

HORNBAKER GARDENS' RECOMMENDATIONS FOR POND TREATMENT AND MAINTENANCE

Here is a summary of how we keep our water clear and our pond clean through the spring, summer and fall, and what we do for winter. None of the products that we put into the pond are chemicals. Rather, they are natural substances designed to help the pond achieve a balanced ecosystem. In a balanced ecosystem, the plant material and bacteria in the pond work together to remove nutrients so that there are not enough nutrients left for algae to thrive.

SPRING: We start the spring with a pond cleanout, preferably in late March or early April. The purpose of the cleanout is to remove as much as possible of the organic matter, which if left in the pond, would tend to make your water dark and would feed the algae. Leaves and other debris are removed, the pond is sprayed down, and any silt and sludge is pumped out. (For a complete guide to doing a pond cleanout, see our website, www.hornbakergardens.com.) Before we fill up the pond, we sprinkle EcoBlast all over the pond and stream floor. This will help break up any organic matter that the cleanout missed. We fill the pond with fresh water, wait 24 hours, and treat with S.A.B. The one-two punch of EcoBlast and S.A.B. should go a long way toward having any string algae problem under control.

Right away, we also start adding AquaClearer (bacteria) to the pond, according to the directions on the container. We usually use the dry form, but it also comes in liquid. Even better, especially if you have had some problem with green water the previous year, start the season with AquaClearer Cold Water Liquid. It is a liquid with a powerful bacteria charge that works well even in cold water, and is great for getting the pond off to a good start after a cleanout.

The instructions on the AquaClearer container call for you to use a prescribed dose for the first two weeks. After that, we put a pinch or so in the skimmer every day throughout the spring and summer to keep that bacteria growing well.

If your pond is short on plants, get some planted as soon as you can find some. Our plants arrive in early May. We would be glad to recommend some good, hardy plants that can stay in the pond all winter, as well as some fun tropical plants, most of which can be overwintered indoors as houseplants.

SUMMER: Continue putting bacteria in the pond on a regular basis, and make sure you have plenty of plants in the pond. We always float some water hyacinths in the BioFalls. Wedge a stick of bamboo, or some other sort of stick, about a third of the way back from the front, and place the floaters in the back two-thirds. The stick will keep the plants from going over the waterfall. (Use water lettuce if your BioFalls is in more shade.)

New ponds often have problems with green water because the plant material is not very mature. Owners of new ponds need to be religious about their use of bacteria, and try to get plants going as soon as possible. More established ponds with mature plant material usually don't have much problem with green water. However, if you start having green water, use AquaClearer in higher doses, the way the instructions say to get the pond going in the spring. Do **not** take the filter pads out of the BioFalls and spray them off. This is only destroying a lot of the bacteria that has been growing there. You can spray off the pad in the skimmer occasionally if it gets slimy green from filtering out the algae. Also, do **not** pump most or all of the water out and replace it with fresh water. This fresh water will contain nutrients that will feed the algae, and make it even worse. Be patient, add plants, use bacteria, and your pond will eventually clear up, especially as the sun gets lower in the sky in August.

Most ponds get some string algae during the year. Often, it starts in the stream, if you have one, and spreads to the pond. A monthly treatment of S.A.B. may control the string algae quite well. If you start getting a bad case of string algae, use the one-two punch of EcoBlast followed by S.A.B. Physically remove what string algae you can. Then shut down the pump for a few minutes while you sprinkle EcoBlast right on the string algae. Wait 24 hours, and then treat with S.A.B. You are not using enough S.A.B. unless it turns your water milky for a while, perhaps even for 24 hours.

For those who are interested in barley bales as a more natural method of controlling string algae, we would suggest using EcoBarley instead. It is a pelletized form of barley that will act much more quickly than actual barley straw, and without the mess.

FALL: If you stay on top of any string algae problem in the fall, you will have little or no string algae problem in the spring. Be sure to treat with S.A.B. during

some warm weather in late September or in October. We have done this for the last two falls, and have had virtually no string algae in the spring. If you have a fair amount of string algae in the fall and do nothing about it, you could have a real explosion in the spring. The string algae grows even in cold water. So in the spring, it can really put on a lot of growth before the plants start growing, and before the water is warm enough for the bacteria to survive and start multiplying.

By the end of August, we have usually quit putting any more AquaClearer (bacteria) in the pond. The plants are doing a good enough job by themselves, and the sun is lower in the sky, so suspended algae is no longer a threat.

Leaves are always a problem in the fall. It helps to remove what you can from the pond. Some people put netting over their ponds. We shut down our pumps in October so that they quit bringing leaves down from the stream. But we don't worry too much about leaves. We know that we will do a cleanout in the spring, at which time they will be removed.

WINTER: Many people leave their pumps running all winter, which is fine. You get the look of a Colorado stream in your yard all winter. In the worst weather, the top of the BioFalls and the stream will actually freeze over, but the water will continue to run underneath. The water in the skimmer will not freeze, and it is here that the water will pick up oxygen for the fish.

The problem with leaving the pump running is that you can get a fair amount of ice built up along the stream. The longer the stream, the more water is removed from the pond and made into ice along the stream. If the water level goes down too far because of ice build-up or for any other reason, the skimmer might go dry, the pump may burn up because no water is going through it, and the check valve can freeze and crack.

One solution is to disconnect the check valve from the PVC pipe that runs to the BioFalls, and turn it toward the front of the skimmer. Then attach the necessary PVC fittings to make the water go over the top of the skimmer and shoot down into the water in front of the skimmer. Aquascape sells the fittings in a kit form, but you could also assemble them at your local hardware or farm supply store. Then just leave the

pump running during cold weather. I have seen that a couple of customers have used this method, and it looks as if it was very effective. We plan to try this out ourselves.

During the last few years, we have not left our pumps running. We have tried a couple of alternatives. For a few years, we placed a cheap, small pump on the second shelf, and just let it push water to the surface during freezing weather. This worked fine, although the pump started getting a bit clogged by the end of winter, even though we had placed it in a plastic basket to try to keep leaves from getting to it. The water moving toward the surface kept an open area for the benefit of the fish.

Recently, Aquascape came out with a 100-watt floating heater (instead of the 1250-watt stock tank heater that many were using). We put one in each pond, and never lost a fish. The directions said to use one heater for every 1000 gallons of water. Our pond in the front yard contains 20,000 gallons. But I figured that we have enough thaws during most years that the fish would probably be fine as long as there was always one circle of water that never froze. The winters of 2004-2005 and 2005-2006 were not particularly severe, so perhaps we were lucky. But for ponds of 3000 gallons and under, I would think that one heater would be plenty even during a severe winter. It keeps an open circle of water over a foot wide.

I hope this information is helpful. If you have any questions, feel free to email me at mail@hornbakergardens.com, or call me at 815 659-3282. Better yet, we can chat while you are here shopping.

Rich Hornbaker