

## **2019 – Tifton – Partnership between UGA and GGEF to Develop Environmentally Sustainable, High Quality Turfgrasses through On-Site Golf Course Research Trials**

### **History**

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.

### **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 this fall 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.





### Country Club of Columbus

William Smith renovated the old research green prior to planting on July 15<sup>th</sup>, 2015. All three bermudagrasses (TifEagle, 12-TG-101, and 12-TG-143) established very quickly. A picture of the green during August 2019 is below, as well as a summary of the 14 stimp measurements taken to-date.

| C.C. of Columbus (14 Stimp Measurements) |                       |              |              |
|--|-----------------------|--------------|--------------|
| (2015 – 2019)                            |                       | Fastest      | Overall Avg. |
| Bermuda                                  | 12-TG-101             | <b>12.1'</b> | <b>9.9'</b>  |
|  | TifEagle              | <b>12.0'</b> | <b>9.7'</b>  |
|  | 12-TG-143             | <b>11.7'</b> | <b>9.3'</b>  |
|  | <b>TifEagle Green</b> | <b>12.0'</b> | <b>10.0'</b> |



### Landings Club

Chris Steigelman renovated a portion of the old practice green prior to planting on July 21<sup>st</sup>, 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 – 2019)                             |           | Fastest      | Overall Avg. |
| Bermuda                                   | TifEagle  | <b>11.4'</b> | <b>9.7'</b>  |
|   | 12-TG-39  | <b>11.4'</b> | <b>9.6'</b>  |
|   | 12-TG-101 | <b>12.2'</b> | <b>9.5'</b>  |
|   | 12-TG-143 | <b>10.5'</b> | <b>9.3'</b>  |
|   | TifGrand  | <b>12.5'</b> | <b>8.6'</b>  |
| Paspalum                                  | SeaStar   | <b>11.5'</b> | <b>8.7'</b>  |



### Valdosta Country Club

Barry Bennett renovated the old practice green prior to planting on May 25<sup>th</sup>, 2016. Tom Howard and Randall Bice have been managing the green for the last two 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 September of 2019 is below, as well as a summary of the 12 stimp measurements taken to-date.

| Valdosta C.C. (12 Stimp Measurements) |           |              |              |
|---------------------------------------|-----------|--------------|--------------|
| (2016 – 2019)                         |           | Fastest      | Overall Avg. |
| Bermuda                               | 12-TG-39  | <b>10.7'</b> | <b>9.3'</b>  |
|                                       | 12-TG-101 | <b>10.4'</b> | <b>9.2'</b>  |
|                                       | 12-TG-143 | <b>10.8'</b> | <b>9.1'</b>  |
|                                       | TifEagle  | <b>11.5'</b> | <b>9.0'</b>  |
|                                       | Tifdwarf  | <b>10.4'</b> | <b>8.6'</b>  |



### Atlanta Country Club

Mark Esoda constructed a new research green adjacent to his bentgrass research green prior to planting on June 16<sup>th</sup>, 2016. Scott Lambert has been managing the green for the last year. All bermudagrasses (TifEagle, 12-TG-101, and 12-TG-143) established quickly, but six large trees surrounding the green were removed September 6<sup>th</sup>, 2016 because the green was only getting 2 hours of sunlight. A picture of the green during May of 2019 is below, as well as a summary of the 12 stimp measurements taken to-date.

#### Atlanta Country Club (12 Stimp Measurements)

| (2016 – 2019) |           | Fastest      | Overall Avg. |
|---------------|-----------|--------------|--------------|
| Bermuda       | 12-TG-101 | <b>11.4'</b> | <b>8.4'</b>  |
|               | 12-TG-143 | <b>10.9'</b> | <b>8.0'</b>  |
|               | TifEagle  | <b>10.4'</b> | <b>7.9'</b>  |
| Bent          | A-1       | <b>10.5'</b> | <b>9.5'</b>  |



### 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 25<sup>th</sup>, 2017. Pictures of the green during 2019 are below, as well as a summary of the 5 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 (5 Stimp Measurements)

| (2017 – 2019) |           | Fastest      | Overall Avg. |
|---------------|-----------|--------------|--------------|
| New Rootzone  | 12-TG-101 | <b>11.3'</b> | <b>9.1'</b>  |
|               | TifEagle  | <b>11.0'</b> | <b>8.8'</b>  |
|               | Primo     | <b>10.6'</b> | <b>8.8'</b>  |
|               | Diamond   | <b>9.5'</b>  | <b>8.2'</b>  |
| No-Till       | 12-TG-101 | <b>10.4'</b> | <b>8.7'</b>  |
|               | TifEagle  | <b>10.7'</b> | <b>8.7'</b>  |
|               | Primo     | <b>9.7'</b>  | <b>7.8'</b>  |
|               | Diamond   | <b>8.9'</b>  | <b>7.7'</b>  |





### 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 DALZ1308) cultivars. A picture of the plots during May 2019 is below, as well as a summary of the 2 stimp measurements taken to-date.

| TPC Sawgrass (2 Stimp Measurements) |           |             |              |  |
|-------------------------------------|-----------|-------------|--------------|--|
| (2017 – 2019)                       |           | Fastest     | Overall Avg. |  |
| Bermuda                             | G12       | <b>8.8'</b> | <b>8.8'</b>  |  |
|                                     | 12-TG-101 | <b>8.8'</b> | <b>8.6'</b>  |  |
|                                     | Imperial  | <b>9.5'</b> | <b>8.6'</b>  |  |
|                                     | TifEagle  | <b>8.7'</b> | <b>8.6'</b>  |  |
|                                     | Sunday    | <b>8.4'</b> | <b>8.0'</b>  |  |
| Zoysia                              | Prizm     | <b>8.6'</b> | <b>8.1'</b>  |  |
|                                     | Primo     | <b>8.2'</b> | <b>8.1'</b>  |  |
|                                     | DALZ1308  | <b>8.3'</b> | <b>7.8'</b>  |  |

### 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 12-TG-101 during June of 2019 is below, as well as the first stimp measurements taken.

| Streamsong (1 Stimp Measurement) |                        |              |              |  |
|----------------------------------|------------------------|--------------|--------------|--|
| (2018 – 2019)                    |                        | Fastest      | Overall Avg. |  |
| Bermuda                          | TifEagle               | <b>10.2'</b> | -            |  |
|                                  | Mach 1                 | <b>10.1'</b> | -            |  |
|                                  | 12-TG-101              | <b>10.1'</b> | -            |  |
|                                  | MiniVerde              | <b>9.0'</b>  | -            |  |
|                                  | <b>MiniVerde Green</b> | <b>12.1'</b> | -            |  |

### 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. Four stimp measurements and pictures of the green during planting, 21, and 31 days later are below.





| East Lake Golf Club (4 Stimp Measurements) |           |              |              |
|--|-----------|--------------|--------------|
| (2019 – 2019)                              |           | Fastest      | Overall Avg. |
| Bermuda                                    | MiniVerde | <b>11.5'</b> | <b>10.5'</b> |
|  | TifEagle  | <b>12.0'</b> | <b>10.3'</b> |
|  | 12-TG-101 | <b>12.0'</b> | <b>10.3'</b> |
|  | Mach 1    | <b>11.4'</b> | <b>10.2'</b> |



### **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 have been establishing 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. Pictures of the green during planting and five weeks later are below.



### **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 have been establishing 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. Pictures of the green during planting and four weeks later are below.

