

Title: Partnership between UGA and GGEF to Develop Environmentally Sustainable, High Quality Turfgrasses through On-Site Golf Course Research Trials

Project Leader(s): Brian Schwartz

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Objectives:

1. Evaluation of advanced experimental turfgrasses for putting greens under realistic management intensity and performance expectations.
2. Initiation of a GGEF sponsored graduate student worker position in the UGA Turfgrass Breeding Program at Tifton, GA.

Start Date: 2016

Project Duration: 5 years (2016 – 2020)

Total Funding: \$47,500 to date

During 2012 we began testing new hybrid bermudagrasses and zoysiagrasses as a way for me to develop relationships with golf course superintendents who had collaborated with the Tifton program in the past. Since then, we have had research trials at the Atlanta Athletic Club, Atlanta Country Club, Big Canoe Golf Course, Country Club of Columbus, East Lake Golf Club, Ford Plantation, Landings Club, Sea Island Golf Club, Streamsong Golf Resort, TPC Sawgrass, University of Georgia Golf Course, and Valdosta Country Club. In addition to the 7 ongoing putting green trials planted during 2018 or before, we established new tests at East Lake Golf Club, Meadows Country Club, and Olde Florida Golf Club during 2019.

Summary Points:

1) Country Club of Columbus

August Rocco took over management of the renovated, old research green that was planted on July 15th, 2015 after William Smith’s retirement this year. All three bermudagrasses (TifEagle, 12-TG-101, and 12-TG-143) established very quickly. A picture of the green during July of 2015 is below, as well as a summary of the 15 stimp measurements taken to-date.

C.C. of Columbus (15 Stimp Measurements)			
(2015 – 2020)		Fastest	Overall Avg.
Bermuda	12-TG-101	12.1’	9.9’
	TifEagle	12.0’	9.7’
	12-TG-143	11.7’	9.3’
	TifEagle Green	12.0’	10.0’



2) Landings Club

Chris Steigelman renovated a portion of the old practice green prior to planting on July 21st, 2015. All bermudagrasses (12-TG-39, 12-TG-101, and 12-TG-143) established very quickly. A picture of the green during the fall of 2019 is below, as well as a summary of the 10 stimp measurements taken to-date.

The Landings Club (10 Stimp Measurements)			
(2015 – 2020)		Fastest	Overall Avg.
Bermuda	TifEagle	11.4'	9.7'
	12-TG-39	11.4'	9.6'
	12-TG-101	12.2'	9.5'
	12-TG-143	10.5'	9.3'
	TifGrand	12.5'	8.6'
Paspalum	SeaStar	11.5'	8.7'



3) Valdosta Country Club

Barry Bennett renovated the old practice green prior to planting on May 25th, 2016. Tom Howard has been managing the green for the last three years. All five bermudagrasses (Tifdwarf, TifEagle, 12-TG-39, 12-TG-101, and 12-TG-143) established fairly quickly. A picture of the green during July 2020 is below, as well as a summary of the 14 stimp measurements taken to-date.

Valdosta C.C. (14 Stimp Measurements)			
(2016 – 2020)		Fastest	Overall Avg.
Bermuda	12-TG-39	10.7'	9.2'
	12-TG-101	10.4'	9.1'
	12-TG-143	10.8'	9.1'
	TifEagle	11.5'	9.0'
	Tifdwarf	10.4'	8.5'



4) Atlanta Country Club

Mark Esoda constructed a new research green adjacent to his bentgrass research green prior to planting on June 16th, 2016. Scott Lambert has been managing the green for the last three years. All bermudagrasses (TifEagle, 12-TG-101, and 12-TG-143) established quickly, but six large trees surrounding the green were removed September 6th, 2016 because the green was only getting 2 hours of sunlight. A picture of the green during July of 2020 is below, as well as a summary of the 13 stimp measurements taken to-date.

Atlanta Country Club (13 Stimp Measurements)

(2016 – 2020)		Fastest	Overall Avg.
Bermuda	12-TG-101	11.4'	8.4'
	12-TG-143	10.9'	8.0'
	TifEagle	10.4'	7.8'
Bent	A-1	10.5'	9.5'



5) Big Canoe Golf Course

Lydell Mack converted a bentgrass nursery green to a research plot during 2017. This test site is divided in two equal areas, one treated as a “no-till” soil profile and the other “cored-out” and refilled with a new green’s mix. Two bermudagrasses (TifEagle and 12-TG-101) and two zoysiagrasses (Diamond and Primo) were planted in long strip-plots that span across both soil profiles on May 25th, 2017. Pictures of the green during 2020 are below, as well as a summary of the 7 stimp measurements taken to-date. The most important information to be gleaned from this trial will be the long-term survival potential of each genotype over several winters when covered, and where left unprotected during the winters.

Big Canoe Golf Course (7 Stimp Measurements)

(2017 – 2020)		Fastest	Overall Avg.
New Rootzone	12-TG-101	11.3'	9.9'
	TifEagle	11.0'	9.4'
	Primo	10.6'	9.4'
	Diamond	9.5'	8.4'
No-Till	12-TG-101	10.4'	9.3'
	TifEagle	10.7'	8.7'
	Primo	9.7'	7.7'
	Diamond	8.9'	7.6'



6) TPC Sawgrass

Jeff Plotts constructed a large research site during the summer of 2017. Our experimental bermudagrass (12-TG-101) is being compared to four bermudagrass (TifEagle, Sunday, Imperial, and G12) and three zoysiagrass (Primo, Prizm, and Lazer) cultivars. A picture of the plots during February 2020 is below, as well as a summary of the 3 stimp measurements taken to-date.

TPC Sawgrass (3 Stimp Measurements)			
(2017 – 2020)		Fastest	Overall Avg.
Bermuda	G12	10.3'	9.4'
	Imperial	10.8'	9.4'
	12-TG-101	9.7'	9.0'
	TifEagle	9.2'	8.8'
	Sunday	9.9'	8.7'
Zoysia	Primo	10.1'	8.7'
	Prizm	9.2'	8.5'
	Lazer	8.5'	8.0'



7) Streamsong Golf Resort

Rusty Mercer constructed a new research site during 2018 to compare MiniVerde, TifEagle, Mach 1, and the UGA experimental variety 12-TG-101. The goals of this research site are to test adaptation to long-season growing environments and very intense topdressing and growth regulator management. A picture of Mach 1 during January of 2020 is below, as well as a summary of the 2 stimp measurements taken to-date.

Streamsong (2 Stimp Measurement)			
(2018 – 2020)		Fastest	Overall Avg.
Bermuda	Mach 1	10.1'	10.3'
	12-TG-101	10.1'	10.2'
	MiniVerde	9.0'	9.6'
	TifEagle	10.2'	*8.8'
	MiniVerde Green	12.1'	11.9'



8) East Lake Golf Club

Ralph Kepple constructed a new research site to compare MiniVerde, TifEagle, Mach 1, and the UGA experimental variety 12-TG-101. Sprigs were planted during May of 2019 and established very quickly. A goal of this research site was to test grow-in time with Lexicon Intrinsic fungicide applications. Eight stimp measurements and a picture of the green in November of 2020 are below.

East Lake Golf Club (8 Stimp Measurements)			
(2019 – 2020)		Fastest	Overall Avg.
Bermuda	12-TG-101	12.0'	10.5'
	MiniVerde	11.5'	10.1'
	TifEagle	12.0'	10.0'
	Mach 1	11.4'	9.9'



9) Meadows Country Club

Pat Franklin constructed a new research site during 2019 to compare TifEagle and the UGA experimental variety 12-TG-101. Sprigs were planted during August of 2019 and established very quickly. The goals of this research site are to test adaptation to warm, long-season environments and a grow-in protocol that included Lexicon Intrinsic fungicide. Two stimp measurements and a picture of the green in January of 2020 are below.

Meadows C.C. (2 Stimp Measurements)			
(2019 – 2020)		Fastest	Overall Avg.
Bermuda	TifEagle	8.3'	8.2'
	12-TG-101	8.1'	8.1'



Olde Florida Golf Club

Darren Davis renovated his research site during 2019 to compare TifEagle, Mach 1, and the UGA experimental variety 12-TG-101. He will also test TifGrand and the UGA experimental variety 11-T-56. Sprigs were planted during September of 2019 and established very quickly. The goals of this research site are to test adaptation to the long-season growing environments, winter-time play and recovery, and very intense topdressing and growth regulator management. A picture of the plots during January 2020 is below, as well as a summary of the 2 stimp measurements taken to-date.

Olde Florida (2 Stimp Measurements)			
(2019 – 2020)		Fastest	Overall Avg.
Bermuda	Mach1	10.7'	9.6'
	TifEagle	10.3'	9.2'
	12-TG-101	10.2'	9.1'
	11-T-56	9.6'	9.0'



10) GGEF Sponsored Students

Mr. Jonathon Fox successfully defended his M.S. thesis “Methods for Analyzing Shade Tolerance in Warm Season Turfgrasses” in December of 2018 and was hired in a full time position with the UGA Tifton turfgrass breeding program during the fall of 2019 to concentrate on developing grasses for golf course use. Mr. Matthew Mathis is currently pursuing a B.S. in Environmental Horticulture on the Turfgrass & Golf Course Management track. Matthew has taken ownership of several on-campus putting green trials and has been instrumental in propagating plant materials for the GGEF sponsored research trials, as well as for those planted at the UGA Tifton Campus and at Pike Creek Turf.

