

Paspalum

by R. R. Duncan, Ph.D.

A new environmental sports turf

In August, the New Orleans Saints created a buzz when they installed natural grass inside the Superdome for a pre-season game against the Green Bay Packers. To fulfill the special, low-light requirements for this unprecedented project, the team turned to paspalum, a new grass that's showing promise for athletic turf applications.

Scientifically referred to as *Paspalum vaginatum*, the grass is known by several common names: seashore paspalum or siltgrass in the United States, and saltwater couch in Australia. While the grass is a "cousin" to dallisgrass and bahiagrass, it more closely resembles hybrid bermudagrasses in appearance, growth habit, and quality.

The Saints installed Salam, Southern Turf Nurseries' proprietary selection of paspalum that had been used in other applications throughout the world.

Origin

Paspalum is a perennial grass that has both stolons and rhizomes. Normally found between 30- and 35-degree North-South latitudes, the grass' primary center of origin lies in the fine-textured ecotypes of South Africa and the coarse-textured ecotypes of both Africa and the Americas. It propagates vegetatively, and acts similarly to hybrid bermudas.

Establishment

Vegetative material — sprigs, stolons, and rhizomes — can be planted at a rate of 200 to 600 bushels per acre. Grow in time approximates 90 days in conditions of proper fertility and moisture.

The fertility package for establishment and grow-in is also similar to that of the bermudas. Highly sol-

Continued on pg. 16

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Continued from pg. 14

uble nitrate (NO₃) sources, such as CaNO₃, can be used in conjunction with close mowing (<0.5 inches) and periodic verticutting to hasten grow-in.

Attributes

A number of characteristics will make paspalum an important, environmentally friendly athletic turf-grass for the 21st century:

- Ocean water can be used for irrigation on some ecotypes.
- Recycled water (gray, effluent) can be used for long-term irrigation.
- The grass features minimal pesticide requirements.
- Compared to current bermuda sports fields, paspalum needs 1/3 to 1/2 less fertilizer for routine maintenance.
- Paspalum's range of mowing



Fraser YMCA in Hinesville, GA, planted paspalum on its soccer field in June 1998. This October-1998 photo was taken just prior to beginning play. Courtesy: R. Duncan

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1. Age of baseball diamond (year of installation).
2. Geographic location (city and state).
3. Description of maintenance program.
4. Operating budget for baseball diamond.
5. Irrigation. None Manual Automatic
6. Total number of maintenance staff for field.
7. Does baseball field have lighting for night games?
8. Number of events on baseball diamond per year.
9. Types and number of events on diamond other than baseball.
10. How many months during the year is the field used?
11. Why do you think this field is one of the best?
12. **IMPORTANT:** Send two copies of entry and two identical sets of color photos.

Deadline for entries: Entries must be postmarked no later than October 30. Selection of winners will be made by the Awards Committee of Four Major League Head Groundskeepers.

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heights includes the following: 0.125-inch golf greens or bowling courts, 0.5- to 0.75-inch soccer fields, and 0.5- to 1.0-inch football fields.

- The grass' soft, cushioning texture can help prevent skin abrasions, ankle and knee problems, and "turf toe."

- Its leaf texture is cosmetically similar to that of hybrid bermudas, but paspalum features more layers of leaves for a thicker canopy.

- Low-light tolerance (not tree shade) makes the grass a good candidate for use in domes and arenas with retractable roofs.

- Paspalum withstands wet, boggy conditions in lowland areas adjacent to wetlands and in areas with high water tables.

- Compared to the best centipedegrasses and bermudas, properly managed paspalum exhibits similar, and sometimes superior drought tolerance.

- The grass roots equally well in mucks, heavy clays, and pure sands.

- Its soil pH adaptability ranges from 3.6 to 10.2.

- Mower striping patterns on paspalum last two- to four-times longer than on bermudas.

- Wear tolerance is similar to that of hybrid bermudas.

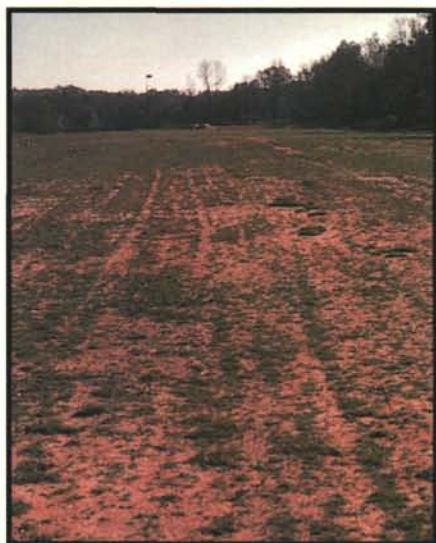
- The grass features a darker green color than most bermudas.

- Paspalum requires approximately 50-percent less water than hybrid bermudas.

Cold tolerance

Paspalum's major limitation is its lack of cold hardiness. Like most hybrid bermudas, the grass' adaptation limits fall in the southern

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A practice football field at Starrs Mill High School in Fayette Co., GA, grows in after being sprigged with paspalum. *Courtesy: R. Duncan*

transition zone.

Current paspalum ecotypes can grow south of a line from Raleigh, NC; to Chattanooga, TN; to Little Rock, AR; to Dallas, TX; to south of San Francisco, CA. Paspalum sports fields in the northern transition zone would need to be covered with plastic blankets to ensure winter survival.

Overseeding

Paspalum is the last warm-season grass to go off-color in the fall. It requires at least two to three nights of 26-degree F temperatures to go completely dormant.

The grass goes off-color three weeks later than the bermudas, but it normally comes out of winter dormancy two weeks later than the bermudas as well. Paspalum can be overseeded with most cool-season grasses, including perennial ryegrass, alkaligrass, and tall fescue.



Ron R. Duncan, Ph.D., is professor of turfgrass breeding and stress physiology at the University of Georgia.

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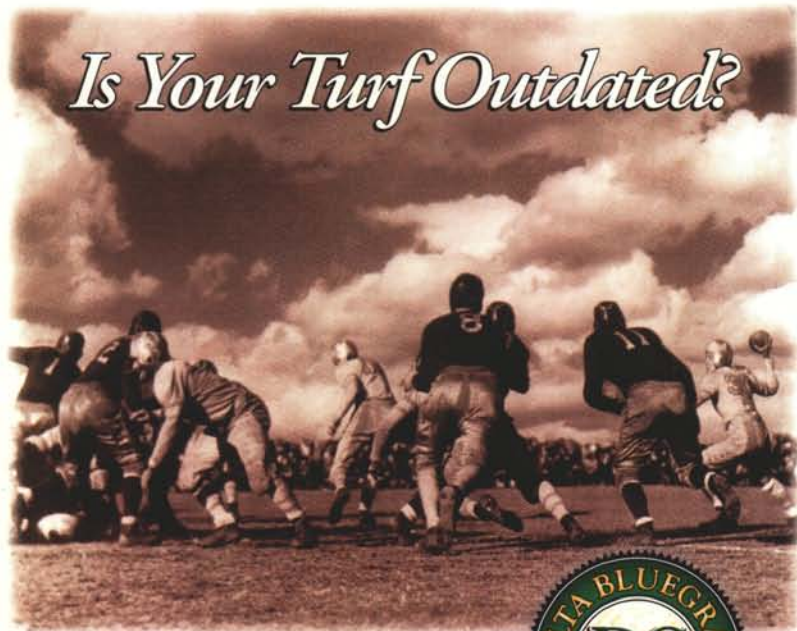
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