



The University of Georgia

Department of
Agronomy

College of Agriculture
GEORGIA AGRICULTURAL EXPERIMENT STATIONS

Coastal Plain Station
Tifton, Georgia 31793
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September 21, 1989

Mr. William H. Bengueyfield
U.S.G.A. Green Section
Box 3375
Tustin, CA 92681

Dear Bill:

Please accept our sincere thanks for your decision to support our turfgrass breeding work in 1990 at \$8000. Be sure to thank the USGA Executive Committee for the continued support and especially for the \$3000 increase.

As usual, my report will be in the form of an extended letter. The requested executive summary is attached.

The most significant accomplishment of our turf research program in 1989 was the discovery of a unique bermudagrass at the SCS Plant Materials Center, Quicksand, Kentucky when I spoke there at a Warm-Season Grass Symposium in the Kentucky mountains, March 7, 1989. The grass was dormant at that time but the enthusiasm of the people over its performance for them caused me to obtain sprigs and establish test plots this summer. They reported that it was very winter hardy, had been around for many years and had been referred to as Quicksand common. Its origin was not known. The rhizomes they sent me were labeled 9034348 bermudagrass. They told me they were planning to release it as a lawn grass.

We found this bermuda that I will call "Quicksand" (they will probably give it another name) to be very fine-stemmed, highly disease resistant, very vigorous and a rapid spreader. It is fertile and could be a better parent for making winter hardy triploid hybrids than the Berlin bermuda that we have used thus far.

Our Cynodon transvaalensis introductions were through heading before our "Quicksand" bermuda produced heads so no crosses could be made this year. I expect to make a lot of Quicksand x transvaalensis hybrids in 1990.

You will recall that the most significant accomplishment of our turf research program at Tifton, Georgia in 1988 was the official release of Tifton 10 turf bermudagrass. This is an increase of vegetative material that I collected in a lawn in Shanghai, China in 1974. It sheds pollen but sets few seeds and must, therefore, be propagated vegetatively. It is a hexaploid with $2n = 54$ chromosomes. Common bermudagrass has 36 chromosomes and the Tif turf bermudas have 27. Tifton 10 has a unique bluish-green color that sets it apart from other turf bermudagrasses. It has been evaluated at nine locations in Georgia, Florida, Texas, and New Jersey.

Tifton 10 rapidly establishes from stolons and above ground stems. Under low-cost management (2.5 lbs. N/1000 sq. ft./yr., irrigated only in dry periods and mowed at 1 1/2 inch once a week), it has maintained turf quality similar (but coarser textured) to Tifway and Tifway 2 at all locations except Ft. Lauderdale, Florida where severe mole cricket damage destroyed stands during establishment. Tifton 10 was not seriously affected by mole cricket infestations at Gainesville, Florida and showed the least damage of 26 bermudagrass entries at Savannah, Georgia. Tifton 10 has received higher turf quality ratings than Midiron at locations where the two cultivars were compared. Tifton 10 received top winter survival ratings in New Brunswick, New Jersey and has survived at the Mountain Station at Blairsville, Georgia when the winter temperature in 1983-84 dropped to -20°F.


Tifton 10 should be suited for roughs, roadsides, low traffic athletic fields, commercial landscaping areas, and lawns. Its unusual dark bluish-green color will be useful for contrast plantings in various recreational areas. Because of its stoloniferous habit, care will need to be taken to keep it out of flower beds and other non-grassed areas. Traffic tolerance tests have not been conducted on Tifton 10 but its rapid recovery indicates it may have a use in low traffic athletic areas.

Reports that we have received indicate that Tifton 10 is being increased in turfgrass nurseries and will be available in quantity soon. I think it will find a place in the turf industry in the South.

Increasing the winterhardiness of the Tifton turf bermudagrasses continues to be our major objective. Toward that end, we have a number of mutants and hybrids established on golf courses in the mountains in Blairsville, GA. and Highlands, NC. We hope that the 1989-90 winter will be cold enough to kill most of them. I hope the plant physiologists working with turf will be able to develop an effective screen for winter survival that can be used to get this important information. It takes too long to wait for the right kind of winter in the South.

In my last report, I expressed the hope that the trend to cut golf greens at 1/8 inch could be reversed. We have some good looking mutants from Midiron and Tifton 419 that could make very satisfactory greens if they could be mowed at 3/16 to 1/4 inch. Only true dwarfs like Tifdwarf can take the very close mowing the pros are demanding and they would look a lot better and satisfy most golfers if the cutting height could be raised.

Sincerely,


Glenn W. Burton
Research Geneticist

TIFTON USGA TURFGRASS RESEARCH

Executive Summary

Glenn W. Burton
Coastal Plain Experiment Station, Tifton, Georgia

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