

OSU EXTENSION NEWS

Understanding the algae in your farm ponds

Blue-green algae, properly called Cyanobacteria, occurs naturally in many farm ponds throughout the Midwest.

As the name implies, it is not truly an algae but a bacteria that contains chlorophyll and can convert sunlight to energy for its replication. For most of the year, the concentrations are low and the organism causes no problems, but under the hot dry conditions of late summer reproduction of the organisms is very rapid resulting in high concentrations called blooms. These blooms are usually visible as a scum or paint on the surface of the water. Blooms can be many different colors from green or blue to red or brown. Under normal conditions the organisms are homogeneously suspended in the water, but as they multiply rapidly, large numbers of dead organisms float to the surface. Wind action causes them to be concentrated on the downwind side of the pond so that concentrations can become extremely high in certain areas.

Problems occur when livestock consume water from the bloom area. The Cyanobacteria produce several different toxins, but the two main ones affect the nervous system and the



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liver. Livestock affected by the nervous system toxin can exhibit signs such as muscle tremors, difficult breathing, and convulsions. Animals affected by the liver toxin show weakness, pale membranes, bloody diarrhea and usually death. If both types of toxins are present, the nervous system toxins usually kill the animal before signs of the liver toxin can be manifested. Dead animals in or near the water certainly suggest blue-green algae toxicity.

Treatment of blue-green algae toxicity is seldom attempted and almost never successful. The key to reducing losses is preventative management. The following are practices that should prove helpful:

- Check ponds for algae blooms in hot weather.
- Fence off downwind drinking areas.
- Use other water sources, when temperatures rise to high levels and algae blooms are observed.
- Copper sulfate has been used to prevent algae blooms, but it is difficult to calculate dosages, difficult to distribute evenly over the pond and tends to be short lived.

For more information contact your local OSU Extension office.