



SOUTH FEATURES

Best of the Both Worlds

by Don Dale

New bermudagrass performs well in the sun and the shade

Wayne Hanna has done it again. He's come out with a new bermudagrass, and this one goes where other bermudagrasses don't go—in the shade.

PHOTOS COURTESY
THE UNIVERSITY OF GEORGIA.



Wayne Hanna is the mastermind behind TifGrand™ bermudagrass, which performs well in shade and should be widely available in 2010.

Dubbed TifGrand™, the new bermudagrass from the University of Georgia Research Foundation, Inc. is a high-quality hybrid from a different line of crosses than the university's earlier releases, such as TifSport and TifEagle. This one has a number of good qualities, but the trait that is giving it rave reviews even before it has found commercial square footage is its adaptability to shade.

As a matter of fact, trials from Arizona to the Carolinas, as well as Hanna's observations from various plantings, show that TifGrand™ will perform well under partial shade all day or heavy shade for much of the day, as well as in full sun. Hanna touts it as a grass that could be a boon to turfgrass managers on golf courses with a lot of trees and in sports stadiums with retractable roofs, though some of that hasn't been proven

as yet. However, its biggest use could be much more plebeian.

"I think one of the biggest markets for this grass will be home lawns," says Hanna, University of Georgia professor and plant breeder at the Tifton campus. That's because one of the drawbacks to the use of bermudagrass in residential and commercial situations is that there are often trees or buildings blocking the sun for much of the day. The same applies to parks and recreation uses, where lawns often extend right up to the tree lines, and then die a slow death in the shade.

It's another coup for Hanna, the one-time ag education major from a small town in Texas who surprised himself by going on to get a Ph.D. in plant breeding and working at Texas A&M and the University of Florida before coming to Georgia in 1971. He succeeded longtime Tifton plant breeder Glenn W. Burton, who originated the Tifway hybrid.

"He and I have about 100 man-years [at Georgia] between the two of us," Hanna says. Even as early as the 1960s, it was thought that the hybrid bermudagrasses had gone about as far as they could and the effort languished for a while, but in 1993, Hanna put out over 27,700 new hybrids with completely new parentage from the previous year's crossings of 24 parent combinations. The idea was to look at any promising characteristics that appeared. Even at that time, 30 of the new hybrids were set aside because their dense growth and good color set them apart from the other experimental hybrids.

Experimental variety ST-5 was one of those 30 promising crosses, and it turned out to be TifGrand. A cross between *Cynodon transvaalensis* and *Cynodon dactylon*, TifGrand™ is a triploid sterile hybrid, which requires vegetative propagation. It's pretty tough, being from one parent that is delicate and fine-bladed, and one parent that is rougher, but more adaptable. "You get the best of both worlds," he says.

TifGrand™ has proven to be finer textured than TifSport and Tifway at a lower than 1-inch mowing height, with dense growth and a dark green color. After being tested for 16 years in various settings, the dwarf-type hybrid has shown good quality throughout the southern tier of states. It has also performed well in the transition zone and as far north as Illinois and Kansas. It has not been tested for drought tolerance, but it does have mole cricket 'non-preference.' That means, Hanna says, that the persistent southern pest will eat it, but will eat other grasses around it first.



One of the biggest uses of TifGrand™ may prove to be for tree-lined home lawns, such as this home in Georgia.

"We have had it all the way up to 1.5 inches and 2 inches, and down to 3/16 inch in mowing height," Hanna says, and it is currently being evaluated at a 5/16-inch height. In short, it "produces a beautiful turf" at heights that would be beneficial to both golf course superintendents and homeowners.

The shade tolerance of TifGrand™ is high. The University of Georgia says that TifGrand performs well in up to 60 percent shade, but Hanna notes that this is a conservative evaluation. Conditions vary widely, but it will produce a thin lawn in up to 90 percent shade.

TifGrand™ is a fine-bladed hybrid that could be slated for use as far north as Illinois.

Because of its naturally dense growth, TifGrand does not require heavy doses of nitrogen. A multiyear test in Roswell, Ga., has shown that nitrogen applications of 2 to 3 pounds per 1,000 square feet annually produce excellent turfgrass at a mowing height of 1.5 inches. In fact, under those conditions, Hanna would recommend removing clippings from the lawn. The cultivar is so dense and vigorous that there could be heavy thatch buildup, and core aeration would be a good management practice with high applications of nitrogen.

One of the attractive features of the Tifton hybrid bermudagrasses is that by the time they have been released they will have been thoroughly tested and evaluated. "We're cautious here at Tifton," says Hanna. It took 16 years to get TifGrand™ to its release date, and Hanna is confident that turfgrass managers and landscapers will find it to be a solid performer. It has been licensed by the University of Georgia Foundation, which owns the intellectual rights, to New Concept Turf, and The Turfgrass Group will be overseeing sod production. Hanna says there has been tremendous advance demand from sod growers across the country who want to produce TifGrand™, which can be planted from sod, sprig or plug.

"In shaded areas we're recommending that they sod it," Hanna says. Growers are pushing a lot of acreage this summer, and TifGrand™ sod should be widely available from coast to coast in 2010.

This isn't the end of the line for the Tifton facility, though. Of those 27,700 experimental varieties, there are still a dozen that show promise in different areas that will be undergoing further evaluation. One, for example, called DT-1, is showing some drought tolerance beyond other hybrids. It stays green 14 days longer than Tifway when denied water and has high quality as well, and this cultivar could be released within five years if tests prove it out.

Hanna notes that as of January, he has passed on his mantle of plant breeder to the new guy at Tifton, Brian Schwartz, and Molecular Geneticist Karen Harris has also been hired. He says the new team will be looking for new lines of turfgrass that show promise in other areas, with water conservation being high on that list.

"The program is really going great," says Hanna, who left his USDA-Agricultural Research Service job in 2003 and currently works part time for the university. He is going on to look at breeding other types of plants, such as seedless tangerines and pomegranates.

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