



Water Quality UPDATE

This issue continues our discussion on lawn care, focusing on fertilizer applications. Please email propst@okstate.edu if you would like to receive this article as a Word document.

The "P" Word

The lawn care Best Management Practice (BMP) with the greatest potential for improving Oklahoma water quality is also one of the most straightforward. Simply put, fertilizer should not be applied unless a soil test shows a nutrient deficiency.

If implemented, this BMP would result in a tremendous statewide reduction in phosphorus (P) application, which could greatly impact water quality. Phosphorus not utilized by plants builds up in the soil, leaching into runoff water over many years. This stimulates algae growth in streams and lakes.

A recent study illustrates how typical lawn care practices overload the soil with phosphorus.



In August 2003, OSU graduate student Krishna Wright tested soil samples from two residential neighborhoods in Stillwater, OK. Approximately 61% of these samples had more than adequate phosphorus (see charts at right).

Unfortunately, most people and most lawn care businesses are hesitant to reduce phosphorus application. In conversations with landscape business owners and operators, OSU Extension Turfgrass Specialist Dennis Martin has noted that many of these professionals are unwilling to trust a soil test to determine plant phosphorus needs.

First of all, some professionals doubt the accuracy of the soil test itself. They are afraid that following the recommendation forces them to operate within a very small margin for error. For them, adding some phosphorus every time is an insurance policy against a potential problem.

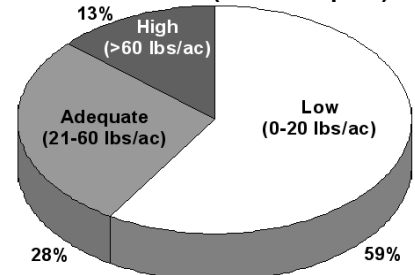
Others fear that if they reduce or eliminate phosphorus applications in response to a soil test, it would open the door for a competitor to steal clients by saying, "We provide a more complete fertilizer with all three macro-nutrients, just in case there is a deficiency, at no additional cost."

Although such a statement probably contains enough truth to sway unwary homeowners, it does not tell the whole story.

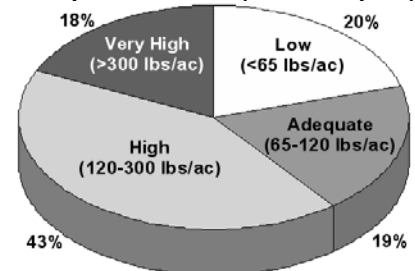
Stillwater Creek Watershed Soil Testing

In August 2003, soil tests were conducted on 122 samples from 54 Stillwater lawns and gardens. Phosphate levels indicated many were over-fertilized. A Phosphorus test index of 65 is considered optimum for turf growth.

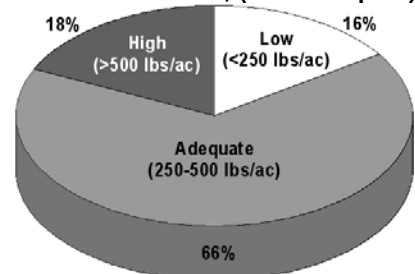
Nitrate Levels (% of samples)



Phosphate Levels, (% of samples)



Potassium Levels, (% of samples)



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The "P"Word continued

One solution would be for lawn care professionals to charge on a service and "per nutrient" basis. However, Martin feels that the "per nutrient" alone basis reduces the landscape service professional from a helpful expert to a product salesman. The better solution is to educate the client so they know and understand the usefulness of a soil test.

Soil testing and fertilizer application recommendations based on it are proven resource management tools. Their use has been validated in numerous long-term studies at OSU.

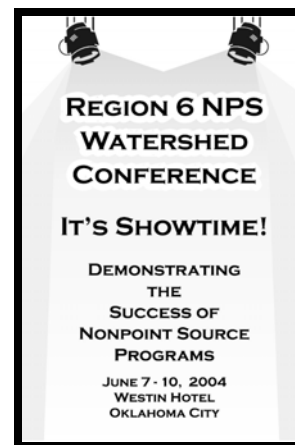
Through the OSU Soil, Water, and Forage Analysis Laboratory, county Extension offices can provide the landscape manager with the information needed to apply the nutrients vital to a healthy lawn.

To protect water quality, homeowners and landscape professionals should reduce or eliminate phosphorus application to turf once soil tests indicate that phosphorus levels are adequate. The practice of applying phosphorus "just in case" is not only expensive and wasteful; it is irresponsible. In fact, it is the "just in case" phosphorus that poses the greatest threat to water quality.

EPA Region VI Nonpoint Source Watershed Conference

This event will be held in OKC on June 7-10 and will focus on innovative aspects of watershed programs; planning, alliances, education, implementation and community action. The full draft program is on the web at <http://www.ose.state.ok.us/watershedConf.html>

For a limited time, the Water Quality Office will cover full registration and lodging for up to four people, as well as workshop registration for anyone interested. For more information, contact Pat Bridger (405-744-5653) **as soon as possible.**



Blue Thumb News

Blue Thumb Volunteer Water Quality Monitors help gather valuable information on the quality of Oklahoma streams and creeks. This is a great activity for students and adults alike. A training session for new volunteers will be held in Ada on June 24-26. For more information, call the OSU Extension Water Quality office (405-744-5653) or contact Cheryl Cheadle at the Statewide Blue Thumb office (918-280-1598)

Official Illinois River Cleanup

Can picking up trash be fun? Float the Illinois on May 21 and find out! The trip starts with registration at 9:00 am at the Oklahoma Scenic Rivers Commission and ends with a free picnic and a raffle for a brand-new canoe. Call OSRC (918-456-3251) for details and reservations.



State-wide 4-H Horse Camp

This educational program will be held May 29-31 at Newton Ranch Trail Rides near Gloss Mountain in Major County. Safety, stabling, tying, environmental concerns, grounds keeping, trail riding, overnight camping, biodiversity, seed travel, happy watersheds and comradeship are included. **Registration is due May 14.** Water Quality Specialist Mitch Fram will bring the Stream Trailer and lead a "Creek Critters" exploration. For more information, contact Tommy Puffinbarger (580-596-3131) or Kevin Varner (580-255-0510)

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Water Quality Update

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