

# Tifway Bermudagrass

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Tifway Bermudagrass is a chance hybrid between *Cynodon transvaalensis* and *C. dactylon* that appeared in a lot of seed of *C. transvaalensis* supplied by Dr. D. Meredith, African Explosives and Chemical Industries Limited, 40 Fox Street, Johannesburg, South Africa, in the spring of 1954. The only identifying characteristic on this lot of seed was the number "2", given to it by Dr. Meredith. Inasmuch as all other seedlings studied from this seed lot were *C. transvaalensis*, the female parent of Tifway must have been *C. transvaalensis* ( $2n = 18$ ). The chromosome number ( $2n = 27$ ) and other characteristics of Tifway indicate that its male parent must have been *C. dactylon* ( $2n = 36$ ).

The principal characteristics of Tifway, three other turf Bermudas, and common Bermuda from seed are summarized in Table 1. Tifway, like our other *C. transvaalensis* × *C. dactylon* hybrids, has 27 chromosomes and, thus, will shed no pollen and set no seed. It appears to be equal or superior to Tiffine and Tifgreen in all characteristics listed except softness. It is not nearly as soft as Tifgreen and, hence, will not be as well suited for putting greens. Its greater stiffness will make it better suited than Tifgreen, however, for fairways and tees, where greater stiffness will give the ball a better lie. This greater stiffness or woodiness should result in greater re-

sistance to sod webworm, which is particularly fond of Tifgreen. Tifway also spreads faster than Tifgreen (Table 2), which should facilitate coverage with wider sprig spacings. Tifway has a darker green color than any of the Bermudas released from Tifton. The comments of homeowners examining the turf plots at Tifton indicate that this color should make Tifway particularly popular as a lawn grass.

It is apparent that Tifway will be superior to Tiffine, Tifgreen, and Tiflawn for fairways, tees, lawns, and similar uses. The name "Tifway" (coined from Tifton and fairway) indicates one of the main uses to which we believe this grass will be put. Tifgreen, because of its greater softness, will continue to be the best grass for golf greens. Tiflawn, because of its greater coarseness and toughness, will no doubt remain the heavy-duty grass for football fields, school grounds, athletic fields, etc.

Supporting test data that recommend the release of Tifway (No. 37 in this test and No. 419 in an earlier test) appear in Tables 2, 3, and 4. Many of these data were obtained from a replicated test planted on MC-2 sterilized soil at the Georgia Coastal Plain Experiment Station in March, 1957. Each 8 x 12 foot plot was established by setting 3 x 3 feet apart 6 small plants that had been growing under uniform conditions in the

Table 1. Comparative characteristics of several Bermudagrasses used for turf.

Grass	Chromo- some No. 2n	Dis- ease resist- ance	Sod den- sity	Weed resist- ance	Seed head abun- dance	Fine- ness	Soft- ness	Type of green color
Tifway	27	1.0	2.3	1.0	1.0	1	3	Very dark
Tiffine	27	1.0	2.5	1.5	1.5	1	2	Light
Tiflawn	36	1.0	2.9	1.0	3.0	3	4	Dark
Tifgreen	27	1.0	2.2	1.5	1.0	1	1	Dark
Common	36	5.0	6.5	4.0	4.0	4	4	Medium

NOTE: Grasses receiving ratings nearest 1.0 were most resistant to disease and weeds, had the greatest sod density, the fewest seed heads, the finest leaves, and made the softest turf.

Table 2. The 1957 response of Tifway turf Bermuda in comparison with several checks.

Grass	: Plant diameter: in : inches	: Leaf : resister: ance : 5/28	: Height in : not cut : 6/26	: Percent of : plot : covered : 5/28	: Greenness : rating : (Average for season	: Sod density : rating : (Average for season)	
Tifway	: 34.0	: 2	: 3.0	: 7.0	: 70.0	: 2.4	: 2.3
Tifgreen	: 18.0	: 2	: 1.0	: 3.8	: 75.0	: 3.4	: 2.3
Tiflawn	: 20.0	: 2	: 5.0	: 6.8	: 77.5	: 4.5	: 4.2
Common	: 28.0	: 2	: 5.0	: 9.0	: 82.5	: 4.2	: 6.5
5% LSD	: 2.0	: NS	: .6	: .9	: 9.6	: 1.1	: 1.1

NOTE: Ratings ranged from 1 for excellent color, sod density, and leaf-hopper resistance to 10 for very poor color, density, and leaf-hopper resistance.

greenhouse during the winter. The plant-diameter measurements taken on April 12, 1957, and summarized in column 1 of Table 2 are indicative of the rate of spread of these grasses. It is believed that most other characteristics are self explanatory. Sod density and greenness ratings were taken several times (about once a month during the growing season) but only the yearly averages have been presented.

Some of the information in Table 4 came from large fairway plots established in the spring of 1959. It was in these plots where all grasses were the same age and cut at the same height that the striking differences in frost resistance were observed. Here also was afforded an excellent opportunity to observe the very dark green color of Tifway.

Mr. T. M. Baumgardner, Vice President of the Sea Island Company, Sea Island, Georgia, has had Tifway (No. 419) under observation at Sea Island during the past season. Mr. Baumgardner, a trained landscape gardener, has been directing the turf program on the Sea Island Golf Club for many years and is one of the best authorities on turf grasses for lawns and golf that I know. A part of his December 7 report on this grass follows:

"As you know, you gave us a small sample of No. 419 early last spring for experimental purposes. We put this grass in our sod nursery, which had been treated with methyl bromide, and by late spring had enough grass to plant the 1500 square foot addition to our No. 2 tee at the Sea Island Golf Club.

Table 3. The 1958 response of Tifway turf Bermuda in comparison with several checks.

Grass	: Greenness : rating : (Average for season	: Sod-density : rating : (Average for season	: Seedhead : abundance : (Average : two dates	: Density of : ryegrass : overseeded : on plots : 3/21/58	: Greenness : rating : of : turf : 3/28/58	: Recovery of : Bermuda : from : ryegrass : 4/22/58
Tifway	: 2.2	: 2.5	: 2.0	: 6.0	: 4.0	: 3.0
Tifgreen	: 2.8	: 2.0	: 2.0	: 5.0	: 4.0	: 2.0
Tiflawn	: 4.3	: 3.0	: 4.5	: 7.0	: 7.0	: 5.0
Common	: 7.3	: 9.0	: 5.0	: 6.0	: 7.0	: 10.0

NOTE: Grasses receiving ratings nearest 1.0 had the best color and density, the fewest seed heads, and made the best recovery after ryegrass.

Table 4. The 1959 response of Tifway turf Bermuda in comparison with several checks.

Grass	: Softness : of : grasses	: Greenness : rating : (Average : for : season	: Sod-density : rating : (Average : for : season	: Resistance : to spurge : invasion : on greens : 8/8/59	: Type : of : green : color	: Frost : resistance : rating
Tifway	: 3	: 1.7	: 2.0	: 1.0	: Very dark	: 1
Tifgreen	: 1	: 1.9	: 2.3	: 2.0	: Dark	: 3
Tiflawn	: 4	: 2.7	: 2.6	: 1.0	: Dark	: 2
Common	: 4	: 3.8	: 4.0	: 4.0	: Medium	: 2

NOTE: Grasses receiving ratings nearest 1.0 had the best color and density, the greatest resistance to spurge and frost, and made the softest turf.

"We have been most favorably impressed with the behavior and experience with this grass for tee, fairway, and lawn purposes. The particular tee on which this grass is planted has about one-half of the remaining area planted to Tifton 57 Bermuda and the other half to common Bermuda, both of which were planted several years ago.

"The No. 419 seemed to spread and cover very quickly and has formed a very dense, closely knit, rather stiff-bladed turf of very good medium fine texture and excellent dark green color. So far, this turf has not shown the tendency to fluffiness, which is one of the main objections to Tifton 57, as you know, for golf-course use. From our observation so far, I believe this grass is far superior to Tifgreen 328 for fairway or tee purposes, as it seems to be a sturdier grass, which should take less meticulous maintenance than No. 328 and, as you have pointed out in your letter, it certainly provides a better lie because of the stiffer grass blades. I think, too, under heavy playing conditions, particularly on the tees, that this grass would be less likely to show severe damage than Tifton No. 328.

"We had considerable infestation of both crowfoot and common crabgrass on this tee and we sprayed with the No. 419 grass along with the rest of the tee with disodium methyl arsonate combined with 2,4-D as the first application and DSMA without the 2,4-D in one or two subsequent

applications. The No. 419 did not show any more damage from spraying than either the common or Tifton 57 Bermuda. As you know, Tifgreen is particularly sensitive to 2,4-D as compared with some of the other Bermudas and I should think this would be another advantage for your No. 419 grass."

A foundation nursery of Tifway was established at the Georgia Coastal Plain Experiment Station during the summer of 1959 and will be available to supply certified growers in the spring of 1960.

## Illinois Turfgrass Field Day

The Illinois Turfgrass Foundation is progressing rapidly with plans for furthering turfgrass research in Illinois. The Foundation's purpose is to support turfgrass research and educational programs at the University of Illinois. The work will be conducted at the campus in Urbana and at the Drug and Horticultural Experiment Station in Downers Grove.

There are definite plans for a field day on July 27. This meeting will be at the Morton Arboretum, Lisle, Illinois. Plots showing grass varieties, weed control studies, and the effects of management practices will be visited.

The Illinois Turfgrass Foundation is being developed under the capable leadership of Ben Warren, President; Bertram Rost, Vice-President; Paul Burdett, Treasurer; and Harleigh Kemmerer, Secretary.