Fall Lawn Fertilization

The fall season is the best time of year to feed the *Cool-Season* group of turfgrasses commonly used for home lawns. This group includes Tall Fescue, Kentucky Bluegrass, Ryegrass, and the Fine Fescues, and some others not used for home lawns. The name for this group of turfgrasses applicably describes their natural growth habit, cool-season grasses grow best during cool weather. Therefore Fall fertilizer applications benefit cool-season turfgrasses the most. It is recommended that 2/3 - 3/4 of the annual fertilizer amount be applied between Labor Day and Thanksgiving Day with the remaining application completed the following Spring.

Fall fertilization is best because the lawn has passed through the stressful summer months and needs food to rebuild itself. During the fall season there is less competition from weeds, insects and diseases. Nutrients are required to take full advantage of the cool weather growth period to restore the lawn to full health and prepare it for the next summer.

Cool-season turfgrasses continue to grow in cool weather even after their top-growth stops. The continued growth occurs in the root system. Developing a thick, deep, root system will help the lawn to survive the heat and drought of the following summer.< If there is a good root system, there will be good top-growth as well. An important function of turfgrass roots is to store extra food in the form of carbohydrates that will be used later by the plant. These carbohydrate reserves are first drawn upon in Spring to produce the flush of growth that is experienced each May. The reserve continues to supplement the plant through the heat of summer.

FERTILIZER SELECTION

The only way to be sure what nutrients are lacking in your lawn is to do a soil test. The nutrient nitrogen is difficult to test for and not done on basic soil tests. Basic tests will tell the level of other available nutrients like phosphorus and potassium as well as the soil pH. Soil test kits are available through the Cooperative Extension Service at the address below.

The fertilizer label contains three large numbers which are known as the fertilizer analysis. The numbers represent the concentration per bag of the three macro-nutrients: ***Nitrogen*** - ***Phosphorus*** - ***Potassium*** (N-P-K). The analysis numbers are the percentage of nutrients by weight in the bag. High analysis numbers do not identify a fertilizer as a better product than one with lower numbers, it only tells us it is more concentrated. The lawn area that a bag of fertilizer will cover depends on its concentration, and the recommended fertilizer rate. For example, a fertilizer bag weighing 50 pounds and labeled 5-10-5 contains 5% or 2.5 pounds of Nitrogen, 10% or 5.0 pounds of Phosphorus , 5% or 2.5 pounds of Potassium. The entire 50 pound bag will cover 2,500 $ft.^2$ of lawn area at a fertilizer rate of 1.0 lb.N/1000 $ft.^2$. A 50 pound fertilizer bag marked 32-5-7 contains 32% N or 16 pounds and will cover 16,000 $ft.^2$ (over 1/3 acre) at the same rate.

The nitrogen source is an important factor as well when choosing a turf fertilizer. Some sources release their nitrogen quickly, while others release it slower resulting in longer,

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more even feeding. Quick-release nitrogen fertilizers are less expensive than the slow-release types. Both are good and have their place in a fertilizer program. Urea is an example of a quick-release nitrogen fertilizer, its grade is 46-0-0. Remember, urea is not a complete fertilizer, it only supplies nitrogen, no other nutrients. While this is fine in an established lawn it may not benefit a newly seeded or sodded lawn which require other nutrients, particularly phosphorus to develop a healthy root system. Sulphur-coated or poly-coated urea are examples of slow-release nitrogen sources. The coating on the urea granule releases nitrogen slowly as it is worn or washed off. Check the label or ask the supplier to be sure of the nitrogen source in the bag.

FERTILIZER RATE

Lawns require high nitrogen levels and therefore fertilizer rates are expressed in terms of pounds of nitrogen per thousand square feet of lawn. The recommended turfgrass species for home lawns in Maryland is Tall Fescue. This species does best with an annual fertilizer rate of 3 - 4 pounds of nitrogen (N) fertilizer per thousand square feet of lawn. The higher rate should be used from initial seeding to at least the second year. Once the lawn is established and thick, apply fertilizer at the lower rate (3 lbs. N/ 1000 $ft.^2$) for maintenance. Proper timing of fertilizer applications will keep a lawn thick, healthy and almost weed free. *(If there are any lingering broadleaf weeds, spot treat them at the end of this month. For best results, apply herbicide when there is adequate soil moisture and cooler daytime temperatures.)* Lesser noticed benefits of proper fertilization practices are increased resistance to disease, as well as faster recovery from traffic, drought and insect damage.

I suggest timing the first Fall fertilizer application sometime at the end of August through the first week of September. Use a fertilizer that contains a *slow-release* nitrogen source. The fertilizer rate should be: 1.0 - 1.5 lbs. N / 1000 $ft.^2$ at this feeding. For new lawns less than 3 years old use the higher rate to establish them thoroughly. Older lawns only require the lower rate for maintenance. The next feeding should be done about ten weeks later, on or about November 15. For this second Fall application use a *quick-release* nitrogen source fertilizer, at the same rate(s). The last fertilizer application will be done the following Spring on or about March 1, or after the natural flush of growth ends, about mid to late May. Again use a quick-release nitrogen source fertilizer, and apply it at a *lighter rate* of: 0.5 - 1.0 lb.N / 1000 $ft.^2$

For more information about horticulture or the Master Gardener Program in Frederick County, call the Frederick County Office of the Maryland Cooperative Extension, 301- 600-1596, or visit http://www.frederick.umd.edu/. Our mission is to educate Maryland residents about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes and communities.