Except maybe for Hawaii, no place has conditions like South Florida

This past spring, the South Florida chapter hosted a meeting with Dr. James Beard on getting back to the basics in turf management. All of us need periodically to hear this information again. After all, Dr. Beard did write *Turf Management*, the book that virtually all universities and colleges use for educating turfgrass students.

As I sat glued to my seat for five hours, something kept clicking in my mind: Southern Florida does not fit into the normal mold for the textbook. I guess the rest of the country is normal; southern Florida is truly unique.

"When do you first mow your rough down here in the springtime?" Beard asked.

"Every Monday morning," I replied.

Let's face it: we don't go into dormancy down here. Maybe a light frost now and then, but the word "dormancy" is not a part of our vocabulary. Having traveled to Arizona, Texas and California during our three most recent GCSAA conferences, I am even more convinced that the only climatic region similar to ours is Hawaii — a true bermuda-base homefield.

Our topic for this issue of the *The Florida Green* is "Winter Preparations."

Let's get to the heart of the issue: Just how do we prepare for our winters in Florida?

First, we have mowed our greens 362 times this past calendar year. That's right. There were only three days that we did not mow greens! And even though our winters seem more like an overlap of fall and spring, we still must prepare for a heavy-play — Snowbird — season. Superintendents in South Florida have gradually changed their cultural practices over the past few years to policies more consistent with Dr. Beard's lecture.

Severely scalping turfgrass has a direct effect on the depth of root growth. Mow off the leaves and the roots die back.

(Please see IF THE MEMBERS, page 52)

If the members want perfection in November, then they have to give us the course for renovation in the summer...

(Continued from page 51)

"Bermuda at a height of 6 inches can pass roots down to a depth of 7 feet!" says Dr. Beard. "Cut the bermudagrass back to less than one inch and you'll have less than an inch worth of roots."

Therefore, my summer projects incorporate more aerification, virtually no verticutting and absolutely no scalping.

For the past two years, we have aerified our greens five times during the summer. The tourists migrate north by the end of April and we begin "tearing up the golf course."

Our winter preparation actually commences the first of May.

We will aerify with 1/2 and 3/4-inch tines on walking-type machines for the greens, collars, green slopes, tee tops and tee slopes. No tractors or heavy equipment is used here.

Our schedule (underline indicates using DOT sand topdressing):

May: Greens, collars, green slopes, tees, tee slopes

June: Greens, collars

July: Greens, collars, green slopes, tees, cartpath wear areas, fairways, rough.

August: Greens, collars.

September: Greens, collars, green slopes, tees, tee slopes.

Let's review the benefits of the aerification program.

For the first time, 1/2-inch tines will be used without a topdressing, a practice some consider controversial. but I believe the benefits are greater to leave the holes open. An increase in the ratio of oxygen pore space to soil ultimately will decrease as the aerification soil wall deteriorates from irrigation, rainfall and surface mechanical wear. Open up the upper strata as much as possible. We should be so lucky as to create "soft greens."

Just as the greens are beginning to heal, we come right back in! For the next four months, we'll do the same thing: tear them up just when they're getting good! At my workplace, I can get away with it because we are such a seasonal club. We will not even have 110 members play for the entire summer.

I realize it's a great benefit.

If the members want perfection in the winter, they have to give us the course in the summer for renovation.

The greens are monostand Tifdwarf, the collars are planted outward to 15 feet, also with Tifdwarf. Tifton 328 bermudagrass is planted around the greens cut to a fairway height halfway down the slope. The tees, including slopes also are planted in 328. These grasses require special attention 12 months of the year. The visual and playing conditions, however, are rewarding enough to merit the maintenance hassle. It will take nearly a month to aerify all of the areas on the plan.

In June, we aerify only the greens and collars and, yes, we will topdress with enough DOT sand to virtually fill in all 3/4-inch tine holes. By the way, all aerification plugs will be cleaned off the greens, collars and tee tops every time. To drag the thatch across these areas will not take away the undesirable thatch.

July is much like May. By then the heavy summer rains have settled in. Topdressing the tees will be beneficial for the 328 and by this time the employees have the program down pat. Upon completion, we'll begin aerification of wear areas in the Tifton 419 bermudagrass around cart paths. We always do this operation last to reduce contamination.

August is much like June. By then the greens soil has truly been modified. Thatch is being removed and the topdressing is dragged in several directions to fill in the holes.

September is tough: it's very wet — sometimes 16 inches of rainfall — and sometimes we'll creep into October to finish the slopes.

After five months of tearing up the entire golf course, life begins to return to "normal." Our goal has been accomplished. The greens are nice and healthy, the tees almost look like greens, a winter fertilization program is now in full swing. And the crew is well aware of the long, hot winter still ahead.

After all, we will mow greens on Thanksgiving Day, Christmas and New Years. The entire crew will feel the pressure of producing a finely groomed golf course all the way through the winter until things calm down next summer.

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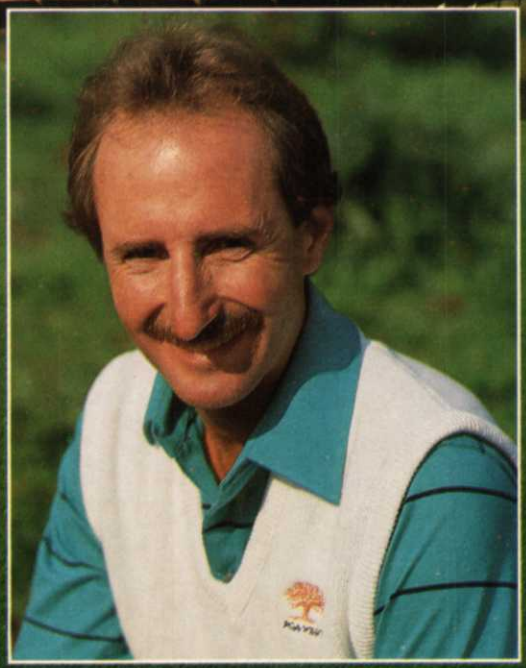

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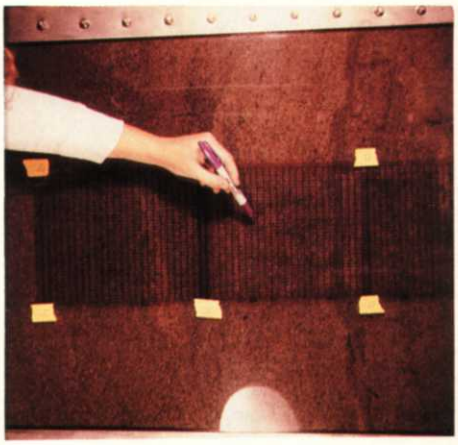
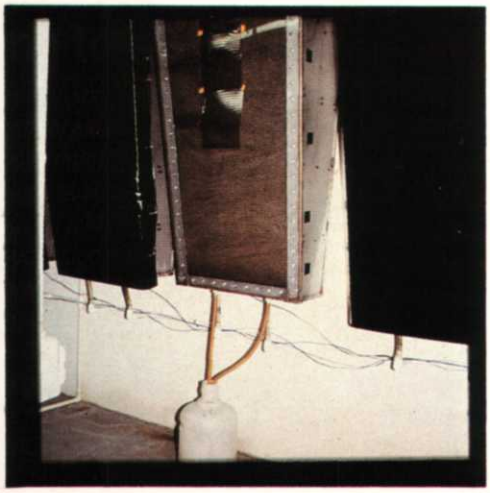
Director Golf Course Operations, PGA West, La Quinta, California





Getting to the roots of some problems...

Those are no ordinary test plots in the photo above. They're actually the "roof" of a unique laboratory known as a "rhizotron," a subterranean structure for studying root growth (above right) and the leaching of chemicals through the soil (note tubes leading to jugs at bottom of photo on left). These photos were taken at the University of Nebraska. At a May 21 FGCSA meeting in Naples, FTGA Awards Chairman Bobby Rehberg suggested that the construction of a rhizotron at the University of Florida would be a worthwhile project for the Florida turf industry. "We could make the boxes slightly bigger in order to study various types of green construction," Rehberg suggested. "With the grief we're getting about pesticides, nitrates and fertilizers, this would be a great way to get some hard data to counter some of that bad publicity." Nebraska's rhizotron, which cost $140,000 to build, consists of two wings off a central control room. An older, less elaborate rhizotron at Ohio State University cost less, he said.

If overseeding gets you bent out of shape...

POA TRIVIALIS

BY RICHARD HURLEY, Ph.D.

Poa trivialis is native to all of northern Europe, temperate Asia and North Africa. It was introduced to North and South America and Australia. Brought to the United States from Europe during the colonial period, it is best adapted for growth in moist, shaded areas from Newfoundland and Ontario, Canada, to North Carolina and west to Minnesota and South Dakota. It has been reported in Colorado, Utah and as far south as Louisiana. *Poa Trivialis* can be readily found on the West Coast from Alaska to California.

Poa trivialis is commonly known by its scientific name, but is also referred to as rough bluegrass, rough-stalked bluegrass, shade bluegrass, rough-stalked meadowgrass, and rough meadowgrass. *Poa trivialis* produces a moderately fine-textured, light-green, medium dense turf. It is a cool season, sod-forming perennial which spreads by creeping leafy stolons, and may be found growing in soils with a pH ranging from five to eight, with

(Please see POA TRIV, page 58)

REDTOP

BY A. DOUGLAS BREDE, Ph.D

Somebody once said that history repeats itself. Many old-time turf managers will recall when professor Burt Musser at Penn State extolled the virtues of redtop in every turf planting during the 1940s and '50s. It offered quick establishment, fine texture and early spring transition.

As years passed, redtop use waned. But in the 1980s, with bentgrass prices on the rise, golf superintendents began re-experimenting with it.

"Superintendents like the qualities of bentgrass in overseeding," says Dr. Rich Hurley, vice president for research at Lofts Seed Co. "Redtop has the qualities of bentgrass but will establish quicker.

"The weakness of creeping bentgrass isn't in its rate of seed germination," says Hurley. "Bent actually germinates quite quickly. But the seedlings just sit there — they're tiny, little seedlings that don't contribute to the stand until late in the season. Redtop has

(Please see REDTOP, page 60)

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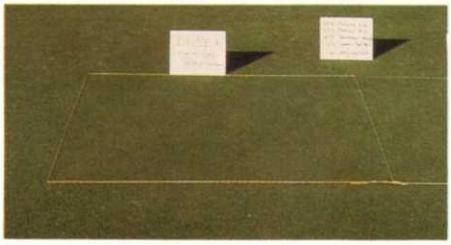
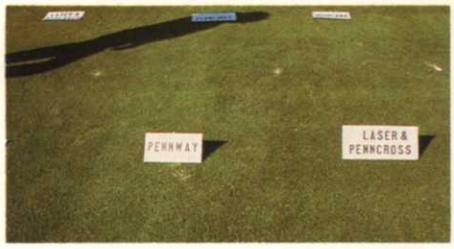
As with any crop protection chemical, always read and follow instructions on the label.

"Poa trivialis has been recommended for winter over seeding of dormant warm season turfs, usually in combination with the improved turf-type perennial ryegrasses,"



LOFTS SEEDS

At left is Laser at 10 pounds/1000 square feet; at right is a mixture of 35% Palmer perennial ryegrass, 35% Prelude perennial ryegrass, 24% Jamestown chewings fescue and 6% Sabre poa trivialis at 20 pounds/1000 square feet.



LOFTS SEEDS

Left is Pennway at 5 pounds/1000 square feet; right is 60% Laser and 40% Penncross at 7 pounds/ 1000 square feet.

Poa 'triv' retains color, can't tolerate traffic

(Continued from page 56)

best growth occurring between pH six and seven. Besides being well adapted to damp, shaded locations, it is also found growing in wet meadows, as a component of high fertility grasslands and along ditch banks. It has the ability to germinate and grow at low temperatures, displays good color retention in the fall, produces early spring greenup, germinates rapidly with good seedling vigor, and has excellent winter hardiness.

Poa trivialis has been recommended for winter overseeding of dormant warm-season turfs, usually in combination with the improved turf-type perennial ryegrasses, with mixtures containing between 10 to 15 percent *poa trivialis* by weight.

Poa trivialis does not tolerate drought and is likely to be short-lived on dry sites. The root system is fibrous, relatively shallow, and annual. It may be severely damaged or killed during periods of moisture stress, especially in dry sandy soils. *Poa trivialis* also has poor wear tolerance and will not persist under heavy traffic.

There are approximately 2.3 million seeds per pound. Seed germinates under a wide temperature range with peak germination occurring at approximately 50 degrees F, with a reported base temperature of 40 degrees F. Base temperature refers to that temperature below which 50 percent of potential germination would not occur.

Rhizoctonia brown patch, leaf spot and dollar spot are the most common diseases associated with the grass. However, ophiobolus patch, pythium blight, fusarium blight, rust, stripe smut and powdery mildew have also been reported as occurring on this species.

Before the release of "Sabre" *poa trivialis* in 1977, no domestic cultivars were commercially available. Most of the seed was imported from Europe. Common types are normally rather tall growing, light in color and form a loose-growing sod. They are of limited value for winter overseeding.

Development of cultivars which have a lower growth habit, a darker green color, the ability to form a dense sod, improved disease resistance, and reduced seed shattering would be helpful in expanding the potential usage of this species

• • •

Dr. Richard Hurley is vice president and director of research and agronomy for Lofts Seed, Inc., Bound Brook, N.J.

POA TRIVIALIS

- ✓ Perennial cool-season grass adapted to moist soils and shaded environments.
- ✓ Injured by hot, dry weather, but performs well in cool, shaded locations and is often the primary grass species found on these sites.
- ✓ Forms a rather loose turf which is intolerant of wear.
- ✓ Growth habit provides extensive shallow and surface roots, making it prone to injury by hot, dry weather.
- ✓ For attaining green color and a winter playing surface, utilized as a component in mixtures for overseeding greens and tees in southern United States.
- ✓ Ability to grow at low temperatures, displays good color retention in the fall, produces early spring green-up, germinates rapidly, has good seedling vigor and excellent winter hardiness.

MANAGEMENT TIPS...

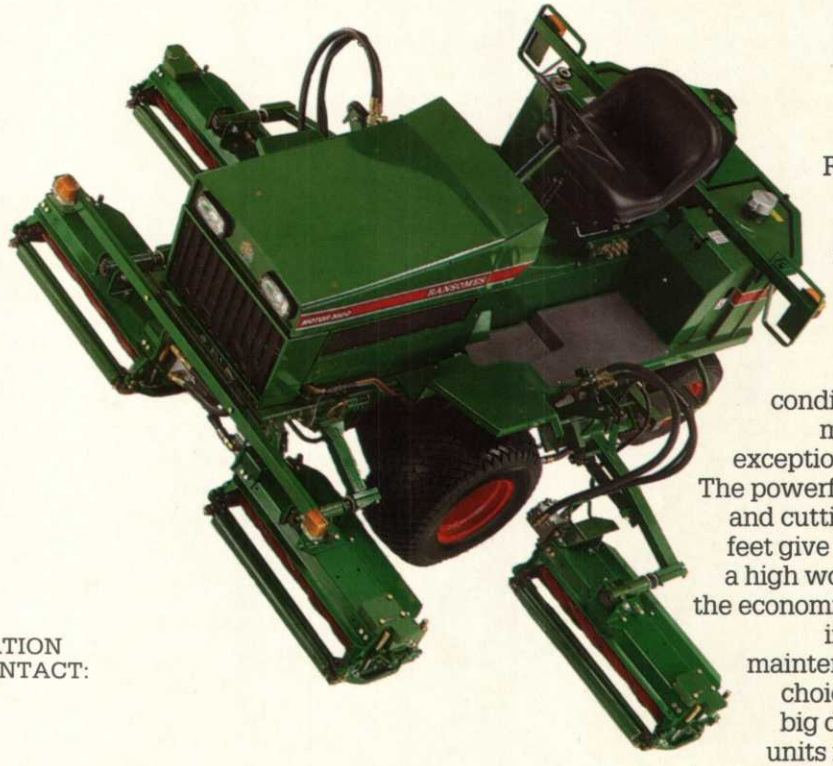
Cutting height — Unlike perennial ryegrass, poa trivialis can be cut close immediately after overseeding. Once established, poa trivialis can withstand heights of cut below 3/16 inch.

Fertility — Schedule light, frequent applications of soluble nitrogen at 0.5 pounds/1000 square feet every two to three weeks after overseeding throughout the winter season.

Irrigation — During fall establishment period, water lightly 3-4 times per day between 10 a.m. and 4 p.m. As poa trivialis has poor heat and drought tolerance, water management is critical for successful overseeding.

Unerring accuracy is a must in negotiating the eighth at Ken Venturi's Eagle Creek Country Club, Naples, Florida.

Grounds for Ransomes.



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RANSOMES

Redtop has superior seedling vigor

(Continued from page 56)

better seedling vigor, and the plants are more substantial. Redtop contributes to the stand early in the season."

Redtop, being a close relative of bentgrass, mimics many of the qualities of bentgrass.It has 5 million seeds per pound, which compares quite closely to the 6 to 8 million per pound of bent. Redtop also has the soft, fine-textured leaf of bentgrass.

The big difference between the two comes in the spring. Following a fall overseeding, bentgrass produces one of the most luxurious late spring turfs in the overseeding business. Unfortunately, that's also about the time that the bermuda is staging a comeback. Redtop, on the other hand, prospers mainly in the fall and winter. As warm temperatures hit, redtop gives way to the bermuda.

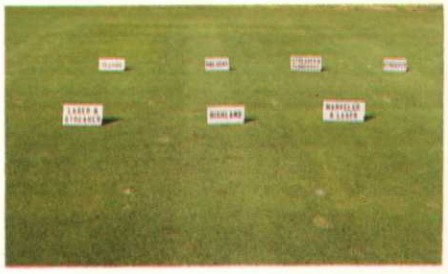
In the 1984 National Dormant Bermudagrass Overseeding Test sponsored by the National Turfgrass Evaluation Program, redtop made the spring transition more readily than any other overseeding variety or blend except one.

Until recent years, the problem with redtop has been finding reliable seed.

Many times, golf superintendents have discovered (after the fact) that their seedlot of common redtop was polluted with orchardgrass, or other undesirable crop plants.

JACKLIN SEED CO.

Al Dudeck and Bert McCarty at the University of Florida compared several overseeding mixtures during the winter of 1987-88. Mixtures of Streaker redtop with Penncross bentgrass displayed similar turf qualities during fall and early winter to that of Penncross alone. The summer 1988 issue of The Florida Green *contained the data of this experiment.*



JACKLIN SEED CO.

Addition of redtop to overseeding mixtures may offer finer texture, darker color, and easier spring transition than the use of perennial ryegrass or creeping bentgrass alone.

Arden Jacklin, retired research director at Jacklin Seed Co., began working on the problems of common redtop in the early 1970s and several years later released "Streaker" redtop.

Streaker is sold as certified, which gives some assurance of varietal purity and integrity. Farmers are paid a premium to ensure freedom from *poa annua* and seed of other crops.

Jimmy Ellison, golf course superintendent at Arnold Palmer's Bay Hill Club in Orlando, uses Streaker on his third nine.

"We use it in areas where we've had a lot of wear or thinning," says Ellison. "We go in with a two-to three-pound rate of Streaker, and we'll see grass again real quick."

Hurley likes to see Streaker used as a component of overseeding mixtures.

"I'm a big fan of three, four and five-way combinations for winter overseeding," says Hurley, "because you don't know what kind of a fall and winter you're going to have. Florida can have highly variable conditions in the fall, winter and spring, from warm to cool, wet or dry.

"Having a redtop, a *poa trivialis*, a ryegrass and maybe a chewings fescue in the mix helps cover your bases. There's a lot of luck in getting a good winter overseeding catch, and a broad-based mix will sometimes help."

Redtop is used more frequently as a mixture component than straight. Its characteristics are best used to enhance the quality of other overseeding grasses.

Redtop also can be used as a "diluent" when overseeding bentgrass. If you would normally plant creeping bentgrass at 5 pounds per 1000 square foot, try planting a 50:50 mixture of about 2.5 pounds of bent and 2.5 pounds of redtop. This helps stretch your overseeding dollar, since redtop seed is much less expensive than creeping bent. Yet it retains the bent characteristics in the stand.

When adding redtop to perennial ryegrass, adjust the rate of the ryegrass down and include 10 to 15 percent redtop. For example, if you're using 30 pounds per 1000 square foot of ryegrass, reduce the rate to 25 pounds and add two to three pounds of redtop.

Like a bentgrass with no stolons

Even though redtop has been used for over 70 years, many people are unfamiliar with this species. Dr. Jim Beard's *Turfgrass Science and Culture* text says, "Redtop is one of the most widely adapted turfgrass species. It may behave as either a long-lived or a short-lived perennial, depending on the intensity of culture, soil and environmental conditions."

Redtop is a close relative of creeping bentgrass — both grasses are members of the *Agrostis* genus. Unlike creeping bentgrass, though, redtop has no stolons. Redtop creeps by means of strong rhizomes beneath the ground.

Redtop has the deep, slate blue-green color of creeping bentgrass. In the national test results from Florida, Streaker redtop scored an 8.3 in genetic color (with 9 equal to the darkest green), while most perennial ryegrasses scored in the 5.0 to 7.7 range.