



# REDUCE NONPOINT SOURCE POLLUTION

*in Louisiana Waters*

## Fertilizing Lawns to Protect the Environment

A healthy grass cover conserves water and soil and rejuvenates the air. Lawns can reduce summer temperatures around the house by 15 to 30 degrees compared to bare soil. Thus, the absorptive, filtering, protective and moderating quality of a lawn are well worth the inputs to keep it thick and healthy.

Many soils lack good fertility and need our help in maintaining an adequate and balanced level of nutrients. Over-application of fertilizer, however, will result in developing lush, soft turf plants that require more mowing, are more prone to diseases and insects and are more sensitive to environmental stresses.

Of the three major fertilizer nutrients, nitrogen (N) and phosphorus (P) can find their way into ponds and bayous to cause trouble. They will readily degrade the quality of surface water by over-stimulating algae blooms and water weeds. Nitrogen is very soluble and moves freely with the water where there is sandy soil, steep slopes and heavy rain or irrigation. Phosphorous is generally carried on soil clays that are washed away in the surface water. It also can percolate through a sandy soil.

Judicious use of fertilizer will promote healthy turf growth without jeopardizing the environment. One must know what to use, how much to apply, when to apply it and how to properly apply it.

### What Fertilizer Should I Buy?

You will need a product that fulfills what's lacking in your soil and is right for your type of grass. Some soils may be too acid for good growth and nutrient availability; they will need lime. A soil test every few years will determine the nutrient status of your soil and any lime requirement. Contact your AgCenter's local agricultural county agent and ask about a routine soil nutrient analysis for your specific lawn.

Without a soil test, you must assume you have a moderate level of nutrients, and this may not be correct.

Homeowners should look for lawn fertilizers that list a protected nitrogen feature. This slow-release N is also listed as water-insoluble, WIN, controlled-release or slowly available. Not all the N will be slowly soluble. Urea nitrogen, ammonium nitrate and ammonium sulfate are water soluble nitrogen forms and give a quick, short-term green up. With a blend of soluble and insoluble N, you will get some immediate greening and sustained feeding for 5 or 6 weeks. This feature is especially important in spring when soils are cool and growth sluggish. Our mid-summer turf can better handle more nitrogen.

An average turf fertilizer will have a high first number (N), low second number ( $P_2O_5$ ) and a mid-strength third number ( $K_2O$ ), which is the potassium (K). These numbers are the percent by weight. Some centipede grass fertilizers will have little or no phosphate.

### How much should I apply?

Your soil test will accurately tell you what your lawn really needs; otherwise, it's a guess to the average. Most lawns need a total season-wide dose of 3-4 lb/N/1,000 sq ft plus 1 lb  $P_2O_5$  and 1.5 to 2 lb  $K_2O$ . Centipede and carpet grasses need half these rates. To apply 1 pound of N, first calculate the amount to spread by dividing the first number on the bag into 100. For example,



using a 16-4-8 fertilizer,  $100/16=6.3$ ; apply 6.3 lb/1,000 sq ft. Never apply more than 1 pound of soluble N in any one month. Calculate application of P<sub>2</sub>O<sub>5</sub> (P) and K<sub>2</sub>O (K) the same way as N.

The fertilizer bag has a suggested application rate. Do not go beyond the rate in any month's application; you can add more later if you are not yet into the fall.

## When Should I Fertilize?

If lime is recommended, apply as directed anytime during the cool months. Lime takes several months to reduce acidity.

We fertilize our warm-season grasses when they are growing and will use the nutrients. This happens a couple of weeks after spring green up and until early fall. Fertilization other than this time frame is either wasteful or harmful to the turf and environment. Centipedegrass is fertilized lightly, at 2 to 3 times per season, and carpetgrass is fertilized only once in spring. St. Augustine grass and zoysiagrass are fertilized 3 times each season, and bermudagrass gets four applications. Avoid much fertilizer in the fall.

## How Do I Apply Fertilizer to a Lawn?

Proper application is essential for turf health, attractive growth and minimal harm to the environment. A drop spreader application is more precise and even than a rotary spreader. It allows superior control of granule dispersment. Read operational instructions carefully.

Fill spreaders on pavement where spills can be swept up. After prescribed application, remove extra granules from the spreader and return them to a proper container. Fill and clean liquid applicators and wash spreaders over turf where spills and water would be absorbed. The fertilizer bag may have a suggested opening setting for a particular model spreader. If using this number, try one notch less until you calibrate the spreader; you can come back a little sooner with the next application, but you can't take back an over-application. Shut off the spreader when passing over hardscape walks, bare ground or when making a sharp turn.

Don't fertilize if a heavy rain is expected; however, do water the granules in lightly especially if the lawn has any slope. Avoid using fertilizer near the shoulders of ditches and ponds. When finished, sweep, blow or wash any granules found on the hardscape into the turf.

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