All about

Algae Control

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Algae Control

Introduction

In the past few years, the construction of watersheds has resulted in a decrease in pond water quality, which has loaded many ponds with inorganic materials, sand, silt and clay, nutrients and sediments. This run-off is from excessive use of fertilizers, malfunctioning septic systems, poor erosion control and improper waste disposal within the watershed. As a result of new development, hard surfaces such as asphalt and concrete have increased the flow of water through these watersheds.

Algae and the control of the simplest form of plant life, has become the most talked about issue among new pond owners. The lack of proper balance between plant and animal life in a beautiful, tranquil pond can turn it into a slimy algae pond.

The rate of growth of algae in ponds is favorable when fish are being fed a lot of food, the water temperature is warm and a strong amount of sunlight is present. If this problem is left uncontrolled, you may have a great risk of loosing animal life in the pond. Fish will suffocate because algae can deplete the oxygen. The depletion is due to the fact that plants produce oxygen in the daytime: consume carbon dioxide at night and less oxygen is available during periods of high temperatures.

General Description

Algae are microscopic, free-floating plants that thrive in garden ponds and may range in color from green to brown. When nutrients and phosphorous are abundant in the pond, uncontrolled growths of surface scum with noxious odors occurs. The three major groups of algae are plankton, filamentous, and chara. Planktons are minute, free-floating plants that are green, bluish-green or a brown color and are usually associated with potable water. Filamentous algae are slimy and green; and appear to have long strands that form nets of plant material that float. Chara, also called musk grass, are anchored underwater and may feel rough and gritty, and have branches that resemble flowering plants.

Types of Algae

There are five major groups of aquatic weed that include planktonic, marginal, submersed, immersed and floating weeds. Marginal weeds grow on the water's edge and resemble cattails. Submersed weeds are rooted at the bottom of the pond and are seed plants. Immersed weeds are at the bottom and have floating leaves and flowers. Finally, floating weeds are rooted but their leaves rise and fall with the water levels.

Causes of Algae

Algae in a pond may be the result of improper equipment, construction, maintenance or an imbalance of plants to water. Preventive maintenance such as removal of sludge is essential and a worthwhile investment of your time in order to maintain the growth of algae in your pond. In order to clean your pond, it is necessary to acquire a pond skimmer, or a vacuum for collecting debris or removal of sludge.

It is important not to overfeed or keep more fish than your pond can accommodate. Make sure that you use enough and the right kind of aquatic plants that will provide balance.

Proper Pond Equipment

One way to control algae is to use a UV clarifier. As the water is exposed to the UV unit, algae flow through the filter and be removed from the water. Another way to control algae is to use a submersible or external pump. Submersible pumps are less expensive and easier to install. Questions to ask before getting a submersible pump include, how dirty the water is; how often will the pump be cleaned; or if the pump will be operational continuously or sporadically. External pumps are energy efficient and may last much longer than a submersible pump. This pump will require more plumbing to pump the water as well as additional requirements to disguise the pump from view.

Proper Pond Construction

The construction of the pond is a major consideration for creating good water quality in the pond. When constructing a pond, the location is very important. It should be located on a flat high area of the yard away from trees that will not receive more than 4 –6 hours of sunlight per day. Sunlight and excess nutrients are major issues concerning the growth of unwanted algae. A pond built using concrete, limestone, or marble will also tend to have a high pH, which can contribute to greater algae growth. A pond should have about 40% of its surface area for the deep zone, which should be at least two feet for a water garden and three feet or more for a koi pond. Thirty percent should be constructed in an intermediate depth of 1-1/2 to 2 feet and the remaining 30% at least 1 to 1-1/2 feet deep. A slight slope to the deepest level allows for easy removal of debris from the pond. The pond should also be constructed in such a way that rainwater does not flow over the yard and into the pond. This is one of the most common causes of algae development in the pond. Rain runoff carries with it lots of organic debris that contain nutrients that feed the algae. Before digging, make sure that the measurements for the liner are adequate for the size of the pond. For colder climates, you may need to dig deeper for a sufficient depth if you will be adding fish. It is important to check with your local permitting department, due to the fact that some areas may require safety fencing.

You'll need these basics to control algae in your pond. Click the items below to go to CheapPetStore.com to find the best prices for online pet supplies.

- **Chlorine Neutralizer**
- **Skimmer**
- **Pump**
- **UV Clarifier**

Pond Kit

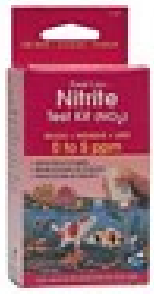
Proper Maintenance

Although the pond water may appear to be clear, it does not always mean it is good or safe. Fish would probably like the water a little cloudy to provide a shelter from known predators. It is important to know that fish pollute their own living environment by producing ammonia and nitrite. You should test your water periodically to make sure that the levels do not elevate and become potentially harmful. It is important to chemically clean pond water from pesticides, chloride and heavy metals. It is not recommended to top off the pond with a garden house, but you should routinely change five to ten percent of the pond water every two to four weeks and remove leaves and debris in the process.

During the winter months, it may be safe to leave fish in the pond if an adequate depth has been allowed during construction. If ice forms on the top of the water, know that the water has not frozen underneath. Always provide an opening for the ammonia to escape and leave the pump operating during the winter months. Do not break holes in the ice because it will send the fish into shock and injure or kill them.

Proper Balance of Plants to Water

Ponds with lower oxygen levels react slower to breaking down organic waste and put a strain on marine life, which causes an outbreak of excessive algae. A small amount of algae is sufficient, because it releases oxygen back into the pond. Organic waste may include dead leaves, grass clippings, fish food, fish and animal waste, dead algae and aquatic plants and fertilizer run-off. Whenever there is an imbalance of plants to water, an increase of odors such as noxious gases like ammonia and hydrogen sulfide develops. When the pond does not provide a healthy oxygen level, anaerobic microbes begin digesting the waste, creating the odors.



Nitrate Test Kit

Pond Netting

Pond Hose

Algae Control Methods

You can maximize the efficiency of your UV clarifier by minimizing the two main factors that influence aggressive algae growth – excessive nutrients and too much light. You can control direct sunlight by using plants, especially if your pond is getting more than 6 hours of direct sunlight. Always make sure that 50 to 60 percent of your pond is shaded.
Proper equipment such as a UV clarifier, filter or pump will slow down growth of algae in your pond. You must realize that there are some species of algae that are difficult to control. It is important to maintain a healthy environment by providing the right type and number of plants in your pond. Underwater and floating plants remove excess nutrients by absorbing and starving the algae of its food source.

Another method for controlling algae in ponds is by using barley straw. A good test for future algae treatment is to treat a small amount of the algae, then wait 7 to 10 days before treating again. Barley straw does not destroy the algae, but controls the new growth. It appears that when the barley straw is exposed to sunlight and in the presence of oxygen, it produces a chemical that inhibits algae growth. Barley straw is most effective when applied early in the spring of the year; and used at temperatures above 70°F. Barley straw will remain effective for a period of six months after application. In order for barley straw to work properly, sunlight and oxygen are needed. Fish may die if you use this method in excess. It is recommended that an application of about two to three bales per square foot of pond area should be used.

[Barley Pond Strip]

[Pond Water Shade]

[Algae Destroyer]

[AlgaeFix]

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