

The Facts About UV

UV or Ultraviolet light has been used in many industries. It is used for sterilizing instruments in the medical field and for sterilizing drinking water. It has also been used for aquariums and ponds for several years for algae control. Basically there are four main components of the ultraviolet sterilizer: a germicidal lamp, a quartz sleeve to protect the lamp from the water, a ballast to provide the correct electrical requirements for the lamp, and the housing which holds all of the other parts and the water flows through it.

There are a lot of misconceptions regarding the use of UV in water gardens. One concern is that you will sterilize your pond and kill all of the beneficial bacteria. This is impossible. Not all of the water will pass through the UV in one circulation and there is always going to be beneficial bacteria inside your biological filter and on everything in the pond, including the liner. What the UV will do, when properly sized for your pond and flow rate, is reduce some bacteria, including harmful bacteria, as well as microscopic organisms that could be harmful to your fish. It will also destroy the DNA in single cell algae cells thereby killing it very efficiently. This will provide clear water when the turbidity is due to suspended algae. UV provides 100% success for achieving clear water from single cell algae in a pond.

While UV will provide clear water it does not filter the pond water. One concern of using UV in a pond is that some people will look at their perfectly clear pond and think that the water quality must be good for the fish. You can have clear water and still have water that would be detrimental to the fish. Always have good biological filtration along with the UV in your pond. You need the biological filter to break down the ammonia given off by the fish and to break down dead organics including the dead algae that is killed by the UV. If you don't have enough biological filtration then you may see one algae problem disappear (green water) and another one (filamentous algae) replace it.

When shopping for a UV you may find some confusing statements. Some companies don't even call their UVs sterilizers. They call them clarifiers. Company x says that their 25 watt UV is for ponds up to 1200 gallons and company y says that their 25 watt UV is for ponds up to 2300 gallons. What's the deal? There are actually two reasons for the discrepancy. When a UV is sized as a clarifier it may not provide crystal clear water and a large number of plants are required to assist with the clarity. If a UV is sized for sterilization then you can have crystal clear water even without plants in the pond, although the plants will certainly make for a healthier pond. Also, there are differences in the efficiency of the UV light from one brand to the next. 25 Watts from one company may not be as efficient as a 25 watt from another company.

Adding a UV to your pond can provide some real benefits but get the facts before making your purchase and be sure to include adequate biological filtration as well.