



Better Turf for Better Golf

TURF MANAGEMENT

from the USGA Green Section

TIFGREEN—AN IMPROVED TURF BERMUDA GRASS

By B. P. ROBINSON AND J. M. LATHAM, JR.

Southeastern Director, USGA Green Section, and Assistant Turf Specialist, Tifton, Ga., respectively.

A MAJOR project in the turf program at Tifton, Ga., since its establishment in 1946, has been the breeding and selection of Bermudagrasses for putting green purposes. Improvement was first accomplished by selecting and testing common Bermudagrass types (*Cynodon dactylon*), resulting in the release of Tiflawn in 1950. The next step was to obtain finer textured Bermudas which possessed desirable characteristics for putting greens. Hybridization of *Cynodon dactylon* types with South African Bermuda (*Cynodon transvaalensis*) produced 89 hybrid plants from which Tifgreen was selected and released in 1953. Since no selection has all the characteristics desired by the golfer and turfgrass producer, the program has continued in order to discover even better Bermudagrasses.

The Origin of Tifgreen

During 1946, W. G. Thomas, Chairman of the Green Committee, and Walter Harkey, Superintendent of the Charlotte (N. C.) Country Club, observed a fine-textured Bermudagrass growing in their no. 4 green. The Bermuda was planted in the turf plots at Tifton for further observation. Eight selections of common Bermudagrass (*C. dactylon*), including the

Charlotte Country Club strain, were hybridized with the South African Bermudagrass (*C. transvaalensis*) in the spring of 1951.

Evaluating Tifgreen

"Tifgreen" (selection carrying Tifton 328 number) is one of the hybrid plants resulting from the cross between Charlotte Country Club selection and the South African Bermudagrass. It has a medium, or forest green color, fine texture, and low spreading type of growth. Tifgreen's fine texture and type of growth make it especially adaptable for putting greens and other turfgrass purposes.

Four hundred and thirty-two seedlings resulting from the crosses and their parents were planted in a screening nursery in April, 1952. Ratings (Table I) on height of growth, rate of speed, disease incidence and turf quality were taken before making selections and transplanting into the putting green plots. Twenty-eight seedlings were selected for further evaluation. "Tifgreen" possessed desirable characteristics and received good ratings in the seedling screening nursery.

The twenty-eight new hybrids, their parents and several other promising selec-

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TABLE I

Comparative Ratings of Tifgreen and its Parents Growing in a Screening Nursery at Tifton, Ga., 1952

<i>Bermuda Selection</i>	<i>Growth in Inches</i>		<i>Disease Rating*</i>	<i>Turf Quality Rating</i>
	<i>Height</i>	<i>Spread</i>		
Tifgreen	2.0	33	2	1
Charlotte Selection	1.5	20	3	2
<i>C. transvaalensis</i>	2.0	18	3	2

Ratings of 1 were for no disease and good quality and 5 for heavily diseased and poor quality.

TABLE II

Comparative Ratings of Several Bermudagrass Selections Growing in an Experimental Putting Green, Tifton, Georgia, 1953-1955

<i>Bermudagrass Selection</i>	1953 Ratings* On:			1954 Ratings On:	1955 Ratings On:			
	<i>Coverage Rate</i>	<i>Height of Turf (in.)</i>	<i>Fineness of Leaves</i>		<i>Turf Quality</i>	<i>Recovery from Ryegrass Overseeding</i>	<i>Turf Quality</i>	<i>Lateral Spread in inches</i>
Tifgreen	1.5	1.8	2.0	1.6	1.5	1.9	11.5	1.7
Tiffine	3.5	2.5	4.5	4.5	2.5	3.9	9.0	3.8
Charlotte C C	---	---	---	4.5	3.5	4.4	5.5	4.1
<i>C. transvaalensis</i>	2.0	4.0	1.0	5.8	4.0	7.1	-1.0	4.0
Gene Tift	1.0	3.5	4.5	4.4	2.0	5.0	-1.5	3.4
Everglades No. 1	1.5	3.5	6.0	3.0	---	6.8	4.5	4.3
<i>C. magennisii</i>	5.0	1.8	4.0	4.0	4.0	7.9	3.0	4.9
Common (seeded)	2.0	8.0	10.0	8.8	5.0	8.8	-7.5	6.9
.05 LSD	1.6	1.1	1.6	1.1	1.2	1.2	NS	
.01 LSD	2.2	1.5	2.2	1.5	1.7	1.7	NS	

Rating of 1 was used for best and 5 or 10 poorest.

TABLE III

Ratings by Golf Professionals and Golf Course Superintendents on the Putting Quality of Several Bermudagrass Selections During the Eighth Annual Southeastern Turfgrass Conference, Tifton, Ga., 1954

<i>Selection</i>	Number of Individuals Rating Selections As					<i>TOTAL</i>
	<i>Best</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>Fifth</i>	
Tifgreen	6	9	5	1	3	24
Tiflawn x <i>C. transvaalensis</i>	2	---	---	4	9	15
Tifton 55 x <i>C. transvaalensis</i>	---	---	---	1	1	2
Gene Tift	36	20	13	8	1	78

TABLE IV

Results of Survey Among Golf Course Superintendents Comparing Tifgreen with Several Other Bermudagrass Selections, December, 1955

<i>Comparison</i>	Percent Reporting Tifgreen As		
	<i>Better</i>	<i>Equal</i>	<i>Poorer</i>
Turf Quality	75	25	0
Fineness	81	19	0
Putting Quality	80	20	0
Rate of Spread	63	31	9
Disease Resistance			
Color	40	60	0
Frost Resistance	26	47	26
Winter Green Establishment	57	14	29
Winter Green Quality	83	17	0
Weed Invasion Resistance	50	50	0

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tions from Florida, Texas, South Africa and the past breeding program were established in the putting green plots in April, 1953. Many ratings (Table II) on rate of coverage, height of growth, fineness of leaves, recovery in spring after overseeding with ryegrass in the fall, lateral spread (aggressiveness), disease incidence, seedhead production, color, general appearance, etc., were made during 1953, 1954, and 1955. Tifgreen received the best average rating of all Bermuda selections. It was outstanding in all the comparisons given in Table II. The recumbent growth of Tifgreen makes it especially adaptable for putting green management.

Tifgreen (Charlotte Country Club selection x *C. transvaalensis*) was appraised (Table III) by golf professionals and superintendents during the 1954 Southeastern Turfgrass Conference. Since the grasses were not identified at the time of the comparison, the ratings are unbiased. Tifgreen received more votes for the best putting Bermudagrass than any other selection. Similar results were obtained in 1955.

Results of a survey (Table IV) among golf course superintendents who have had Tifgreen under observation from 3 to 36 months indicate that its performance was superior to other Bermudagrasses. Out of 10 comparisons, Tifgreen was rated best for 6 and better or equal for 4. Sixteen superintendents reported, representing nine states. Ten golf courses have planted Tifgreen in their putting greens. Ninety per cent of the golf courses desire to plant more greens to Tifgreen. Eighty-nine per cent reported that Tifgreen produced less seedheads than other Bermudagrass selections and sixty-six per cent reported less mat formation. Superintendents reported that Tifgreen was compared with such well known Bermudagrass selections as Gene Tift, Tiffine, Tiflawn, U-3 Bermuda, common seeded Bermuda, Everglades 1 & 2, Ormond and *Cynodon magennisii*.

Summary

Tifgreen is a hybrid between *Cynodon transvaalensis* and a selection from the Charlotte Country Club. It has a forest

GOLF COURSE DEVELOPMENT

One hundred twenty-seven new golf courses and additions to existing courses were opened for play during the last year to set a new high in post-war golf course development, according to the annual report of the National Golf Foundation. Vice-president Rex McMorris said the newly opened facilities added 1,337 holes of golf to those already in play.

McMorris said the 108 new golf courses and 19 additions were opened in 36 of the 48 states, California leading with 21, Texas second with 12, Pennsylvania third with 9, followed by Florida with 6, and New York and the state of Washington with 5 each.

Of the 127 new courses and additions, 37 percent are private clubs, 30 percent are semi-private operations, 22 percent are municipal and the remaining 11 percent includes 8 military, 3 industrial and 2 college golf courses.

green color, fine texture, and a recumbent growth habit. This hybrid ranked first in three years of experimental testing in the Tifton turf plots. Observations by golfers and growers have reflected this superiority over other Bermudagrass selections for putting quality. These observations, made throughout the South, indicate the general acceptance of Tifgreen by the men who must produce high quality turfgrass.

Planting Stock

Foundation planting stock of Tifgreen Bermudagrass was released to certified growers from March 15 to April 11 by the University of Georgia Coastal Plain Experiment Station, Tifton, Ga. Those who wish to qualify for certification should contact Mr. Hugh A. Inglis, Georgia Crop Improvement Association, Inc., 208 Hoke Smith Annex, Athens, Georgia. Commercial supplies of certified Tifgreen should be available by late spring.

A Blade of Grass

A common thing is a grass blade small,
Crushed by the feet that pass,
But all the dwarfs and giants tall,
Working till doomsday shadows fall,
Can't make a blade of grass.

Julian Stearns Cutter