



## **SOIL PREPARATION FOR A BEAUTIFUL LAWN**

### *Benefits of Proper and Complete Soil Preparation:*

Improved Uniformity  
Increased Density  
Faster recovery from wear  
Reduced Use of water, fertilizer, & chemicals  
Reduced Maintenance

### **Why Is Good Soil Important?**

For optimum growth, turfgrass needs just four things (in the proper balance) to grow...sunlight, air, water and nutrients. Reduce any of these, or provide too much of any one, and the grass may die or simply suffer. In the right proportions, the grass will flourish, providing not only beauty to the landscape, but also a clean and safe place to play and many benefits to the environment.

Grass obtains three of these four essential factors (air, water and nutrients) from the soil, but many soils are less than ideal for growing grass. Some soils contain too much clay and may be very compacted... great for roads, bad for grass, because air and water aren't available to the roots and the roots can't grow. Other soils may have too much sand... beautiful on a beach, but difficult to grow grass because water and nutrients won't stay in the root zone long enough for the plant to use. Another frequently observed problem with many soils is that its pH (the degree of acidity or alkalinity) is too high or too low for optimum grass growth.

### **What Is The Best Soil For Turfgrass?**

Loams, sandy loams and loamy sands, with a pH of 6.0 to 7.0 are the very best soils for producing a beautiful, high-use, low-maintenance lawn. Unfortunately, this ideal soil mixture is seldom found on any property after construction.

### **How Deep Should the Soil Be For Turfgrass?**

The absolute minimum quality soil depth for a care-free lawn is 4 inches; however, for deeper root penetration and the benefits that brings, the accepted standard is 6 inches.

### **Can Soils Be Improved?**

Practically without exception, not only can most soils be improved, they usually need to be improved to get the maximum results with only a minimum of other on-going effort.

The knowledge of what's necessary, the amount and availability of materials and the immediate costs of time and money are the factors that typically deter people from taking the steps necessary to improving the soil. While some people do not fully understand the importance of good soils for grass, many also believe they can save time and money by ignoring the need to improve their lawn's soil. The fact is that failing to improve the soil before planting is only inviting a much greater and continual investment of both time and money, that will never return its value as fully as preparing the soil properly before planting any grass.

# Site Preparation

1. Clear the site of all building materials (wood, cement, bricks, etc.), as well as any buried stumps, rocks, stones or other debris that would not allow consistent sod to soil contact.
2. Rough grade the entire area to eliminate any drainage problems on the property. This would include sloping the grade away from building foundations, eliminating or reducing severe slopes and filling low-lying areas. A tractor-mounted blade and/or box are most often used for rough grading, but if the area is smaller, it can be done with hand tools. The rough grading will probably uncover more debris that should be removed and not buried.
3. Initial tilling, to a depth of at least 5 cm (2 inches), should be completed prior to adding any topsoil or soil amendments. This will control most annual weeds, alleviate subsoil compaction and permit a bonding of the topsoil to the subsoil and improve root penetration and water movement.
4. Add topsoil to achieve a total topsoil depth of 10-15 cm (4-6 inches), after firming. The topsoil should be a loamy sand, sandy loam, clay loam, loam, silt loam, sandy clay loam or other soil suitable for the area. To the extent possible, practical, affordable and available, incorporate humus (fully decomposed organic matter) into the topsoil.
5. Test the soil pH with a chemical soil test to determine if any pH correction materials are required. (*OPTIONAL*)
  - Acidic soils (pH of 6 and below) can be improved with the addition of lime. The type (or source) and total amount of applied lime will be determined by the level of acidity and should be based on the recommendations of a reliable garden center or turf professional.
  - Alkaline soils (pH of 7.5 and higher) can be improved with the addition of sulfur or gypsum. As with acidic soil correction materials, the type and total amount of materials will be determined by the level of alkalinity and should be based on professional recommendations.
6. Apply "starter fertilizer" that is high in phosphate (P, or the middle number on a bag of fertilizer), at a rate recommended for the particular product. To prevent root injury to newly installed turfgrass sod, this fertilizer should be worked into the top 7 to 10 cm (3-4 inches).
7. Finish grade the entire site, maintaining the rough grading contours and slopes, with a tractor-mounted box blade on large areas or heavy-duty rake on smaller sites. Rolling the area is optional with a lawn roller.

*Information adapted from Turf Producers International information.*

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