

Air Injectors (Force 7)

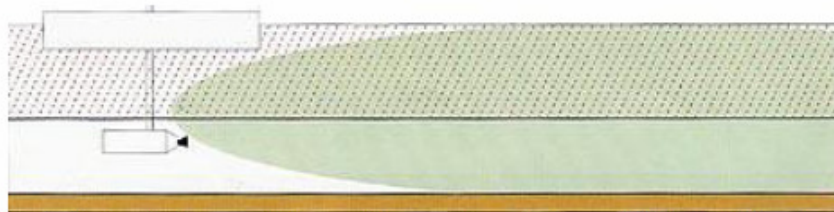
In current literature the lack of oxygen dissolved in water is highlighted as one of the most limiting factors in operating a fish farm. AERATION, DEGASSING, and CIRCULATION of the water, together with elimination of the organic sediment are therefore necessary aids to obtain the production process in Aquaculture. 90% of Diseases and Viruses are caused by poor hygiene of the pond and of the environment, poor quality of the water and of the bed.



During the day there is a high content of Oxygen dissolved in the water in the surface layers produced by the photosynthesis of the Phytoplankton. Of great importance for aquatic organisms, but not being able to spread in depth it will be of little use for the microbial flora.



At night-time, the oxygen produced during the day is consumed by the Benthonic organisms, Phytoplankton and fish. The continual lack of oxygen in the depths aids the development of anaerobic bacteria, which transform the organic sediments into non-oxidized compounds. In this way, the bed of the aquatic environment produces highly toxic substances for the fish, such as ammonia, hydrogen sulphide, and nitrites that can cause their death.



The action of horizontal circulation and the surface water mixing with that of the deeper layers, permits spreading the oxygen produced by photosynthesis to all the levels of the pond. Operating in this way, on the bed and on the sediments, creates the optimum conditions for the development of aerobic micro-organisms able to break down the organic matter into inorganic compounds that are not harmful to the aquatic organisms.



At sunset, after using the **Force 7**, there will be plenty of oxygen at every level. In this way all the phenomena connected with anaerobic fermentation of the sediment can be prevented and attenuated.