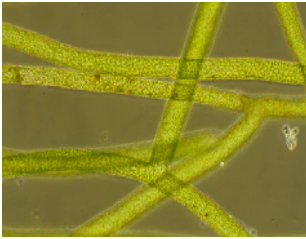


Irrigating from Ponds

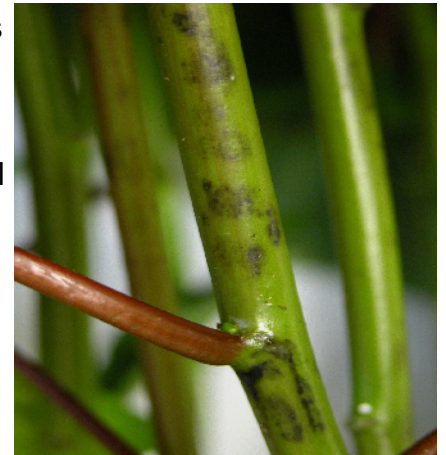
Ponds can have severe effects on filters, microjets, spitters, spitters, drip tape, and all types of micro emitters. Most ponds have a higher concentration of algae and other micro-organisms than well water. There are exceptions, but overall, ponds pose more of a hazard to an irrigation system. It is the algae that causes most problems in filters and emitters. It is an excellent environment for growing algae. Warmth, water, fertilizer and down times can cause an algae bloom in the system.

The best filtration system for pond water is a sand media filter. However, at times it can seem like a nightmare when it becomes plugged. Algae grows in long stringy filaments and can set up like filter paper catching everything that is pumped into the filter. At times it can become such a strong filter that very little water can pass through it before it stopped passing water through the filter. At this point something drastic must happen in order for the filter to work.



Filamentous Algae

One of the most common treatments is using chlorine. Usually liquid chlorine is introduced into the filter in an attempt to remove the algae. Chlorine is well known for its affects both good and bad. However when you think about the way chlorine works, it is not very effective for several reason. Chlorine is corrosive to metals and can destroy the plastic parts by making them brittle. A can destroy a filter with chlorine in one application. It is very corrosive to most metals and is very destructive to stainless steel. One grower had what he thought was a plastic filter with no meal parts. They grower injected a high dosage of chlorine. What he didn't consider was the metal screws holding it together. They rusted out completely in less than a month after the chlorine as applied.



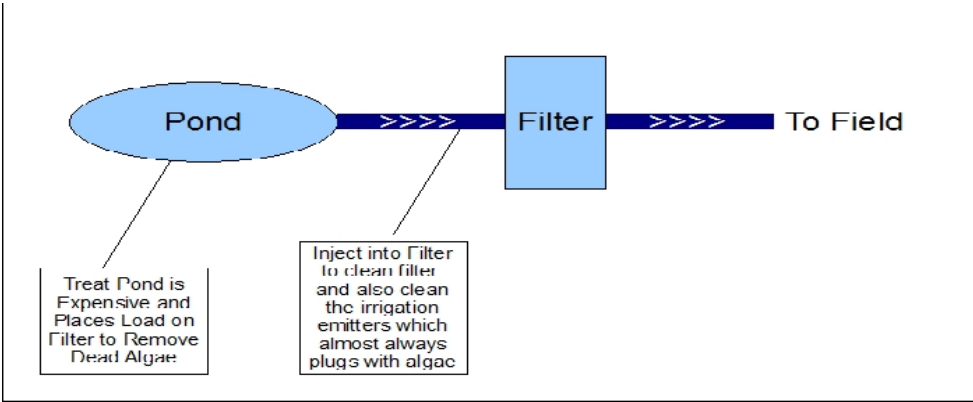
Damage to Plant from Chlorine

Chlorine will kill algae and other micro-organisms, but unless it is applied in extremely high dosages, it will not remove the micro-organisms. Think of a swimming pool. Chlorine is usually applied to the pool at low dosages of 1-3 ppm. The chlorine kills the algae, but it must be scrubbed off the walls so that the filter to can remove the dead cells. In a situation where the filter is stopped up with algae, it is over saturated with algae and cannot remove any more. Chlorine can also be toxic to plants at even low dosage and at high dosages, it can kill the plants.

Another treatment that is commonly used in agriculture is acid. Phosphoric or sulfuric acid is added to the filter to try to remove the algae. While the acids are are corrosive, they have no ability to kill or remove the algae. The only affect would be when it applied almost full strength and it burns the algae by physically destroying the cells. Much like when acid is spilled on skin and the acid burns the tissue. Other than that, it has little if any affect on micro-organisms.

A common idea is to treat the pond. However, that can be expensive and not effective. The pond would be like the swimming pool mentioned above. Once you start treating the pond, you need to treat it on a regular basis to keep it clean. The cost of cleaning the pond can be

very high. You could chlorinate the pond and it would still require the filter to remove the dead algae cells. This is not exactly what is wanted.



The best idea to treat treatment would remove the algae from the system and also remove the blockage in the micro-irrigation system. The ideal product needs to remove the dead cells without adding any burden to the filter. It is a much better idea to treat the water as it leaves the pond and clean the filter at the same time.s