

Groundcovers

Management Highlights

- Target pH: **6.0**
- Fertilize groundcovers each year in the early spring.
- Use organic fertilizers on established plantings since mineral fertilizers can severely burn the foliage of plants.

Introduction

Groundcovers are low-growing plants that spread quickly over the soil surface into a living carpet. Groundcovers have many uses in the landscape. They provide cover to the soil in areas in which other plants may not grow because of poor light, such as under trees. Groundcovers act as a mulch, crowding out existing weeds and prevent new ones from germinating by blocking sunlight. They help to stabilize the soil surface and prevent erosion and runoff of soil in sensitive areas. Groundcovers provide a unifying effect to the landscape by joining different areas or specimen plants together. Groundcovers also have the added benefit of being much lower maintenance than a turfgrass planting of the same size.

Soil pH and Liming

The target pH for groundcovers on most Delaware soils is **6.0**. Soils high in organic matter ("black soils" -- OM > 6%) have a lower target pH (~5.6) since organic matter moderates some of the negative effects of excessive soil acidity. The lime recommendation for a particular site is calculated from the soil pH and buffer pH measurements using the steps outlined in *Calculating the Lime Requirement -- Chapter 4, Section 4.4*. Avoid overliming in order to encourage good plant growth and prevent deficiency of micronutrients such as iron. When at all possible, soil pH problems should be corrected prior to establishing the groundcover since lime application will be more difficult once the planting is established.

In most cases, the lime requirement can be met by either calcitic or dolomitic limestone. *Dolomitic limestone* is recommended if:

- soil test Mg is less than 50 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and less than soil test Ca*.

Calcitic limestone is recommended if:

- soil test Mg is greater than 100 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and greater than soil test Ca*.

Lawn and Garden Plants

Lime should be applied in the fall. Do not spread more than 50 lbs lime/1000 square feet at a time. If more than 50 lbs/1000 square feet has been recommended, make two or more treatments of 40-50 lbs each several months apart until the full rate has been applied. When applying lime to an established groundcover, efforts should be made to get applied lime in contact with the soil in some way (e.g., by gently washing it off the leaves with water) since lime can only affect pH when allowed to react with the soil.

Nutrient Recommendations

Nutrient recommendations for groundcovers are designed as either pre-plant applications to optimize soil fertility during bed establishment or as an annual maintenance application. *Pre-planting applications* are based on the nutrient requirements of the plant and the soil test values for P and K. To determine the nutrient recommendation for a specific site, select the **P-K Index Value** from Table 1 using the soil test P and soil test K values shown on the Soil Test Report Form. Next, using that index value, select the appropriate nutrient recommendation from Table 2, below.

Table 1. P-K Index value as a function of soil test P and soil test K.

Soil Test K (FIVs)	Soil Test P (FIV)s			
	1 - 25	26 - 50	51 - 100	101 - 150
1 - 25	1	2	3	4
26 - 50	5	6	7	8
51 - 100	9	10	11	12
101 - 150	13	14	15	16

Table 2. Nutrient recommendations for groundcover establishment as a function of the P-K index value.

P-K Index Value	Nutrient Recommendation
1-15	Apply 2 lbs 5-10-10 per 100 square feet (approximately 4 cups) at planting. Material should be mixed in thoroughly by spading or rototilling.
16	Since both soil test P and K are very high, ammonium nitrate (34-0-0) or urea (46-0-0) can be used in place of the complete fertilizer. Apply at a rate of 4 oz. per 100 square feet (approximately ½ cup) at planting. Material should be mixed in thoroughly by spading or rototilling.

Maintenance Applications

For *established plantings*, only organic fertilizers should be used since inorganic, mineral fertilizers can severely burn plant leaves. As an *annual maintenance application*, broadcast 2-3 lbs of organic fertilizer/100 square feet of bed each spring.

Additional Information

See Soil Test Notes 1 and 13 (Appendix APP-7) Extension Bulletin #154: *The Care of Ornamental Plants -- Delaware Home Gardeners Manual* for additional information about nutrient management of groundcovers.