

Algal Bloom Blues

Algae are always present in natural streams, rivers and lakes. Algae are microscopic organisms that live in aquatic environments and like plants, they use photosynthesis to produce energy from sunlight. Algal blooms, an excess of algal growth, become visible to the naked eye and can be green, blue-green, red, or brown, depending on the type of algae.

A harmful algal bloom (HAB) occurs when toxin-producing algae grow excessively in a body of water. In these few algae types, toxin production can be stimulated by environmental factors such as light, temperature, and nutrient levels. Algal toxins released into the surrounding water or air can seriously harm people, animals, fish, and other parts of the ecosystem. In other algal types, an excess of algae grows in abundance and upon death these decaying algae consume most of the oxygen in the water, causing widespread fish kills which also has impacts on wildlife that depend on fish for food.

Act against algal blooms!

Of the three environmental factors that stimulate algae growth (light, temperature, nutrients), excess nutrients can be controlled. When lawns are over fertilized, yard waste isn't managed properly, or pet waste is not picked up, stormwater carries excess nutrients from these sources to nearby streams, ponds, and lakes. Excess nutrients entering stormwater contribute to hazardous algal blooms and nutrient reduction begins with you!

Steps to reducing your nutrients at home:

1. Soil test, fertilize only when necessary
2. Keep lawn debris and leaves out of storm drains by mulching and composting
3. Pet waste contains nutrients. Bag the doo!

Test, Test, Test!!!

Did you know the highest levels of soil phosphorus are found in urban Kentucky? Four out of 5 soil samples from lawns and gardens have so much phosphorus that there is a risk of it running off after an intense rainfall, while only 1 in 3 soil samples from agricultural fields have a high risk. How do you know if you have a lawn high in phosphorus? It's easy! Test your soil. Contact your county extension agent for details. Your agent will be able to help you interpret your soil test results and determine exactly what your lawn needs and when to apply the correct amount of fertilizer.

Free Fertilizer

Grass clippings and fall leaves add a considerable amount of the total phosphorus that ends up in stormwater. These lawn wastes can be a considerable amount of free nutrients for your lawn. Consider using the mulch setting on your lawn mower to add these nutrients back to your lawn. You can also compost your yard waste and use it in garden beds or as mulch around your landscaping. This will help keep your lawn waste on your lawn and out of storm drains.

Bag the Doo!

How many times does your dog poop on your lawn in a day? The EPA estimates that one dog produces 275 pounds of dog waste per year. About 60% of people pick up dog poop while in public, but how many people pick it up in their own backyard? Simply picking up, and disposing of, pet waste will make a big impact on your local water quality and help prevent harmful algal blooms.

Suggested Social Media Text

Algal blooms are an overgrowth of algae due to excess nutrients in water. Some algal blooms decrease oxygen levels in water causing fish kills while other algal blooms produce toxins that are harmful to people and pets. By reducing nutrient runoff from your yard, you reduce excess nutrients in Kentucky's waterways and help prevent Harmful Algal Blooms (HABs).

References and Resources:

AGR-53 Lawn fertilization in Kentucky

https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1009&context=anr_reports

HENV-402 Water Quality and Nutrient Management at Home.

<http://www2.ca.uky.edu/agcomm/pubs/HENV/HENV402/HENV402.pdf>

ID-72 Principles of Home Landscape Fertilization

<http://www2.ca.uky.edu/agcomm/pubs/id/id72/id72.pdf>

ID-201 Your Yard and Water Quality

<http://www2.ca.uky.edu/agcomm/pubs/id/id201/id201.pdf>

National Institute of Environmental Health Sciences – Algal Blooms

<https://www.niehs.nih.gov/health/topics/agents/algal-blooms/index.cfm>

Utah State University Extension – Harmful Algal Blooms

<https://extension.usu.edu/waterquality/Learnaboutlakes/hab/index>

University of Minnesota Extension – Harmful Algal Bloom <https://extension.umn.edu/source-magazine/harmful-algal-bloom>

US EPA Harmful Algal Blooms <https://www.epa.gov/nutrientpollution/harmful-algal-blooms>

HO-75 Home composting <http://www2.ca.uky.edu/agc/pubs/ho/ho75/ho75.pdf>

UKY Extension video on mulching lawn leaves
<https://www.youtube.com/watch?v=pVTY4BhsBz4>