

## **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.

Executive Director - Kevin N. Morris, National Turfgrass Evaluation Program, Inc.

### **CURRENT POLICY COMMITTEE MEMBERS:**

Dr. Steve Johnson, Peak Plant Genetics LLC  
Mr. Steve Tubbs, Turf Merchants, Inc.  
Dr. Jeff Nus, USGA Green Section  
Dr. Michael Richardson, University of Arkansas  
Dr. David Kopec, University of Arizona  
Mr. Warren Bell, Biograss Sod Farms  
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## 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 2007

<u>State</u>	<u>Location</u>	<u>Code</u>
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 2009.

TABLE A.

2007 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
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	3.1-4.0	FULL SUN	2.1-2.5	TO PREVENT STRESS

TABLE B.

## LOCATIONS AND DATA COLLECTED IN 2007

LOCATION	OCTOBER QUALITY RATING	NOVEMBER QUALITY RATING	GENETIC COLOR	LEAF TEXTURE	FALL COLOR NOVEMBER	FALL COLOR DECEMBER	PERCENT ESTABLISHMENT SEPTEMBER	OCTOBER	RATINGS NOVEMBER
MS1	X	X					X	X	X
NC1			X	X	X	X	X	X	X

TABLE 1. MEAN TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS  
AT MISS. ST., MS 1/  
2007 DATA

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

NAME	OCT	NOV	MEAN
DALSA 0406	5.7	6.0	5.8
* FLORATAM	6.0	5.7	5.8
DALSA 0602	5.3	6.0	5.7
* MERCEDES	5.0	6.0	5.5
NUF-76	5.0	5.7	5.3
* RALEIGH	5.0	5.7	5.3
LSD VALUE	0.6	0.7	0.6
C.V. (%)	5.9	5.4	4.9

TABLE 2. GENETIC COLOR RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
2007 DATA

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

NAME	NC1
DALSA 0406	7.0
FLORATAM	7.0
NUF-76	7.0
MERCEDES	5.7
RALEIGH	5.7
DALSA 0602	5.0
LSD VALUE	1.4
C.V. (%)	14.2

\* COMMERCIALY AVAILABLE IN THE USA IN 2009.

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. LEAF TEXTURE RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
2007 DATA

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

NAME	NC1
NUF-76	8.0
MERCEDES	7.3
RALEIGH	6.7
DALSA 0406	5.7
DALSA 0602	5.3
FLORATAM	5.3
LSD VALUE	0.8
C.V. (%)	8.2

TABLE 4. FALL COLOR (NOVEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
2007 DATA

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

NAME	NC1
DALSA 0602	8.0
DALSA 0406	7.7
FLORATAM	7.7
NUF-76	7.0
MERCEDES	6.0
RALEIGH	5.3
LSD VALUE	1.1
C.V. (%)	10.2

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. FALL COLOR (DECEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
2007 DATA

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

NAME	NC1
MERCEDES	5.3
DALSA 0602	4.7
NUF-76	4.7
RALEIGH	4.0
DALSA 0406	3.7
FLORATAM	2.0
LSD VALUE	1.7
C.V. (%)	25.3

TABLE 6. PERCENT ESTABLISHMENT RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
AT MISS. ST., MS 2/  
2007 DATA

NAME	SEPTEMBER	OCTOBER	NOVEMBER	MEAN
FLORATAM	61.7	93.3	98.0	84.3
DALSA 0406	50.0	85.0	93.3	76.1
RALEIGH	45.0	81.7	90.0	72.2
DALSA 0602	41.7	76.7	90.0	69.4
NUF-76	41.7	75.0	88.3	68.3
MERCEDES	40.0	75.0	88.3	67.8
LSD VALUE	16.4	12.3	9.7	11.4
C.V. (%)	17.2	7.7	4.9	7.8

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 7. PERCENT ESTABLISHMENT RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/  
 AT RALEIGH, NC 2/  
 2007 DATA

NAME	SEPTEMBER	OCTOBER	NOVEMBER	MEAN
FLORATAM	75.0	92.7	96.0	87.9
DALSA 0406	78.3	84.7	91.0	84.7
MERCEDES	63.3	73.3	84.7	73.8
RALEIGH	51.7	70.0	83.0	68.2
NUF-76	46.7	60.0	76.7	61.1
DALSA 0602	38.3	60.0	76.7	58.3
LSD VALUE	21.3	32.4	26.7	25.0
C.V. (%)	19.2	20.6	13.8	16.8

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.