Controlling Algae in the Koi Pond and Water Garden by David Hopes

Article published on May 16th 2012 | Gardening

With the unusual warm winter and early warm spring in much of the United States pond owners are experiencing an unusual outburst of algae. This an age old battle with pond owners from the time they installed a koi pond or water garden and continues every spring as the water starts to warm. Algae diminish the beauty of the pond, cause wide fluctuations in ph, and starve the water of dissolved oxygen. We cannot totally get rid of algae but it can be controlled.

Soon after the pond is constructed and filled with water, the water will suddenly turn green with free floating micro algae. This is where many pond owners will rush out and purchase a UV sterilizer. UV sterilizers, also called UV clarifiers, will kill micro algae. Other methods such as algaecides or barley may be used to rid the green invasion. But where did the algae came from and why did it all of a sudden take over? Traces of algae may very well be present in the tap water that is used to fill the pond. Yet another contributing factor toward algae growth are millions of microscopic algae spores that are carried by wind, eventually falling into the pond, where they will grow into outbreaks if conditions are favorable. Denitrifying bacteria and larger plant life take longer to become established. The bacteria and plant life consume the nutrients in the water that the algae need to grow and it will die off. This process can be speeded up by seeding the pond with beneficial bacteria.

The next type of algae that makes a foothold in the pond is filamentous algae, known as string algae, hair algae, and blanket weed. It is most prevalent in the spring and diminishes greatly when the water temperature reaches 80Â° F. Filamentous algae cannot be controlled with UV clarifiers because it is not free floating. Many pond owners will use barley straw to control it with some results. So why does this type of algae seem to come back every spring and what steps can be taken to reduce its impact on koi and other aquatic life? During the winter months the metabolism of the pond slows to a crawl. The koi all but stop eating and the plants die back. Leaves and other debris are blown into the pond all winter long. Many pond owners will shut their pumps down in the winter and the oxygen levels in the pond are depleted. During the winter, the nitrosomonas and nitrobacter bacteria in the filter die off for lack of nutriment. In the spring as the water warms, leaves and plants that died back in the winter will start decaying. The activity of the koi will increase and produce more ammonia. Seeds and pollen from trees and other plants are blown into the pond. All of this leads to nutrients the filamentous algae will thrive on. As the water temperature gets to 80Â° F the denitrifying bacteria and larger plant life is established enough to remove enough nutrients where the filamentous algae cannot grow.

The best steps to take to reduce algae blooms in the spring start in the fall and winter. A good pond skimmer will remove most of the leaves before they have a chance to settle to the bottom. Some will still have to be cleaned from the bottom with a good pond vacuum or net and dying plants should be cut back. If the pumps are shut down in the winter, an air pump and air stones should be used to add oxygen to the pond and create enough of a current by uplift to keep a hole in the ice allowing harmful gases to escape. Spring time should be a time of cleanup and should start as early as possible. Remove any leaves and other debris before the water warms and starts the decaying process. Clean the filters and pumps and start them up as early as possible to regenerate good oxygen levels in the water. Seed the filters with bacteria and remember not to over feed the koi. Even though the koi are more active their metabolism does not peak until the water temperature reaches 80Â° F. In the early spring koi should only be fed every 2 - 3 days with an easy to digest koi food such as an all season or wheat germ. Even at 65 - 70Â° F water temperature koi should be fed only once a day and no more than they will eat in a few minutes. Adding calcium bentonite or calcium montmorillonite clay to the water will help stabilize the ph and reduce an algae outbreak. Adding a floating fountain is an excellent way to provide aeration and water movement for ponds too

large for skimmer applications.

Article Source:
http://www.articleside.com/gardening-articles/controlling-algae-in-the-koi-pond-and-water-garden.htm - Article Side

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Article Keywords:
Pond Pumps,Floating Fountains