

How to prevent excessive algae growth is one of the most common pond maintenance questions. Algae can cloud the water, looks messy and degrades water quality. There are a variety of methods including filters and water treatments to control algae, but the first step is to establish balanced pond ecology.

Always treat new pond water with a de-chlorination product such as Amquel. This treatment is for the purpose of removing chlorine, chloramines and toxic metals from the water. It does not help to prevent or remove algae, but protects fish from these harmful chemicals. After the water has been treated plants can then be added to the pond.

Some algae should be expected, especially in new ponds or following a change of water. About a month after installation, the pond will go through an "algae bloom". Every pond goes through this normal aging process. **Do not be alarmed, and do not change the water.** The water will be a pea green color, and will stay this way for about 1 to 3 weeks. With new ponds, fish should not be added until after the initial "algae bloom". The algae in the pond would take oxygen away from the fish. The following are guidelines to help maintain clear water in your pond.

### **Establishing a Balanced Pond**

Deciding how many plants and fish to include is determined by the size of your pond. Use this formula to determine what is recommended. Multiply the length x the width to calculate the total surface area of the pond. (i.e. 8 ft x 5 ft = 40 sq. ft total surface area.) For a pond with less than 25 sq. ft, Use one clump of oxygenating grasses, one snail, and a maximum of one inch of fish per sq. ft of surface water. Oxygenating plants include anacharis, myriophyllum, cabomba, and hortwort.

Floating plants on the surface of the water make an attractive addition and keep the water shaded and cool. Use one water lily per 10 to 15 sq. ft. of water surface and other floating plants to cover about 60% of the surface. Choices include water lilies, lotus, water hyacinths, floating hearts, and floating clover.

For a pond with more than 25 sq. ft, use one clump of underwater oxygenating plants and one snail per each 2 sq. ft. of surface area. Use up to two inches of fish per sq. ft. of surface area. Use one water lily per 10 to 15 sq. ft, and other floating plants to cover about 50% to 60% of the surface.

Excess nutrients in the water will cause algae problems. Use aquatic plant food tablets designed to promote healthy plants without contaminating the water. Fertilize water lilies with two tablets once a month in May, June, July, and August. Fertilize other water plants once or twice a season.

It is important not to over feed the fish. Fish food eventually becomes fish waste, which is toxic to the pond. In a healthy pond, bacteria break down the fish waste and convert it to a fertilizer that is absorbed by the plants. When there are more nutrients in the water than can be absorbed by the plants, it feeds the algae. The presence of underwater grasses helps to absorb the nitrates (fertilizer); this in turn helps keep algae down.

To keep your pond clean during the fall, cover the pond with netting to keep falling leaves and other debris out of the water. Sediment that accumulates near the bottom should be cleaned about once a year. Scoop bigger debris out of the pond or siphon off the bottom water to collect debris that has settled.

## Water Treatments

Several water treatment products are available to help keep pond water clear. Following are a few that can be used alone, or with a filter, and are safe for fish ponds. Most are applied throughout the spring, summer and fall. Be sure to read all label directions before use.

**Barley Straw:** Barley has been used to control algae in farm ponds for many years and is now available for decorative ponds. Exactly how it controls algae is not fully understood, but it appears that by-products of its decomposition help to prevent both string and floating algae, while improving fish health. Barley can be slow acting and should be used before algae become a problem. It is available in small straw bales, palletized or liquid forms.

**MicrobeLift:** This is a biological algae control that uses specific types of bacteria to maintain water quality and clarity. The bacteria reduce ammonia nitrogen and aid with the decomposition of organic material in the water. MicrobeLift can be slow acting and should be used before algae become a problem.

**Accu-Clear:** This is a flocculent, which causes algae to clump together and settle to the bottom of the pond. It will often produce results in 1-2 days.

**AlgaeFix:** This liquid algaecide effectively controls string and floating algae. If the water has not cleared within 3 days, reapply.

## Filters

A filter is sometimes necessary to help keep water gardens clean and free of smaller debris. There are two basic types, mechanical or biological. Mechanical filters are for use primarily in smaller ponds. The water circulates through screens or sponges that collect debris from the water. Biological filters are for use with larger ponds. These filters provide a favorable environment for the colonization of beneficial bacteria. The bacteria remove excess nitrogen from the water and prevent algae from growing. Many systems will combine mechanical and biological filters. A pump is required to circulate water through the filter, so it should be located near electricity or where an electric line can be installed. The volume of water in the pond determines the pump size for a biological filter. In general, the pump must be capable of pumping 50% of the total pond contents in one hour. Clean biological filters once a year each winter to keep them functioning properly.

## Ultra Violet Lights

Best results occur when filters are used along with ultra violet lights. With these systems, after the water has been filtered, it will pass by an ultra violet light that will kill any remaining algae. The UV light bulbs should be replaced once every 1-2 years. Most ponds in sunny locations with the proper balance of plants and fish should not need a filter. It is still a good idea to have a small pump in the pond to move the water around to keep the nitrite cycle working properly. In shadier areas, or in sunny ponds without a proper plant and fish balance, the pond may not stay clear. If you are having problems with green or cloudy water, a member of our staff can help determine why this is occurring and discuss these, and other, options with you.

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