

The Magic Wand Of Science

A Ryegrass That Cuts Clean

MICHELANGELO'S wide, shaggy paintbrush may have been ideal for creating beauty in the Sistine Chapel's frescoes. But a shaggy paintbrush cut on a golf course seeded with perennial ryegrass signals a fuzzy turf that can slow down a ball and one that takes on a damaged, frayed look when the shredded ends dry out and turn brown.

This frayed and fibrous look can cost a superintendent plenty in re-seeding, re-sodding and general turfgrass maintenance. Any superintendent or grounds manager will agree that mowing is an integral part of turfgrass management. Cutting height, blade sharpness, mowing speed, clippings—all are top priority items. A correctly adjusted mower with a finely honed blade can create just the effect desired by the golfer. Run this mower on an area where a ryegrass is seeded and the result is often an unsightly brown caused by rough and shaggy blade ends.

The nature of most perennial ryegrasses is to produce rapid growth early in the season until the more predominant Kentucky bluegrasses develop. But the advantage of early season growth is offset by the disadvantage of perennial ryegrass being hard to mow. Recently, however, science and nature have teamed up to develop a new ryegrass that has superior mowability characteristics. The new ryegrass is Pennfine perennial ryegrass.

This fine-leaved perennial was bred specifically for superior mowability. As the November WTT cover shows, Pennfine cuts sharp and clean. How? Turfgrass breeders at Penn State University, under the direction of Dr. Joseph Duich, developed this non-fluorescent variety to have softer, cleaner-cutting fibers, a marked departure from the inherent characteristics of other ryegrasses.

Further, by refining the coarseness of the leaf, the scientists discovered that when cut, the blade produces a scissor-cut look that holds a ball erect.

This attractive feature combined with the superior mowability has caused many turf managers to take a second look at Pennfine. For example, Jim Ganley, superintendent at Pinehurst Golf Course, North Carolina, regularly overseeds greens with perennial ryegrass.

"We've been using Pennfine on Pinehurst's No. 2 course with excellent results," he says. "It takes a good, even cut. Any shredding that does take place is probably not as noticeable to the eye because of Pennfine's finer blade. Our plans

are to include it in the overseeding of the other four courses here at Pinehurst."

The finer-blade variety has performed favorably in many research trials at state universities. In tests conducted at University Park, Pennsylvania, Pennfine cultivars ranked first in mowability among nine ryegrasses tested. It was also first in texture, density, decumbency (low growth) and disease tolerance to snowmold and leafspot.

The trials for leaf-width measurements showed Pennfine to average 2.5 mm for the first mature leaf compared to 2.7 mm to 5.6 mm for others in the test.

A. E. Dudeck and E. O. Burt, assistant professor and professor of ornamental horticulture, respectively, at the University of Florida, point to another characteristic. Their tests evaluated the performance of 24 varieties and mixtures of ryegrasses, bluegrasses and fescues used for overseeding of winter-dormant bermudagrass putting greens on southern golf courses.

Besides noting the high mowability and turf quality during the critical spring transition period, they charted slow growth rate as a distinct advantage.

"Clipping weights were taken 10 weeks after seeding as a measure of differential growth rates between treatments," Dudeck said. "... Annual ryegrass produced the most clippings compared to other ryegrasses while Pennfine produced the least. Pennfine ryegrass would appear to have an advantage over the other ryegrasses because of its slow growth rate and good quality ratings."

All commercially produced perennial ryegrasses have certain desirable characteristics; however, up to now, mowability has not been one of them. Seedsmen and sod producers usually point out the other attributes of perennial ryegrass and leave the cut of the blade as an unmentionable. But the mowability of Pennfine has started a mild revolution.

Russ Billings, long-time seedsman and president of Stanford Seed Company, Buffalo, New York, has 35 years of grass seed selling under his belt. Nearly every turfgrass available has come under his critical eye.

"Frankly, I've never seen anything like Pennfine," he says. "It has thick, complete coverage, a pretty green color, and when I cut it, it just doesn't brown or fray as other ryegrasses have always done. It cuts cleanly."

Results of turfgrass trials at Ohio State University on tests of ryegrass cultivars.

Cultivar	Density ¹	Uniformity ²	Color ¹	Disease ³	Desirability ¹
Pelo	6.0	6.6	5.6	3.5	5.6
Norlea	5.9	6.1	5.4	3.0	5.3
Common Perennial	4.0	4.1	4.3	2.0	3.3
Manhattan	7.2	7.3	6.9	5.0	7.0
NK-100	5.1	5.4	5.6	2.5	4.4
MSU Perennial	4.9	5.1	4.8	1.8	4.5
Brabantia	4.6	5.0	5.7	2.8	4.3
Combi	4.1	4.5	5.3	3.3	3.6
K9-124	7.5	7.1	8.1	5.0	7.3
K9-123	3.8	4.1	6.0	1.8	3.6
K9-125	5.5	5.8	7.1	4.3	5.3
Pennfine	7.6	8.1	7.0	8.3	7.4

¹average of 4 ratings

²average of ratings on July and Aug. 3

³average of rating on July 1

Rating System: Density, Uniformity, Color, Desirability
9 most 1 least
Disease 1 most 9 least

Billings is building a home in an area where the surrounding soil is a heavy clay poor in nutrients—definitely not the easiest place in the world to get grass started. But in spite of that “Pennfine has taken hold right away.”

Mowing clean can mean a lot for sales of turfgrass sod. Homeowners who invest many dollars in a quality sod demand that the turfgrass not only cut clean but look well manicured. A sod containing perennial ryegrass that has a shaggy, rugged look is cause for rejection. Business back at the sod farm hurts when this happens. That's why a ryegrass that mows cleanly can boost profits in the sod sales department. As Parker Shirling, vice president, Princeton Turf Farms, Inc., Centreville, Maryland, put it, “We've had no trouble mowing Pennfine and we don't change mowers to get the cut either. It really mows clean.”

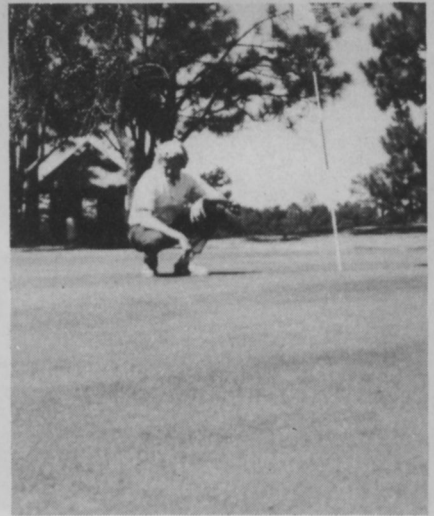
Unlike the superintendent or grounds manager whose standard maintenance practices include keeping mowers sharp, the homeowner is often guilty of operating his mow-

ing equipment under less than ideal conditions. While he wants his lawn to maintain a good appearance, the task becomes an often dreaded chore. But even with seldom sharpened mowers homeowners such as Ronald Barrett of Guilderland, New York report less shredding of leaves with Pennfine.

“It doesn't shred as easily as other grasses I have grown,” he claims, “and my lawnmower hasn't been exceptionally sharp either.”

Pennfine is recommended for athletic fields, golf courses, cemeteries, public grounds, parks, sod farms and home lawns. It is highly compatible in blending with other grasses or in overseeding of established turf areas.

In all these areas, turfgrass managers are interested in getting the maximum performance from their turfgrass seeding. Like Michelangelo, each continually works for perfection with the tools available. A clean cutting ryegrass adds a new dimension to turfgrass care. Small wonder that the excitement over Pennfine's mowability is contagious.



Jim Ganley, superintendent at Pinehurst Golf Course, Pinehurst, North Carolina.



Fine-leaved Pennfine is ideal for home lawns. Fibers cut clean even with a seldom sharpened mower. Great for overseeding, too.

