

## Aquatic Vegetation

The cause of the muddy water should first be determined and then controlled. This will allow the pond to clear over time. Planting windbreaks and deepening shallow shoreline areas of the pond will reduce turbidity due to erosion. Livestock can be fenced from a pond and given an alternate source of drinking water. Crayfish are not normally a problem in ponds that have established bass populations because predation of bass on crayfish will often result in reduced crayfish abundance. Nuisance fish such as carp or bullheads can be removed by rotenone as discussed previously in the section on removal of unwanted fish. Shallow ponds with large numbers of catfish will often be muddy. This type of pond is best left alone. Any attempt to clear this type of pond will usually fail as the catfish will continuously stir up the pond bottom.

If the water does not clear, the turbidity could be due to suspended clay particles. This type of water can be quickly cleared by broadcasting either 75 to 100 pounds of ground agricultural gypsum or 5 to 15 pounds of aluminum sulfate (commercial alum crystals) per acre-foot of water.

Hay can also be applied at about two bales per surface acre. The bales should be broken apart and scattered about the surface of the pond. As the hay decays, the clay particles will settle out. The decaying hay will also promote the growth of microscopic plants and animals which are food for small fish. If the pond does not clear, additional hay can be added at a rate of two bales per surface acre every two weeks, not to exceed a total of 10 bales per acre per year. Care must be taken to avoid depleting oxygen in the pond which could lead to a fish kill.

Aquatic plants serve many roles in ponds. They produce oxygen which is used by fish and they remove waste nutrients. They provide cover for small fish, spawning habitat for adult fish, and substrate for small aquatic animals which are food for fish. Aquatic plants reduce wind erosion to shorelines by dampening wave action. At times, however, plants may become too abundant, interfering with the recreational use of a pond, including such activities as fishing, boating, and swimming. Excessive plants can also disrupt the ability of predators such as the largemouth bass to capture prey species such as the bluegill. Under such conditions, growth of both of these species will be reduced. In addition, decaying plants consume large quantities of oxygen, which may result in fish kills.

When ponds are constructed with minimal amounts of shallow water and are relatively fertile, aquatic vegetation is normally not a serious problem. If aquatic vegetation becomes overabundant, three methods of control are available. These include mechanical, chemical, and biological techniques (see Florida Cooperative Extension Service Circular 707, "Weed Control in Aquaculture and Farm Ponds").

Mechanical control may be as simple as cutting plants such as willows or cattails from the dam of a pond or raking submerged plants from a favorite fishing area. Large mechanical harvesters are also available, but are cost-prohibitive and impractical for small ponds. Such devices are generally used to maintain boat trails in larger lakes. Mechanical control is time consuming and its effects are short-lived if total control is not achieved.

