New type of perennial ryegrass good in traffic

As a Sports Turf Manager you are looking for ways to make sure your grassed areas are evenly covered. Under heavy wear this can pose a serious challenge with bare spots developing in highly used areas.

Researchers are watching for varieties that help alleviate this problem. One grass caught the eye of one such researcher in Virginia about 10 years ago.

Dr. Joseph Wipff noticed a particular grass in plots where varieties were being tested for wear tolerance. A 2,000-pound wear machine was repeatedly pulled by a tractor across the plots. What really caught his eye was a grass growing at the ends of the rows where the tractor and machine turned around. The area with the heaviest traffic was covered with a fast growing grass. Further investigation showed that this grass was producing pseudo-stolons and regenerating faster than other perennial ryegrasses. These pseudo-stolons are sometimes called runners. They are growth shoots emerging from the auxiliary buds at the base of each plant. These pseudo-stolons then root down and produce a daughter plant, a trait not usually observed in perennial ryegrass.

Wipff isolated this new type of perennial ryegrass and sent seed to Oregon for further testing. Christiaan Arends, turf product manager for Barenbrug USA reports, “We tested this seed at our research farm, and the plantings were each 3 feet wide within a year. That is unusual for a perennial ryegrass; the others in the plot measured less than 1/3 that size. At this point we knew we had an unusual plant.”

More testing has been done at various locations around the country. Pam Sherratt, sports turf extension specialist at The Ohio State University, observed what is now called regenerating perennial ryegrass (RPR) in their research plots. She says, “The grass is very wear tolerant. Like other ryegrasses, it germinates very quickly.”

Sod growers have also done some testing on these new grasses. Zach Kuenzi, Kuenzi Turf & Nursery, Salem, OR planted 3 acres last May 1. They seeded at the rate of 150 pounds per acre. They fertilized with 16-16-16 at 300 pounds per acre at seeding. The majority of the seed germinated within 7 days. The 3 acres were fertilized on June 17 and July 23 at the rate of 250 pounds per acre each time with 20-0-0 urea. Kuenzi reports, “The plot established very quickly, filled in fast. It has great texture, color and is very full. It was full enough this fall that we could have harvested it if we had wanted to. It was a full month ahead of other grasses planted around the same time.” He also reported that the grass came through the winter in great shape.

A stoloniferous perennial ryegrass was just the ticket for Bill Gallagher in Rhode Island. Gallagher is the property director at the Ocean State Soccer School in North Kingston. It is a volunteer position as are all positions at this 10-acre facility. When Gallagher took over about 6 years ago his only experience with turfgrass was his home lawn. He relied on his local seed salesman and reading excerpts from Sports Turf to help him learn about maintaining a soccer field. In terms of the number of participants, Ocean State is the largest soccer program in Rhode Island. When they added the second five acres to their facility 5 years ago and expanded their competition team program, Gallagher had all sorts of challenges. His seed salesman told him about some testing a seed company was doing with a new stoloniferous grass and encouraged Gallagher to try some in a few heavy use areas. He picked the toughest test: the goal mouths showing the most wear.

Gallagher says, “It came up so quick and kept spreading so well, I had no more problems around the goals.” When the time came last fall when his fields were showing wear and he needed to overseed, he again turned to his seed supplier for help. His rep, Howard Allen at Allen’s Seed Store in Exeter, recommended a mixture including 30% of the soon to be introduced RPR ryegrass. Gallagher says, “We needed something quick and durable. Since I had the experience a couple of years ago and Howard had always been most helpful, I went with his recommendation. The grass came up looking great and was filling in beautifully when the season closed down. We were all very pleased.

Allen reports, “We have tried this new seed on numerous soccer fields, especially at the goal mouths and every one of them reports...”
Two varieties of RPR will be available in 2010 and more are being developed. All will have the prefix Bar with the ending from the Greek alphabet. The first variety is Baralpha and the next Barbeta. Kuenzi reports that when you observe these varieties by themselves, they appear quite dark.

The intense traffic tolerance tests at Ohio State showed a much higher rating over a typical perennial ryegrass blend. Visual wear tolerance ratings at the Southeastern Turfgrass Research Center showed noticeable differences comparing these new varieties to the average perennial ryegrass blend. This data was collected late in the season when the pressure on sports fields is high. Turf quality also scored very high in various tests.

Water use is about the same in these grasses as with other perennial ryegrasses. Entophytes provide protection against disease and insect pressure. The recommended seeding rate is about 7 pounds per 1,000 sq. ft. or 300 pounds per acre. Fertilizer requirements are comparable to other sports turf grasses. Tests at Ohio State show the optimum cutting height is 1.5 inches although the grass will tolerate cutting as low as ½ inch. While the grass is aggressive, it should not need anymore mowing than any other grass. Most of the extra growth is more of a lateral aggressiveness.

These new grasses should work well in mixtures with bluegrasses or other ryegrass species. They are especially suited to all areas where cool-season grasses are predominating. Because of its aggressiveness and especially the regenerative qualities, they are probably not suited to overseeding in warm season areas.

Seed is available from most distributors now and some sod growers also are producing it. Kuenzi reports that they are going to do some testing growing the sod with and without netting. The aggressive growth may make netting unnecessary thus reducing some of the cost and making the sod much safer for the players.

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