## **Fish Pond Basics**

fish ponds cannot utilize poisons to control algae or bacteria; this leaves chlorine out. the water should circulate also, and if no circulation exists, expect trouble as water needs to move to stay 'healthy'; this means that a pump must be used. the primary idea of the floatron is to mineralize the water - with beneficial minerals which are inhospitable to microorganisms but of no consequence to the larger plants, or the fish. aeration of some sort remains a necessity, as the fish must have oxygenated water to breathe.

other or typical means to keep fish ponds from stagnating or turning green are:

1- adding copper sulfate to the water. this is too much, too fast, and not a nice chemistry to ingest. also, you add a lot of sulphur with the copper, and thats not good either. kills everything in sight, including the fish. not too expensive to buy, unless purchasing this chemistry with a fancy name on the bottle.

2- aeration is good, but usually localized to a small area of the pond, leaving most of the water unaffected. typical systems emit air bubbles from the bottom, which simply rise to the surface. without correct water motion, not much oxygen is picked up by the water during the bubbles short trip to the top - but its better than nothing.

3- ultrasonic frequency broadcast within the body of water can affect and control algae growth, but one wonders what effect that frequency range has on fish...... and the systems are not cheap. oxygenation still needs to happen to aid the fish.

4- straw bales placed in the pond can help, and need changing every so often. fairly heavy and bulky; a natural approach to water maintenance. not always 'strong enough' for some situations.

5- fountains are good, as they help aerate, but the water should be additionally pumped / moved to get the oxygen around - a tough situation. algae blooms are not normally halted by a fountain's activity; the resultant water movement from a fountain is just about what the pump does itself, ie, circulates from where it falls to the pump intake. the rest of the pond stays still.

6- changing the water out every so often, and cleaning out the water feature can work, but it is labor intensive and not fun. the fish have to accomodate to the new water each time also. by doing this, algae will still come back every time.

7- live bacterial filters can be effective, although their forte is just that - bacteria. algae can and will still grow in the body of water. still need oxygenation and water movement.

8- phosphates..... real food for algae. gets into your water by way of rain, dust, runoff, you name it. phosphates can be removed with a good 'phosphate remover' (chemical); once down to trace amounts, the algae will not have much to feed on. removing phosphates in conjunction with mineralized (floatronized) water is a good combo.

the floatron can help in virtually all of the above situations (except #1). koi ponds, or all ponds for that matter, need to have oxygenation, and water flowing and recirculating (the floatron will not work in bodies of water which have an inflow and outflow). in addition to these basics, the water should be mineralized just enough to control the algael growth. this is done best with the floatron.