

Responsible Use of Fertilizers

Few soils have enough natural fertility to sustain good turf grass quality. Fertilizer can provide essential nutrients to maintain optimum (not necessarily maximum) turf grass growth. Nitrogen (N), phosphorus (P), and potassium (K) are the three elements usually applied as supplemental fertilizers.

Proper supplies of nutrients are essential for a healthy lawn. Your main objective in applying fertilizer should be to add necessary nutrients in the required amounts and at the proper time to achieve good quality turf. A healthy lawn is able to recover from insect and disease attacks. It will compete better with weeds, thereby reducing the need for pesticides.

Fertilizing Your Lawn

Fill granular fertilizer spreaders on a hard surface where spills are easy to clean up. Never wash fertilizer spills into the street or other hard surface areas where they can easily enter storm sewers and eventually end up in surface water. Clean granular fertilizer spreaders and liquid fertilizer applicators over grassy areas to prevent runoff of fertilizer from hard surfaces.

Close the gate on your fertilizer spreader when crossing hard surface areas. If fertilizer falls on a hard surface, sweep it up and use it later.

Leave a buffer zone of unmanaged grasses or natural vegetation along a shoreline. This will help prevent soil erosion and retain some of the nutrients that might otherwise enter a lake or other water resources. Never deposit fertilizer into lakes, streams, wetlands or other bodies of water. When applying fertilizer near a body of water, it is better to use a drop spreader. Drop spreaders are more precise but slower than rotary-type spreaders. The rest of the area further away from the shoreline may be fertilized with either a rotary or drop spreader.

Don't apply fertilizer in natural drainage areas. Though they might not be hard surfaced, these areas can still channel fertilizer directly into the surface water before it infiltrates surrounding turf or soil.

Never apply fertilizers directly into surface water or onto frozen ground.

Applying Nitrogen to Your Lawn

The amount of nitrogen your lawn needs depends on what type of grass you have and how you maintain it. High-maintenance lawns often contain vigorous Kentucky bluegrass and turf-type perennial rye grass varieties. These lawns perform better with regular applications of water and fertilizer. Low-maintenance lawns usually contain common types of bluegrass combined with a mixture of other grasses. These lawns grow and spread more slowly than high-maintenance lawns without requiring much extra water or nitrogen fertilizer.

The amount of nitrogen your lawn needs also depends on what type of soil you have. Soil tests are available through the University of Minnesota or through private firms. On soils such as sands and sandy loams, the nitrogen application rates may result in excessive loss of nitrogen through leaching. If you apply nitrogen to sandy soil, reduce the application rate to $\frac{1}{4}$ to $\frac{1}{2}$ pound nitrogen per 1,000 square feet to minimize loss of nitrogen.

If frequent, lower nitrogen-rate applications are not practical, consider using a slow-release nitrogen source. This technique is adaptable to late-season nitrogen fertilization, and is also useful where sandy soils are in close proximity to surface water or ground water.

Don't over-water your sandy soil – you'll increase the risk of nitrogen loss to groundwater. Daily watering during cool, moist periods will also increase leaching potential. Watering techniques that meet a grass plant's needs during any particular climate condition are more effective. To minimize nitrogen leaching, water just enough to compensate for moisture removed by plant uptake and evaporation. Sloped areas may require more frequent but smaller amounts of water per application, since they're vulnerable to runoff before ample water has infiltrated the soil.

Providing ¼ to ½ inch of water immediately after applying a quick-release nitrogen source will help move the nitrogen into the surface soil, where it can be reached by grass plants. This technique also provides some protection from runoff and volatilization back to the atmosphere.

Leave grass clippings on your lawn – as they decompose, they'll recycle nutrients. They should not be blown or raked into street gutters or onto sidewalks and driveways, where they can be carried in runoff to surface water. Nutrients released in water through decomposition may cause undesirable algae and vegetative growth.

Applying Phosphorus to Your Lawn

Except as noted below, starting January 1 2005, fertilizers containing phosphorus cannot be used on lawns in Minnesota. Look for the middle number on a bag of fertilizer. It should be zero (0).

Fertilizers containing phosphorus may be used on lawns if a soil test indicates that it is needed or if you are establishing a new lawn.

A soil test will inform you of the amount of phosphorus in your soil and the appropriate application rate. Soil tests are available through the University of Minnesota or through private firms.