FLORATAM

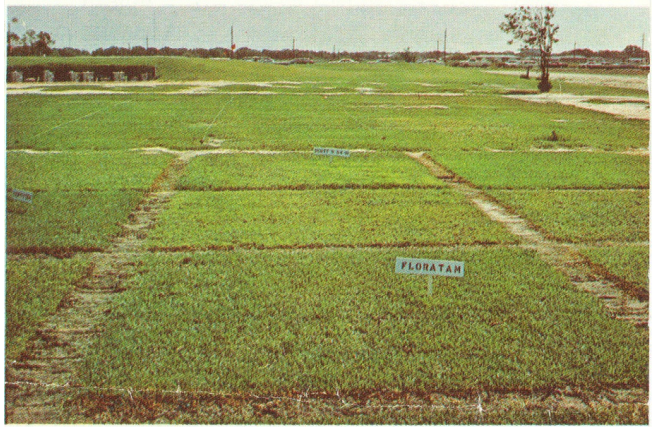
. Dark Green

. Vigorous

. Broad Leafed

. Resistant to St. Augustine Decline Disease

. Resistant to Chinch Bug



Floratam is a new variety of St. Augustinegrass lawn grass selected in a cooperative program of the Texas Agricultural Experiment Station and the Florida Agricultural Experiment Station. The variety was selected for the control of St. Augustine Decline (SAD) disease. Floratam is a fast-growing, vigorous, broad-leafed St. Augustinegrass for use where St. Augustine Decline is a problem in lawns or for special purpose use in park areas, berms, earth sculptures, borders, restricted green spaces, back slopes and esplanades.

St. Augustinegrasses are versatile and more salt tolerant than most warm season grasses. They thrive well in full sun or moderate shade and have low maintenance requirements in comparison with most other turf grasses.

Growth Characteristics

Floratam is a moderately coarse-textured, fast-growing, dark green grass which was selected at Gainesville, Florida, from FA-23. It is a deep-rooted, stoloniferous St. Augustinegrass that compares favorably in growth with Roselawn and Common. The culms are branching, highly compressed, and the flowering shoots are 30 to 15 centimeters (12 to 18 inches) tall. Stolons are large, purplish red with internodes averaging 3 inches in length. Blades are wide, averaging 8.59 millimeters (0.34 inch) in width and 9.56 centimeters (3.8 inches) in length. Leaf color is a deeper green than that of Roselawn or Common under uniform fertilization.

Performance

Average yields and performance data for Floratam and Common St. Augustinegrass are shown in Table 1. Floratam, tested as accession number FA110, covers rapidly. When sprigged in rows 12 inches apart on l2-inch centers, in 1 year Floratam covered 93 percent of the planting area in Florida. In Texas, Common and Floratam St. Augustinegrass will cover in one season where planted on 1-foot centers under optimum culture. It has good vigor and rapid growth and

competes favorably with weeds. Clipping yields are comparative with those of Common and Roselawn. In controlled greenhouse clipping trials, yields reported in grams oven dry weight over a 6-week period show Floratam yields compared favorably with those of Common and Roselawn. The average clipping yield was Common 0.59, Roselawn 0.56 and Floratam 0.52 grams oven dry weight.

Good tolerance to atrazine and simazine herbicides was demonstrated by Floratam. Both of these herbicides may be used at the recommended rates shown on the labels. Floratam is slightly less cold tolerant and is not recommended for areas where common St. Augustine normally winterkills.

TABLE 1. COMPARATIVE PERFORMANCE OF COMMON AND FLORATAM ST. AUGUSTINEGRASS

Ground cover, first growing season (low maintenance)	Clipping yield, gm oven dry wt	Leaf		Color rating 1 -5. yellow-green to green	Average stolon number per 4" x 4" plugs	Stolon length, inches (May-November)
		Width, mm	Length, cm			
Common 65 %	0.59	7.36	7.24	1.80	12.71	23.61
Floratam 85 %	0.52	8.59	9.56	2.77	6.06	29.21

Disease Resistance

St. Augustine Decline, a new mosaic virus disease of St. Augustinegrass, was observed in South Texas in 1966 and has since been identified in 56 counties in the State, in Mexico and in two locations in Louisiana. The disease has caused extensive damage to Common St. Augustinegrass which is the only cultivar commercially grown in Texas.

Accessions of St. Augustinegrass, *Stenotaphrum secundatum,* were screened in the greenhouse beginning in 1968. The first disease field trial in 1969 revealed that some accessions, even though resistant to mechanical infection in the greenhouse, become diseased in the field in disease test site situations. Accessions showing resistance to infection were test planted in Common St. Augustine turf heavily diseased with St. Augustine Decline at Ft. Worth, San Antonio, Corpus Christi and Kingsville in 1970 and at Houston and Bryan in l 971. In the field trials, transplanted susceptible Common became infected, and St. Augustine Decline disease developed in this cultivar in 30 to l80 days. Other strains or accessions became infected, and disease developed at one or more locations in the State over a 2-year period; however, Roselawn strains and Floratam remained symptomless. The test material was assayed for SAD virus development by inoculation onto susceptible Common St. Augustine and proso millet, the clinical indicator host. Floratam has exhibited resistance to St. Augustine Decline under greenhouse testing since 1968 and in the field after 24 consecutive months, 1970-72.

Resistance to infection and disease development as exhibited by Floratam is genetic. This type of resistance may break down due to specific stresses: changes in vectors or infection mechanisms or changes in the virus due to mutation for virulence. Pressures from diseases, and

their distribution and spread, are enhanced in one- plant-variety communities. The Gulf Coast of Texas is an example of this condition where the Common cultivar of St. Augustine is the only commercially grown variety in the ecosystem. The genetic base of commercial varieties of *Stenotaphrum secundatum* should be broadened with general adaptation particularly since they are vegetatively propagated. New varieties are desirable to reduce crop vulnerability. Special purpose St. Augustine cultivars will continue to be in demand.

Floratam, like Common St. Augustine, is not resistant to Brown Patch or Rust. Carbamate-type protectants may be employed in reducing Rust and Brown Patch diseases. Floratam has tolerance equal to or slightly better than that of Common to the fungus diseases Gray Leaf Spot and Downy Mildew (Table 2).

TABLE 2: COMPARATIVE FIELD DISEASE REACTIONS OF COMMON AND FLORATAM ST. AUGUSTINEGRASS

St. Augustine Decline Rating 1 -51	Brown Patch Rating 1 -5	Gray Leaf Spot Rating 1 -5	Downy Mildew Rating 1-5
Common 2.90	2.79	2.02	1.84
Floratam 1.00	2.92	1.40	1.25

'Disease ratings 1 to 5 with 1 = no disease development and 5 = severe disease.

Chinch Bug Resistance

One of the most important problems facing St. Augustinegrass is the southern lawn chinch bug *(Blissus insularis* Barber). Although chemical control measures are available for this insect, these provide only temporary relief and add to the maintenance requirements of the grass. The development of chinch bug tolerant or resistant varieties of St. Augustinegrass offered the most promising method of control. Floratam and all other available varieties of St. Augustinegrass were evaluated for chinch bug resistance in separate investigations in Florida and Texas. At both locations Floratam was found to be resistant to chinch bug injury. In the Texas investigations St. Augustinegrass varieties were inoculated with 50 chinch bugs per square foot of turf, and the insects were restricted to the grass by nylon netting. Within 6 weeks Common St. Augustinegrass and other varieties began to show visual symptoms of chinch bug damage. Within 3 months all the grasses except Floratam and one experimental selection were killed or severely damaged by the insects. Very few insects survived on Floratam, indicating that the grass was toxic to them or that they could not reproduce when restricted to the grass. Research from Florida produced the same conclusion–that "Floratam was resistant to the southern lawn chinch bug."

Sources

Floratam was named jointly by the Texas Agricultural Experiment Station and the Florida Agricultural Experiment Station and approved for release by these states in 1972.

Foundation sod is available through the Texas Agricultural Experiment Station Foundation Seed

Service, College Station, Texas, and the Florida Foundation Seed Producers, Inc., in 1973.

Vegetative propagated material is to be sold by variety name Floratam only.

Floratam is one of a number of new or improved varieties or hybrids of field and horticultural crops developed jointly by the Texas Agricultural Experiment Station and the Florida Agricultural Experiment Station. Similar leaflets are published when seed or vegetative material of new varieties becomes available.

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