Establishing a warm-season turfgrass

In a recent column, I covered the various types of warm-season turfgrasses that grow well in Oklahoma’s diverse climate and growing conditions.

This week’s topic will cover soil and site preparation. Following these guidelines and it won’t be long until you’ll need to fire up the lawnmower to maintain that manicured look.

As with growing anything in the landscape, proper soil and site preparation creates optimal conditions for turfgrass establishment and forms the foundation of the turfgrass area. Complete your soil and site preparation just prior to planting. Make sure the seedbed surface is smooth, free of dirt clods and the soil should be moist but firm. In addition, make sure the area has been properly fertilized. Uniformity of site preparation is critical in obtaining a uniform turfgrass stand and a firm, weed-free seedbed is essential.

A properly prepared site aids in obtaining a uniform planting depth and improves seed-soil contact. Site preparation is the same whether you choose to establish a lawn by seeding, sodding, plugging or sprigging.

First, calculate the area that will be planted in turf. This will determine the appropriate amounts of fertilizer, seed, sod and other needed materials. Next, obtain soil samples for a soil test to determine phosphorus and potassium levels, as well as pH. To test the soil, take about 10 to 15 random core samples at a consistent depth over the entire lawn area. Place the samples in a container and mix them thoroughly. Contact your county Oklahoma State University Extension office regarding how to deliver the soil sample. County Extension offices currently are closed to the public, but they are still providing services, including soil testing. Simply call and set up an appointment. The testing will determine what amendments need to be added to the soil. If amendments are needed, incorporate them into the top 4 to 6 inches of the cultivated soil in the prepared site.

To prepare the site, remove debris such as wood, rocks, stumps, basically anything that will interfere with turfgrass root growth and water movement through the soil. Cultivate about 8 to 10 inches of the soil with a field cultivator, disk or similar cultivating equipment. Loosening the soil surface is critical for alleviating compacted, hard, tight soils. It also helps with incorporating fertilizer and soil amendment materials, which are crucial for optimum turfgrass establishment.

If your site has clay soil, it can be improved by incorporating topsoil or sand to increase soil aeration and water drainage. Add at least 4 to 6 inches of loamy topsoil or coarse sand into the upper 2 to 4 inches of the underlying soil. If you’re dealing with sandy soil, add 6 to 8 inches of loamy topsoil into the upper 4 to 6 inches of underlying soil. Also, if organic matter is needed,
add 10 to 15 percent by volume of a well decomposed peat or other organic material and work it in well.

An underground irrigation system should be installed below the frost line prior to final seedbed preparation. If the soil test indicated, mix the recommended amount of lime or sulfur into the upper 4 to 6 inches of soil.

Finally, complete grading and smoothing. There needs to be at least a 1 percent slope away from buildings to prevent water from settling. At planting, the seedbed should be firm enough to walk on with the top half inch of soil loose. Just before planting, apply a starter fertilizer on the seedbed at the rate of 1 to 2 pounds per 1,000 square feet. This will help ensure enough fertilizer is available for rapid root establishment. You are now ready to plant your turfgrass whether it be by seeds or vegetative material (sod, sprigs or plugs).

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