Reducing unwanted aquatic plant and algae growth in ponds

Source: Forrest Wynne, extension aquaculture specialist, Kentucky State University

During the spring and summer, we get a lot of questions at the extension office from pond owners about how to control unwanted aquatic plant and algae growth in their ponds. Here are some ideas to help reduce the amount of these unwanted plants in your pond.

Whether constructing a new pond or renovating an old one, minimize shallow areas of less than 2.5 or 3 feet around the shoreline to prevent unwanted plant growth. Aquatic plant and algae typically establish first in these shallow areas before extending toward the center of the pond.

If you are installing a new pond, make sure it is located away from watershed runoff consisting of nutrients from fertilizers, manure and septic wastewater. These promote unwanted aquatic growth and may pose hazards to aquatic life.

If possible, construct a pond near a source of electricity. You may want to install electric surface aeration devices. You can install these in shallow ponds that are 10 feet or less in depth. Deeper ponds may benefit from the installation of a diffused aeration system. Air is pumped through hoses from a compressor on the pond bank to air stones located on the pond bottom. Both surface aerator and diffused aeration systems help circulate pond nutrients and reduce stagnant water that often encourages plant or algae growth.

Adding agricultural limestone to ponds constructed in acidic soils will raise the pH of the bottom mud and free up phosphorus and other nutrients. These nutrients will encourage the development of beneficial plankton blooms and enhance fish growth. Pond soils may be submitted for pH testing and liming requirements. Use the same nutrient amounts recommended for alfalfa fields. Total alkalinity of pond water may be tested, and samples ranging between 50 - 100 mg/L are good for fish growth.

Aquatic dyes can be added to impart color to the pond water and help reduce sunlight penetration to the pond bottom. This may help control plant or algae growth. Unfortunately, aquatic dyes are not effective in controlling unwanted growth in shallow water. Dyes may best be added to a pond when water retention time is greatest, often in the middle summer and early fall.

Triploid grass carp are legal to stock into private Kentucky ponds. They will control soft-stemmed plants and branched algae that are easily digested. The fish contain an extra set of chromosomes which makes them unable to reproduce. Grass carp 10 inches long or larger should be stocked into ponds containing adult largemouth bass to avoid predation. Grass carp grow quickly and should be restocked every few years as younger, smaller fish control vegetation better than larger fish. Adult fish can grow up to 20 pounds or more. They are powerful and can be dangerous to handle.

Both liquid and granular algaecides and herbicides are available to temporarily control unwanted aquatic plant and algae growth. Aquatic plants and algae must be correctly identified before these chemicals are applied. Follow all label recommendations and observe all application restrictions.

Your local extension agent can help you identify aquatic plants and algae. For help with identification or other topics related to pond management, contact the (COUNTY NAME) office of the University of Kentucky Cooperative Extension Service.

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