

FLORATEX® — A Low-Maintenance Bermudagrass for the South

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FLoraTeX® bermudagrass, *Cynodon dactylon* (L.) Pers., is a joint release of the Florida and Texas Agricultural Experiment Stations (1). It is a low-maintenance turfgrass for cemeteries, golf courses, lawns, parks, and sports turfs in warm-humid and warm-semiarid climatic regions of the United States.

Origin

FLoraTeX® bermudagrass is thought to have been introduced into the United States in 1954 as a plant introduction from South Africa. Its true origin, however, was lost over time due to vegetative contamination. During the 1980s, FLoraTeX® was tested extensively

under its experimental number FB-119 in Florida and Texas and throughout the South.

Characteristics

FLoraTeX® bermudagrass is a deep-rooted, warm-season turfgrass with excellent dehydration avoidance (Table 1), low nitrogen requirement (Table 2, Figure 1), excel-

MERITS

- Widely adapted and produces acceptable turf quality throughout the warm-humid and warm-semiarid regions of the southern United States, especially under low-maintenance inputs.
- Widely adapted to soil pH, especially on alkaline soils.
- Very low nitrogen requirement due to superior nitrogen stress tolerance.
- Excellent drought resistance and dehydration avoidance.
- Superior rooting depth and mass.
- Excellent fall low-temperature color retention.
- Very early spring greenup.
- Good wear tolerance, similar to Tifgreen and Arizona Common.
- Resistant to bermudagrass stunt mite.
- Tolerant to the short-winged mole cricket.
- Tolerant to lance and spiral nematodes.
- Least affected by dollar spot under low-nitrogen stress.
- Can be identified by its starch gel electrophoresis banding pattern for aconitase.

LIMITATIONS

- Prolific seedhead producer at certain times of the year.
- Produces viable seed which may contaminate turf with off-types.
- Must be vegetatively propagated by plugs, sod, or sprigs.
- Lacks cold hardiness.
- Poor shade adaptation, which is a characteristic of all bermudagrass cultivars.



lent fall low-temperature color retention (Figure 2), and early spring greenup. It is resistant to bermudagrass stunt mite, *Eriophyes cynodontiensis* Sayed. It is tolerant of short-winged mole cricket, *Scapteriscus abbreviatus* Scudder, and of lance, *Hoplolaimus galeatus* Cobb, and spiral, *Helicotylenchus pseudorobustus* Steiner, nematodes. It is least affected by dollar spot, *Sclerotinia homoeocarpa* F. T. Bennett, under low-nitrogen stress. It is widely adapted and produces an acceptable turf throughout the southern United States (Table 3). It can be identified by means of starch gel electrophoresis for its aconitase "fingerprint." FLoraTeX® bermudagrass is an environmentally acceptable grass for low-maintenance turfs on golf course fairways and roughs, as well as on athletic fields, other recreational sports turfs, roadsides, and home lawns.

Fall low-temperature color retention of FLoraTeX® (center) compared to NuMex Sahara (right) and to an experimental bermudagrass selection (left) at Gainesville, Florida, in December.



TABLE 1
Comparative dehydration avoidance, as assessed by percent leaf firing, of selected bermudagrass cultivars observed after 158 days of drought stress during the summer of 1988 and after 48 days of drought stress during the summer of 1989 at College Station, Texas (3)

| Relative Ranking | Year | |
|------------------|----------------|----------------|
| | 1988 | 1989 |
| Very High | FLoraTeX® | — |
| | NuMex Sahara | NuMex Sahara |
| | Ormond | Ormond |
| High | — | FLoraTeX® |
| | Midiron | Midiron |
| | Midlawn | — |
| | Texturf 10 | Texturf 10 |
| Medium | — | Tifway |
| | — | Arizona Common |
| | Bayshore | — |
| Low | Arizona Common | — |
| | — | Bayshore |
| | Everglades | Everglades |
| | Guymon | Guymon |
| | — | Midlawn |
| | Tifway | — |
| | Tufcote | Tufcote |
| Vamont | Vamont | |

TABLE 2
Influence of nitrogen fertilization on ground cover estimates of selected bermudagrasses† after 3.5 years at Fort Lauderdale, Florida (A. E. Dudeck, Unpub. Data)

| Cultivar | N Level‡ | |
|------------------|----------|--------|
| | Low | Medium |
| Percent | | |
| FLoraTeX® | 70 a* | 91 a |
| Tiflawn | 46 a-c | 79 ab |
| Ormond | 24 b-d | 74 ab |
| Tifway | 17 cd | 47 cd |
| Bayshore | 0 d | 41 d |
| Everglades | 0 d | 13 e |
| Arizona Common § | — | — |

†A total of 145 bermudagrasses were involved in this trial.

‡Low-N plots received only one pound of N per 1,000 square feet from a complete N-P-K fertilizer plus minor elements in March of an 8-month growing season. Thus, the average rate was 0.1 pound of N per 1,000 square feet per growing month. Medium-N plots also received a complete N-P-K fertilizer in March, but N was reapplied during the following seven months at the rate of 0.5 pound of N per 1,000 square feet. Thus, the average rate was 0.6 pound of N per 1,000 square feet per growing month.

§Arizona Common did not survive at both N rates and, therefore, was not included in the statistical analysis.

*Means followed by the same letter are not significantly different ($P=0.05$) using Waller-Duncan k-ratio *t* test.



FLoraTeX® (left foreground) and Tifway (right foreground) bermudagrass after three years in the field at Gainesville, Florida. Plots received one pound of N per 1,000 square feet from a complete N-P-K with minor elements in March of each year.

TABLE 3

Comparative average turfgrass quality of selected cultivars when tested in Florida and Texas with other experimental and commercially available cultivars in an NTEP National Bermudagrass Test that totaled 21 locations in 14 southern states from 1986 to 1991 (2)

| Cultivar | Florida | Texas | NTEP |
|----------------|---------|-------|-------|
| | Rating† | | |
| MS-Pride | 6.7 | 7.7 | 6.7 |
| Tifway | 6.6 | 7.5 | 6.6 |
| MS-Express | 6.2 | 8.0 | 6.6 |
| MS-Choice | 6.1 | 7.3 | 6.4 |
| Tufcote | 6.3 | 5.7 | 6.1 |
| Midfield | 5.8 | 5.0 | 6.1 |
| Midlawn | 5.7 | 6.0 | 6.0 |
| Texturf 10 | 5.9 | 5.2 | 6.0 |
| FLoraTeX® | 6.2 | 5.8 | 5.7 |
| Midiron | 5.8 | 5.5 | 5.7 |
| Vamont | 5.7 | 5.2 | 5.5 |
| Sonesta | 5.7 | 5.2 | 5.4 |
| NuMex Sahara | 5.3 | 4.5 | 4.9 |
| Guymon | 5.3 | 3.2 | 4.4 |
| Arizona Common | 5.0 | 3.5 | 4.4 |
| ----- | ----- | ----- | ----- |
| LSD‡ | 0.7 | 0.9 | 0.2 |

†Quality rated 1 to 9 where 9 = best.

‡Fisher's protected least significant differences at $P=0.05$.

Source of Grass

Foundation stock of FLoraTeX® bermudagrass has been released to licensed growers in Florida. FLoraTeX® is being grown under strict certification standards to maintain its genetic purity. Information regarding availability of certified plant stock may be obtained from Florida Foundation Seed Producers, Inc., P.O. Box 309, Greenwood, FL 42443.

Literature Cited

- Dudeck, A. E., J. B. Beard, J. A. Reinert, and S. I. Sifers. 1994. FLoraTeX® bermudagrass. Florida Agric. Exp. Sta. Bul. 891.
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- Sifers, S. I., J. B. Beard, and M. H. Hall. 1990. Comparative dehydration avoidance and drought resistance among major warm-season turfgrass species and cultivars. Texas Turfgrass Research — 1990. Texas Agric. Exp. Sta. Progress Rep. 4749:37-40.