

## Harmful Algal Blooms Can Be Anywhere

### AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

I was saddened to read in the news of dogs in North Carolina and Georgia dying after being in ponds that had harmful algal blooms. Harmful algal blooms are another word for what we locally know as blue-green algae. Unfortunately there's a lot of misinformation floating around about blue-green algae or harmful algal blooms.

First of all, blue-green algae aren't algae at all, they are bacteria that grow in water, contain chlorophyll and can photosynthesize. A more correct name would be cyanobacteria but everyone knows them as blue-green algae so there you go. Blue-green algae are found in virtually every body of water in Kansas and the USA. They are nothing new, they have always been there.

Unfortunately when calm waters warm up and there are a lot of nutrients in the water there can be population explosions of these bacteria especially when the water is really clear so that the sunshine can penetrate several feet deep. Since the bacteria can carry on photosynthesis, sunlight becomes the energy source. Warm waters allow biological functions to occur faster, hence the population explosion. Unfortunately, these bacteria can produce toxins especially when the bacteria die and the little cell body breaks down.

These toxins, if in high enough concentrations, can affect the skin, liver and nervous system. The toxins can be acquired through skin contact with the water, accidental ingestion, even inhaling water spray. The toxins can cause health issues and death for people, pets, wildlife, and livestock. The dogs in the southeastern US contracted the toxins from swimming in ponds that had high levels of cyanobacteria and the toxins. While blue-green algae are the common cause of hazardous algal blooms in Kansas and most fresh water bodies of water, situations like the red tide of coastal areas are also considered hazardous algal blooms (HAB) and I prefer to just refer to them as HAB.

Since HAB is caused by a bacteria it doesn't look anything like the long filamentous moss that we drag in while fishing. It doesn't have distinct little leaves like duck weed or pondweed. Water often has a scummy look to it like a thick mat or is foamy or even looks like paint was spilled on it. The water may be red, pea-green, blue, blue-green or even brownish red. One thing that I invariably notice is a very distinct odor.

Water can be tested by the Kansas State Veterinary Diagnostic Lab. Care must be taken when collecting the sample though as if an HAB is present you could wind up with toxins on your skin that would make you sick. You can visit <http://www.ksvdl.org/> for more information on testing. If you do collect a sample, keep it cool and get it to the lab at K-State just as soon as possible. Kansas Department of Health and Environment has an excellent website on HAB at: <http://www.kdheks.gov/algae-illness/index.htm>.

There are two very important steps that you need to take when it comes to HAB. First, in the short term, recognize that HAB can just about anywhere in Kansas during the summer. Be aware of the condition of water when you are out with your family and pets. If the waters looks suspect, stay out of it and keep your pets out of it. If the water is a source of livestock water, provide alternate drinking water for your livestock. In the long term there are no quick fixes. We have to lower nutrient levels in water and nutrients can come from many sources including industrial, residential, municipal, wildlife, or agricultural. But that will take quite some time. So be aware and avoid suspect looking water!