lack of water movement. When they recover the surface of a water plan, they form a greenish lay. As a result, the other aquatic species do not receive enough oxygen and die.

Moreover, with a too high concentration of algae, the natural light does not cross the water plan and the exchanges with the atmosphere are getting difficult.
Finally, it is important to know that some algae are composed of toxic composites and so they can contaminate the whole water plan.



Aeration of water plans: the solution against the proliferation of algae.

In order to control the proliferation of algae and so to assure the healthy state of water plans, the aeration is the adapted solution.

This technique consists in adding oxygen to preserve a continuous oxygen level into the lake leading to a double effect:

- Phosphorus control: phosphorus is indispensable for natural ecosystems.

Because of the climatic changes due to the human activities, the ecosystem uses to change. As a result, it creates a consequent proliferation of algae, leaving the other species without oxygen. Thus, with phosphorus and the proliferation of algae, the eutrophication process happens and generates a deterioration of the sanitary state of the water plan.

Even if it is indispensable, it is necessary to control phosphorus to preserve your water plans and so to preserve the other species present in these water plans.

The aeration of the water plans is the solution to control the phosphorus. It also controls the proliferation of algae by allowing aeration and circulation of water to the whole pond.

Initial situation

Situation after 5 days treatment

• Importance of the zooplankton:

The zooplankton is present in every oxygenated water plan (fresh water, sea water…)

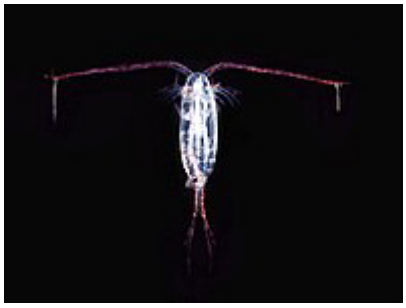
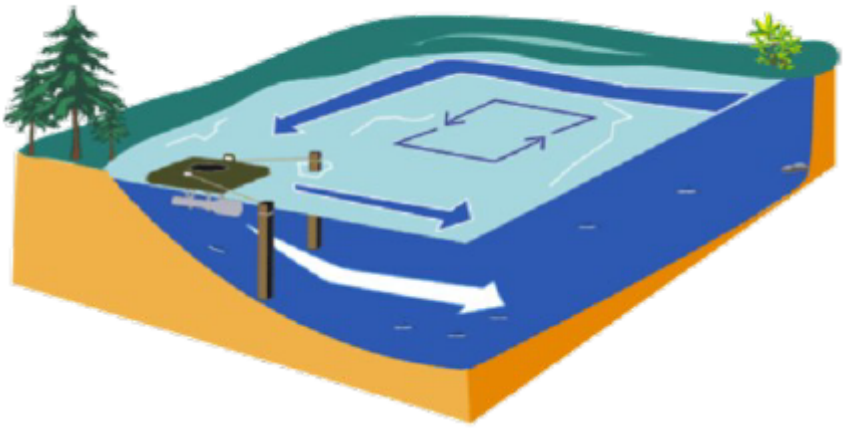


Photo of a zooplankton

Moreover, if there is enough natural light crossing the water plan, the zooplankton is transparent. This characteristic is very important to its survival because it avoids the predators to detect him.
As it lives in depth waters, the zooplankton eats phytoplankton. Thus, its quantity and its composition have a direct impact on the whole food chain and play a major role in the ecosystem. If there is a high quantity of zooplankton in a water plan, it will control the algae.

The aeration has a double effect on the water plan. As it permits the survival of the Zooplankton with a high oxygen supply, this process also permits the circulation of water



Scheme of the aeration and circulation of water in a basin

Our machine AQUASUB permits the oxygenation of the depth of a lake. It permits to have favorable conditions for the zooplankton development thanks to a high oxygen supply in the whole pond.

Photo of an AQUASUB