Turf Resource Center has released about turfgrass sod. Turf Installation Guide demonstrates a four-step process for quick turfgrass sod installation — from measuring and ordering sod to soil preparation and future maintenance. Self-Scoring Method: How To Establish a Lawn compares sod versus seed and evaluates the importance of each factor and which method best suits specific needs. They are available by sending a self-addressed stamped envelope to the center at 1855-A Hicks Road, Rolling Meadows, IL 60008.

ARIZONA PESTICIDE USE SURVEYED

The pesticide coordinator's office at the University of Arizona, in cooperation with the Cactus and Pine Golf Course Superintendents Association of Arizona, is conducting a pesticide use survey on Arizona golf courses. The office is attempting to determine, from these confidential surveys, such information as pesticide use patterns, management strategies and integrated pest management (IPM) practices. The survey was expected to be distributed in January.

HODGE TAKES CHARGE IN MAINE

PORTLAND, Maine — Jim Hodge of Val Halla Golf Course in Falmouth was elected president, heading a new slate of officers for the Maine Golf Course Superintendents Association, and declared his role will be "that of a communicator within the organization." Hodge, who replaced Pat Lewis of Portland CC, is joined by Vice President Norm Hevey of Dutch Elm GC in Biddeford and Secretary/Treasurer Dave Child.

Drainage, drainage, drainage...

By MARK LESLIE

I t is a well-known fact that only superintendents were rice farmers. Then they could applaud rainstorms and not worry about drainage. Insufficient drainage is the plight of superintendents everywhere, whether their course is brand spanking new or was built with horse and scrapper.

"There's never enough drainage," said Bob Mitchell, superintendent at The Greensbriar in White Sulphur Springs, W. Va. "We have installed miles and miles of drainage in my 21 years here and we still have not done enough."

"If you install five miles of drainage on a golf course, you're going to need another five miles of it over time," said Larry Rogers of Larry Rogers Design in Lakewood, Colo., who has installed irrigation systems in hundreds of golf facilities.

"By use, you find out more areas that need more drain-

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Supers to designers: Stop! Look! Listen!

By PETER BLAIS

N ot only should architects strive to bring superintendents aboard as early as possible in the construction process, they need to listen to them once they are there.

Those were the overriding concerns of superintendents at courses opened in the past year. The superintendents were queried in a Golf Course News survey asking them to rate the job done by architects at their courses.

At Coller's Reserve in Naples, Fla., superintendent Tim Hiers worked closely with architects Art Hills and Mike Dauber on the course design and particularly the maintenance area.

"I believe they left here with a better understanding for what makes a well-designed maintenance complex than when they came in," said superintendent Tim Hiers.

"Most architects don't give a lot of thought to the need for a maintenance complex that maximizes human performance, is aesthetically pleasing and has the functional ability to service the golf course. It would help them to work closely with an experienced superintendent and listen to his input."

The same goes for the irrigation system, according to Brad

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Breeders close to solving Poa annua puzzle

By DAVID M. ROSE

Poa annua, an invasive annual bluegrass, is a perennial headache for course managers in marine climates all over the world. Strategies for eradicating Poa annua exist, but they're labor-intensive and not always successful. Now researchers expect to provide superintendents with a new weapon in the battle against this invasive weed. Their solution? Better Poa annua.

"Our goal is to develop perennial Poa annua cultivars for golf course use," said Dr. Donald White, leader of the Poa annua breeding project at the University of Minnesota. White said perennial varieties may be available commercially by 1998.

"These perennial Poas will have improved color, texture, and vigor" when compared to naturalized varieties, White said, adding he hopes they will outperform bentgrass in areas where Poa annua thrives.

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MAINTENANCE
MAINTENANCE

Poa belt solution: Better Poa, scientists say

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“The annual Poaas are voracious,” said Ray Davies, superintendent at Merced (Calif.) Golf and Country Club. While the relatively warm weather at Merced helps keep Poa in check, the problem was much more severe at Davies' previous course, Virginia Country Club in Huntington, Calif. “In coastal California, we haven’t been successful in keeping bentgrass for more than a few years, and the Poa is very competitive.”

The most common approach to dealing with Poa is eradication, but that isn’t always possible or even desirable. “[At Virginia], we were really Poa-dependent,” said Davies. “The greens were 100 percent Poa, and, at that point, you can’t just kill it off.”

Unfortunately, living with existing Poa isn’t easy. “The annual Poa have tremendous genetic diversity,” Davies explained. “They’re not uniform, so you get a very patchy green.”

In addition, heavy seed production in the spring can create a bumpy surface that is difficult to mow and difficult to play. Perhaps most troubling of all, much of the green dies off in the summer.

Even when eradication is possible, it comes at a cost. Ted Horton is director of golf course maintenance at Pebble Beach, in the heart of what might be called the Poa belt.

“At Pebble Beach we’ve had a successful eradication program on the fairways, but it’s very intense,” he said. “We’ve used complete conversion, followed by both pre- and post-emersion herbicides. If we could find an alternative that requires less intensive management, it would be great.”

White agreed. “My primary motivation [for the Poa breeding project] is and has been ecological,” he said. In cool-season climates like coastal California, Poa simply has a selective advantage over introduced bentgrass. Rather than fight a losing battle against Poa with heavy herbicide use and other intensive techniques, White’s approach is to turn the

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I’m sold on the idea [of developing a better Poa].”
— Ted Horton, vp Pebble Beach

positive growth characteristics of Poa annua to the advantage of golf course managers by providing them with improved strains of Poa annua.

Central to the success of the breeding project is the observation (made as early as the 1950’s) that some varieties of Poa annua, their name notwithstanding, are actually perennials. In contrast to annual varieties, the growth of these perennial strains, known as Poa annua var. reptans, is largely vegetative, through the production of stolons. Seed production is reduced, flowering time is more narrowly defined, and because they are perennials these Poa perform well year round.

White and his colleagues have been identifying perennial Poa with desirable characteristics, determining the heritability of those traits, and then recombin- ing them through interbreeding. In addition to the technical hurdles, there may be political obstacles to the commercial production of Poa annua. “Poa annua is classified as a noxious weed,” said Dr. Richard Hurley, vice president of Research and Professional Sales at Lofts Seed. First, seed farmers may be reluctant to grow Poa annua. “You’re asking them to contaminate their land with Poa,” Hurley pointed out, “and they may want to go back to bluegrass production later.” In addition, many states, fearing infestation, have laws prohibiting the introduction of Poa annua seed across state lines.

White conceded that these issues may be psychologically important, but doubts they are insurmountable. He pointed out the invasiveness characteristic of Poa is less of a problem with the perennial varieties he is developing. “It’s pretty easy to kill,” he said, “and in the seed production area they deal with these issues all the time.”

Beleaguered golf course superintendents, for their part, are optimistic.

“A lot of older greens are mostly perennial Poa, and we know by history that these Poa do pretty well year round,” said Davies. “We just don’t know how well they’ll perform until we can try them, but I think it’s really important to get these seeds out.”

“I’m sold on the idea,” agreed Horton. “Rights to nothing beats a good, true, clean bentgrass green. Hopefully, they’ll develop a strain of Poa that can accomplish the same thing.”

Dr. David M. Rose, who earned his PhD in cellular developmental biology, is a research fellow in the Department of Genetics at Harvard Medical School.