

Seeding Winter Greens

By O. J. Noer

Milwaukee Sewerage Commission

EACH fall throughout the Southeastern states, Bermuda greens are seeded with temporary grasses for winter play. The practice was first adopted in the far South, but gradually extended north to the upper fringe of the Bermuda belt. The westward march is taking place but sometimes with indifferent success, even though accepted methods used elsewhere are imitated. Failure to recognize inherent differences in climate within the South, and to modify methods accordingly underlie disappointment.

Rye grass, the original choice, has never surrendered its popularity. The switch from imported Italian rye to domestic grown seed is the only important change, prompted by difference in cost rather than performance. American varieties produce as good putting surfaces and are equal, if not superior, from the maintenance standpoint.

That rye grass can produce fine textured turf seems incredible to most Northerners. Narrow leaves and dwarf plants result from crowding achieved by seemingly wasteful rates of seeding. Individual seeds are large, so low cost per pound is partially offset by the large quantity used.

Seeding Done Late

Rye grass germinates quickly, emerging in less than a week provided soil is warm and moist, but the tendency of all young grass leaves to be tender is accentuated in rye grass. Hence, if weather is hot and muggy, new seedings often "choke-out" or "damp-off" soon after emergence. Trouble of this kind is more likely in the far South, so seeding there is delayed until very late hoping to strike a spell of moderate temperatures. Warm weather all winter permits reseeding at any time with full assurance that seed will germinate.

To imitate this procedure where early cold snaps are likely, is to court disaster of a different kind. In northerly sections it is imperative that a good stand of grass be obtained before cold weather sets in, because after that, germination is uncertain and hence reseeding is a gambler's chance.

Once rye grass becomes well established it will withstand more cold than any of the

other grasses, excepting poa annua, which is similar in this respect. Both continue growth when temperatures are too low for bluegrass, red top, or the commonly used bents. Hence, choice in cooler regions is limited to rye grass, and success is almost sure provided seeding is done early; that is, after summer heat is over, but while soil temperature is sufficiently high to permit germination.

Amount of seed used varies widely. In regions where "damping-off" is a likely possibility, initial seeding rate seldom exceeds 25 to 50 lbs. per 1,000 sq. ft., but additional seed is used from time to time throughout the winter. Farther north it is not uncommon to double this rate, because reseeding during winter is most uncertain; so it is necessary to depend upon the initial stand of grass until after January at least.

Sowing Rate Varies

When greens are used all year it is universal practice to seed at lighter rates than when play is confined to winter months only, because too much rye retards, and occasionally prevents, recovery of Bermuda in spring. Hence the 40 to 50 lb. total rate is approached to provide decent putting, but is not exceeded. Where play is limited to winter, efforts are centered upon developing the best possible green for winter play. For that reason some use up to 100 lbs. of rye grass seed per 1,000 sq. ft.

As stated before, rye grass is the only logical choice for the colder regions of the South, but in the far South other grasses can be used. Some favor red top as an economy measure, for although cost per pound is higher, far less seed is needed because of much smaller size. There is a tendency to use some bluegrass along with red top or rye, based on the supposition that bluegrass is more hardy and hence better able to cope with disease and other related troubles.

A stand of Kentucky bluegrass cannot be obtained by mixing a small amount of bluegrass seed with the customary amount of rye grass seed commonly used. The rye grass quickly covers the surface and smothers the bluegrass before it starts

germination. To obtain a stand bluegrass seed must predominate in the mixture or else the two grasses must be seeded separately. The bluegrass should be seeded first, and the rye grass after its seedlings appear.

Some of the seeded bents should succeed. High cost of seed is the principal deterrent. On the other hand seed is exceedingly small so very little is needed, possibly $\frac{3}{4}$ lb. per 1,000 sq. ft. *Poa annua* is another likely grass which would find wider use except for fact that seed is scarce and high priced. It should not be necessary to use more than 7 or 8 lbs. of its seed per 1,000 sq. ft.

Remove Surplus Bermuda

Before seeding, surplus Bermuda beyond that needed to serve as a base for winter grass, should be removed. A thick surface layer of matted stems and leaves inhibits germination and may cause serious loss later. Occasionally on courses not used in summer, greens are mowed during that off-season with tractor-drawn fairway units. In that event bed knives should be lowered gradually in late summer to eliminate the objectionable mat. This is best achieved by removing back rollers a fortnight before seeding time and setting bed knives right down to the ground. During final seed bed preparation greens should be alternately cross raked and hand cut until stems not needed to protect winter grass are removed.

Topdressing used to cover seed, as well as any needed to level surfaces just before seeding, should be devoid of organic matter and low in plant food. A mixture of poor soil and sand is best for both purposes.

Sometimes newly seeded grass is killed by the first severe frost after seeding. Locally this is called honey-combing. By collecting and trapping surplus water, heavily matted Bermuda and high content of organic matter in topdressing, or both, accentuates loss.

In the far South where "damping-off" is a serious menace, pre-seeding fertilization should emphasize sturdiness and hardiness. That means using phosphate and potash generously before seeding, and withholding nitrogen until after grass is well established. Furthermore, weather is comparatively warm all winter so nitrogenous fertilizer can be used as needed.

Farther north in the cooler regions, the problem is quite different. A good stand

of grass must be obtained early so some nitrogen is indispensable in addition to phosphate and potash. The amount of nitrogen used should be just sufficient to establish the grass and carry it through early winter cold snaps, because benefits from fertilizer used during cold weather are negligible.

Preseeding fertilizer should be applied a week before seeding so it will not inhibit germination. The rate for 20% grade superphosphate should be 10 to 20 lbs. and for 50% grade muriate of potash 4-6 lbs. per 1,000 sq. ft. These alone suffice in the far South, but farther north, where nitrogen is often needed also, the rate for a high grade organic fertilizer should be 15 to 30 lbs. per 1,000 sq. ft., but if soluble fertilizer is substituted not more than 3 to 5 lbs. should be used because of possible damage to sprouting seed. When mixed fertilizer is substituted it should carry approximately the same amount of plant food as the straight materials suggested above.

The annoyance of poor putting in spring, during the transition from winter grass to Bermuda, is responsible for the decision by some to forego winter greens. When left to itself, winter grass goes out gradually, first in isolated spots, and after that in progressively larger areas until all is gone. Transition may extend over several months which makes for bad putting all that time. Winter grass can be eliminated quickly. The secret is to use nitrogen fertilizer and water generously at the first suspicion of warm weather, which is the time for Bermuda to begin activity. Then by withholding water, when leaves of winter grass become soft and tender, (from plentiful nitrogen and water), the temporary grass disappears quickly, almost overnight. Light seeding with scarified Bermuda seed, along with the nitrogen fertilizer, then speeds development of that grass for summer play.

Iowa Greenkeepers Inspect Des Moines' Courses

IOWA Greenkeepers Assn. had a turnout of 30 greenkeepers for a tour of courses in and around Des Moines, September 18; several Nebraska greenkeepers also made the rounds with the Iowans. Minnesota and Missouri greenkeepers, who had originally planned to attend, were unable to be there because of greenkeeping field days held by their groups on that day. The boys