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That's why I switched to Buntun.”**

*Bill Wright, President
Lawn-Wright, Inc., Gaithersburg, Maryland*

“When I started my lawn service business seven years ago I had a push mower and riding tractor. It only took a year to realize I could cut a lot more grass in the same amount of time with one commercial walk-behind mower,” says Bill Wright, president of Lawn-Wright, Inc. “Four years later I discovered Buntun. Now I can cut even more grass with the same number of mowers.”

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THE FRONT OFFICE

OPINION PAGE

ALL IT TAKES IS A "CAN DO" ATTITUDE



When we started *sportsTURF* two years ago this month, just about everyone we talked to said there was definitely a need for a magazine about turf management—one that would encompass all types of sports facilities. But, after saying that, they would add, "How come nobody has done it before?"

I think the answer to that question is other publishers were hesitant because they operate by what is, not by what can be. To me, that attitude is totally contrary to sports. There are no sure bets in athletic competition. There may be a winner and a loser for every event, but every-

body wins in the long run.

The same applies to the business of sports. Joe Robbe had no guarantee that he could build Dolphin Stadium and make it profitable, but he is doing it. Al Davis is taking very large risks leaving the Los Angeles Coliseum and moving his Raiders to Irwindale, but he is going to do it. Every developer who invests millions of dollars in a real estate or resort course today is taking a huge risk as well. But, the number of new golf courses under construction today is phenomenal.

When a coach selects players for his team, he has no guarantee they will produce a winning season. He has some idea of an athlete's abilities, but he also has to have good intuition. Every professional, college and high school coach faces the same uncertainty. Do they decide not to field a team if they don't feel certain they will win? Of course not, they work harder to take the players they have and use determination, motivation and team chemistry to stretch their natural abilities to the maximum.

You have to be a little crazy to be in the business of sports. Every good sports turf manager knows that. The hours are long, the pay is decent but not spectacular and the work is hard. It's the other rewards that keep you going much of the time. These include the success of a sports program, the obvious improvement you provide to the facility and the excitement of being involved in sports. Sports turf managers who don't feel compensated by these non-salary benefits don't belong in the business. They will not make the extra effort it takes to build a winner.

Both financial and emotional rewards drive the sports turf industry. For that reason, the industry will always go beyond what skeptics predict. The golf market will continue to expand dramatically throughout this century. The number of new and reconstructed stadiums in this country will almost double in the next 20 years. Fewer professional baseball and football teams will have to share facilities between August and November. More communities will build or help finance stadiums for expansion teams, minor league baseball clubs, and college and high school sports. These new stadiums will employ skilled turf managers to provide higher standards in field management. More school systems will cooperate with park districts to provide better, safer fields for their growing sports programs.

More and more private investors and public officials are developing a "can do" attitude about sports facilities. If it can happen in Irwindale, CA; Miami, FL; Worthington, OH; Broward County, FL; Raleigh, NC; Chicago, IL; Toronto, ON; Albany, NY; Huntsville, AL; Omaha, NE; and St. Louis, MO; it can happen where you live. Those who will reap the rewards of the future must have the guts and drive to take a chance today. The leading sports turf managers in the U.S. and their employers have taken that step. Those who wait will end up going the way of the Model T. At some point you have to change to keep pace with society and the business and employment opportunities it presents.

Bruce F. Shank

EVENTS

CALENDAR

SEPTEMBER

21-24 Northwest Turfgrass Conference, Salishan Lodge, Gleneden Beach, OR. Contact: NW Turfgrass Association, P.O. Box 1367, Olympia, WA 98507, (206) 754-0825.

22-23 Virginia Tech Turfgrass Research Field Days, Virginia Tech, Blacksburg, VA. Contact: J. R. Hall, (703) 961-5797.

24-26 Pan Pacific Turf Conference, Hawaiian Regent Hotel-Waikiki, Honolulu, HI. Contact: Wayne K. Ogasawara, Hawaiian Fertilizer Sales, Inc., 94-155 C. Leowaena St., Waipahu, HI 96797, (808) 677-8779.

28-29 Sports Management 87...A Conference for Local Governments, Cincinnati, OH. Contact: International City Management Association, 1120 G Street, NW, Washington, D.C. 20005, (202) 626-4600.

OCTOBER

6 GCSANJ Annual Turfgrass Equipment, Irrigation and Supplies Field Day, Rutgers Stadium and Golf Course, Piscataway, NJ. Contact: Dr. Henry Indyk, Soils and Crops Dept., PO Box 231, Cook College, New Brunswick, NJ, 08903, (201) 932-9453.

28-29 Wisconsin Golf Turf Symposium, Pfister Hotel, Milwaukee, WI. Contact: Bob Welch, Milwaukee Metropolitan Sewerage District, 735 North Water St., Milwaukee, WI 53202, (414) 225-2222

NOVEMBER

3-6 New York State Turfgrass Association Convention, Rochester Riverside Convention Center, Rochester, NY. Contact: Elizabeth Seme, executive director, NYSTA, PO Box 612, Latham, NY 12110, (518)783-1229.

Citation II · Birdie II · Omega II CBS II · Manhattan II

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These flag leaves show the genetic improvement of Turf-Seed's IIs.

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Ryegrass: The Choice Turf For Winter Sports

Winter overseeding is no longer a luxury restricted to resort golf courses and professional stadiums. Ryegrass has become the life's blood for sports turf facilities across the South and Southwest during the winter. It keeps these facilities in safe, playable condition and protects dormant warm-season turfgrasses during some of the busiest and coldest sports months of the year.

Proof of the tremendous increase of winter overseeding can be found in Oregon where turf seed producers have greatly increased their acreage devoted to ryegrass seed in the last five years. Lofts Seed Inc. increased its acreage of perennial ryegrass by nearly 50 percent in 1987 alone, according to John Dimateo. Now it appears the market is no where near its full potential, says Howard Kaerwer, developer of the first perennial ryegrasses specifically for overseeding while he was the turf breeder for Northrup King.

When Kaerwer started his investigation of winterseeding grasses nearly 20 years ago, turf managers were seeding almost every type of cool-season grass into warm-season turfgrasses in the fall. Annual ryegrass was the most popular, but many turf managers were trying mixtures of older

perennial ryegrasses, Kentucky bluegrass, red and chewings fescues, rough bluegrass (*Poa trivialis*) and bentgrass. "We found that the newer perennial ryegrasses had the most potential," said Kaerwer. Some of the first improved perennial ryegrasses were NK100, Pelo, Manhattan and Pennfine. "Today's perennial ryegrasses are far superior to older types like Linn. They may cost more than older varieties or than annual ryegrasses, but they provide qualities the other grasses can't, including better color, insect and disease resistance, wear tolerance, lower fertilizer and water requirements and improved mowability, in addition to rapid germination."

Kaerwer, concentrating on overseeding in the Southeast, helped to develop and promote the use of the improved perennial ryegrasses Pennfine, NK200, Delray, and Goalie. He was also the first to treat seed with the fungicide Koban to help the overseeded ryegrass defend itself against seedling diseases. He spent months on golf courses showing superintendents the advantages and techniques important in overseeding with perennial ryegrasses.

As other seed companies, such as Lofts, Burlingham, Pickseed, Turf Merchants and International, began to realize the great



Only the greens and collars at Innisbrook are over-

potential of the overseeding market, they started looking for new varieties of perennial ryegrass that they could patent and sell.



The football field at Cooper City High School Stadium in Broward County, FL, is overseeded with perennial ryegrass in the fall.



Annual ryegrass keeps the main baseball fields at Broward County schools bright green during the winter.



ed because the Tifway fairways and roughs do not go completely dormant during the winter.

Many found what they were looking for in Dr. Reed Funk's turfgrass research plots at Rutgers University. Funk collected strong turfgrass specimens he found while travelling around the nation and planted them in his plots in New Brunswick, NJ.

Today, nearly every seed company has a perennial ryegrass that was first recognized for its strengths by Funk or his graduate students. A few examples of varieties born partly at Rutgers are Manhattan, Bell, Birdie, Blazer, Citation, Cowboy, Dasher, Diplomat, Fiesta, Palmer, Pennant, Prelude, Regal and Yorktown.

It wasn't long before seed companies began hiring their own turf breeders to continue to build upon Funk and Kaerwer's work. Some of the most productive have been Lofts' Richard Hurley, Turf Seed's Bill Meyer and Pickseed's Jerry Pepin. They would take "germplasm" from Rutgers, test it for desirable traits, cross it with other ryegrasses, test it again, and give it a name if they had a superior product. Many of the latest perennial ryegrasses are second and third generations of material that originated at Rutgers.

Because of this heightened commercial interest in ryegrasses, golf course superintendents and sports turf managers now have vastly superior tools to use than they did just 15 years ago. The first goal of turf breeders was to produce a ryegrass for greens that could be trimmed down to 1/4 inch. As their work steadily progressed, other characteristics for sports turf became important. These include wear tolerance, heat tolerance, disease resistance and insect resistance. Actually, some of the traits that make one type of ryegrass a good choice for overseeding an athletic field might make it a poor choice for a golf green. For example, a heat-tolerant perennial ryegrass developed for durable turf in the North, might hang on too long in the spring on a green in the South when the superintendent wants the bermudagrass to take over again.

Overseeding golf greens is necessary to maintain quality putting conditions in the South during the winter. Resorts and resort-area golf courses depend heavily upon the winter golfer for income. Many courses simply would not have been built if they could

not count on the traffic produced by tourists.

What started on golf greens soon spread to other parts of the course. Some superintendents began to overseed greens and tees with perennial ryegrass and fairways with annual ryegrass. Others overseeded greens and tees and simply painted the dormant bermudagrass on the fairways green during the winter. It wasn't long before some courses were overseeding the entire course and were ordering 40,000 pounds of ryegrass every fall.

A few imaginative turf managers at professional and college stadiums borrowed a page out of the golf course superintendent's play book for important winter football games, especially if they were televised. The options were to paint or to overseed. Those who chose to overseed used annual ryegrass. After all, the intent was to provide a green field for one or two games. With a three-week lead time, irrigation and 1,000 pounds of annual ryegrass, the field manager could turn a brown, dormant field into a bright green gridiron that dazzled fans

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The greens at Gulf Shores Golf Club are aerified six weeks prior to overseeding. Cores are broken up and left as topdressing.



Pythium disease on ryegrass seedlings.

Ryegrass

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in the stands and television viewers up North.

The real test of overseeding came when dormant bermudagrass or centipedegrass fields had to stand up to more than just one or two important games. Daily practice would render a field bare in a few short weeks. Athletic directors and coaches began to appreciate the safety value of overseeding for both stadium and practice fields. Furthermore, the exploding popularity of soccer added to the wear burden on many football fields. Overseeding was rapidly evolving from a luxury into a necessity.

Today overseeding is an indispensable maintenance tool for heavily-used athletic fields and golf courses. It is as important as aerifying, irrigation and fertilization. Most southern sports fields become worn out and dangerous without it.

As evidenced by the following examples of overseeding programs at schools and golf courses across the southern half of the country, it is best to start overseeding a few key turf areas to demonstrate its importance. The practical benefits of overseeding far outweigh the aesthetic ones. The ryegrass insulates the warm-season grass from cold temperatures that could cause winter kill.

It also cushions the dormant turf from physical damage caused by sports. Ryegrass, by shading the soil surface during the winter, also discourages germination of winter weed seed.

Once turf managers at schools, parks, universities or golf courses succeed in winning a commitment from management for overseeding, the next step is to educate them regarding the superior qualities of perennial over annual ryegrasses. Only the turf manager knows how far or how fast he can push his management. But evidence exists to support the use of improved perennial ryegrasses for overseeding high-use, warm-season sports turf in the fall.

Ed Birch is responsible for the grounds of 50 out of 170 public schools in Broward County, FL. Located just north of Miami, the bermudagrass and bahiagrass turf in Broward County never goes totally dormant. However, the growth of the turf slows down enough to allow weeds to encroach and to hamper recovery from sports related injuries.

When he was hired by the school system, Birch was told that the system operated under "school-based management." If he wanted to renovate a field, he had to sell the idea to the individual principal first. "I had to go to each principal and explain what I wanted to do to his fields and why," says Birch.

"Weeds were taking over most of the fields," he explained. Surprisingly he ended up with more work than he could handle. The first year he renovated nine football and baseball fields and installed a number of automatic irrigation systems. Birch now renovates three fields every year. The crew sprayed the old turf and weeds with glyphosate (Roundup) and then used a Turf Quaker (which is similar to a rototiller with long vertical blades) to break up the soil to a depth of ten inches. After repairing the irrigation and drainage systems, the fields were sprigged with Tifway.

"There was still tremendous weed pressure on these fields," state Birch. He used this fact to sell overseeding. From August to Thanksgiving the fields are used for football practice and games. Then soccer takes over until February. Birch felt overseeding was necessary to prevent soccer from finishing off the bermudagrass already damaged by football. After the last football game, the fields were sliced to open up the bermudagrass thatch so the seed could reach the soil. The cost conscious Birch purchased intermediate ryegrass, a cross between annual and perennial ryegrass, from Lesco and broadcast it onto the fields at a rate of 600 pounds per acre. With the assistance of an hydraulic valve-in-head irrigation system, the seed germinated quickly.

After the ryegrass was established, Birch made the first of two applications of Ronstar to prevent germination of winter weed seed. The fields have remained in notably improved condition for more than five years. "Principals started bragging about their fields," said Birch, "and I started getting calls from the principals of other schools asking me if we could do the same for their main fields."

Weed encroachment is also the main concern of Holman Griffin, grounds manager of Richardson School District near Dallas, TX. The former United States Golf Association (USGA) regional agronomist is in charge of 50 school grounds. "The only thing that seems to thrive in our black clay-soil is goosegrass," explains Griffin.

Despite a "bare bones" budget caused by the depressed state of the oil business, Griffin has been able to upgrade the irrigation and overseed the 12 most important fields in the district. "It's mainly a matter of priorities," explains Griffin. "Kids don't stop playing ball just because the economy is tight. If anything, they play more. Still, we've had to make some tough choices lately."

The school district has always had a busy athletic program. Between football and soccer, the main practice and game fields are busy from August through May. "The only time we can get on the fields to do major work is on Sundays and some Mondays," Griffin says. "We also have to be very careful with irrigation since the clay holds water like a sponge."

The majority of the turf under Griffin's care is common bermudagrass or St. Augustine. The main football and baseball fields are Tifway. Two long freezes in the early '80s wiped out patches of bermudagrass on many of the fields.

To solve the winter kill and goosegrass problems Griffin devised a program of overseeding and topdressing with sand. "The idea is to protect the dormant bermudagrass with the ryegrass and a blanket of sand," he explains. "The sand protects the seed, improves drainage over time and fills in all the divots made in the clay. But, there are some very important things to remember.

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Ryegrass

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The sand must be between .1 and 1 millimeter, and no other material can be placed on top of it. You can make a low grade of concrete by using the wrong sand. If you aerify before you topdress, you may also be bringing goosegrass seed up to the surface where it can germinate."

Anytime he has a chance, Griffin gets sand into the field. When he installs new irrigation lines he fills the trenches with sand. He also dug trenches under each five-yard line on two football fields and backfilled them with sand.

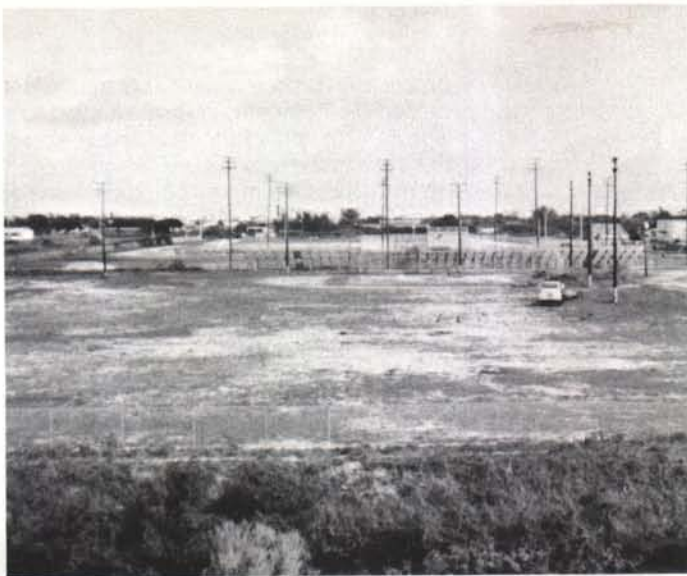
Griffin's overseeding program is simple by his own standards. As soon as the football season ends, he goes over the hybrid bermuda fields with an aero-seeder to open up the thatch layer and to sow Pennfine perennial ryegrass at a rate of 350 pounds per acre. He does nothing to the common bermudagrass fields except broadcast 900 pounds per acre of annual ryegrass. A Meter-matic topdresser follows the seeders applying a thin layer of sand over the seed.

If the field has automatic irrigation he will run a short cycle early each morning to keep the seed moist. He lets natural rainfall and irrigation once a week with a portable system get the seed started on fields without automatic irrigation. "Rain does more for the seed than a week of irrigation," says Griffin. "One good rain and the seed seems to jump out of the ground."

In late February, Griffin kills the ryegrass and any goosegrass that come up on the main fields with glyphosate. "It's expensive, but it keeps the goosegrass under control and lets the bermuda get off to a good start in the spring. On fields we don't spray, we get up to a 30 percent carryover of the perennial ryegrass."

Griffin has entertained the notion of permanent ryegrass or tall fescue turf. On one football field, he seeded varying mixtures of Delray ryegrass and Galway turf-type tall fescue between the five yard lines. "The results showed that no more than ten percent of the mix should be ryegrass," reports Griffin. "I think there is a place for the turf-type tall fescues. We are in the process of converting one of the baseball fields to tall fescue to see how it will stand up."

The threat of winter kill increases the further north one plants bermudagrass. Jay Karlberg guards ten acres of Midiron bermudagrass on the 300-acre grounds of the Kentucky Fair and Exposition Center in Louisville. This is the training site for the University of Louisville football Cardinals under coach Howard Schnellenberger. The university and the city wanted a winning football team badly. Schnellenberger had compiled an impressive record as assistant to Bear Bryant at the University of Alabama, head coach at the University of Miami, and assistant coach for the Miami Dolphins. To entice Schnellenberger they gave him a training camp facility at the Exposition Center



Common bermudagrass baseball field topdressed with sand prior to overseeding.



Same field four weeks later.

rivalling the pros. The coach wanted bermudagrass and he got it.

Midiron is a bermudagrass noted for its winter hardiness. By October it is dormant and will not regain aggressive growth until late May in Louisville. Schellenberger's concern over the bermudagrass is centered on the condition of the field during spring workouts rather than fall practices. So Karlberg overseeds in September to prepare the field primarily for the following spring.

Karlberg aerifies monthly in the summer while the bermudagrass is actively growing to help control thatch and fight compaction. In September, doing one half of the turf at a time, he uses a Jacobsen power seeder to sow 800 pounds of Pennfine perennial ryegrass per acre. He lets the team practice on it for one week to work the seed into the soil. After a week, that half of the area is allowed to rest for two weeks while it is irrigated daily. The process is then repeated on the other half of the turf.

By the end of October, the ryegrass is fully established as the Midiron enters dormancy. In November, Karlberg makes his last monthly application of IBDU, blows out the irrigation system and lets the ryegrass fend for itself (except for mowing) over the winter. When the team suits up for spring workouts in March, the ryegrass is as perfect as turf can get.

When practice is over in May, Karlberg lowers the cut on his triplex reel mowers from 1½ inch to 1/2 inch. The bermudagrass starts getting direct sunlight while the Louisville humidity and heat take their toll on the ryegrass.

Golf adds an extra dimension to winter overseeding. Seeding rates on greens are four to five times higher than for sports fields or fairways and the ryegrass must tolerate mowing heights of 1/4 inch and less. A testament to the success of ryegrass is the fact that some golfers prefer putting on ryegrass than on bermudagrass since it has less grain.

In Tarpon Springs, FL, the good low temperature color retention of Tifway enables Arlin Grant, superintendent of Innisbrook Golf and Country Club, to get by without overseeding his fairways. When it comes to his 36 greens there is no question about overseeding, it's essential. *Golf Digest* holds winter golf schools at Innisbrook and the quality of the course attracts tourist golfers from across the country every winter.

A testament to the success of ryegrass is that some golfers prefer it over bermuda on putting greens.

Grant manages the greens and collars year-round with overseeding in mind. During the summer the 27 Tifdwarf and nine Tifgreen greens are aerified and verticut to control thatch. In September, Grant stops verticutting the greens until December to let some thatch build up to insulate the bermudagrass from cool night temperatures in the fall. "The shorter the time the ryegrass lives on the greens, the easier it is to get rid of in the spring," he points out. "I keep the bermudagrass for as long as I can."

Three days before overseeding in December, Grant verticuts lightly, then topdresses and fertilizes. He closes each course for three days during overseeding. The bermuda greens and collars are cut short before broadcasting 30 pounds per 1,000 square feet of Birdie II perennial ryegrass. After applying a thin coat of sand, he sprays the

greens and collars with a slurry of activated charcoal to neutralize any herbicide residues in the soil that could hamper germination. The dark slurry also absorbs the winter sun to warm the seed bed.

For the next two weeks, the greens will be cut at 1/4 inch and syringed twice a day, once at 10 a.m. and again at 2 p.m. Grant examines each green every day to watch for any signs of *Pythium*. Every seven days until March they are treated with Koban, Subdue or Daconil on an alternating basis. At the end of two weeks, the cutting height is lowered to 3/16 inch and Grant returns to irrigating the greens at night. Eventually the height will be reduced again to 5/32 inch.

When the *Golf Digest* schools end in April, Grant shortens the irrigation cycles on the greens and starts brushing the greens with a steel brush attached to the walking greens mowers. He plans to use the Turf Groomer attachment for his Jacobsen greens mowers this spring to lightly verticut the greens each time they are cut.

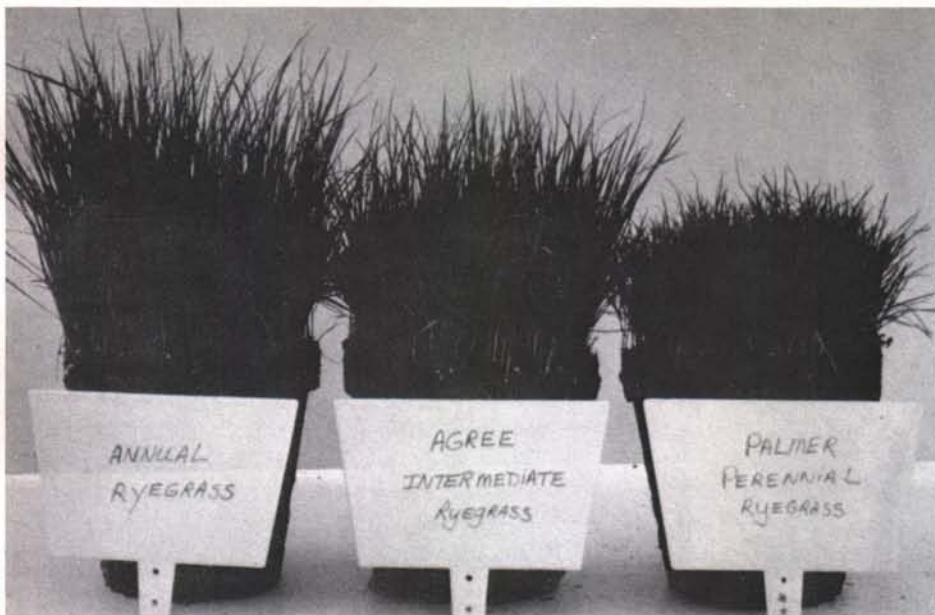
ames "Boots" Lang has dealt with every twist nature has thrown at Gulf Shores Golf Club in Gulf Shores, AL, since he helped build it 23 years ago. His familiarity with the course, a copy of the Farmer's Almanac and a close watch on the weather forecast, have helped him manage a successful overseeding program.

Over the years Lang has planned his program to overseed when temperatures drop below 72 degrees F. He knows from experience that this will happen between October 15 and November 15 every year. Six weeks beforehand he aerates, verticuts to break up the cores and drags the Tifdwarf greens. Three weeks before overseeding he topdresses the greens lightly with sand. He topdresses one more time the week before overseeding. Finally, on the day Lang has picked out from local weather conditions, he applies a complete fertilizer then

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Ryegrass

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The large difference in height between annual and perennial ryegrass is a good indicator of the rate of growth between the grasses and the resulting mowing frequency.



Irrigation cycles are increased for two weeks after overseeding.



Seed covered with a light topdressing of sand is dragged to blend it into the prepared turf.

broadcasts 25 pounds per 1,000 square feet of Medalist 7 perennial ryegrass treated with Apron. "We spread the seed in two directions at a half rate to get uniform coverage," he explains. One more light application of sand is made over the seed and a piece of carpet with the drag mat on top is pulled over the greens.

The irrigation schedule, which has been running for 20 minutes every second or third evening, is changed to a single, daily cycle in the early morning and a light syringing at mid-day. Lang will not cut the greens for the next five to seven days. "We sharpen the blades on the greens mowers while the seed is germinating so that first cut is made with a very sharp mower," Lang points out.

After two to three weeks, the irrigation schedule is returned to normal. If temperature and humidity are conducive for *Pythium*, Lang will treat the greens every ten to 14 days with fungicides. An application of IBDU is then made every 21 days during the winter. In late winter Lang will apply Pre-San to prevent germination of weeds.

The procedure for the fairways is not as complicated. During the year the Tifway II fairways are aerated three times and dragged to break up the cores and mix them into any thatch that has accumulated. Just before overseeding, Lang slices the fairways to open up the Tifway II to receive the seed. After applying a complete fertilizer, the Gulf Shore crew broadcasts 200 pounds per acre of annual ryegrass. Again, mowing is withheld for up to four days and the irrigation schedule is changed from nighttime cycles every six to eight days to once-a-day morning irrigation and mid-day syringing. The roughs are not overseeded.

Lang's spring transition program starts in March. "Around here you have to watch out for a late freeze in March or April," Lang advises. "If you start slicing and aerifying too soon you run a chance of some winter kill of the dormant bermudagrass." Despite all efforts to warm up the soil in the spring to help the bermudagrass get going, ryegrass hangs on usually into June. "If you have an important tournament in late June or early July, it might be better to encourage the ryegrass to stay around until after the tournament. While the golfers don't really notice any big change in the course during the summer, a few know when the bermudagrass is back because they have to read their puts better on the bermuda than the ryegrass."

Spring transition does not seem to be as great a problem for superintendents in the desert Southwest as it is in the Southeast. Extremely high summer temperatures solve that problem. There also appears to be less disease pressure on the ryegrass in the winter.

If there is a problem, it is forcing the bermudagrass into dormancy in the fall so the

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