



Spring Seeding Update

By Steve and Suz Trusty

Spring seeding fills many roles. A newly constructed or rebuilt field may be seeded in the spring in preparation for play in the fall or the following spring. Bare and badly worn areas of existing fields may be seeded in the spring to augment sections seeded in the fall where the grass didn't develop as well as expected.

Spring seeding may be the first opportunity to repair bare or damaged areas of fields used late in the fall. It may be used to repair sections of turf damaged by winter use, weather conditions, or equipment traffic. An existing field may be overseeded to thicken sparse turf or to add grasses with specific characteristics lacking in the established turf.

The initial question sports turf managers must answer is why a problem exists.

Unless the seeding will be used to establish a new or rebuilt field, an assessment of current turf conditions will be needed. Why does the field, or a specific section of the field, need seeding? Some damaging situations are beyond the sports turf manager's control; others may be altered by adjusting cultural practices or field use schedules.

If the same areas need reseeding every spring, alternative practices should be explored. Perhaps late season football and band practices could be moved off the game field to a different section of turf. Maybe games could be rescheduled if heavy fall rains create conditions sure to damage the turf if play takes place. Excess snow could be piled in a different area. Construction equipment could travel a different route.

Consider cultural practices to strengthen turf against winter stress, such as more frequent aeration, aeration later in the fall, adjustments in the irrigation, fertilization or topdressing programs or changes in fall seeding programs.

Sports turf managers next must decide what they can accomplish with spring seeding. While aesthetics are important, field playability and player safety are the prime concerns. Expectations must be realistic, taking into consideration existing conditions, pre-seeding preparation requirements, anticipated weather patterns, irrigation capabilities, and the time needed for seed germination and establishment.

All this must be compared to the preliminary schedule for field use. Again, shifting practices and games to alternative sites may allow sufficient time for turf establishment. If space allows, practice fields can be temporarily laid out differently — perhaps running two fields north to south instead of one field east to west, or moving the field several feet in one direction — to allow small seeded areas time to become established.

When fields are in good shape, with regular aeration, fertilization and irrigation programs in place, but play is frequent and heavy, many sports turf managers time overseeding applications to keep viable seed on the field throughout the growing season. As turf is worn and damaged by the action of play, seed is in place to fill in bare and thin spots.

Other sports turf managers keep small batches of pregerminated seed on hand for crews to apply as necessary during the post-game field inspection.

Sport Grasses

Seed producers have made great strides over the past several years in developing varieties suited for sports turf. Specific desirable characteristics can be gained by selecting bluegrasses, perennial ryegrasses, turf-type tall fescues and seeded varieties of bermudagrasses with those attributes.

Kentucky bluegrass is the most widely used cool-season turfgrass. The individual, fine-to-medium-bladed plants

spread aggressively by sending out rhizomes which form a dense, strong sod with the holding power to withstand sports activity. Bluegrasses are relatively cold-hardy, coloring early in the spring and holding color into the fall. They respond well to consistent fertilization and irrigation programs. They may enter a semi-dormant state in response to intense summer heat, combined with a lack of moisture.

Perennial ryegrasses are quick to establish and produce a medium-bladed, uniform, bunch-type turf with good shoot density. They have fairly high wear resistance. They exhibit relatively good heat and cold tolerance; coloring early in the spring and retaining color into the fall.

Turf-type tall fescues are bunch grasses with medium to medium-wide blades. They're very drought and salt resistant, and have fairly good heat resistance. They tolerate lower fertility levels than bluegrasses and perennial ryegrasses. Many varieties are deep-rooted and stand up well to heavy activity.

Bermudagrasses are the preferred warm-season grasses for sports turf. They are fine-to-medium textured, aggressive grasses that spread by both stolons and rhizomes, forming a tight-knit, dense sod. They thrive in heat, but go dormant as temperatures cool in the fall and don't begin spring growth until soil temperatures approach 60 degrees F. Their aggressive growth requires regular fertilization. They can tolerate short periods of limited moisture. Once established only by sodding or sprigging, new seeded varieties have become available.

Because bermudagrasses on athletic fields go dormant in cold temperatures, they often are overseeded in the fall with perennial ryegrasses. The perennial ryegrasses produce new growth through the cushioning base of the bermudagrass and bring green color back to the field. As temperatures warm in late spring, the sports turf manager uses cultural practices to encourage the bermudagrass and discourage the perennial ryegrass. Seeded bermudagrass applications may be made to these fields in the late spring as temperatures reach the proper levels for optimum germination. On high-profile, high-budget fields, the turf may be removed and replaced with bermudagrass sod or sprigs.

Within each of these grass types are multiple varieties that exhibit such characteristics as dwarf or semi-dwarf growth patterns, dark green color, resistance to heat, cold, drought, specific diseases, or insects. Some will withstand wear better and recuperate faster than others. Some

perform well at lower fertilization levels. Some tolerate higher salinity; some tolerate shade. Some varieties can withstand short periods of excess moisture.

Researchers also are working with endophyte (technically, any plant that grows within another plant, such as certain fungi or algae) "enhanced" turf varieties which are resistant to specific insects. Advances in genetic engineering now on the horizon may be able to take turf development further and faster than all the previous more traditional plant breeding methods.

The performance of each grass variety will differ according to the soil profile, pH, nutrient levels, irrigation pattern, mowing regime, temperature and humidity patterns, amounts of sun and shade, wind conditions and other components of its maintenance "package" and the unique micro-climate of its site.

Importance of Quality

The National Turfgrass Evaluation Program (NTEP), with headquarters in Beltsville, MD, collects, compiles and distributes data from tests conducted at a wide variety of sites across the country. Additional testing is conducted by university turfgrass extension personnel and by the seed companies. For recommendations on varieties that will perform as desired on specific site conditions under specific maintenance practices, contact local representatives of seed suppliers and the extension service. Also check with other sports turf managers who face similar situations to see what varieties have worked best under actual field conditions.

To build on the strengths of each grass variety and minimize the weaknesses, a combination of varieties can be used. A grass blend combines varieties of one grass type, such as several different bluegrasses. A grass mix combines varieties of two or more grass types, such as varieties of bluegrasses and varieties of perennial ryegrasses. Seed suppliers package blends and mixes of selected varieties that combine the best characteristics for specific uses. Again, check these mixes and blends for performance under specific conditions, including actual field use.

Because turf seed is a crop, the availability of certain varieties may vary according to weather conditions during the growing and harvest seasons. Seed costs also are variable, rising or lowering according to supply and demand.

It's important to start with high quality, viable seed. Check the label. State laws regulating the sale of turfgrass seed

require certain information to be stated on the seed label. Requirements vary somewhat by state, but generally include: the name of the producer or seller; the seed lot number; the type of seed; the seed variety — if a named variety is claimed; the purity (given as a percentage); the rate of germination (given as a percentage); and the date the seed was last tested for germination. Filler — non-seed, inert materials — must be listed as a percentage. Weed and/or crop seed also must be listed as a percentage present. Noxious weed seeds must be listed by name, along with the amount present (generally given as the number of seeds per pound).

Certification programs assure that seed is of the purity and germination rates listed on the label and is "true" to variety. Named varieties and certified seed will cost more than non-certified seed and "generic" seed.

Don't skimp on quality. It's a tough world out there, and a certain percentage of even the best quality seed is bound to fail. Why start with less than the best? The initial cost of the seed is small in comparison to the labor and material costs — and the time investment — required for mature turf to develop from seed.

Getting Started

Proper preparation and follow-up are critical. Use soil tests to check pH and nutrient levels, and correct deficiencies according to test results. Prepare the area with aeration, surface cultivation, top dressing or a combination of these so that the seed will have the best possible growing conditions. Select application equipment that will ensure good seed-to-soil contact.

Irrigate as required to keep young seedlings viable. Gradually adjust the light, frequent irrigation used during the germination and early growth periods to less frequent, deep watering to encourage deep rooting in the mature plants.

Mow the young grass when it reaches mowing height, rather than allowing it to become overly long. Follow the one-third rule, removing no more than one-third of the grass blade with any one mowing.

Finally, control use. Sports turf is under as much stress as players bound for the Super Bowl or the World Series. Don't put tender grass plants into the challenge of the game until they're adequately prepared. □

Steve and Suz Trusty are partners in Trusty & Associates, a consulting firm located in Council Bluffs, IA. Steve is executive director of Sports Turf Managers Association.

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