

# Pond Care

## A Garden Guide

Doing a few things throughout the year makes pond care much easier, reduces the need for large maintenance undertakings, allows your pond to consistently look good, and avoids many common problems pond owners experience with fish, plants, and water quality.



## Water Quality Problems

Murky or cloudy water – Murky water is caused by an excess of organic material, (fish waste, uneaten food, dead algae, decomposing plant material, leaves, and debris) that are suspended in the water, or have formed sediments on the bottom. This material is often too much for your filter to remove. Help your filter out by limiting the amount of this stuff entering your pond.

What to do:

1. Surface cleaning, net out leaves or debris that blow into the pond on a regular basis.
2. Prune lilies and other plants of old yellowing leaves and spent flower buds.
3. If the pond is in a location under or near deciduous trees, use netting in the fall.
4. Don't overfeed your fish (see Garden Guide - Fish Care).
5. Despite all these efforts, some material will accumulate on the bottom of the pond. Spring and fall is a good time to remove some of this material with a long handled fine mesh net, wet vac, or siphoning vacuum.
6. Products like Pond Zyme, Microblift, and the aptly named Sludge Digester are beneficial. They contain enzymes and bacteria that break down and metabolize fish waste, uneaten food, and decomposing organic material. Make sure these products are fresh. These beneficial organisms can deteriorate rapidly when stored.

Green Water - Green water algae is caused by floating diatomic algae too small for your filter to remove. It arrives on spores in the wind and the rain. Algae almost always occurs in a new pond while it's trying to establish itself. It takes time for natural ecological processes and balance to develop (that's why cleaning out your pond completely, and scrubbing it with a toothbrush is ironically a good way to cause algae, not remove it). Algae blooms commonly occur in established ponds in the spring when the natural ecological balance is trying to reestablish itself, the other water plants have not yet grown in, if you feed your fish too much, too soon, or have not followed the basic maintenance steps outlined here.

Algae is a plant, it's not your enemy. It's harmless and an important addition to your fishes' diet. Only when it gets out of control, and this is common, do you need to take action. Green water is not unhealthy. It may be unsightly, and nobody wants a pea soup pond, but your fish love it. Newly hatched baby koi and goldfish use it as a food source.

What to do:

1. Follow all the steps under murky water prevention. Do not overfeed your fish. Decomposing organic matter, and uneaten fish food is algae food.
2. Completely draining and scrubbing your pond is NOT recommended. There are complex ecological processes in an established pond that help keep algae under control. This is why some pond owners can practice benign neglect, and do not encounter any problems. If you follow these guidelines, a natural, balanced ecosystem should establish itself with no effort on its own, leaving you more time to enjoy, and less on major undertakings.
3. Use of barley straw (Bales, pellets, or concentrate). Barley straw does not kill algae, but releases small amounts of chemicals that deter algae growth, improve water clarity, and is especially important in the early spring, before other plants begin their growth cycle.
4. Use of water plants, especially water lilies, that are not only beautiful season long blooming, fragrant additions to your pond, but are an essential part of algae control. Their large floating leaves and nutritional requirements block sunlight and use nutrients otherwise available to algae.
5. Algaecides like Algaefix are effective in removing string algae and green water on a temporary basis. Dead algae must be removed when using these products or they become food for an even bigger algae bloom later. Algaecides deplete your pond of oxygen, so be careful to maintain strong aeration during treatment.

6. UV lamps kill the “pea soup” green water algae spores, bacteria, and pathogens that are harmful to fish, and are an effective, technological way to control green water.

### Filter Maintenance

The mechanical part of your filter is the foam that can be removed and rinsed with a hose as needed. The biological part of your filter are the bio-balls, lava rock, or other items with large surface areas for beneficial bacteria to colonize. This is their home. Please don't disturb them by washing them away, or killing them with chlorinated water.

Calculating the Volume of Your Pond:

Multiply the length x width x depth x 7.5 = no. of gallons.

### Stocking your Pond

Koi ponds should be 400 gallons or larger. Koi need lots of room, and their average life expectancy is over 100 years. There are reports of the oldest known koi exceeding 200! The amount of koi per gallon of water depends entirely on the quality and extent of your filtration system.

Smaller ponds should be stocked with goldfish varieties only. Goldfish can be stocked at a rate of 1 or 2 fish per 50 gallons of water, depending on your filtration system. Version

2.2 Feb 23

