

#### Livestock and Natural Resources

**Ponds do not come with owner's manuals. Most people stumble into being responsible for a pond without giving a thought to the understanding and management that will be needed.**

**Here are some of the main perceived problems:**

**Pond plants are generally beneficial, providing feeding areas for fish, refuge for small fish from bass, and protecting shorelines from wave erosion. However, when plant growth becomes a nuisance, several approaches can be used to manage the problem.**

**The problem plant must be identified before correct management steps can be taken. Herbicides or other control measures that work on one plant may have no effect on another plant, or even make the problem worse. Collect a fresh sample of the plant and make a sketch of your pond. Take both to your county Extension office for assistance in identification and advice on management options.**

**There are two common reasons that plants get out of control in ponds. First, too many nutrients may be getting into the pond from sources such as livestock or overfertilized yards. This often leads to excessive growth of algae. Filamentous algae is stringy, lacks any type of leaf, and often resembles green fiberglass insulation. Planktonic algae is visible only under the microscope, but when overly abundant it gives the water a thick green color, making it difficult to see a shallow submerged object.**

**Another reason for excessive plant growth is that there may be too many shallow areas in the pond. Areas with less than three to four feet of water are ideal for aquatic plant growth. Many ponds are built with improper shoreline slopes. Livestock around a pond can also trample banks and dams, creating shallow, weed-prone edges.**

**Herbicides offer quick results, but if the underlying cause of the problem is not corrected, plant growth will reoccur. Grass carp offer an option for controlling most rooted aquatic plants, but if overstocked these fish can completely clean out a pond and leave no feeding or refuge areas for forage fish.**

**When large numbers of fish show up dead within the period of a day, a fish kill has occurred. Smaller numbers of fish dying over a period of several days indicates a disease-related problem. (See the section entitled "Sick Fish.")**

**Oxygen depletion is the leading cause of fish kills in Oklahoma ponds. Because**

**low oxygen kills are usually sudden and massive, many pond owners mistakenly jump to the conclusion that a pesticide must be responsible. The following signs point to low oxygen as the cause of a fish kill:**

- Fish gulping at the water's surface.**
- Bass die first.**
- Large fish die before small fish of the same species.**
- Pond water changes color.**
- Light scum or a film is visible on the water.**

**If you see fish gulping at the surface and not too many have died, it may be practical to try saving the rest by aerating the water. This can be done by backing a boat into the water and running the outboard motor with the propeller near the surface to maximize splashing. A pump can be set up to allow water to cascade over boards or a roll of fencing to break it up into as many drops as possible. Some pond owners report success in using a tractor-mounted bush hog to aerate the pond. Aeration should continue at least until fish are no longer at the surface and possibly for as long as several days to allow oxygen levels to recover.**

**Pesticides do occasionally cause fish kills. Some or all of the following signs can indicate a pesticide fish kill:**

- Animals other than fish are dead.**
- Small fish die sooner than large ones.**
- Fish may be seen swimming convulsively.**
- Fish with fins flared out.**

**Testing for pesticides is expensive and will not certify that remaining fish are safe to eat. A short list of the names of suspected pesticides is needed if testing fees are to be kept affordable. If you believe the expense is justified, collect samples as soon as possible for testing.**