

Bluegrass on comeback trail, turf breeders say

By MARK LESLIE
BELTSVILLE, Md. — Bluegrass, out of fashion since perennial ryegrasses broke onto the scene, may be on the road to a comeback in golf course circles. Turfgrass breeders are conquering the obstacles of lower height of cut and density, and are hoping to improve seed yield and heat tolerance.

"We've opened the door for closecut bluegrasses," said Dr. Doug Brede, research director at Jacklin Seed Co. "In fact, I think we've started a whole phenomena... It opens up a totally different option for people. On a scale of 10, I'd give it an 8 on an order of earth-shattering if I were a superintendent."

"Where superintendents have had the difficult choice of a ryegrass fairway which does not have the ability to spread and repair divots, or bentgrass fairways with much higher maintenance costs, bluegrasses will become a much more considered choice," said Dr. Virginia Lehman, director of research at the Lofts Seed

Co. research farm in Lebanon, Ore. "People used to use Kentucky bluegrass on fairways almost exclusively, partially because there were not a lot of options," said Kevin Morris, national director of the National Turfgrass Evaluation Program (NTEP), headquartered here. "They worked pretty well except that summer patch and necrotic ring spot started to become a problem and we had no control for them. When the perennial ryes came along, and were easy to seed and looked nice, people started to use them exclusively. But, since then, we've found that rye is not perfect, either."

"You can blow out a lot of ryegrass with winter kill," said Dave Oatis, director of the U.S. Golf Association Green Section's Northeast Region. Ryegrasses also suffer from poor divot recovery, attacks of snow mold, brown patch and red thread. And now gray leafspot has emerged as a devastating

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Buffalograss breeders hoping for supers' change in attitude

By MARK LESLIE
PHOENIX, Ariz. — Hailed a few years ago as a solution to water restrictions and chemical applications, buffalograss

has instead drawn more attraction as an "accent" grass on golf courses. Yet turf breeders remain optimistic about the future of buffalograss on golf courses. A native grass on prairies, buffalograsses are known for drought-hardiness, low fertility requirements, disease and insect-resistance, heat and cold-tolerance and other attributes. They require only one-fourth to one-half the water needed for Bermudagrass, so with growing concern about water availability, research on buffaloes has drawn widespread attention. They re-emerged in a handful of research programs just a dozen years ago — a New York minute in the time clock of turf breeders.

"We're looking at this as developing a grass for the next century," said Dr. Terry Riordan of the University of Nebraska, a key breeder of buffaloes. "We're only in our 12th year, but the new varieties we

have are much better than we've had in the past." Riordan touted the density, color and uniformity of the newer buffalograsses and said two Northern types that can tolerate mowing down to 5/8 inch should be available next year.

Nevertheless, buffalograss hasn't been without its critics among those who have tried it in the field. The main negative is that stands of buffalograss may be invaded by the more aggressive Bermudagrass.

Golf course architect Ken Dye of Houston, who has specified buffalograss on a couple of courses, said: "We don't do it anymore. Our overall experience has been mediocre. The newer varieties are definitely better... But the experience we've had is that contamination over time is significant. Within five or 10 years, 10 to 20 feet of your buffalograss rough is taken over by Bermudagrass that has spread from the fairway."

"So until someone figures how to make stronger buffalograss, or a chemical to keep out Bermuda, I can't see putting the two

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National Kentucky bluegrass test progress report for medium-high input

Name	AB1	IA1	IA2	IL1	IL2	IN1	KS1	KY1	MA1	MD1	ME1	MI1	MN1	MO1	MJ3	NC1	NE1	NJ1	NJ2	OH1	OK1	ON1	PA1	QE1	RI1	UB1	UT1	VA1	WA1	Mean
*Midnight	6.3	6.5	5.7	6.6	6.5	6.3	7.0	7.5	6.0	5.0	6.7	6.4	6.1	4.4	7.0	5.8	6.3	6.7	7.2	8.0	6.5	5.5	6.3	7.8	6.3	6.8	5.8	4.4	6.7	6.3
*ZPS-2572	6.7	7.3	6.1	7.2	6.4	5.4	6.8	7.3	6.1	5.7	6.4	6.3	6.2	4.5	7.2	6.3	6.5	5.2	6.8	7.6	6.5	4.9	6.3	7.4	6.3	6.9	5.5	4.2	5.8	6.3
*Unique	7.0	6.8	6.8	6.2	5.9	6.1	5.8	7.4	6.3	5.7	6.5	6.4	6.7	5.0	6.7	5.4	6.5	5.3	5.3	7.8	6.9	5.1	6.6	7.6	5.3	5.8	6.8	5.9	6.0	6.3
*Total Eclipse	6.0	6.2	6.4	7.3	5.3	5.5	6.7	8.0	6.3	5.2	6.6	6.0	6.0	4.1	7.2	5.4	6.3	5.1	7.3	7.3	6.2	4.5	6.7	7.8	6.6	7.3	6.2	4.1	6.4	6.2
*Award	7.0	7.1	6.0	6.9	5.3	5.5	6.4	7.3	5.5	5.8	6.4	6.6	5.8	4.4	7.0	5.6	6.2	4.5	6.9	8.0	6.5	4.7	7.2	7.2	7.0	6.3	5.9	4.5	6.5	6.2
PST-B2-42	7.0	7.2	6.4	6.7	6.3	6.5	6.3	7.3	6.0	4.8	6.6	7.1	6.0	4.5	6.3	6.0	7.0	4.5	5.3	7.9	5.9	5.1	6.0	7.8	5.7	6.0	6.6	5.2	6.0	6.2
PST-B0-141	5.7	6.7	7.0	7.3	6.7	6.0	6.1	7.1	6.7	5.7	6.4	6.2	6.0	4.3	6.3	6.5	6.5	4.4	5.4	8.0	6.4	4.8	6.2	7.9	6.0	5.3	6.7	5.8	5.8	6.2
*Blacksburg	6.7	7.3	6.9	6.3	6.2	6.2	6.7	6.0	5.5	6.0	6.4	6.5	6.2	5.6	6.5	5.4	5.5	4.9	5.4	8.0	5.8	5.2	7.8	7.8	6.2	5.5	6.3	5.1	5.9	6.2
Absolute	7.0	6.9	5.9	7.3	5.3	6.1	5.7	6.6	5.1	5.8	6.4	6.7	6.2	5.0	7.0	5.7	5.5	5.0	5.8	7.9	6.4	5.5	7.2	7.8	6.1	6.4	6.2	4.4	6.4	6.2
*Odyssey	7.0	5.7	6.8	7.4	5.2	5.6	6.3	7.2	5.9	5.4	6.7	6.6	5.4	3.9	6.9	6.1	5.3	4.8	6.8	8.1	6.8	5.4	6.5	7.4	6.2	6.8	6.0	4.8	5.7	6.2
*Nuglade	6.3	6.0	6.6	6.5	5.3	5.3	6.4	7.3	6.3	5.5	6.8	6.1	5.7	4.5	6.9	5.8	5.3	4.5	6.7	8.1	7.3	4.9	6.8	7.3	6.5	7.0	5.8	4.0	6.8	6.1
*Quantum Leap	6.7	6.3	5.7	6.8	5.7	5.3	6.4	7.5	5.5	5.3	6.0	6.3	5.8	4.8	6.4	5.7	6.8	4.8	7.1	7.7	5.9	5.3	7.0	7.5	6.6	7.0	5.3	4.7	6.3	6.1
*America	5.3	5.7	6.5	6.9	6.5	6.5	5.8	7.0	6.3	5.7	7.0	6.3	6.0	4.4	6.4	5.8	7.0	5.6	5.3	7.7	5.9	4.7	6.2	7.3	6.3	5.7	6.7	5.7	5.8	6.1
*Rugby II	7.0	5.6	6.3	7.0	5.3	5.6	6.2	7.0	5.8	5.4	6.2	6.7	6.0	4.2	6.9	5.3	6.0	5.1	6.5	7.6	6.5	5.0	6.7	7.3	6.5	6.3	5.9	5.0	6.6	6.1
J-1576	6.0	5.8	5.7	6.9	5.9	5.2	6.3	7.8	5.9	5.4	6.2	6.3	5.8	4.4	6.5	5.9	6.0	4.7	6.7	7.5	7.0	4.8	6.2	7.6	6.8	7.1	5.9	4.7	6.6	6.1
PST-B3-180	6.0	5.7	6.2	6.8	6.5	6.0	7.0	7.2	6.3	5.5	5.8	6.0	6.0	4.7	6.3	6.0	5.2	5.0	5.3	8.1	6.4	5.3	6.1	7.4	6.5	5.7	6.6	5.1	6.2	6.1
PST-638	6.3	5.9	6.0	6.7	7.1	5.6	6.2	5.8	5.0	5.7	6.8	6.7	6.3	4.4	6.7	5.6	6.2	5.8	6.6	7.3	6.1	4.8	6.6	7.6	6.6	5.6	5.1	4.7	5.8	6.1
LSD	1.3	1.6	1.1	0.7	1.2	0.8	0.9	0.9	0.9	0.9	1.6	0.6	0.6	1.0	0.5	1.0	1.0	0.9	1.0	0.7	0.9	0.9	1.0	0.5	0.8	1.1	0.8	1.0	0.6	0.2

* — Commercially available in the United States in 1997.

SEED FIRMS WITH TOP ENTRIES

- Midnight — Standard Entry
- ZPS-2572 — Zajac Performance Seeds
- Unique — Turf-Seed
- Total Eclipse — Jacklin Seed
- Award — Jacklin Seed
- PST-B2-42 — Pure-Seed Testing
- PST-B0-141 — Pure-Seed Testing
- Blacksburg — Turf-Seed
- Absolute — Medalist America
- Odyssey — Peterson Seed
- Nuglade — Jacklin Seed
- Quantum Leap — Roberts Seed
- America — Pickseed West
- Rugby II — Medalist America
- J-1576 — Jacklin Seed
- PST-B3-180 — Olsen-Fennel Seed
- PST-638 — C.R. Funk, Rutgers University

The following are conditions at the sites of the bluegrass national tests, including, in order, location, soil texture, soil pH, nitrogen applied (in pounds per 1,000 square feet), mowing height (in inches) and irrigation practiced:

- AB1 — Olds, Alberta, Canada, N/A, N/A, 2.1-3.0, 0.5-1.0, N/A.
- IA1 — Ames, Iowa, sandy clay loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- IA2 — Ames, Iowa (traffic), sandy clay loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- IL1 — Urbana, Ill., silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.
- IL2 — Carbondale, Ill., silty clay loam, 6.1-6.5, 4.1-5.0, 1.1-1.5, to prevent stress.
- IN1 — West Lafayette, Ind., silt loam and silt, 7.1-7.5, 3.1-4.0, 0.6-1.0, to prevent stress.
- KS1 — Manhattan, Kan., silt loam and silt, 6.6-7.0, 3.1-4.0, 0.0-0.5, to prevent stress.
- KY1 — Lexington, Ky., silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5, only during severe stress.

- MA1 — Amherst, Mass., silt loam and silt, 6.1-6.5, 5.1-6.0, 0.0-0.5, to prevent stress.
- MD1 — Silver Spring, Md. (dense shade), loamy sand, 4.6-5.5, 2.1-3.0, 2.1-2.5, to prevent stress.
- MD2 — Silver Spring, Md. (shade), silt loam and silt, 6.6-7.0, 2.1-3.0, 2.6-3.0, to prevent dormancy.
- ME1 — Orono, Maine, N/A, 5.6-6.0, 5.1-6.0, 1.1-1.5, to prevent stress.
- MI1 — East Lansing, Mich., sandy loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- MN1 — St. Paul, Minn., silty clay loam, 7.1-7.5, 2.1-3.0, 1.6-2.0, to prevent stress.
- MO1 — Columbia, Mo., silty clay loam, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.
- MO3 — St. Louis, Mo., silty clay loam, 6.6-7.0, 4.1-5.0, 2.6-3.0, to prevent dormancy.
- NC1 — Raleigh, N.C., sandy clay loam, 5.6-6.0, 2.1-3.0, 1.1-1.5, to prevent stress.
- NE1 — Lincoln, Neb., N/A, N/A, 3.1-4.0, 0.0-0.5, to prevent stress.
- NJ1 — North Brunswick, N.J., sandy loam, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.

- NJ2 — Adelphia, N.J., sandy loam, 6.1-6.5, 5.1-6.0, 1.1-1.5, to prevent stress.
- OH1 — Columbus, Ohio, silt loam and silt, 6.6-7.0, 2.1-3.0, 2.1-2.5, to prevent stress.
- OK1 — Stillwater, Okla., silty clay loam, 6.6-7.0, 3.1-4.0, 1.6-2.0, to prevent stress.
- ON1 — Guelph, Ontario, Canada, Sandy loam, 7.6-8.5, 3.1-4.0, 2.1-2.5 no irrigation.
- PA1 — University Park, Pa., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.6-2.0, to prevent stress.
- QE1 — Quebec, Quebec, Canada, N/A, N/A, 3.1-4.0, 0.6-1.0, N/A.
- RI1 — Kingston, R.I., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.1-1.5, to prevent stress.
- UB1 — Beltsville, Md. (high maintenance), silt loam and silt, 5.6-6.0, 3.1-4.0, 0.6-1.0, to prevent stress.
- UT1 — Logan, Utah, silt loam and silt, 7.1-7.5, 4.1-5.0, 0.6-1.0, to prevent stress.
- VA1 — Blacksburg, Va., N/A, N/A, 3.1-4.0, 1.1-1.5, N/A.
- WA1 — Pullman, Wash., silt loam and silt, 5.6-6.0, 5.1-6.0, 1.6-2.0, to prevent stress.

Buffalograss being used for 'accent' more than water-saver

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next to each other without problems."

Indeed, at two courses here — DC Ranch and The Raven Golf Club at South Mountain — superintendents speak of the aesthetics of buffalograss rather than its attributes of drought- and disease-resistance.

"We've used buffalograss as an accent turf," said Bob Clarkson, who is in his first summer at The Raven. "Ninety-five percent of the buffalo here is between tees and fairways and adjacent to common ar-

eas. We don't overseed it in the winter. It goes dormant and has dark brown contrast. In the summer the color is different than Bermuda and defines the hole."

"We like the contrast, the light green with the dark 419 Bermuda that we have everywhere else," concurred David Bergstrom at DC Ranch. "We have a different theory. We're maintaining it — mowing it at 2-1/2 inch height, and watering it fairly consistently. We're not dealing with it as though it is completely

drought-tolerant, but not using a lot of fertilizer, either."

DC Ranch also uses the buffalograss around the bunker faces. "Those come into play more often than not," Bergstrom said. "We did not want the ball to get caught up in the bunker sides."

He said buffalo can be allowed to grow "natural, 6 inches high and lazy, or tight and playable at higher maintenance levels."

Clarkson has seen some Bermudagrass

encroachment into the buffalograss areas in his 1-1/2-year-old course, and Bergstrom has not witnessed any in his 1-year-old track.

"Some of the perimeters have encroachment and contamination where clippings have blown in and established themselves," Clarkson said. "Over time, it will probably encroach quite a bit. We may treat it like poa annua and cut it out."

Clarkson said the situation, however, was exacerbated by poor-quality soil and the decision to not install irrigation for buffalograss areas. "I'm proposing to irrigate these areas," he said.

Riordan acknowledged the criticisms and said management practices determine the outcome of using buffalograss.

"With management it's possible to keep them separate," Riordan said. "In areas where hybrid Bermuda is getting mixed in with the buffalo at planting ... Bermuda becomes a weed in the buffalo and will take over. The bugaboo is when they plant plugs through a machine. The planting device for sprigging throws the sprigs, and so the two grasses get mixed in the process. They just need to be separate."

Riordan added that common Bermudagrass is not as aggressive in stands of rough and thus causes less of a problem as hybrids.

"One of the first courses Dye did was an installation problem, I thought," he added. "They had problems on installation. The first nine is a mess. The second looks pretty good. They took the care to keep them separated at planting."

Riordan said that if an area is overwatered, Bermudagrass will be much more aggressive. "But if it is kept a little drier — which I think roughs should be — Bermuda won't be as aggressive and buffalograss will grow quite well. This is something the superintendents will have to work out."

Researchers, he said, are trying to devise a way to keep Bermuda out of buffalo stands.

"That's still in the lab situation right now," he said. "I think we can get it done in the next five years."

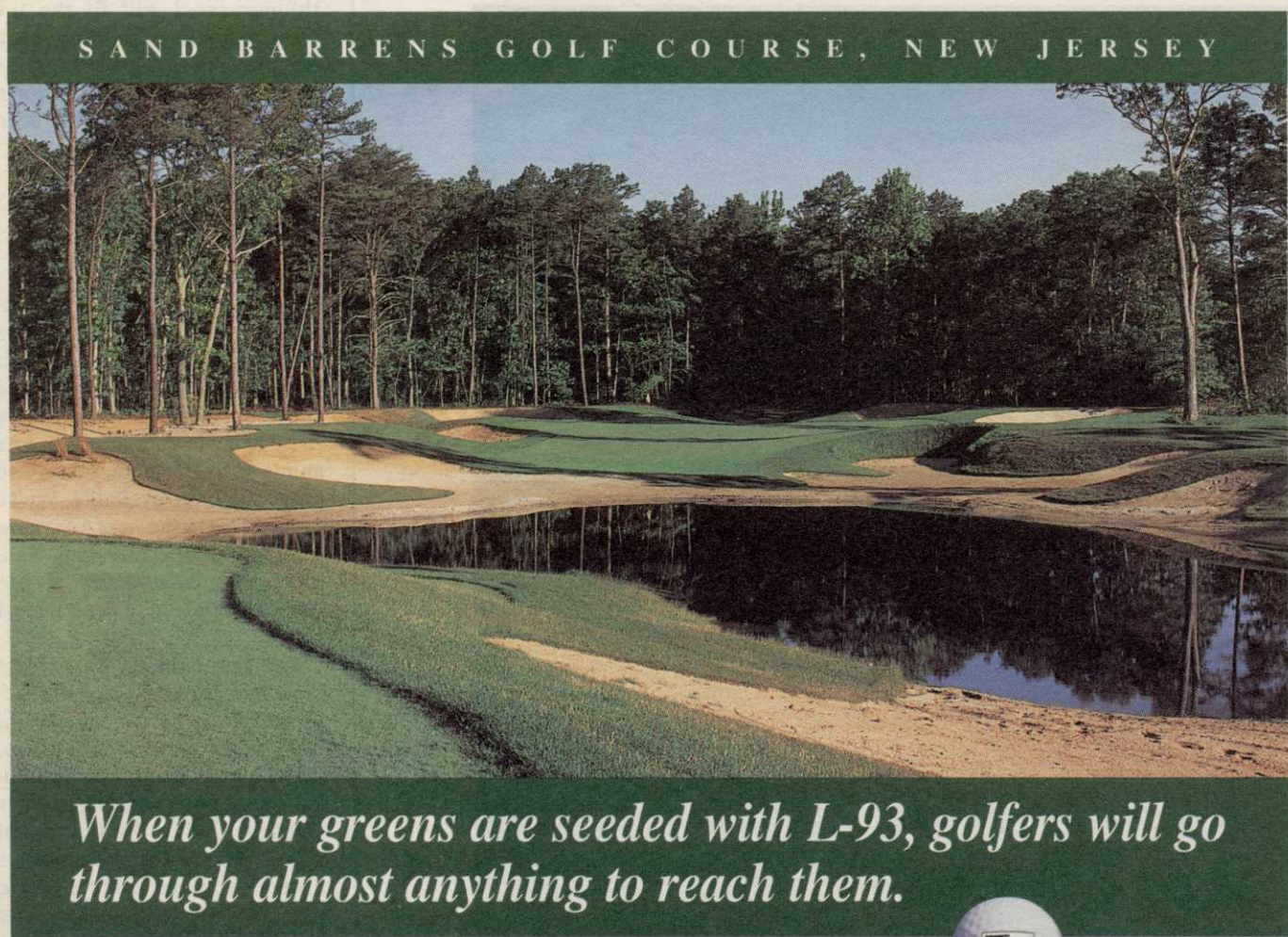
Meanwhile, the new trials on buffalograsses will not be ready until 1998, according to Kevin Morris, director of the National Turfgrass Evaluation Program. But he observed: "The seeded types have improved characteristics. There will be several good fairway types."

UCAL-RIVERSIDE PLANS FIELD DAYS

RIVERSIDE, Calif. — The Turfgrass Research Conference and Field Day and the Landscape Management Research Conference and Field Day will provide two full days of updates for turf and landscape professionals on Sept. 17 and 18 at the University of California at Riverside here.

Both programs will begin at 8 a.m. with detailed briefings on the latest research in turfgrass and landscape topics, followed by on-site examinations of test plots that conclude at about 3:30 p.m.

More information is available from Susana Velez, registration coordinator/research conferences, Department of Botany and Plant Sciences, University of California, Riverside, Calif. 92521-0124; 909-787-4430.



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Regent	5.8
Pro/Cup	5.7
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Turfgrass Quality Ratings: 9 = Ideal Turf
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