

NATIONAL TURFGRASS EVALUATION PROGRAM

The National Turfgrass Evaluation Program (NTEP) is designed to develop and coordinate uniform evaluation trials of turfgrass varieties and promising selections in the United States and Canada. Test results can be used by national companies and plant breeders to determine the broad picture of the adaptation of a cultivar. Results can also be used to determine if a cultivar is well adapted to a local area or level of turf maintenance.

Briefly, the NTEP is a self-supporting, non-profit program, sponsored by the Beltsville Agricultural Research Center and the National Turfgrass Federation, Inc. Program policy is made by a policy committee consisting of one member from each of the four (4) Regional Turfgrass Research Committees in the United States, one member from the Lawn Seed Division of the American Seed Trade Association, one member from the United States Golf Association (USGA) Green Section, one member from the Golf Course Superintendents Assoc. of America (GCSAA), one member for the Turfgrass Producers International (TPI), one member from the Turfgrass Breeders Association and an executive director. The program does not make variety recommendations. However, the data from tests can be used by extension specialists and others for making recommendations.

The policy committee is responsible for determining program policy including, (1) requirements for submission of entries, (2) scheduling tests, (3) evaluation methods, (4) selecting standard or control test entries, (5) setting entry fees, (6) coordinating tests in their respective regions, (7) establishing guidelines for publication and data distribution and (8) scheduling committee meetings.

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CONTENTS

2007 National St. Augustinegrass Test - 2010 data

LOCATIONS SUBMITTING DATA FOR 2010.....1

NATIONAL ST. AUGUSTINEGRASS TEST, 2007

 Entries and Sponsors.....2

Table A - 2010 Locations, Site Descriptions and Management Practices in
the 2007 National St. Augustinegrass Test.....3

Table B - Locations and Data Collected in 2010.....3

Table 1 - Mean Turfgrass Quality Ratings of St. Augustinegrass
Cultivars Grown at Griffin, GA.....4

Table 2 - Mean Turfgrass Quality Ratings of St. Augustinegrass
Cultivars Grown at Miss. St., MS.....4

Table 3 - Mean Turfgrass Quality Ratings of St. Augustinegrass
Cultivars Grown at Raleigh, NC.....5

Table 4 - Genetic Color Ratings of St. Augustinegrass Cultivars.....5

Table 5 - Spring Greenup Ratings of St. Augustinegrass Cultivars.....6

Table 6 - Leaf Texture Ratings of St. Augustinegrass Cultivars.....6

Table 7 - Summer Density Ratings of St. Augustinegrass Cultivars.....7

Table 8 - Percent Living Ground Cover (Spring) Ratings of
St. Augustinegrass Cultivars.....7

Table 9 - Brown Patch (Warm Temperature) Ratings of
St. Augustinegrass Cultivars.....8

Table 10- Fall Color (September) Ratings of St. Augustinegrass Cultivars.....8

Table 11- Fall Color (October) Ratings of St. Augustinegrass Cultivars.....9

Table 12- Fall Color (November) Ratings of St. Augustinegrass Cultivars.....9

Table 13- Fall Color (December) Ratings of St. Augustinegrass Cultivars.....10

Table 14- Winter Kill Ratings of St. Augustinegrass Cultivars.....10

A Guide to NTEP Turfgrass Ratings

Introduction

The quality and scientific merit of NTEP data is extremely important. However, the evaluation of turfgrass species and cultivars is a difficult and complex issue. Furthermore, turfgrass evaluation is generally a subjective process based on visual estimates of factors, like genetic color, stand density, leaf texture, uniformity and quality. These factors can not be measured in the same way as other agricultural crops. Turfgrass quality is not a measure of yield or nutritive value. Turfgrass quality is a measure of aesthetics (i.e. density, uniformity, texture, smoothness, growth habit and color), and functional use. The most common way of assessing turfgrass quality is a visual rating system that is based on the turfgrass evaluator's judgement.

General Considerations

Most visual ratings collected on NTEP trials are based on a 1 to 9 rating scale. One is the poorest or lowest and 9 is the best or highest rating. However, a few characteristics, such as winter kill or percent living ground cover, are rated on a percentage basis, again by using the evaluator's judgement. Most disease ratings found in NTEP reports will use the 1-9 scale, 9=no disease except where the evaluator made a judgement of the percentage of disease in each plot. Percent disease data will be found in separate tables and will normally not be included with disease data using the 1-9 scale.

Turfgrass Quality

Turfgrass Quality is based on 9 being outstanding or ideal turf and 1 being poorest or dead. A rating of 6 or above is generally considered acceptable. A quality rating value of 9 is reserved for a perfect or ideal grass, but it also can reflect an absolutely outstanding treatment plot. The NTEP requires quality ratings on a monthly basis. Quality ratings take into account the aesthetic and functional aspects of the turf. Quality ratings are not based on color alone, but on a combination of color, density, uniformity, texture, and disease or environmental stress.

Turfgrass quality ratings are grouped and presented by region, management level, a particular stress (shade, traffic, etc.) and in some cases, by individual location (starting with 2001 data, data from each location will be posted separately as well on the NTEP web site, <http://www.ntep.org>). Also available now is a summary table (Appendix) in the back of this report. This summary table includes various statistical measures not previously compiled for NTEP reports. For an explanation of this table and these changes, please go to the NTEP web site at <http://www.ntep.org/pdf/grandmean.mem.pdf>.

Other Ratings

More detailed information on the ratings of specific characteristics can be found on the NTEP web site at <http://www.ntep.org/reports/ratings.htm>.

2007 NATIONAL ST. AUGUSTINEGRASS TEST

LOCATIONS SUBMITTING DATA FOR 2010

<u>State</u>	<u>Location</u>	<u>Code</u>
Georgia	Griffin	GA1
Mississippi	Mississippi State	MS1
North Carolina	Raleigh	NC1

2007 NATIONAL ST. AUGUSTINEGRASS TEST

Entries and Sponsors

Entry No.	Name	Sponsor
*1	Floratom	Standard entry
*2	Raleigh	Standard entry
*3	Mercedes	Standard entry
4	DALSA 0406	Texas A&M University
5	DALSA 0602	Texas A&M University
*6	NUF-76	Univ. of Florida/Florida Sod Growers Coop.

* COMMERCIALY AVAILABLE IN THE USA IN 2011.

TABLE A.

2010 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN
THE 2007 NATIONAL ST. AUGUSTINEGRASS TEST

LOCATION	SOIL TEXTURE	SOIL PH	SOIL PHOSPHOROUS (LBS/ACRE)	SOIL POTASSIUM (LBS/ACRE)	NITROGEN (LBS/1000 SQ FT)	SUN OR SHADE	MOWING HEIGHT (IN)	IRRIGATION PRACTICED
GA1	LOAMY SAND	5.6-6.0	61-150	151-240	-	FULL SUN	2.6-3.0	TO PREVENT STRESS
MS1	SANDY LOAM	6.6-7.0	151-270	241-375	2.1-3.0	FULL SUN	2.6-3.0	TO PREVENT STRESS
NC1	SILTY CLAY AND CLAY	6.1-6.5	61-150	0-150	2.1-3.0	FULL SUN	2.6-3.0	TO PREVENT STRESS

TABLE B.

LOCATIONS AND DATA COLLECTED IN 2010

LOCATION	APRIL QUALITY RATING	MAY QUALITY RATING	JUNE QUALITY RATING	JULY QUALITY RATING	AUGUST QUALITY RATING	SEPTEMBER QUALITY RATING	OCTOBER QUALITY RATING	NOVEMBER QUALITY RATING
GA1		X	X	X	X	X	X	
MS1	X	X	X	X	X	X	X	X
NC1		X	X	X	X	X	X	X

TABLE B. (CONT'D)

LOCATIONS AND DATA COLLECTED IN 2010

LOCATION	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SUMMER DENSITY	PERCENT COVER SPRING	BROWN PATCH WARM TEMP.	FALL COLOR SEPTEMBER	FALL COLOR OCTOBER	FALL COLOR NOVEMBER	FALL COLOR DECEMBER	WINTER KILL RATINGS
GA1	X	X		X		X	X	X	X		
MS1	X	X	X		X						
NC1	X	X	X	X				X	X	X	X

TABLE 1. MEAN TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
AT GRIFFIN, GA 1/
2010 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=BEST 2/

NAME	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
* MERCEDES	5.0	5.7	6.7	7.0	7.3	7.3	6.5
* CAPTIVA (NUF-76)	4.0	5.0	6.7	7.3	7.3	6.7	6.2
* RALEIGH	3.7	5.7	6.0	6.7	7.0	6.3	5.9
DALSA 0602	3.3	4.3	5.7	6.3	7.7	6.3	5.6
* FLORATAM	3.0	3.7	5.0	6.7	6.7	6.7	5.3
DALSA 0406	2.7	3.7	4.7	7.0	7.0	6.0	5.2
LSD VALUE	1.9	2.9	2.6	1.6	1.2	2.7	1.6
C.V. (%)	24.6	27.9	19.9	9.6	7.2	16.6	12.5

TABLE 2. MEAN TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
AT MISS. ST., MS 1/
2010 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=BEST 2/

NAME	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
MERCEDES	4.3	5.7	6.0	6.3	6.7	6.0	6.3	6.3	6.0
RALEIGH	4.3	6.0	6.0	6.0	6.7	6.7	6.0	5.7	5.9
DALSA 0406	3.7	5.0	5.7	6.0	7.0	6.7	6.3	6.0	5.8
CAPTIVA (NUF-76)	3.0	3.7	4.0	4.7	4.0	4.0	4.7	3.7	4.0
DALSA 0602	2.7	3.7	4.0	4.0	4.0	3.7	4.7	4.3	3.9
FLORATAM	2.0	2.3	2.3	2.3	2.3	2.3	2.7	2.0	2.3
LSD VALUE	0.6	0.8	1.4	1.8	2.0	2.0	1.9	2.3	1.4
C.V. (%)	11.0	10.7	16.6	20.3	21.3	22.3	20.1	25.7	16.7

* COMMERCIALY AVAILABLE IN THE USA IN 2011.

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 3. MEAN TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
AT RALEIGH, NC 1/
2010 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=BEST 2/

NAME	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
MERCEDES	6.7	6.7	7.7	6.7	5.7	6.3	6.0	6.5
DALSA 0602	4.7	5.3	5.7	7.3	6.3	6.7	6.0	6.0
CAPTIVA (NUF-76)	4.0	4.0	4.0	5.3	5.3	6.3	5.7	5.0
RALEIGH	5.0	5.7	7.0	5.3	4.3	4.7	3.3	5.0
FLORATAM	3.3	3.3	4.0	4.3	3.7	5.0	3.7	3.9
DALSA 0406	2.0	3.0	3.0	4.7	4.3	4.7	4.3	3.7
LSD VALUE	1.8	2.1	1.5	1.5	1.4	1.3	1.1	1.0
C.V. (%)	22.9	23.8	16.3	14.4	15.1	12.0	12.5	11.6

TABLE 4. GENETIC COLOR RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

GENETIC COLOR RATINGS 1-9; 9=DARK GREEN 2/

NAME	GA1	MS1	NC1	MEAN
CAPTIVA (NUF-76)	7.3	6.3	7.3	7.0
MERCEDES	6.7	6.0	6.3	6.3
DALSA 0406	5.3	6.0	7.3	6.2
RALEIGH	6.7	6.0	5.7	6.1
FLORATAM	5.7	5.0	6.7	5.8
DALSA 0602	5.7	5.0	5.0	5.2
LSD VALUE	1.6	0.4	1.4	0.7
C.V. (%)	16.1	4.1	13.8	12.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 5. SPRING GREENUP RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

SPRING GREENUP RATINGS 1-9; 9=COMPLETELY GREEN 2/

NAME	GA1	MS1	NC1	MEAN
MERCEDES	4.3	4.3	5.0	4.6
RALEIGH	3.0	4.7	4.0	3.9
CAPTIVA (NUF-76)	3.0	2.3	2.7	2.7
DALSA 0406	2.3	3.7	2.0	2.7
DALSA 0602	2.7	1.7	2.7	2.3
FLORATAM	2.3	1.0	2.3	1.9
LSD VALUE	1.2	0.8	1.3	0.7
C.V. (%)	25.3	17.9	26.2	23.6

TABLE 6. LEAF TEXTURE RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

LEAF TEXTURE RATINGS 1-9; 9=VERY FINE 2/

NAME	MS1	NC1	MEAN
CAPTIVA (NUF-76)	6.7	7.0	6.8
MERCEDES	6.7	7.0	6.8
RALEIGH	6.0	6.0	6.0
DALSA 0406	6.0	5.3	5.7
DALSA 0602	5.0	4.7	4.8
FLORATAM	4.3	3.0	3.7
LSD VALUE	0.7	0.8	0.5
C.V. (%)	7.1	9.6	8.4

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 7. SUMMER DENSITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

DENSITY RATINGS 1-9; 9=MAXIMUM DENSITY 2/

NAME	GA1	NC1	MEAN
MERCEDES	6.7	7.7	7.2
RALEIGH	5.7	7.0	6.3
DALSA 0602	5.0	6.7	5.8
CAPTIVA (NUF-76)	6.3	4.7	5.5
FLORATAM	4.3	4.7	4.5
DALSA 0406	4.0	3.7	3.8
LSD VALUE	3.0	1.4	1.6
C.V. (%)	34.5	15.4	26.1

TABLE 8. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	MS1
RALEIGH	76.7
MERCEDES	70.0
DALSA 0406	66.7
CAPTIVA (NUF-76)	28.3
DALSA 0602	26.7
FLORATAM	3.0
LSD VALUE	18.7
C.V. (%)	25.7

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 9. BROWN PATCH (WARM TEMPERATURE) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

BROWN PATCH RATINGS 1-9; 9=NO DISEASE 2/

NAME	GA1
DALSA 0602	4.3
RALEIGH	4.0
CAPTIVA (NUF-76)	3.3
MERCEDES	3.0
DALSA 0406	2.3
FLORATAM	2.0
LSD VALUE	3.1
C.V. (%)	60.5

TABLE 10. FALL COLOR (SEPTEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION 2/

NAME	GA1
CAPTIVA (NUF-76)	8.0
RALEIGH	7.7
DALSA 0602	7.3
FLORATAM	7.3
MERCEDES	7.3
DALSA 0406	7.0
LSD VALUE	0.8
C.V. (%)	6.3

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 11. FALL COLOR (OCTOBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION 2/

NAME	GA1	NC1	MEAN
DALSA 0602	7.0	8.7	7.8
FLORATAM	7.3	7.3	7.3
CAPTIVA (NUF-76)	7.7	6.3	7.0
DALSA 0406	6.3	6.7	6.5
MERCEDES	8.0	5.0	6.5
RALEIGH	7.0	4.3	5.7
LSD VALUE	0.7	2.1	1.1
C.V. (%)	5.7	20.9	14.5

TABLE 12. FALL COLOR (NOVEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION 2/

NAME	GA1	NC1	MEAN
DALSA 0602	4.3	6.7	5.5
MERCEDES	6.0	5.0	5.5
CAPTIVA (NUF-76)	4.7	5.3	5.0
DALSA 0406	4.0	4.0	4.0
FLORATAM	4.7	3.0	3.8
RALEIGH	4.0	3.0	3.5
LSD VALUE	1.6	1.1	1.0
C.V. (%)	21.7	14.8	18.7

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 13. FALL COLOR (DECEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION 2/

NAME	NC1
DALSA 0602	7.0
CAPTIVA (NUF-76)	6.0
MERCEDES	5.0
DALSA 0406	4.3
FLORATAM	4.0
RALEIGH	3.3
LSD VALUE	1.1
C.V. (%)	13.5

TABLE 14. WINTER KILL RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2010 DATA

WINTER KILL RATINGS 1-9; 9=NONE 2/

NAME	NC1
MERCEDES	7.3
RALEIGH	7.3
DALSA 0602	5.3
CAPTIVA (NUF-76)	4.3
FLORATAM	4.3
DALSA 0406	2.3
LSD VALUE	2.6
C.V. (%)	31.6

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.