CLEAN NOT GREEN

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Abstract- In our environment, water is very essential one, that water is must be clean not in green. Thus way "Clean not Green". The green things in water are presence of algae. There is only one major reason for presence of algae in water, that is excess of nutrition content present in water due to natural or manmade activates. But we provide a solution for the presence of algae in water is Algae eating fishes and snails. There are many verities of algae eating fishes and snails are available but we use only fishes and snails suitable for the such environmental condition like water etc.,. level. pН. food. That condition environmental is very important for the fishes and snails to way is very easy and live. This economical one to prevent algae growth. By this way we control the algae growth in the water bodies.

Introduction

Algae are single celled microscopic organisms, presence in water bodies. Those algae creating many problems in presenting water bodies. The presence of algae in water looks like dirty and affects the living organisms in water body. In case the presence of algae increases leads to algae blooms. Humans, livestock are drink those algae present water its leads to bad health condition and sometimes cause death. Some algae types are free-floating cells, grow as long strings, beards or tufts.

Algae forming reasons are presence of excessive nutrients majorly phosphorus and nitrogen in water is the main reason. The warm temperature also helps to grow and direct sunlight also one of the reasons for algae growth.



Algae Pond

Clean Not Green

The surrounding environment should be in green but the water bodies such as lakes, ponds are not in green, it must in clean thus "Clean not Green" is very important. The green things in the water bodies are algae, so we remove the algae presence in pond, lakes. So we choose algae eating fishes and snails to remove algae presences in ponds and lakes.

Algae eating Fishes and Snails

There is much type of algae eating fishes and snails are available, but we use the selected fishes which are suitable for that pond, Lake Environment condition. The pond, lake environment condition is depends upon the pН levels. temperature, hardness. Thus way we choose some algae eating fishes and snails suitable according to general algae growth conditions are Siamese algae eater, Otocinclus catfish, Twlg catfish, Chinese algae eater and Mystery snails, Nerite snail, Malaysian Trumpet snail.

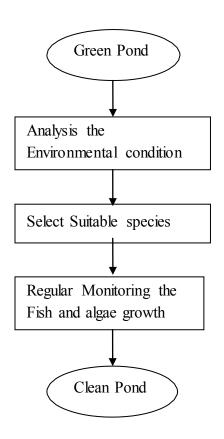
The algae pond environmental conditions are pH -6 to 8 and temperature 23° to 30° C.

Table Different pH and temperature of algae eating fishes and snails

NAME	рН	Temperature °C
Siamese algae eater	6.5-8.0	24-26
Otocinclus catfish	6.8-7.5	23-26
Twlg catfish	6.0-7.0	24-26
Chinese algae eater	6.5-7.5	24-27
Mystery snails	7.0-7.5	20-28
Nerite snail	6.5-8.5	20-28
Malaysian Trumpet snail	7.0-7.5	21-27

In the above table the algae eating fishes and snails pH and temperature are mentioned, these temperature and pH are suitable coincide with algae pond temperature and pH for fish and snail to live.

Methodology for Clean not Green



Clean not Green

For cleaning the green algae pond we choose the above one or more algae eater fishes or snail or both according to suitable environmental condition of pond, lake respectively. Incase of we choose Siamese algae eater fish the pond pH level must be in 6.5 to 8.0 and temperature must be in 24°C - 26°C. is very important.

Then the suitable fish species is collecting from sellers in required amount depending upon the pond size and algae level in the pond. Then the collected fish species is put into algae growth pond after few days the fishes eats the algae the pond becomes Clean

Siamese Algae eater

Siamese algae eater is from fresh water family so easily adapted to fresh water environment. They are eat all types of algae, string algae, algae clumps to red algae. Comparing to other types of algae eaters it eats more types of algae in fresh water environment. They are growing up to six inches long and life spanning up to ten years. The environment condition should be required warmer to survival for Siamese algae eater. They also share his environment with other like goldfish and koi fish.



Otocinclus catfish

Otocinclus catfish are mainly suitable for smaller scale pond. These are small in like one to two inches long, so it easily eats newly grown algae as soon as it appears. These are also easily share with other species. They eat algae in plants without damage it. It most suitable for smaller pond environment.



Koi and Golden fish

Koi and golden fish are most common species we seen in pond, these species are also algae eater. They not like to eat algae as their main food source but eat during winter when they are more dormant and fewer food options available.





Conclusion

Green and Clean environment is we live clean want SO we our to environment by using natural methods is very important by the way we use the natural algae eating fishes and snails used to clean the algae presence in lake, pond. The one only important rule in the maintaining method is the environmental conditions like pH and temperature. The best suitable fish type for water bodies is depends upon its area. The koi and golden fishes are used

in small area and Siamese algae eater is suitable for big area. The algae eating fishes and snails are not enough to control algae growth. During summer season the algae growth are faster, in that times we use traditional methods to control them.

REFERENCE

- 1) SRAC Fifteenth Annual Progress Report, December, 2002
- 2) Tackling Algal Blooms in the Great Lakes, By Nancy Goucher, ENVIRONMENTAL DEFENCE and Tony Maas, FRESHWATER FUTURE CANADA.
- 3) University of Arkansas at Pine Bluff, United States Department of Agriculture, and County Governments Cooperating, Algal Blooms, Scums and Mats in Ponds.
- 4) Algae eating pond fish pond informer