

CHALKBOARD

TIPS FROM THE PROS

Tall Fescue Management

Tall fescue is one of the most widely used turfgrasses for athletic fields in this country. It is the backbone of sports turf in the transition zone and is being used further south each year. Low water, fertilizer and pesticide requirements plus tolerance to a wide range of soils make it one of the least expensive turfgrasses from a maintenance standpoint.

Larry Leuthold, extension horticulturist at Kansas State University, has worked closely with athletic field managers in his state. Tall fescue is used on more football fields in Kansas than any other turfgrass so Leuthold has become an expert on tall fescue management for sports fields.

One reason for the growing popularity of tall fescue is the great improvement made by turf breeders. Old pasture-type tall fescues such as K-31, Alta and Fawn, are being replaced by new varieties with finer leaves and darker color. Some of these are Apache, Bonanza, Brookston, Falcon, Galway, Hounddog, Jaguar, Mustang, Olympic and Rebel. Seed growers are expanding their production of these varieties as fast as possible to meet the tremendous demand.

Tall fescue will tolerate soils with a pH range of 4.7-8.5 so it is seldom necessary to adjust the pH says Leuthold. Rarely are micronutrients, such as iron and zinc, required since the plants have deep root systems that extract soil nutrients efficiently.

Nitrogen is the most important fertilizer element for tall fescue, Leuthold points out. Tall fescue fields need regular applications of nitrogen and only a small amount of phosphorus and a moderate amount of potassium. A common mistake in fertilizing most turfgrasses is to use a balanced fertilizer such as 10-10-10. Established turfgrasses use nutrients in approximately a 4-1-2 ratio (nitrogen-phosphorus-potassium).

Phosphorus, potassium or lime should be applied only if soil tests indicate they are needed. Often, the phosphorus and potassium level in the soil for established tall fescue is adequate or even excessive.

The amount of nitrogen that is applied should be based on the level of maintenance (especially mowing and watering), budget, use, available labor and quality expectation. Applying half the fertilizer in one direction and half at a right angle to the first will minimize skipping and streaking.

Leuthold recommends three to four applications of nitrogen per year for tall fescue. Timed around football season, the first application of soluble nitrogen (1 lb./1,000

sq. ft.) should be made a week to ten days prior to the first football game. In November, after the last regular game is played, a second application should be made at the same rate. Leuthold recommends an application of insoluble nitrogen (1 lb./1,000 sq. ft.) in early May and possibly a fourth application in June if nitrogen is depleted by heavy irrigation or rainfall.

Three pounds of nitrogen per 1,000 square feet per year is not much compared to the fertilizer needs of bentgrasses and Kentucky bluegrasses. The result is a dense, healthy stand of turf which resists weed encroachment and damage by players.

Leuthold believes mowing is too often neglected, especially during the off-season. Letting the grass grow tall and mowing it down to a stubble results in a thin stand of stemmy turf that is easily invaded by weeds. Frequent mowing at the right height with a sharp blade is one of the most important factors in having high quality turf.

Leuthold says never mow tall fescue shorter than two inches and mow frequently enough so that no more than a third of the turf height is cut at one time. He suggests a mowing height of 2½ inches in the spring, 3½ inches in the summer and 2½ inches in the fall. Tall fescue grows fastest in the spring, slows during the summer and grows moderately fast in the fall. Mowing schedules should be adjusted for each season.

Removing the clippings is not necessary if proper mowing frequency is maintained. Clippings return much of the fertilizer and nutrients back to the soil and do not contribute to thatch.

Keeping mower blades sharp is important since tall fescue has a fibrous leaf. Dull blades cause frayed white tips which are especially noticeable in hot weather. Blades should be checked for sharpness before mowing the athletic fields.

Overwatering is a bigger problem with tall fescue turf than underwatering. Unnecessary frequent irrigation causes shallow rooting, encourages compaction and can lead to insect and disease problems. Quality tall fescue turf should be thoroughly watered once a week during hot, dry weather and perhaps twice a week during extended drought periods.

It takes about 35,000 gallons of water to properly irrigate a football field one time. The turf establishes its water dependency based upon the way it is irrigated early in the spring. Wait as long as possible in the spring before watering. This will help keep the turf roots deep in the soil and improve its ability to withstand drought later in the year. A higher mowing height also encourages deeper rooting.

During the off-season, do not water until wilt symptoms are seen. The best time to irrigate is in the early morning. Also, try not to irrigate within 24 to 48 hours of a game. When a field receives fairly constant use, water immediately after the last game of the day. Avoid soggy conditions during play since this will greatly increase compaction. Dry spots can be treated with wetting agents and/or aerified.

Under normal conditions, a tall fescue athletic field should be aerated twice a year, immediately after the last game in the fall and early in the spring. Severely compacted fields may need additional aeration, but avoid aeration during the playing season and especially before games.

Tall fescue football fields should be renovated immediately after the last game in the fall. This includes filling in low spots, core aerating, fertilizing, reseeding and watering. Aerate the field three or more times before fertilizing and reseeding.

Reseeding may only be necessary in the center of the field. Although seed can be broadcast and watered in, the best way is to use a seed drill. For best results, seed in the fall immediately after aeration. Seeding in the late spring requires an excessive amount of water which leads to other problems. Early spring seeding can be successful but timing is critical. You need to get the seedlings established before weeds do and before temperatures get hot.

It is important to remember the only crabgrass preventer that can be used in newly-seeded areas is siduron. Also, 2,4-D and other broadleaf weed killers should not be used within one month before seeding and until the grass has been mowed at least three times after germinating. The exception is bromoxynil, which can be used on seedling grass, but it must be applied to broadleaf weeds while they are young and small.

The Right Sand

Sand is undoubtedly one of the major solutions to poorly-drained and compacted athletic turf. But sand can make matters worse in many cases unless it is properly incorporated into the rootzone and it is the right size.

Research performed at Pennsylvania State University indicates that 80 percent of sand used in soil modification should have a particle size in the range of 0.5 and 1.0 mm. Furthermore, 95 percent of the sand should range from 0.5 to 2.0 mm. Problems can result if more than five percent of the sand is smaller than 0.5 mm.