

Veterinary toxicologist warns of blue-green algae dangers to livestock, pets

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Blue-green algae may bloom in fresh water where environmental conditions make it possible for these organisms to grow and replicate rapidly. Credit: Kansas State University

Summertime is known for its heat. Add some rainy days to the mix, and this combination can be the recipe for the development of blue-green algae, according to a toxicologist at the Kansas State Veterinary Diagnostic Laboratory, a part of Kansas State University's College of Veterinary Medicine.

Also known as cyanobacteria, blue-green [algae](#) may bloom in fresh [water](#) where environmental conditions make it possible for these organisms to grow and replicate rapidly. Conditions typically associated with blue-green algae development include warm weather, lots of sunlight and the presence of nutrients in the water, which often are the result of agricultural runoff.

Steve Ensley, a clinical veterinary toxicologist at Kansas State University, said health problems can arise when animals and people come into contact with the various toxins produced by cyanobacteria. The most prominent problem involves a toxin called microcystin, which affects the gastrointestinal tract and liver.

When animals are exposed to this toxin, they may experience vomiting or diarrhea, Ensley said. If the cyanobacteria exposure is severe, it can be lethal and cause liver failure in animals. Although gastrointestinal problems and [liver failure](#) also are possible in humans after blue-green algae exposure, Ensley said irritant effects are more common. Humans often experience skin rashes, sneezing, coughing, irritated eyes, running noses and conjunctivitis after blue-green algae exposure.

"If there is a bloom in a body of water that animals are drinking out of, then we need to move them away from it as fast as we can," Ensley said. "Fence off that water source if at all possible."

If livestock and/or pet owners are worried that their animals could potentially be exposed to blue-green algae, then they should regularly

check for signs of its development, Ensley said.

"There is some confusion between the blue-green algae blooms and other vegetation on water," Ensley said. "If a blue-green algae bloom occurs, then it looks like blue or green paint was spilled on the surface of nonmoving water."

With warm weather and rainy days on the rise, the risk of blue-green algae blooms may not slow down soon.

"It's going to be a concern until we get into cooler weather, so it may be a problem until September as long as the weather stays warm and we continue to get rainfall," Ensley said. "Rain causes lakes and ponds to become enriched with an excess amount of nutrients, like phosphorus and nitrogen, causing the bacteria to bloom at a more rapid pace."

Water samples for blue-green algae identification can be submitted to the Kansas State Veterinary Diagnostic Laboratory. When collecting a water sample, the laboratory recommends using gloves to prevent skin contact. Collect about 20 fluid ounces—or 500 milliliters—in a clean, leak-proof container, and include any visible scum. Keep the sample refrigerated, not frozen. Samples should be shipped to the laboratory in an insulated box with a cold pack. For more information, please contact the Kansas State Veterinary Diagnostic Laboratory at 866-512-5650 or email clientcare@vet.k-state.edu.

Provided by Kansas State University

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