



# UNITED STATES GOLF ASSOCIATION GREEN SECTION

## Southern Turfletter

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### WINTER GREENS

#### Pointers for Overseeding Ryegrass on Bermuda Greens

In spite of the long history of ryegrass overseeding for winter greens there is still a great deal of controversy over most aspects of the overseeding process. There seems to be no definite rate of seeding and the date of seeding quite often depends on convenience alone. The method of surface preparation and seeding also differs widely between golf courses. The following pointers on overseeding are more or less the consensus of opinion among those who, year in and year out, have the least amount of trouble with the installation of ryegrass and the bermudagrass recovery in the spring.

Surface Preparation - Many superintendents feel that aeration of the green at the time of seeding gives the ryegrass a tufted appearance after emergence. This is due to the collection of seed in the aeration holes which will make stronger growth than those in the Bermuda sod itself. To provide the desired fall aeration without encountering this condition it is thought best to aerate a few weeks prior to overseeding. At the time of seeding the general practice is to thin drastically the Bermuda turf with a vertical mower so that the seed come in close contact with the soil. This also provides an opportunity to remove a great deal of thatch which has accumulated over the summer and to prevent the formation of an organic layer at the soil surface by subsequent topdressing.

Seeding - The most variable factor in overseeding is the rate used. In the upper south many superintendents feel that their members can best be satisfied with a heavy seeding which will provide good putting conditions from November through May. Since they will be on ryegrass for 7 or 8 months they feel that this surface should be the best they can provide. The seeding rate in some of these cases will run from 75 to 100 pounds per 1000 square feet. With this heavy rate, a poor spring transition is expected.

Where the new fine-leafed Bermudas are used, and where color alone is the basic need, it is thought that a light rate of seeding will suffice. Good putting conditions were maintained on many courses last winter with as little as 25 pounds of ryegrass per 1000 square feet on Tifgreen Bermuda. Experiments performed several years ago at the Coastal Plain Experiment Station in Tifton, Georgia, indicated that a medium rate of 40 to 50 pounds per 1000 square feet should provide adequate growth and a good putting surface and should also ease the transition period in the spring. Generally speaking, the lighter the rate of seeding the less chance there will be for drastic damage by disease. Light rates also ease the emergence of bermudagrass in the spring. Heavy stands of ryegrass make it very easy for a disease to be transmitted from plant to plant.

After the seed are applied they should be dragged into the turf with a steel drag mat or with topdressing rakes, to assure their close contact with the soil. The seeded green should be topdressed with sterilized soil to a depth of at least 1/8 inch. Many superintendents lose a high percentage of seed by not having them sufficiently covered with topdressing. The topdressing should be dragged or matted into the sod and the watering initiated. The surface should be kept moist, but not wet, until full emergence is attained and mowing is initiated.

In order to obtain a heavy stand of ryegrass in areas where cottony blight (Pythium aphanidermatum) is a serious pest, most superintendents split their seeding applications. Forty to 50 pounds per 1000 square feet are used in the first application. When this is up and growing well, the remainder of the seed is then applied with a very light topdressing.

Disease Control - Seedling disease is the greatest hazard to good ryegrass greens in the fall. Cottony blight is a major consequence shortly after the ryegrass seedlings emerge. This disease has been studied for several years by Dr. Homer D. Wells in Tifton, and as yet no positive control has been developed. New materials are under test which show promise but they are still in the experimental stage. The best control for use at this time is a mixture of one pound of Captan 50-W and the manufacturer's recommended rate of Acti-dione per 1000 square feet at the time of planting. This mixture can be applied directly on the seed after they have been broadcast or onto the soil following topdressing. Follow-up sprays should contain the same rate of Acti-dione but only half the amount of Captan. Cottony blight is likely to appear at any time during warm, humid weather in the fall. The disease does not seem to be a problem in the spring after the ryegrass becomes well established. In areas where cottony blight is prevalent it is best to apply the fungicides at any time the humid conditions exist.

Subsequent Maintenance - With the initiation of mowing following seedling emergence all mowers must be in excellent condition -- sharp and well adjusted. Otherwise the seedlings may be pulled out of the ground by a dull mower or the leaves may be frayed and bruised. Such injury makes it easier for the plants to become diseased. Ryegrass is a heavy user of nitrogen and to obtain rapid, early growth an adequate supply of nitrogen must be maintained in the soil.

### Overseeding With a Mixture of Redtopgrass and Bentgrass

Where fine-leaved Bermudas are being used, many superintendents get good results from the use of redtopgrass (Agrostis alba) and the bentgrasses. It seems advisable to use equal amounts of seed of these grasses in combination. Three to five pounds of seed per 1000 square feet will give a sufficient amount of seedlings for a good putting surface. It would not be advisable to plant these seed in the southern portion of the bermudagrass area before the 15th of October. In the northern bermudagrass areas, the date of seeding would be five to ten days earlier.

In the southern part of the United States "damping-off" diseases in the early part of October frequently will take a great toll of seedlings before they have emerged and begun to grow. Dates of seeding studies indicate that early seedings are especially apt to be damaged. Thiram fungicides are helpful in controlling some of the "damping-off" organisms. This is not necessarily the same fungus that causes the "cottony blight" discussed under the heading of ryegrass.

The seed of redtopgrass and bentgrass can be sown into the bermudagrass turf and worked with a light drag mat. A very light topdressing would be beneficial after seeding. The seed of these grasses are small and rates are light. Therefore one must be careful to obtain a uniform distribution of seed.

Why Use Redtop and Bent? - By using redtopgrass and Highland bentgrass, the transition period in the spring seems to be less abrupt than when ryegrass is used. The redtop and bent begin to disappear gradually from the turf as the bermudagrasses take over. Ryegrass becomes established rapidly but it is also likely to die out rapidly in spring.

Cost Comparison - Prices fluctuate from year to year but redtop and bent usually cost about five to eight times as much as ryegrass per pound of seed. However, the much lighter rates of redtop and bent more than offset the additional cost per pound. Therefore it is actually somewhat cheaper to plant redtop and bent.

Some may wonder at the difference in seeding rates. A mixture of redtop and Colonial bent contains approximately 6,875,000 seeds per pound. Ryegrass seeds are much heavier, one pound containing 275,000 seed. Therefore one gets 25 times as many plants from a pound of redtop and bent seed mixture as he does from a pound of ryegrass seed.

Either ryegrass or redtop-bent mixture will provide good winter greens if they are handled properly. Each choice has its advantages and disadvantages. It would appear that greens of fine-leaved bermudagrass are more often planted to redtop-bent and common bermudagrass greens are more often overseeded with ryegrass.

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