

## Hints for selecting an appropriate fertilizer

All fertilizer packages must have three numbers on them (example: 10-10-10, 16-4-8). The numbers represent the percentages of nitrogen (N), phosphorus (P) and potassium (K) – in that order – by weight. This is also referred to as the N-P-K ratio. So, 16-4-8 fertilizer is 16 percent nitrogen, 4 percent phosphorus and 8 percent potassium. While all three are necessary for proper growth, many soils have enough of certain nutrients. Your soil test will help you understand which nutrients your lawn lacks.

**EXAMPLE:** Your soil test recommends applying 1 pound actual nitrogen per 1,000 square feet. Say you have a 40 lb. bag of 12-4-8. The 12 means the fertilizer is 12 percent nitrogen by weight. To determine how many pounds to apply, multiply .12 times 40 lbs. This equals 4.8 lbs., the amount of nitrogen in the bag. Now divide 1, the number of lbs. per 1,000 sq. ft. you want to spread, by 4.8, the pounds of nitrogen you have. This gives you .208, or the ratio for what you want to spread. Now multiply your 40 lbs. of fertilizer times .208. This gives you 8.3 lbs. – the amount of fertilizer to spread over the 1,000 sq. feet.

Remember, the best fertilizer for your lawn has a **slowly available** nitrogen source. "Slow-release" nitrogen sources are usually stated on the label, possibly as **WIN** or water-insoluble nitrogen, sulfur-coated urea, natural organic nitrogen, etc.

**HINT:** For dark green turf, a good alternative to nitrogen is iron (periodic use) for "green-up."

## Fertilizer application equipment and methods

Nitrogen fertilizer will generally "green-up" a lawn. Therefore it is important to apply the fertilizer uni-

formly. Use a drop-type or rotary spreader, and be sure to overlap adequately. Check the applicator setting often to be sure you're applying the fertilizer at the proper rate. Applying fertilizer by hand is **not recommended**.

**HINT:** for uniform fertilizer application, apply half in one direction and the other half in a perpendicular direction!

These guidelines are basics for having a healthy, attractive lawn that protects water quality – both nearby and in the Chesapeake Bay. Your actions do make a difference. For ideas to make your home landscape more environmentally sound, contact the Virginia Department of Conservation and Recreation or Virginia Cooperative Extension.

**1-877-42-WATER**



Chesapeake Bay Program  
*A Watershed Partnership*



VIRGINIA POLYTECHNIC INSTITUTE  
AND STATE UNIVERSITY



Department of Conservation & Recreation  
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

# Tips on keeping your lawn green



## And the Chesapeake Bay Clean

The health of Virginia's waterways begins in your backyard.

# Tips on keeping your lawn green . . . and the Chesapeake Bay clean

There are 5 million lawns in the Chesapeake Bay watershed, each with the potential to send a potent dose of chemicals into local waters and the bay's fragile ecosystem. These lawns cover Virginia, five other states, and the District of Columbia.

Improper or excessive lawn fertilization is a significant source of nutrient runoff pollution, the most severe problem facing local waterways and the bay. Runoff that carries excess nitrogen increases the growth of algae and reduces water clarity, which stresses underwater plant and animal life.

Runoff from your property can enter one of more than 150 creeks, rivers and streams in Virginia that flow to the bay. The health of Virginia's waterways begins in your backyard.

You can have a great yard and, at the same time, help protect local water quality and improve the Chesapeake Bay. Follow these simple steps, recommended by the Virginia Department of Conservation and Recreation and Virginia Cooperative Extension.

## Growing a greener lawn

Mow high with a sharp blade: 2 to 3 inches for cool-season grasses and 1 – 1 ½ inches for warm-season grasses. Don't mow more than 1/3 of the blade at one time.

Don't mow or fertilize when grass is wet or under drought stress.

Leave clippings on your lawn – they reduce the need for nitrogen fertilizer as much as one-third. If clippings clump, spread them over the lawn with a rake or pick them up and make compost.

Established plants need little or no water! Save it for newly planted items, and then let it sink in slowly and over time.

**HINT:** For dark a green lawn, select darker grass varieties – they require less nitrogen and water.

## Fertilizer guidelines

Fertilize when grass is actively growing and can take up the nutrients.

Look for fertilizers with high levels of water insoluble nitrogen (**WIN**). It releases fertilizer slowly, and your lawn makes better use of it.

**Never** apply more than 1 pound of soluble nitrogen per 1,000 square feet at one time.

Remember, more is not better. Lawn fertilizer is measured in pounds per 1,000 square feet. To determine square feet, multiply the length by the width of the area to be fertilized.

## Does my lawn need fertilizer?

The best way to determine whether or not your lawn needs fertilizer is to **test** your soil. Information on soil tests is available through your local Virginia Cooperative Extension Agent. It's easy and inexpensive. The results you get back will include recommendations on amounts of plant nutrients and lime that would benefit your lawn. Soil tests do not determine nitrogen needs. Nitrogen should be applied based upon established requirements of grass species, seasons of growth and intended use. (See chart)

## What if I don't fertilize?

Your lawn will gradually thin and become more susceptible to weeds. Proper and timely fertilization can be good for both your lawn and the environment. There is less chance of nutrient and soil runoff to surface waters from a healthy stand of grass than thin grass. Healthy lawns have less disease, insect and weed problems, reducing the need for pesticides.

## When to fertilize

This depends on the type of grass and the lawn's appearance – color, density, uniformity – you want. Summer is best for warm-season grasses, like Bermudagrass and zoysiagrass. September – November is best for cool-season grasses like tall fes-

cue, Kentucky bluegrass and perennial ryegrass. If you don't know what type grass you have, ask your Extension Agent, or a landscape professional. **Never fertilize when grass is dormant (brown).**

Use the following tables to determine nitrogen needs for established lawns:

**Pounds of nitrogen per 1,000 square ft. if the fertilizer is less than 50 percent WIN**

Type of Grass Month	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
September	1	1	0	0
October	1	1	0	0
Early Nov.	1	1	0	0
April	0	0	1	0
May	0-.5	0-.5	1	1
June	0	0	1	0
July/August	0	0	1	1
Yearly LBS N/1000 sq. ft.	2-3.5	3-3.5	2-4	1-2

**Pounds of nitrogen per 1,000 sq. ft. if the fertilizer is more than 50 percent WIN**

Type of Grass Month	Tall Fescue Perennial Rye	Kentucky Bluegrass	Bermudagrass	Zoysiagrass
August 15	1.5	1.5	0	0
October 1	1.5	1.5	0	0
April	0	0	1.5-2	1.5-2
May 15	0-1	0-1	0	0
June	0	0	1.5-2	0
Yearly LBS N/1000 sq. ft.	3-4	3-4	3-4	1.5-2

Green areas denote optional or secondary applications