



Rapid Increase Of Aquatic Plants And Demand For Oxygen

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Introduction:

Aquatic plants are plants which can be found in water sources. These plants grow in water and complete at least a part of their life cycle in water. Most of the aquatic plants are beneficial because they may be used as food for some animal like cows and goats; they decrease the evaporation of water. But it has been observed that the presence of aquatic plants like algae on water source is among the source of suffocation and decline of other aquatic organism like fish. In order to prove this statement we conducted a certain experiment as follows;

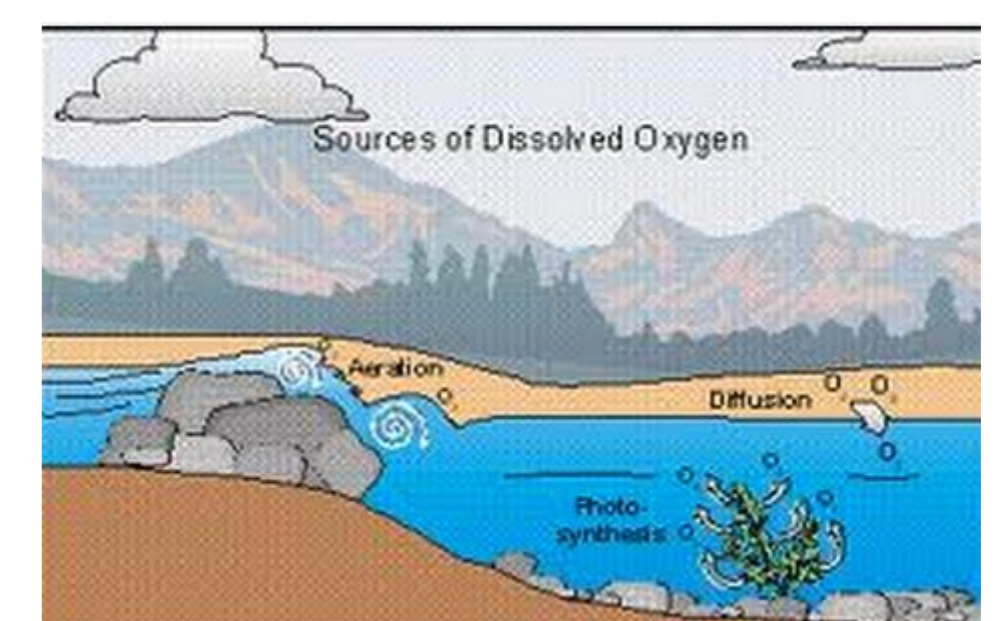
Aim:

TO PROVE IF RAPID GROWTH OF AQUATIC PLANTS INCREASE BIOLOGICAL OXYGEN DEMAND TO AQUATIC ORGANISM

Tilapia fish
_Pond of 1m to 1.5m
Organic fertilizer
Fresh water
Cement
supplement feed{rice, maize}
D.O metre

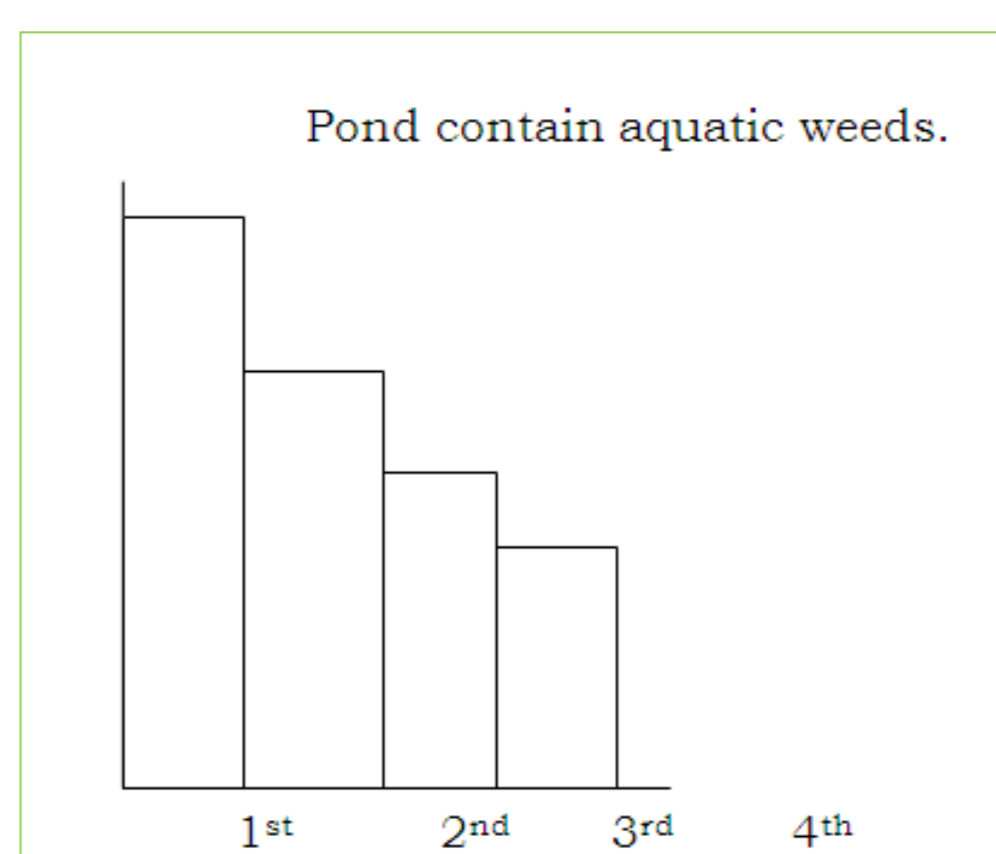
Procedure:

1. Dig a pond of 1m to 1.5m
2. Cover the pond with cement
3. Add fresh water into the pond
4. Fertilize the water in the pond with much organic fertilizer and let it stay for two weeks
5. After two weeks put 6 Tilapia fish in the pond.
6. Feed the fish with supplement feed like rice and maize twice a day from 8:00am to 10:00am and 9:00pm to 5:00pm and record oxygen supply by using D.O metre.
7. After four weeks start to observe the oxygen supply by checking if fish come up the oxygen in low if they remain at bottom the oxygen supply is normal at rise D.O metre.



Results:

Before growth of aquatic plants the oxygen supply is normal and fish remain at the bottom. While after for weeks the oxygen demand was observed because fish come up to obtain oxygen. The rate of oxygen was decreased as bar chart shown below;



Advantages:

- i) Act as protector for some aquatic organism who uses aquatic plant to hide from enemies.
- ii) They decrease evaporation of water.
- iii) They are used as a source of food for animals like cows and goats.

Disadvantages:

Decreases water depth because when they decompose and become mud.
They increase oxygen demand.
They cause poor growth of organism like fish.

Effect:

- Causes low production of fish.
- reduce source of income to the society.
- Unemployment for dependent of natural resources such as fish.
- reduce edible protein substance such as fish.
- utilize nutrients (become poor fertility).
- No better test of water.

Conclusions:

Therefore it has been observed that rapid growth of aquatic plants increased biological oxygen demand to aquatic organism. The aquatic plant prevents the penetration of sun light which could be used for photosynthesis which would result in giving out oxygen as a by-product. During the night there will be less oxygen supply in water because the upper plants take in oxygen.

Recommendation:

This problem can be controlled by Mechanical rakes, these are instruments which are used to harvest the aquatic plants physically in large farm ponds. Biological control. This involves releasing plant eating creatures into the water source. Regulation of nutrients level. This involves allowing right nutrients at right level in order to prevent aquatic plants. World Book Encyclopedia Vol 1; North Michigan (Chicago 2001)

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Further information:

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