



Information Sheet
“Problems & Solutions”

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Pond Problems and Solutions

Green Water

Green water is usually caused by an imbalance that has occurred within the pond. Generally there has been an excessive amount of phosphate, ammonia, nitrite or nitrate entering the pond (basically these substances are algae food) via fish, storms, run-off or wind blown debris. Also, if there has been a sudden change in pH, temperature or oxygen levels within the pond this could be enough of a shock to the pond environment to cause natural bacteria to die off or become ineffective. These natural bacteria found in the pond, which are the nature's cleaning system, require a pH between 6.5 and 9.0, temperature above 60 degrees Fahrenheit and dissolved oxygen levels between 3 and 5 parts per million. If these parameters do not remain constant the bacteria will die off, leaving no natural defense system in place to keep pond water clean. This is why it is important to always add natural bacteria and enzymes to your water garden. Winston Company, Inc. manufactures four bacteria and enzyme products designed to remove ammonia, nitrite and nitrate. They are Crystal Clear Nitrifier, Crystal Clear Biological Clarifier (Dry), Crystal Clear WS and Crystal Clear Biological Clarifier (Liquid)

Sludge

Just as with natural ponds, water gardens are susceptible to the same environmental factors. Whether it be wind blown organic material, uneaten fish food or fish waste, most ponds will eventually receive their share of sludge build-up on the bottom of the pond. This slimy, black, odorous film can become extremely harmful to pond fish because of the ammonia (rotten egg smell) release that often accompanies this build-up. If there is not sufficient natural bacteria and enzymes present in the pond the ammonia found in the sludge will clog fish gills and death will eventually result. This is why it is very important to always add supplemental bacteria and enzymes to the pond environment. Crystal Clear Biological Clarifier (Dry), Crystal Clear Biological Clarifier (Liquid) and Crystal Clear WS will all remove the harmful sludge and ammonia build-up.

pH

pH is a measure of acidity or basicity of water. This means that the more acidic the water is the lower the pH will be, and the higher the alkalinity in water the higher the pH will be. Knowing the pH of pond water is very important, especially when you are dealing with fish and plants. Rapid changes beyond 0.2 high or low can stress or even kill fish and aquatic plants. Pond pH generally follows a daily cycle of being lowest just before dawn and highest in the afternoon due to photosynthesis and aquatic life respiration. Winston Company, Inc. suggests testing the pH of your water first with Test Strips. Then if the pH is low, apply a pH Up, and if the pH is high,

apply a pH Down. However, if you simply want to guard against rapid pH swings Crystal Clear Buffer is an excellent product for this situation.

Chlorine & Chloramines

Chlorine and chloramines are disinfectants which are applied to municipal water systems. These substances make water safe for humans to consume. However, these substances are very harmful to fish and pond environments and can cause gill failure. Chlorine and chloramines can also kill aquatic plants if not removed from the system. Dechlorinator (Dry) and Dechlorinator (Liquid) will break the chlorine and chloramines bond, thus reducing these substances in pond water.

Plant Failure

When aquatic plants fail, it is usually due to lack of attention. Most pond enthusiasts think that if the plant is in water, that should be all that it needs. For fuller, more attractive blooms and heartier plants, it is important to always fertilize your water plants. Aquatic Plant Fertilizer provides aquatic plants with essential nutrients needed for stronger, healthier plants.