

In mid-March athletic fields in the northern United States show the scars of battles won and lost the previous fall.

Meanwhile, spring sports teams are already practicing and softball teams are organizing for their summer leagues. The damaged turf must somehow be readied to provide a playable surface for upcoming sports events.

The practice of overseeding is often the only means of providing a turfgrass cover on athletic fields from year to year. There are also times when a home lawn or other turfgrass areas succumb to disease, insects, chemical damage or environmental stress. Here, too, overseeding offers a practical

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means of repairing the damage and improving the overall quality of the turf.

Overseeding is a partial renovation process used to improve damaged turfgrass areas. Overseeding becomes necessary when the turf is damaged to an extent that it cannot recover with standard maintenance practices, such as fertilization. It is a selective tillage process that falls short of completely reestablishing the entire area. Overseeding can also be used as a means of introducing more desirable grass species or cultivars into an existing sod.

Timing

One of the more difficult places on which to maintain turf is an athletic field. The intense wear that athletic fields are subjected to make annual overseeding necessary to maintain turfgrass quality and playability.

Early fall would be the optimum time to overseed an athletic field because the warm days, cool nights, and adequate precipitation are conducive to rapid establishment of cool season grasses.

However, it is usually necessary to have the field in playable condition much sooner in the year. A more realistic time to overseed is mid to late spring. Dormant seeding in early winter should be avoided because seed germination could be greatly reduced by seed rot.

Honeycomb seeding is a method of overseeding that many old-timers and some not-so-old-timers swear by.

Honeycomb seeding should be performed in mid-February to late March in the northern United States. Seed should be divided into three or four

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Overseeding has proven itself a valuable "pinch-hitter" in healing athletic field scars and in producing high quality turf.

A Practical Quick-Fix

by Dr. Norman Hummel, Cornell University



A flexible-tine harrow is an effective method of preparing a site for overseeding.

Overseeding *from page 30*

equal lots and sown on three or four different days.

The seed should be applied in the early morning when the soil is still frozen but is expected to thaw during the day. The freeze-thaw cycles produce a honeycomb or soil cracking that enables the seed to become embedded in the soil.

The results of honeycomb seeding can be improved if the areas are scarified the previous fall with a flexible-tine harrow or similar piece of equipment.

Many landscape superintendents also feel that broadcasting seed on a field just prior to use is beneficial, assuming that the cleats of shoes will push the seed into the ground.

It is unlikely, however, that much of the seed will germinate and survive, especially if applied much past Oct. 1.

Species, cultivar selection

Successful overseeding begins by selecting the best grass species and cultivars for your area. Fields that receive heavy use should be overseeded with a blend of two or three **perennial ryegrass** cultivars at a rate of five to seven pounds of seed per 1,000 square feet. This quick germinating species is well-suited for athletic fields because it has good wear resistance, it is very easy to establish and is better able to compete with weeds when used in a spring seeding.

However, it is somewhat susceptible to winterkill and since it is a non-spreading grass, it's ability to recover from injury is poor. Therefore, more frequent overseeding will be necessary to maintain density on perennial ryegrass fields.

Kentucky bluegrass is also well-suited for athletic field use. It is attractive, durable and is able to recover from injury. The biggest drawback of Kentucky bluegrass is that it is difficult and very slow to establish, especially when overseeded with sod.

Mixtures of Kentucky bluegrass and perennial ryegrass can be overseeded on fields, provided that the perennial ryegrass component does not exceed 20 percent of the seed mixture. Mixtures with a larger percentage of perennial ryegrass will produce a predominately ryegrass stand. The differences in seedling vigor make it difficult for Kentucky bluegrass to germinate and establish itself in a vigorous perennial ryegrass sward.

However, if the vigor of the ryegrass is reduced by close mowing (1/2 inch) for the first few weeks of establishment, then it is possible to produce a true blend of Kentucky

bluegrass and perennial ryegrass from a 50:50 seed mixture.

The preferred grass species for home lawns in the northern United States is Kentucky bluegrass. The many improved cultivars now available have such genetic diversity that there are few situations where at least one cultivar won't be adapted.

There are cultivars adapted to sun or shade, high or low maintenance and they are all attractive. Kentucky bluegrass should be overseeded into a lawn at a rate of two to three pounds of seed per 1,000 square feet. This rate is slightly higher than what might be used in bare soil, but it compensates

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for the reduced germination that can be expected in what are often less than ideal germinating conditions.

The turf type **tall fescues** are becoming more popular for athletic fields, home lawns and other grounds areas.

The new fine-textured cultivars have good drought tolerance, good wear resistance and they are much more attractive than the old varieties such as Kentucky 31. Since tall fescue is also a bunch-type grass, more frequent overseeding will be necessary to maintain density and for the cultivars to maintain their fine-leaf characteristics. Also, tall fescue is very susceptible to winterkill, so its use is limited to rather specific areas in the northern United States. Contact your county extension agent or state turfgrass specialist for the species and cultivars recommended in your state.

Seeding

Once the seed mixture has been selected, the area must be prepared for seeding. Mow the area as short as possible and remove the clipping debris. This step will insure that adequate sunlight reaches the soil surface to enhance germination.

Seed is most successfully germinated when it is placed in direct contact with the soil. Core aeration is an effective means to accomplish this.

Core aerify the field or lawn in at least four directions. Germination will be noticeably enhanced directly in the aerifier holes. Therefore, the

more passes made with the aerifier, the better.

Allow the cores to dry, then break them up by dragging the area with a drag mat, piece of chain link fence, or flexible tine harrow. Core aeration prepares a partial seeded by bringing soil to the surface.

Apply a high phosphorous or starter fertilizer with an approximate 2-4-1 or 3-4-1 ratio at a rate necessary to provide one pound of actual nitrogen per 1,000 square feet. Both nitrogen and phosphorous are essential for rapid establishment and maturation of overseeded turf.

Overseed immediately following aeration. The preferred method of overseeding is to use a disk-type seeder that cuts a narrow slit into the soil or thatch and directly deposits the seed into the slit. The areas should be seeded with a disk seeder in at least two, and preferably four, directions.

When bunch grasses are used, superintendents will often broadcast seed on top of the disk-seeded areas to accelerate the filling in-between the seeded slits. This step could probably be eliminated if the area is disk seeded in four directions.

When a disk seeder is not available, it is possible to further prepare the seedbed by working up the soil surface with a flexible tine harrow. Seed may then be broadcast and the area lightly dragged.

On spring-seeded turf, siduron (Tupersan) should be applied to reduce annual grass competition. Siduron is presently the only pre-emergence herbicide safe to use in seedling turf.

In 1986 there may be a new postemergence herbicide available called Acclaim that is effective on many annual grasses and is safe to use in seedling turf.

Water the area as necessary to keep the soil surface moist. Mow the area when the grass seedlings are slightly higher than the height at which they will be maintained.

After the newly seeded area has been mowed at least twice, herbicides may be applied as needed to control broadleaf weeds.

Regardless of the turfgrass area being maintained, overseeding is only one step in producing high quality turf. Controlling the amount of play and providing adequate drainage will help preserve a playable turfgrass cover on athletic fields.

Proper fertilization, mowing, irrigation, cultivation, and controlling turfgrass pests will all contribute to a healthy, vigorous turf and reduce the need for overseeding.

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