



Pond Care

Relaxing by cool, clear, shimmering water, watching fish swimming lazily about and enjoying the serene beauty of water lilies; these are the joys of water gardening. One stumbling block to enjoying a pond is how to keep that water clear. It is deceptively easy; all you need to do is add the proper ingredients, keep the filter cleaned, and let the pond do all the work.

Algae

First, we must distinguish between the two basic types of algae. The moss-like algae which grows on the sides of the pond is actually desirable and it is not a type which clouds the water. To prevent excessive growth of these algae, scavengers, such as snails or algae eaters, can be used to eat it.

The unicellular type of algae is the culprit of the 'pea soup' green or 'cloudy' water. This type of algae is not desirable and an active program to prevent and eliminate these algae is one key way to help clear the water.

Algae Control

To control algae you need patience, plants, scavengers and a filter system. The most important factor is patience; a new pond (or one just cleaned) will turn cloudy and have some algae. Do not just drain the pond each time you get cloudy water. The water must age and the microorganisms and plant populations must establish themselves.

An algaecide can be used during this period to keep the algae growth under control. Remember, an algaecide only acts on existing algae and a single treatment will not keep a pond clear indefinitely. It is only a temporary control and it will not change the conditions in the pond that are causing algae to grow.

Plants

Plants are one secret to clearing up a pond and keeping it clear. They starve the algae by absorbing the carbon dioxide and minerals essential for algae to grow. Submerged grasses are especially effective in controlling algae. Water lilies are also helpful because their pads shade out a good amount of sunlight. This shade helps to keep the water cool and it helps to prevent algae from growing by inhibiting photosynthesis. A good rule of thumb for the number of submerged grasses is to stock one bunch of grass for every 4 to 6 square feet of pond. Water lilies, or other floating



pond plants, should cover 50% to 60% of the surface of the water. Although not extremely effective, artificial water lilies can also help shade the water, and more importantly, artificial water lilies can add a bit of color when your natural water lilies are not blooming.

Scavengers

Scavengers are another important way to help keep pond water clear because they help to eliminate food sources for algae. Do not over feed the fish in your pond. Only feed your fish what they will eat in 5 to 10 minutes. Leftover fish food will rot and foul the water. The grazing hair-like algae will absorb and use the remnants of this leftover food. Scavengers will also eat leftover fish food. This is important because pond fish will not eat any of the leftover food, even if they are not fed for several days.



Filters

Careful selection of the natural methods mentioned above can lead to a clear pond. However, a filter system is a great time-saver in clearing a pond and keeping it clear. Filters remove algae, fish wastes, and any particulate matter clouding the pond. Because a pond filter is so efficient in removing these elements from the pond, the pond is less likely to become cloudy.

There are two main types of pond filters. The most common is just a mechanical filter. This type of filter removes physical materials from the water; leaves, fish waste, free-floating algae, and other floating materials. The other type of filter is a biological filter. This type of filter helps to eliminate the algae and it also helps to eliminate the harmful bacteria in the water. This filter uses beneficial bacteria to kill both the harmful bacteria and many types of algae.

Pond Problems

Sometimes a clear pond will suddenly become cloudy even though it has been clear for several weeks or months.



Several factors can cause this situation.

1. Overfeeding the fish.
2. A drastic weather change - usually an increase in temperature during the summer. However, in the spring and fall, the plants are not as active and algae can take over.
3. A chemical imbalance in the water such as too much ammonia or too high of a pH. Excess ammonia can be a direct result of too many fish for the size of pond you have. The water pH can be influenced by the type of water you add to your pond, tap water, irrigation water, or well water.
4. Toxic gases in the water. Fish need oxygen and plants need carbon dioxide. Keeping a balance of these gases are important in maintaining a pond's health. Toxic gases can be produced by rotting organic matter on

the bottom of the pond, a dead fish, or not enough water (air) circulation within the pond system.

Spring Check List

1. As pond temperatures warm into the upper 50 F, start feeding the fish with high carbohydrate / low protein food. As the water warms gradually work up to the higher protein foods.
2. Raise aquatic plant pots from the bottom to warmer surface water.
3. Early spring is the time to remove pond waste and leaves. As the pond temperature begins to rise, the pond detritus begins decomposing rapidly and releasing nutrients into the water. Possible effects from this scenario are robbing the pond of oxygen, releasing toxic gases, and causing an algae boom.
4. Test the water for both pH and ammonia.
5. Check pumps, lines, and restart filters. Use an inoculant to get Biofilters restarted.
6. Remove filamentous algae by hand or by using a notched stick. If unicellular algae persists consider adding more scavengers, plants, or re-evaluating your filter system.
7. Begin fertilizing pond plants after they start to grow. Divide and repot them if needed.
8. Watch for spawning fish.
9. When plants are growing vigorously, fertilize them once a month until temperatures reach the eighties, then fertilize them twice a month
10. Do not put tropical plants into the pond until the water temperature is 70 F.



Summer Check List

1. As water evaporates, refill it as needed.
2. Fertilize the lilies every two weeks when the water temperature is in the 80.s. Other pond plants only need fertilizer once a month.
3. Prune the old or decaying leaves and spent blossoms.
4. Feed the fish what they will eat in 5 to 10 minutes; this can be split into several feedings. Fish are active in the summer and will benefit from high protein and color enhancing foods.
5. Clean the filter as the pond dictates.
6. Check the submersible pump for debris in the impellers.
7. Be on the alert for unwanted summertime pests.

Fall check List

1. Feed fish high protein food in early fall, switch to low protein-high carbohydrate food as winter approaches. Color enhancing food is not necessary in the fall.
2. Stop feeding fish when pond water temperature lowers to 50 F.
3. If fish are to be left in the pond through the winter, make sure to keep an opening in the ice to provide a place for oxygen to enter and to allow other gases to escape.
4. Keep lilies well pruned, cut back frost-killed foliage and set pots in the bottom of the pond for the winter.
5. Clean the pond as much as possible. Make sure you remove as much bottom debris as possible.
6. After two or three freezes check tropical lilies. Store tubers in plastic bags filled with water in a cool spot for the winter.
7. Remove falling leaves from pond as often as possible.

Winter Check List

1. Consider a stock tank warmer, or a pond-deicing device, to keep an open area free of ice.
2. Let a small pump run all winter with a tube near the surface, to prevent ice from completely covering the pond.
3. Do not break ice with a hammer. The shock waves may kill your fish.
4. Let a ball float on the pond. Remove the ball each morning and replace it every night to help maintain a hole in the ice.
5. Do not feed your fish.

Pond Chemicals

Occasionally Mother Nature needs a little help keeping a pond in proper balance. There are a few products that are very effective to help restore, or to maintain, the proper balance in your pond.

Stress Zyme. This product contains a natural bacteria that speeds up the biological development in the pond. It gives the fish a coating that helps reduce stress. It also helps speed up the natural decomposition of organic matter in the pond.

Stress Coat. This product is a chemical that covers the fish with a slime coating. This coating helps relieve stress and helps prevent parasites. Add this product any time new fish are added to the pond or when a substantial amount of water is changed.

Crystal Lagoon. This product clears cloudy water caused by algae, dirt, and bacteria by chemically forcing the materials suspended in water to settle to the bottom of the pond. It clears pond water fairly quickly but does not change the conditions causing the cloudy water, it is a good short-term fix not a long-term control.

Microbe-Lift-PL. This product contains a photo synthetic bacteria that helps starve the algae causing cloudy water. It helps to lower ammonia and nitrogen levels in the water. It also feeds on organic matter on the

bottom of the pond. This product helps fish and plants resist diseases and parasites. It also helps eliminate undesirable pond odours.

Microbe-Lift / Autumn Prep. This product is very similar to the summer Microbe-Lift-PL but it also contains bacteria that will continue to be effective even when the water temperature drops below 55 degrees. When the water freezes the bacteria stops its activity but it will become active again when the water unthaws. It is very effective preventing buildup of dead leaves and organic sediment thus preventing a buildup of toxic gases during the winter months.

Bio-Zyme Digester. This product contains micro-encapsulated bacteria that feeds on the food sources that algae would otherwise use; it starves algae to death. It effectively eliminates organic materials on the bottom of the pond and uses up the ammonia and nitrogen in the water. This is an extremely effective product, but it is also a little expensive.

Barley Straw. This is exactly what it says – Barley Straw. This type of straw continuously releases compounds into the water that prevents algae. It takes about four to eight weeks to start working so be sure to use this product before the water becomes cloudy.