

February 27, 2015

AGRIVIEW

By: Rick Hirsch
County Extension Agent

Muddy water is often a problem in East Texas farm ponds because it inhibits the growth of natural fish foods and is not aesthetically pleasing. In addition, the reduced visibility in muddy ponds limits the ability of sight-feeding predators, such as large mouth bass, to feed on forage populations effectively.

The first step in clearing ponds is to inspect the watershed and shoreline for signs of erosion. Grass sod should be established on bare areas. Rocks or other rip-rap material should be placed on shorelines of larger ponds if eroded by wave action.

Many ponds become temporarily muddy following heavy rains, but clearing usually occurs in a few days. Abundant bullhead catfish and/or common carp populations may also cause muddy conditions and should be eliminated.

If heavy rainfall or undesirable fish are not causing muddy conditions, the cause is negatively charged clay particles causing coagulation precipitation of clay particles.

A good compound recommended for clearing ponds is agricultural limestone.

Early spring is a good time to start a management program for ponds and small lakes. If managed correctly, these ponds or lakes can be a source of recreation and food for your family. Lets look at some management tips to get started.

The first area to look at managing a farm pond is to know the pH in the water. Liming is a critical step that is often overlooked by landowners. Just like pastures, ponds have an optimum pH level that enhances fish growth by keeping the food chain in balance. When pH dips below 20 parts per million, it is time to lime. Ponds in East Texas should be tested just like you test a hay meadow. It is very important to test before you begin a stocking program.

Late winter to early spring is the best time to lime a pond. We recently acquired the material to provide an alkalinity and pH test here at the office. You need to call ahead to make sure we are available to run the water sample before you bring it by.

What lime source is needed? Agricultural limestone just like is used in pastures and hay fields is an adequate material for correcting water pH. DO NOT use hydrated lime as it can change the pH too quickly and cause a fish kill.

Alkalinity and hardness are important in providing adequate natural food and in maintaining a healthy fish population. The pH of the pond cycles daily because of respiration and photosynthesis. Carbon dioxide released from respiration reacts with water, producing carbonic acid. The pH scale measures the acidity; therefore, as carbonic acid is formed the pH is lowered or the pond becomes temporarily more acidic. Algae use carbon dioxide for photosynthesis during daylight hours and the pond water becomes less acidic with the decline of carbonic acid. Because of this, a pond pH normally fluctuates between 6.5 and 9. If the pH drops below 5, as it does in ponds that receive acid runoff, or rises above 10, as in low alkalinity ponds with excessive algae blooms, fish will be stressed and can die. The only practical method to manage for abnormal pH changes is to increase the alkalinity of the pond.

Alkalinity is a measure of bases in the water. Bases react to neutralize acids and, therefore, directly influence pH. As bases react with the hydrogen ions present, they buffer or suppress pH changes. Some alkalinity is necessary for good algae production.

An alkalinity of 20 ppm or more is necessary for proper algae growth and therefore, good fish production.

Hardness is a measure of calcium and magnesium ions. Hardness concentrations are usually similar to alkalinity (if derived from limestone) but can be different, especially in coastal areas. A lack of hardness can reduce plankton production and cause muddiness.

DRINKING WATER:

Safe drinking water is important to everyone all the time, especially in the home where we cook, eat and spend many off work hours.

If you have any doubts at all about the quality of water in your home, a water test is the only way to discover if a problem actually exists. And quality is important because it involves the health of all family members.

In addition to illness, symptoms of water quality problems are - poor taste, unusual color or odor and staining of clothes or fixtures by water.

Water from public or municipal water systems is regularly tested for contaminants regulated by Federal and State standards. However, some public water supplies may have water quality problems caused by distribution.

Also corrosive water or deteriorating pipes in the house may add contaminants to municipal drinking water after it enters the house.

If your water source is a private well, you alone are responsible for assuring it is safe. Routine testing for a few of the most common contaminants is recommended.

Even if you currently have a safe, pure water supply regular testing is valuable. It establishes a record of quality that can be helpful in solving any future problems, or in

obtaining compensation if someone damages your water supply.

In Henderson County, homeowners can take of send their samples to Texas Department of Health in Tyler for a bacteria test.

Water tests fall into two basic categories: Bacteriological and chemical.

The first determine if water is bacteriologically safe for human consumption. It detects the presence of coliform bacteria, a group of micro-organisms recognized as indicators of pollution.

A laboratory reporting the results of a bacteriological test on a water sample may use such terms as safe or unsafe for human consumption, or coliform negative - the sample is safe or coliform positive - the sample is not safe.

Chemical tests identify impurities and other dissolved substances. Other tests indicate the degree of hardness and identify various substances or conditons causing sink and bathtub stains.

Water sample kits can be obtained at County Extension Office.

IMPORTANT DATES:

- March 19th - Henderson County Master Gardener Association 2015 Spring Conference - First United Methodist Church - Athens - 5:00 p.m. - Tickets \$20.00 available at the Extension Office or any Henderson County Master Gardener
- April 2nd - Cattleman's Cow-Calf Clinic - 3:00 p.m. - Henderson County Fair Park Complex, Athens - \$15.00/Person - 1.5 C. E. U.'s

Rick Hirsch is the Henderson County Extension Agent - Agriculture for the Texas A&M AgriLife Extension Service. Visit our web page at <http://henderson.agrilife.org/>.