

Six Years of Tests Help Turfmen Pin Down Some Secrets of Overseeding

Effectiveness of various grasses and preparation and fertilization methods for Southern turf are examined

By O. J. NOER

When Southern greens were planted with common Bermuda, overseeding was with ryegrass. At a few courses, so-called Italian ryegrass was preferred even though seed was more costly. The preference was based on the supposition that the imported seed produced sturdier turf and was more resistant to disease. Before long, domestic rye (a mixture of annual and perennial types) became the universally used seed. Its price was much lower and performance almost as good as the imported variety.

Heavy seeding rates, up to 100 pounds per 1,000 sq. ft., were necessary to insure a fine textured turf. At light seeding rates, ryegrass is coarse textured. Although ryegrass is a soft succulent grass, especially in the seedling state, the seed germinates quickly and grows rapidly. It has the ability to retain its green color in cold weather.

Many golfers from the North have not been enthusiastic about ryegrass greens. They are slow because of the heavy seeding rate.

The most dependable seeding practice with ryegrass has been to use phosphate and potash generously, about a week before seeding, and to withhold nitrogen until after growth has started, usually about two weeks after seeding. If used before seeding, nitrogen aggravates succulence and invites a damp-off type dis-

ease. Phosphate encourages root formation, and potash reduces succulence.

Ryegrass seed is large (250,000 per pound) so it contains an ample reserve of stored food for germination and initial growth.

Generous Topdressing

Greens are shaved close, seeded and topdressed immediately at a generous rate, usually a couple of yards to the average sized green of 5,000 to 6,000 square feet. A heavy topdressing is needed to cover the coarse Bermuda stems. Large seeded grasses such as rye and fescue, like $\frac{1}{4}$ to $\frac{1}{2}$ inch of cover, but this is not the case with the bents which have very small seed. Many seeds do not emerge when buried under a heavy topdressing.

The quest for a better Bermudagrass for use on greens started in Savannah. Lester Hall made selections of fine textured strains from the greens at the country club. He grew them in a nursery and used the best ones in the greens. Some years later, Fred Hoerger did the same thing in Miami Beach where he was in charge of LaGorce and Bay Shore. Both courses were operated then by Fischer Property Co.

The Bay Shore greens had been planted twice to African Bermuda, obtained from the U.S.G.A. green section in Washington. It did well until subjected to very close mowing. Then it couldn't resist invasion by common Bermuda. Bay Shore was taken over by the Army and used as a drill field during World War II. Greens were allowed to grow. There were marked differences in the Bermudas, ascribed by some as being natural hybrids. Hoerger made selections of what seemed to him



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like good strains and planted them in a nursery before his untimely death.

The best one was named Gene Tift by local supts. in honor of the man who worked under Hoerger and became supt. at Bay Shore after Hoerger's death. Gene Tift was used at the old Miami CC, Indian Creek, Coral Ridge, in Puerto Rico and in Houston on the greens at Lakewood first, and subsequently, on the greens, tees and fairways at the new Houston CC course. Bair at the Everglades experiment station in Florida tested a number of Bermuda selections. One, Everglades I, from the Everglades Club in Palm Beach, has found favor at a few clubs.

Burton Works With Bermuda

Glen Burton's original mission at the Coastal experiment station in Tifton, Ga., was to develop forage grasses so cotton acreage could be transformed into ranges for the beef cattle industry.

Burton became interested in turfgrass breeding. Some selections, unsuitable as forage, had possibilities for use on lawns, golf courses, athletic fields, etc. His Tifton-328 became known as Tifgreen and is the most popular Bermuda putting green grass in the South. More recently he has released T-419 as Tifway. It is becoming a popular grass for fairways and tees. In the deep South, Tifway holds its color better than most other selections.

The Milwaukee Sewerage Commission established its first overseeding trials six years ago, and now has as many years of test results. The plots included these grasses, used singly and in combination: Seaside, Astoria and Highland bent; Red top; Pennlawn, creeping red and Illahee fescue; Poa trivialis; Common Kentucky and Merion blue along with ryegrass for comparison.

Some Test Observations

Pennlawn bent was used alone the first year, but not after that because of its high cost. By mid-winter it made a heavy dense turf, almost too heavy for play. It could retard recovery of Bermuda in the spring transition period. This has not happened with any of the other grasses or mixtures.

In 1962-63, velvet bent seed from Holland was tried alone on one plot. It developed cover very slowly and does not seem to be a likely candidate for use either alone or in mixtures.

Seaside has been the best of the bent-grasses, followed by Astoria and with Highland last. Astoria and Highland were



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somewhat better in 1962-63. The bents germinate quickly but do not come into their own until late winter or early spring.

Redtop has been a poor choice, worse than any of the bents. It succumbs quickly in periods of adversity. Currently, Redtop costs 10 to 20 cents per pound more than Highland bent, Kentucky bluegrass and fescue. It is overrated for use alone or in mixtures.

All fescues germinated quickly and made excellent growth. Pennlawn was the best by a slight margin. When used alone, heavy seeding is necessary — in the range of 30 lbs. per 1,000 sq. ft. The fescues do not mask poa annua, which is unfortunate where greens are cursed with this volunteer grass.

Outstanding Performer

Poa trivialis has given an outstanding performance every year. It germinates quickly and grows fast. Greens containing it have an apple green color in contrast to the blue green color of Bermuda. Players appreciate the color difference and poa trivialis is similar to poa annua in color and texture. It masks poa annua better than any other cool season grass.

Some think poa trivialis too soft in texture. It is more sturdy than ryegrass and otherwise superior to it. Poa trivialis retains its color, as well or better than ryegrass. Some lots of seed contain shep-

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Secrets of Overseeding

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herdspurse and related rosette type weeds, besides chickweed. The shepherdspurse is objectionable; the chickweed can be controlled. Both types of weeds can be removed by re-cleaning the seed. Poa trivialis can be used alone or as the basis of mixtures with other grasses.

Get Slow Start

The bluegrasses start slowly and are not good until late winter or early spring. Their only place is in mixtures. Merion is a coarser grass and seed is much higher priced. Common Kentucky blue is the best one to use.

On some courses, poa trivialis has been used alone and has been satisfactory when seeded at 6 to 8, or up to 10 lbs. per 1,000 sq. ft. Others have preferred 5 to 6 lbs. of Poa trivialis and 2 to 3 lbs. of Seaside bent per 1,000 sq. ft. The bent-grass is really good toward spring.

Most other mixtures have been good. Plots overseeded with 1½ lbs. Seaside, 3 lbs. poa trivialis, 3½ lbs. Kentucky blue and 12½ lbs. Pennlawn fescue have been very good. Where twice as much seed of each kind was used cover was quicker and turf was heavy by late winter.

Here Is The Choice

The choice is between poa trivialis alone, a mixture of it with Seaside, or a combination of Seaside, poa trivialis, bluegrass and fescue. There is no point in paying a premium for Pennlawn over creeping red or Ihallee fescue. Unless Seaside prices are substantially lower, it might pay to use half Highland and half Seaside.

Seedbed preparation is extremely important and after that it is a matter of water management. Various methods of seeding are to be tested this year. Until then, the following procedure is suggested, based on experience:

- Any deep aeration should take place 3 to 4 weeks before seeding. Otherwise, grass in the aerifier holes will grow at a faster rate and make the surfaces uneven.

- A week before seeding, surplus grass should be removed by cross verticutting with a Verticut or Mat-O-Way and trash picked up with a power sweeper. The next operation should be close mowing twice, crosswise the second time. Cross spiking followed by an application of 0-20-20, or similar mixture, at 15 lbs. per



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1,000 sq. ft. and generous topdressing. Then seed about a week later and topdress very lightly in order not to bury the seed. Some nitrogen should be used because the smaller seed of these grasses does not contain enough stored food for anything but germination. Some supts. prefer to use a steel mat after seeding.

• Another variation is to apply 0-20-20 a week before seeding. Then do everything else on the same day. Topdressing used after seeding should be at a light rate. Thus there is less interference with play.

• The surface soil must remain moist, but not wet, until new grass is well established. In hot spells or on windy days this may require light watering by hand, or with automatic sprinklers, several times a day for 5 to 10 minutes and no more. This means Saturday and Sunday as well as the other five days. Unless this is done, the sprouting seed may wither and die.

MH-30 was tried at several locations to test its ability to check Bermuda growth. In several places the MH-30 did damage to both Bermuda and the new grass. Weather was on the warm side. At Charlotte there was no damage and the MH-30 pots were free of poa.

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