

# How to Protect Water Quality and Have a Beautiful Lawn

## Ten Steps to Proper Fertilization

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Every year during the spring and fall, many New Jersey residents embark on the ritual of fertilizing their lawns. Proper fertility management can produce a healthy, attractive lawn and is part of a sound environmental management plan for your landscape. The dense sod that is created when turfgrass is properly managed and fertilized acts as a filter which can serve to protect and enhance water quality in your area. Although the misapplication of fertilizer on one lawn may seem insignificant, careless applications can add up to a major problem for local water supplies.

Proper fertilization techniques can prevent the misapplication or overapplication of fertilizers, which can damage turf and affect the quality and safety of groundwater and surface water.

Listed below are ten steps that will help you maintain a healthy attractive lawn, while protecting water quality in your community.

**1. Don't guess—soil test!** As the most critical step in any lawn fertility program, soil testing helps determine the need for fertilizer and lime. Too little or too much fertilizer can result in poor turf performance that reduces soil cover, enhancing the likelihood of wind and water erosion of the soil. The Rutgers Soils Laboratory can test your soil for phosphorus, potassium, calcium, magnesium, copper,

manganese, and zinc, as well as the soil pH. After the lab analysis, the results of your test will be interpreted by your local Rutgers Cooperative Extension County Agricultural Agent. The agent will provide recommendations on how best to fertilize and lime the soil for your lawn needs. If you hire a lawn care company, make sure that they also fertilize as recommended by soil test results. Request RCE fact sheet, FS797, *Soil Testing for Home Lawns and Gardens*, from your county office of Rutgers Cooperative Extension for more information.

**2. Choose the proper fertilizer.** Select the fertilizer best suited to the nutritional needs of the soil based on the soil test report. Soil tests may indicate that your lawn require a complete nitrogen-phosphorus-potassium (N-P-K) fertilizer. About 80% of lawns tested in New Jersey, however, have high or very high soil phosphorus ratings. Soil tests also indicate that many lawns have been overlimed (the pH is too high). Avoid application of additional phosphorus fertilizer on established lawns that already have an adequate supply. For many lawns in New Jersey, a fertilizer that only contains nitrogen is appropriate.

**3. Use a slow-release nitrogen fertilizer.** Use a slow-release fertilizer to limit the amount of N released at any one time. The rule of thumb for N applications to lawns is to apply two to four pounds of N per 1000 square feet of lawn in one year.



**4. Time fertilizer applications.** Timing of fertilizer applications is very important to maintaining a quality turf. Fall is the best time to apply nitrogen to cool-season grasses (September to November). Some nitrogen can be applied in the spring to promote early growth and lawn "green-up", however spring fertilization should be minimized to ensure good turf performance. RCE fact sheet, FS633, *Fertilizing Your Home Lawn*, provides additional information.

**5. Calibrate fertilizer spreaders properly.** Calibration helps to prevent the misapplication of fertilizers based on the variability among spreaders when using various formulations of fertilizers. Request RCE fact sheet, FS766, *Lawn Fertilizer Spreader Calibration*, for more detail.

**6. Choose the proper spreader.** Avoid the use of a rotary spreader around waterbodies. Although rotary spreaders are useful when fertilizing a large area, they can also throw fertilizer into waterbodies, streets, and storm sewers. Use a drop spreader whenever fertilizing close to bodies of water, streets, sidewalks, drainage ditches, and storm sewers.

#### **7. Prevent misapplication of fertilizers.**

- ✓ **Use buffer strips.** Leave a strip of unfertilized grass near any stream or waterbody. This will prevent fertilizer from being thrown into the water by the spreader.
- ✓ **Be careful when applying fertilizer around sewers and drains.** Fertilizer that enters storm sewers or storm drains is headed on a direct route to your water resources.

- ✓ **Shut off spreaders before crossing sidewalks and driveways.**

- ✓ **Sweep up misapplied fertilizer.** The excess can be reapplied or saved for later use.

- ✓ **Do not dispose of unused fertilizer.** It should be removed from the spreader and returned to the original bag or container for future use.

**8. Rinse spreader over lawn area.** When rinsed on a driveway or sidewalk, rinse water can carry excess fertilizer to waterbodies or storm sewers. Avoid this by rinsing spreaders and other equipment over a turf area.

**9. Use a mulching mower.** Mowing frequently and returning clippings reduces the need for fertilizer by as much as one-half.

**10. Maintain a dense, healthy turf to reduce runoff erosion of soil and fertilizers.** Healthy lawns with deep root systems will use most of the fertilizer applied, stabilizing soil and allowing very little water to run off. To maintain a healthy lawn, your fertilization program should begin in early September, not early May. Spring applications can actually harm lawns by promoting more top (leaf) growth than root growth. Shallow root systems are unable to sustain lawns through the dry and hot weather of summer.

To find additional methods for improving your lawn and landscape or to order a soil test kit, contact your county office of Rutgers Cooperative Extension, located in the blue pages of your phone book.

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