

Each year hundreds of Southern courses literally apply millions of pounds of "overseeding" grasses to their Bermudagrass greens and tees.

The process of applying the seed takes place normally in October and November and is quite detailed. Exact procedures vary from course to course. At Inverrary, our overseeding program begins long before temperatures cool in the fall.

A successful overseeding is the

However, the green with more seed may putt slower.

After seed application, the single most important program is proper irrigation. Light, frequent irrigation is the key to a high percentage of seed germination and retention.

Golfers are inconvenienced by the frequent daytime watering and it places more pressure on the irrigation crew. But, the temporary inconvenience is justified by the condition of the over-

The day of seeding two crewmembers **remove the dew** from the greens by dragging hoses across them. This speeds up the time it takes for the greens to dry. The greens must be dry so the seed is not tracked off the greens on the shoes of the seeding crew.

Next, the **greens are spiked** in four directions to allow the seed to make better contact with the soil.

Seeding takes the most thought. I like to think we get better each year. Hopefully, the days

Winterseeding

The Greening of Inverrary

by Brad G. Kocher, Golf Course Superintendent, Inverrary Country Club, Club Corp. of America, Lauderhill, FL.

product of a lot of prior planning and effective turf management. We try to strive for (1) a healthy turf, prior to seeding; (2) a good seedbed; (3) consistent seed application; (4) adequate irrigation; and (5) proper post-germination mowing, watering and fertilizing practices.

Healthy turf is paramount to any quality putting surface. Our pre-seeding goals are to have healthy turf, while not overly lush. Lush turf causes Bermudagrass to grow more rapidly and compete with the newly establishing overseeded grass.

The turf should also be weed-free, fungus-free and void of insects. At no time do we wish to have an outbreak of disease or insects in conjunction with newly established grasses.

A good seedbed is also quite important. This involves minimizing thatch and application of top-dressing material after seeding to assure seed/soil contact.

An even application of seed is also imperative to produce a consistent overseeded surface. Our rate is 30 lbs. of ryegrass per 1,000 square feet. We want each green to have the same exact rate, not 28 lbs/1,000 on some greens and 32 lbs/1,000 on others. Golfers may or may not notice the difference.

seeded areas during the next six to seven months. In many areas, overseeded turf predominates for a longer period than Bermudagrass.

Lastly, a good overseeding program requires proper turf management—mowing, watering and fertilizing—throughout the winter months. This is outlined in the following chronolog of overseeding at Inverrary.

Overseeding diary

Our overseeding program begins with **verticutting** the greens ten days to two weeks prior to overseeding. The purpose is to thin the Bermudagrass sufficiently and to give it time to heal before applying ryegrass seed. We have found if we verticut the day of seeding, an excessive amount of seed works its way into the verticut grooves and the seed germinates in rows.

Three days before seeding, we **discontinue mowing** the greens. The reason for this is to give the seed some upright Bermudagrass leaf surface for shelter. The seed is not as exposed and the leaf blades stabilize the seed among the Bermudagrass plants. This is particularly helpful if we have a downpour between seeding and germination. The seed is much less likely to wash away.

of spilling seed out the back of a Cushman as we travel from green to green are over.

Each **green is measured** accurately. We know precisely how much seed we need for each particular green to achieve the 30 lbs/1,000 rate. For example, a 6,000-square-foot green should receive 180 lbs of seed (6 x 30 lbs).

In addition, we overseed the perimeter of the green, the cleanup ring, at 35 lbs/1,000. We seed the cleanup ring at a slightly higher rate because of the higher mortality rate of ryegrass in this area due to triplex greens mowing. The extra seed in the area is only noticeable for the first few weeks.

In the past we tried to establish seed rates based upon the speed of the spreader operator. Due to inconsistencies, we now pre-measure the amount of seed needed for each green based upon individual measurements.

Using a rotary spreader, set wide open, we **spread seed** in four directions at a normal walking pace. Any leftover seed is then applied at a faster walking pace.

The cleanup passes are made with a drop spreader to give a neat, definitive edge to the green.

Neatness is of monumental importance when applying seed. All of our bags of seed are placed on a

piece of carpet on the collar of the green. One man carries the seed to the spreader and two people apply it, one with the rotary and one with the drop spreader. They switch jobs periodically to avoid boredom.

Before the "seeders" leave the green, they clean their shoes using a brush or small broom. In this way they insure that no seed leaves the green on the bottom of their feet. A small piece of carpet is taken from green to green to

provide an area for cleaning.

Next we **apply topdressing** at a rate of approximately one and one-half cubic yards per 5,000 square feet. We use a 90(sand)/10(organic) grade of topdressing. The topdressing helps cover the seed and also provides a medium for good seed-to-soil contact.

Again, neatness is of utmost importance. The topdresser applies his material in a circular motion and never leaves the putting sur-

face until he is finished. This is possible because we back our trucks onto a sheet of plywood at the edge of the putting surface. We can then back the topdresser to the tailgate of the truck and reload it without leaving the green.

When the topdresser leaves he drives onto a sheet of black plastic, cleans the seed off the tires, then proceeds to the next green.

After giving the topdressing material time to dry, we begin **dragging** it in. We use a golf car to pull the mat because it is light and has shallow grooves in the tires making it easy to clean.

We use a steel drag mat with a piece of thick pile carpet attached to one side. We find using the carpet allows us to drag in the topdressing without shifting the position of the grass seed.

Our dragging pattern starts at the outside edge proceeding to a series of shifting oval patterns. In this way, we minimize short turns and avoid going over the same area several times causing a buildup of topdressing in one spot. The natural tendency is to keep going over and over the outside edge.

Once dragging is complete, the car is driven off the green onto a sheet of black plastic and the tires are brushed free of grass seed.

continued on page 52



Topdressing right after seeding and when mowing height is reduced to 1/4-inch is part of a successful overseeding program. Shown right are **greens spiked** in four directions prior to seeding to improve seed/soil contact.

Immediately after dragging irrigation is applied, thoroughly but not to the point of puddling. The greens should then be watered three to four times lightly during daylight hours. If the weather is exceptionally dry, we have irrigated lightly at 1 a.m. By light, I mean one rotation of the sprinkler head, or just enough to keep the seed moist without overwatering the green.

The seed generally germinates within four days since temperatures are still in the low 80's. Within 24 hours of germination, we apply a preventative application of fungicide (Subdue) to thwart any outbreaks of Pythium during the next week. We are not generally subject to Pythium at this time of year. However, a little preventative application insures a good night's sleep for me and the seed.

The first mowing is made two days after germination at 3/8-in. We leave the baskets off the mower for the first two mowing. Sharp blades are important to minimize pulling the young ryegrass so mowers are lapped daily.

The greens are mowed daily at 3/8-in. for the next five days, 5/16-in. for the next five days, and 1/4-inch for the next two to three weeks. By now the plants are starting to tiller. Finally, the height is reduced 1/16-in. per week for three weeks for a final height of 5/32-in. is reached. This height will vary depending on the severity of our winter temperatures, but we can obtain a good putting surface at this height.

Light topdressing begins at the same time we lower the mowers below 1/4-in. This light topdressing is applied every three to four weeks to produce a smooth putting surface and to encourage lateral growth by the ryegrass and the slower growing Bermuda grass.

We fertilize greens at 3/4- to one-pound of nitrogen per month during January through April, then we change our program to slowly phase out the ryegrass and encourage growth of the Bermuda grass.

No overseeding program would be complete without a description of the transition from ryegrass to Bermuda. It can be gradual and hardly noticeable, to quick and disastrous. We have discovered it is best to control transition than let nature take its course and possibly lose the greens on a hot, muggy, windy weekend before a big tournament.

To control transition we start verticutting lightly in April and May and increase fertilizer to one-and-one-half-lbs. nitrogen per 1,000 square feet per month. In this manner we control when and how much ryegrass we take out. We feel more comfortable knowing the ryegrass leaves in relation to our cultural practices, instead of Mother Nature.

Finally, I would like to thank the Inverrary crew who always do that little extra when it comes time to overseed our greens. WT&T

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