

# Turfgrass Fertility

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To maintain an attractive and healthy lawn, it is often necessary to provide supplemental fertilizer. The following recommendations are intended as guidelines for annual lawn fertilization. It is always a good practice to have the soil tested before fertilizing or liming the lawn. This fertilization plan is based upon limited applications of nitrogen resulting in moderate grass growth. This level of lawn vigor should not require bagging of clippings, thus allowing the nutrients to be recycled in the yard. If the soil test indicates higher applications of nutrients than provided by this recommendation, contact your county's WVU Extension Office for more information.

It is important not to overfertilize your lawn, because this may lead to turf maintenance problems such as thatch buildup and contribute to environmental problems. Proper mowing height and sharp mower blades are also important factors in maintaining a healthy lawn.

## **During spring (*March-April*)**

Apply  $\frac{1}{2}$  to 1 pound of nitrogen per 1,000 square feet, using a complete fertilizer containing nitrogen, phosphorous, and potassium. This fertilizer, which should contain at least 30% slow-release nitrogen, should be applied should be applied when grass begins to "green-up" in the spring. This fertilization enables earlier and more vigorous grass growth, while providing



slow-release nitrogen throughout the spring season. This vigorous growth minimizes the likelihood of any disease development.

## **During summer (*June-July*)**

Apply  $\frac{1}{2}$  pound of nitrogen per 1,000 square feet. This should also be slow-release nitrogen, which reduces the potential for burning the lawn and losing nitrogen through volatilization. This fertilization helps to maintain growth and vigor of the lawn and minimize disease development.

## **During fall (*October-November*)**

Apply 1 to  $1\frac{1}{4}$  pounds of nitrogen per 1,000 square feet, using a complete fertilizer with at least 20% slow-release nitrogen. This fertilizer application must occur before the dormant phase or about the time of the first frost. This fertilization is very important in promoting strong root growth over the winter months. This improved root structure enhances resistance to disease and drought for the next season and promotes earlier "green-up" in the spring.

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## **Understanding fertilizer: What is a complete fertilizer and how much do I use?**

The numbers on a bag of fertilizer indicate the percentage of actual nutrients the fertilizer contains. The three numbers are always in this order: nitrogen (N), phosphorous (P), and potassium (K, also called potash).

A complete fertilizer is one that contains nitrogen, phosphorous, and potassium.

The element limiting application is typically nitrogen, and a fertilizer with a ratio of nitrogen-phosphorous-potassium such as a 3-1-2, 4-1-2, or 5-1-2 is most desirable for lawn fertilization. However,

the ratio does not need to be exact. For example, a complete fertilizer with a ratio of 24-6-6 is close to a 4-1-2 ratio; likewise 15-6-10 ratio approximates a 3-1-2 ratio.

If you have a 100-pound bag of 10-10-10, you actually have 10 pounds of N, 10 pounds of P, and 10 pounds of K. Likewise, if you have a 50-pound bag of 10-20-20 fertilizer, you actually have:

$$50 \text{ lbs.} \times 10\% \text{ N} = 5 \text{ lbs. of N}$$

$$50 \text{ lbs.} \times 20\% \text{ P} = 10 \text{ lbs. of P}$$

$$50 \text{ lbs.} \times 20\% \text{ K} = 10 \text{ lbs. of K}$$

For more information on lawn fertilization and fertilizer calculations, please contact your county WVU Extension Office.

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