

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.

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Mr. Ryan Jeffries, Columbia Seeds, Inc.
Dr. Cole Thompson, USGA Green Section
Dr. Charles Fontanier, Oklahoma State University
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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 cannot 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>.

2016 NATIONAL ST. AUGUSTINEGRASS TEST

LOCATIONS SUBMITTING DATA FOR 2019

<u>State</u>	<u>Location</u>	<u>Code</u>
Alabama	Auburn	AL1
Florida	Ft. Lauderdale	FL5
Florida	Ft. Lauderdale (Low Fertilizer)	FL6
Florida	Jay	FL3
Mississippi	Mississippi State	MS1
North Carolina	Raleigh	NC1
Texas	Dallas	TX1
Texas	College Station (Drought)	TX2

2016 St. Augustinegrass Test Entries and Sponsors

Entry No	Name	Sponsor
*1	Floritam	Standard
*2	Raleigh	Standard
*3	Palmetto	Standard
4	XSA10403	North Carolina University
5	XSA11168	North Carolina University
6	FSA 1601	University of Florida
*7	CitraBlue (FSA 1602)	University of Florida
8	FSA 1603	University of Florida
9	FSA 1604	University of Florida
10	FSA 1605	University of Florida
11	FSA 1606	University of Florida
12	FSA 1607	University of Florida
13	FSA 1608	University of Florida
14	FSA 1609	University of Florida
15	FSA 1610	University of Florida
16	FSA 1611	University of Florida
17	FSA 1612	University of Florida
18	FSA 1613	University of Florida
19	FSA 1614	University of Florida
20	UGA/TX SA26	The University of Georgia
21	DALSA 1623	Texas A&M AgriLife Research-Dallas
22	DALSA 1316	Texas A&M AgriLife Research-Dallas
23	DALSA 1323	Texas A&M AgriLife Research-Dallas
24	DALSA 1404	Texas A&M AgriLife Research-Dallas
25	DALSA 1501	Texas A&M AgriLife Research-Dallas
26	DALSA 1502	Texas A&M AgriLife Research-Dallas
27	DALSA 1618	Texas A&M AgriLife Research-Dallas

* Commercially Available in the USA in 2020 or in any other country

TABLE A.

2019 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN
THE 2016 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
AL1	-	-	-	-	-	-	-	-
FL3	SAND	5.6-6.0	151-270	0-150	2.1-3.0	FULL SUN	2.6-3.0	TO PREVENT STRESS
FL5	SAND	6.6-7.0	61-150	0-150	4.1-5.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
FL6	SAND	6.6-7.0	61-150	0-150	2.1-3.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
MS1	SANDY LOAM	6.6-7.0	151-270	241-375	3.1-4.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
NC1	SILTY CLAY LOAM	6.1-6.5	61-150	0-150	1.1-2.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
TX1	SILTY CLAY LOAM	7.6-8.5	151-270	241-375	3.1-4.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
TX2	-	7.6-8.5	0-60	0-150	0.0-1.0	FULL SUN	2.6-3.0	TO PREVENT DORMANCY

TABLE B.

LOCATIONS AND DATA COLLECTED IN 2019

LOCATION	JANUARY QUALITY RATING	FEBRUARY QUALITY RATING	MARCH QUALITY RATING	APRIL QUALITY RATING	MAY QUALITY RATING	JUNE QUALITY RATING	JULY QUALITY RATING	AUGUST QUALITY RATING	SEPTEMBER QUALITY RATING	OCTOBER QUALITY RATING	NOVEMBER QUALITY RATING	DECEMBER QUALITY RATING	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE
AL1					X	X	X	X	X	X			X	X	X
FL3				X	X	X	X	X	X	X				X	
FL5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FL6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MS1				X	X	X	X	X	X	X			X	X	X
NC1				X	X	X	X	X	X	X				X	
TX1						X	X	X	X	X			X	X	X
TX2					X	X	X	X	X	X			X	X	X

TABLE B.
(CONT'D)

LOCATIONS AND DATA COLLECTED IN 2019

LOCATION	SPRING DENSITY	SUMMER DENSITY	FALL DENSITY	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	WINTER COLOR	PERCENT WINTER KILL	WILTING	GRAY LEAF SPOT	PERCENT SEPTEMBER	COLOR OCTOBER	RATINGS DECEMBER	SEEDHEAD RATINGS	WINTER KILL RATINGS
AL1															X
FL3	X	X	X								X	X			
FL5	X		X	X	X	X				X	X		X		
FL6	X		X	X	X	X				X	X		X		
MS1				X											
NC1				X	X					X				X	
TX1		X						X						X	X
TX2							X		X						

TABLE 1. TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
GROWN IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1 **/
2019 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# Entry	NC1	AL1	TX1	MEAN
DALSA 1618	27	6.1	7.4	7.6	7.0
DALSA 1502	26	6.0	6.4	7.5	6.7
FSA 1613	18	5.6	6.7	7.1	6.5
DALSA 1501	25	5.8	6.3	7.3	6.5
FSA 1608	13	5.6	6.5	7.1	6.4
*PALMETTO	3	5.5	6.7	7.0	6.4
UGA/TX SA26	20	5.5	5.5	7.0	6.0
*RALEIGH	2	5.3	5.6	6.8	5.9
*CITRABLUE (FSA 1602)	7	4.8	6.1	6.4	5.8
DALSA 1404	24	5.2	4.9	6.7	5.6
FSA 1614	19	4.7	5.8	6.2	5.6
DALSA 1623	21	5.5	4.2	6.9	5.6
FSA 1605	10	4.3	5.2	5.8	5.1
DALSA 1316	22	4.9	3.9	6.4	5.1
FSA 1607	12	4.3	4.7	5.8	4.9
*FLORATAM	1	4.2	5.0	5.7	4.9
FSA 1601	6	4.1	4.5	5.6	4.8
FSA 1606	11	4.3	3.9	5.8	4.6
FSA 1610	15	3.8	4.7	5.3	4.6
FSA 1603	8	4.4	3.1	5.9	4.5
DALSA 1323	23	4.7	1.9	6.2	4.3
FSA 1604	9	3.6	3.9	5.1	4.2
XSA11168	5	3.4	4.4	4.9	4.2
FSA 1609	14	3.9	2.8	5.4	4.0
FSA 1611	16	3.6	2.2	5.1	3.6
XSA10403	4	3.3	2.7	4.8	3.6
FSA 1612	17	3.4	1.6	4.8	3.3
LSD VALUE		1.3	1.3	1.3	1.3
C.V. (%)		17.0	17.0	12.9	15.4

*/ COMMERCIALY AVAILABLE IN THE USA IN 2020

**/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON LPI, GO TO WWW.NTEP.ORG/LPI_Q&A.PDF

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 2. TURFGRASS QUALITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
GROWN IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2 */
2019 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/				
NAME	FL3	FL5	MS1	MEAN
CITRABLUE (FSA 1602)	7.0	8.3	6.2	7.1
FSA 1606	6.6	7.7	5.9	6.7
FSA 1610	6.4	8.0	5.6	6.7
FSA 1613	6.6	7.1	5.9	6.5
DALSA 1501	6.7	6.9	5.9	6.5
PALMETTO	6.5	6.9	5.7	6.4
FSA 1601	6.2	7.2	5.4	6.3
DALSA 1404	6.4	6.7	5.7	6.3
FSA 1609	6.2	7.1	5.5	6.3
FSA 1607	6.1	7.0	5.4	6.2
DALSA 1623	6.4	6.3	5.7	6.1
DALSA 1618	6.4	6.4	5.7	6.1
FSA 1604	6.0	7.2	5.2	6.1
FSA 1608	6.3	6.5	5.6	6.1
DALSA 1502	6.4	6.3	5.7	6.1
FSA 1605	6.0	6.9	5.3	6.1
FSA 1614	6.1	6.8	5.3	6.1
UGA/TX SA26	6.3	6.3	5.6	6.0
RALEIGH	6.1	6.4	5.4	6.0
FSA 1603	6.1	6.5	5.4	6.0
FLORATAM	5.8	6.7	5.1	5.8
DALSA 1316	6.0	6.1	5.3	5.8
XSA11168	5.5	6.7	4.7	5.6
XSA10403	5.5	6.4	4.7	5.6
DALSA 1323	5.8	5.5	5.1	5.5
FSA 1611	5.5	6.1	4.8	5.5
FSA 1612	5.3	5.7	4.5	5.2
LSD VALUE	1.3	1.3	1.3	1.3
C.V. (%)	13.0	11.9	14.7	13.1

*/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON LPI, GO TO WWW.NTEP.ORG/LPI_Q&A.PDF

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 AND OTHER RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
GROWN UNDER LOW FERTILIZER AT FT. LAUDERDALE, FL 1/
2019 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS												MEAN
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
CITRABLUE (FSA 1602)	8.3	8.3	3.3	9.0	8.7	9.0	9.0	8.7	9.0	8.7	8.7	7.7	7.7	7.7	7.7	8.4
FSA 1606	8.0	7.3	3.0	8.7	8.3	8.0	8.0	7.3	7.3	7.3	7.3	7.7	7.7	7.7	7.0	7.7
FSA 1610	8.7	8.7	4.0	8.0	8.0	7.7	7.7	6.7	6.7	5.3	5.3	8.0	8.0	8.0	7.7	7.3
PALMETTO	8.0	6.7	3.3	7.0	7.0	7.0	7.0	6.7	6.7	6.7	6.7	7.0	7.0	7.0	6.7	6.9
FSA 1613	7.7	7.3	2.7	7.3	7.3	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.8
FSA 1607	7.0	6.7	3.0	7.7	7.3	7.7	7.7	6.7	6.7	6.3	6.3	6.3	6.3	6.3	5.3	6.7
FSA 1605	9.0	7.3	3.0	7.7	7.3	6.7	6.7	6.7	6.7	6.7	6.7	6.0	6.3	6.0	5.7	6.6
FLORATAM	7.7	6.7	2.7	7.7	7.7	6.3	6.0	6.0	6.3	6.0	6.0	6.7	6.7	6.7	6.0	6.5
FSA 1609	7.0	7.0	3.3	8.0	7.7	7.0	7.0	6.3	6.3	6.0	5.7	6.0	6.0	6.0	5.7	6.5
FSA 1601	9.0	8.7	3.7	7.7	7.3	6.3	6.3	7.0	7.0	5.7	5.3	6.3	6.3	6.3	5.3	6.4
FSA 1604	7.0	7.3	3.7	7.3	7.3	6.7	6.7	6.3	6.3	6.3	6.0	5.7	6.0	5.7	5.7	6.3
RALEIGH	8.0	6.3	3.0	6.7	6.7	6.3	6.0	6.7	6.7	6.0	6.0	6.0	6.3	6.0	5.3	6.2
DALSA 1623	7.0	8.3	2.3	7.3	7.3	6.7	6.3	6.3	6.3	6.0	6.0	5.3	5.3	5.3	5.0	6.1
FSA 1614	8.3	7.3	2.7	6.7	6.7	6.0	6.0	6.7	6.7	5.7	5.3	6.0	6.3	6.0	5.3	6.1
DALSA 1501	6.7	7.3	2.0	7.0	7.0	6.7	6.7	6.0	6.0	6.0	6.0	5.3	5.3	5.3	5.0	6.0
FSA 1608	7.3	6.3	3.7	6.7	6.7	6.7	6.3	6.0	5.7	4.7	4.7	6.3	6.3	6.3	6.0	6.0
UGA/TX SA26	7.3	6.7	4.0	7.0	7.0	6.7	6.7	6.0	6.0	5.3	5.3	5.7	5.7	5.7	5.3	6.0
XSA11168	7.0	6.7	3.0	7.0	7.0	6.3	6.3	5.7	5.3	5.3	5.3	6.0	6.0	6.0	6.0	6.0
DALSA 1404	6.3	8.3	2.3	7.0	7.0	7.3	7.3	5.3	5.3	5.3	5.0	5.3	5.7	5.3	4.7	5.9
DALSA 1618	7.7	8.3	2.3	5.3	5.3	6.3	6.3	6.3	6.3	5.7	5.7	5.3	5.7	5.3	4.7	5.7
FSA 1611	7.3	6.0	2.7	7.0	7.0	6.0	6.0	5.0	5.0	5.0	4.7	6.0	6.0	6.0	5.0	5.7
XSA10403	7.0	7.3	3.0	6.3	6.3	6.3	6.0	6.0	5.7	5.7	5.3	5.3	5.3	5.3	4.7	5.7
FSA 1612	6.7	7.0	2.0	6.3	6.7	6.0	6.0	5.7	5.0	4.7	4.3	5.3	5.7	5.3	4.7	5.5
FSA 1603	7.7	8.0	3.7	6.0	6.0	5.3	5.3	5.7	5.0	5.0	4.7	5.7	5.7	5.7	5.3	5.4
DALSA 1502	7.7	7.0	2.0	5.7	5.7	5.7	5.7	5.3	5.3	5.0	5.0	5.0	5.3	5.0	4.7	5.3
DALSA 1316	6.7	6.7	2.0	6.0	6.0	5.3	5.3	5.3	5.3	4.7	4.7	5.0	5.0	5.0	4.3	5.2
DALSA 1323	6.7	6.3	2.3	4.7	5.0	4.7	4.3	5.3	5.3	5.0	4.7	5.0	5.3	5.0	5.0	4.9
LSD VALUE	0.8	1.0	0.7	2.4	2.5	2.1	2.3	1.1	1.2	1.2	1.1	2.3	1.9	2.3	2.5	1.2
C.V. (%)	6.9	8.5	15.0	16.3	15.8	15.7	17.1	10.7	11.5	12.4	12.5	17.4	15.0	17.4	20.2	11.2

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 3.
(CONT'D)

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
GROWN UNDER LOW FERTILIZER AT FT. LAUDERDALE, FL 1/
2019 DATA

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

NAME	DENSITY RATINGS		PERCENT GROUND COVER			GRAY	COLOR RATINGS	
	SPRING	FALL	SPRING	SUMMER	FALL	LEAF SPOT	SEPTEMBER	DECEMBER
CITRABLUE (FSA 1602)	8.3	8.0	99.0	99.0	99.0	8.7	9.0	7.7
FSA 1606	8.0	8.0	99.0	99.0	99.0	9.0	7.3	7.7
FSA 1610	8.0	8.0	99.0	99.0	97.7	8.7	6.7	8.0
PALMETTO	7.3	7.3	99.0	99.0	94.3	8.0	6.7	7.0
FSA 1613	6.7	6.7	99.0	99.0	97.7	8.7	6.7	6.7
FSA 1607	8.0	8.0	99.0	99.0	97.7	8.7	6.7	6.3
FSA 1605	7.0	7.0	99.0	99.0	74.7	6.0	6.7	6.0
FLORATAM	6.0	6.0	99.0	99.0	98.7	8.7	6.3	6.7
FSA 1609	7.3	7.3	99.0	99.0	99.0	8.7	6.3	6.0
FSA 1601	7.0	7.3	96.0	96.0	84.7	7.3	7.0	6.3
FSA 1604	6.7	6.7	99.0	99.0	93.0	7.3	6.3	5.7
RALEIGH	6.0	6.0	94.3	94.3	78.0	6.3	6.7	6.0
DALSA 1623	6.3	6.3	96.0	96.0	82.7	7.0	6.3	5.3
FSA 1614	6.0	6.0	96.0	99.0	90.0	7.3	6.7	6.0
DALSA 1501	7.0	7.0	99.0	99.0	88.3	7.0	6.0	5.3
FSA 1608	6.3	6.3	99.0	99.0	93.0	7.7	5.7	6.3
UGA/TX SA26	6.7	6.7	97.7	99.0	96.0	7.7	6.0	5.7
XSA11168	8.0	8.0	99.0	99.0	97.7	8.7	5.3	6.0
DALSA 1404	7.3	7.3	99.0	99.0	86.3	6.7	5.3	5.3
DALSA 1618	6.3	6.3	99.0	99.0	88.0	7.0	6.3	5.3
FSA 1611	6.0	6.3	99.0	99.0	99.0	8.7	5.0	6.0
XSA10403	6.7	6.7	99.0	99.0	81.7	5.3	5.7	5.3
FSA 1612	5.7	6.0	99.0	99.0	89.3	7.3	5.0	5.3
FSA 1603	7.0	7.0	94.3	96.0	88.3	6.0	5.0	5.7
DALSA 1502	6.0	6.0	91.3	99.0	89.7	7.3	5.3	4.7
DALSA 1316	5.3	5.3	91.0	92.7	74.7	5.0	5.3	4.7
DALSA 1323	5.0	5.0	89.7	93.0	90.0	6.0	5.3	5.0
LSD VALUE	1.7	1.5	13.1	10.2	45.8	5.7	1.2	2.4
C.V. (%)	13.3	12.1	4.6	3.4	15.1	25.4	11.5	18.3

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 4.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
GROWN UNDER DROUGHT/DRY DOWN AT COLLEGE STATION, TX 1/
2019 DATA

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

NAME	QUALITY RATINGS												MEAN
	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	WINTER COLOR	WILTING	MAY	JUN	JUL	AUG	SEP	OCT		
DALSA 1502	6.7	5.7	5.3	5.0	6.3	6.0	6.7	6.7	6.7	7.3	6.3	6.6	
DALSA 1618	7.0	5.7	5.7	4.7	6.3	6.0	6.7	7.0	7.0	7.3	5.7	6.6	
DALSA 1501	5.7	5.7	6.0	5.0	6.0	6.3	6.7	6.3	6.3	6.7	6.0	6.4	
DALSA 1404	5.7	6.0	5.3	4.7	5.3	6.0	6.3	6.3	6.7	6.3	6.3	6.3	
DALSA 1623	6.7	6.0	6.0	4.0	6.3	5.7	6.0	6.3	6.7	7.3	6.0	6.3	
FSA 1609	7.0	6.0	6.0	4.0	4.0	5.0	6.0	6.0	6.0	7.0	6.0	6.0	
FSA 1613	6.0	5.0	5.3	3.7	5.3	5.3	5.3	5.7	6.0	7.0	6.3	5.9	
UGA/TX SA26	6.3	6.0	5.3	3.7	4.7	5.7	5.7	6.0	6.3	6.3	5.7	5.9	
PALMETTO	6.0	5.7	6.0	3.7	4.3	5.3	5.7	6.0	5.7	6.0	6.0	5.8	
DALSA 1316	6.0	5.3	5.3	4.7	6.3	5.7	5.3	6.0	5.3	6.0	5.0	5.6	
FSA 1606	6.7	5.0	6.0	4.3	4.0	4.7	4.7	5.7	5.7	7.0	6.0	5.6	
FSA 1604	7.0	5.3	6.0	4.7	5.3	4.7	5.7	5.7	5.3	6.0	5.7	5.5	
FSA 1608	5.7	5.3	5.7	4.3	4.0	5.3	5.0	5.7	5.3	5.7	5.0	5.3	
FSA 1610	6.7	5.7	5.7	4.0	5.3	4.7	5.0	5.7	5.7	5.7	5.3	5.3	
FSA 1607	7.0	5.7	6.3	4.0	5.3	5.0	5.7	5.3	5.0	5.0	5.0	5.2	
RALEIGH	6.0	5.3	5.3	3.7	4.0	5.0	4.3	5.3	5.3	5.7	5.3	5.2	
XSA11168	6.0	4.0	5.3	5.0	4.0	4.7	5.3	5.0	5.0	6.0	5.3	5.2	
FSA 1605	6.3	4.7	5.3	4.0	5.0	5.0	4.3	5.3	5.0	5.3	5.3	5.1	
FLORATAM	6.7	4.0	5.3	5.5	5.5	3.5	3.5	5.0	5.5	6.5	6.0	5.0	
FSA 1614	6.7	4.3	5.0	4.7	4.3	4.7	4.7	5.7	4.7	5.0	5.3	5.0	
CITRABLUE (FSA 1602)	6.3	4.7	6.0	4.7	4.7	4.7	4.7	5.0	5.0	4.7	5.0	4.8	
DALSA 1323	5.0	5.0	6.0	4.0	4.5	4.5	4.5	5.0	4.0	4.5	5.0	4.6	
FSA 1601	7.3	4.3	7.0	4.0	5.3	3.7	4.3	4.0	4.3	5.0	4.7	4.3	
FSA 1603	6.5	4.0	5.5	3.5	4.0	3.5	4.0	4.5	3.5	4.5	5.0	4.2	
FSA 1611	6.0	3.0	5.7	4.3	4.7	4.0	4.0	4.3	3.0	5.0	4.7	4.2	
FSA 1612	6.0	3.3	5.0	4.7	4.0	3.7	3.7	4.3	4.0	3.7	4.0	3.9	
XSA10403	5.3	3.3	5.7	4.0	4.3	3.0	3.7	4.0	2.3	4.3	4.0	3.6	
LSD VALUE	1.3	1.4	0.9	1.6	1.3	1.3	2.1	1.8	2.4	2.9	2.4	1.5	
C.V. (%)	9.9	15.9	8.2	14.8	14.2	15.0	20.1	15.6	22.2	21.2	16.4	15.0	

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. GENETIC COLOR RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	AL1	FL5	MS1	TX1	MEAN
FSA 1601	8.0	9.0	7.0	7.0	7.8
CITRABLUE (FSA 1602)	7.3	8.3	6.0	8.0	7.4
DALSA 1618	6.7	7.7	5.7	7.0	6.8
FSA 1613	7.7	7.7	6.0	5.3	6.7
FSA 1603	5.7	7.7	6.7	6.3	6.6
FLORATAM	7.0	7.7	5.3	6.0	6.5
FSA 1605	4.0	9.0	6.0	6.7	6.4
FSA 1610	4.7	8.7	6.0	6.3	6.4
DALSA 1501	6.0	7.0	6.0	6.3	6.3
DALSA 1502	6.3	7.7	5.3	6.0	6.3
FSA 1609	5.0	7.0	6.0	7.0	6.3
FSA 1607	5.0	7.0	6.0	6.7	6.2
FSA 1604	5.3	7.0	6.0	6.3	6.2
FSA 1606	4.7	8.0	6.0	5.7	6.1
DALSA 1623	6.0	7.0	5.0	6.3	6.1
FSA 1614	4.7	8.3	5.3	6.0	6.1
PALMETTO	4.3	8.0	6.0	6.0	6.1
RALEIGH	3.7	8.0	5.7	6.7	6.0
FSA 1608	4.7	7.3	6.0	5.7	5.9
FSA 1611	6.7	7.3	4.7	5.0	5.9
DALSA 1404	6.3	6.3	5.0	5.7	5.8
FSA 1612	7.0	6.7	4.3	5.3	5.8
DALSA 1323	4.3	6.7	5.3	6.3	5.7
UGA/TX SA26	4.3	7.3	6.0	5.0	5.7
DALSA 1316	7.0	6.7	3.7	5.0	5.6
XSA10403	5.0	7.0	4.0	4.7	5.2
XSA11168	4.7	7.0	4.0	4.3	5.0
LSD VALUE	2.0	0.8	0.6	0.9	0.6
C.V. (%)	22.6	6.8	7.3	9.8	12.5

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 6. SPRING GREENUP RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

NAME	SPRING GREENUP RATINGS 1-9; 9=COMPLETELY GREEN 2/						MEAN
	AL1	FL3	FL5	MS1	NC1	TX1	
DALSA 1502	6.3	4.3	7.0	5.0	5.0	3.7	5.2
UGA/TX SA26	6.7	3.7	7.3	4.7	5.3	3.7	5.2
DALSA 1618	6.0	4.0	8.3	4.7	4.7	3.3	5.2
PALMETTO	6.7	4.0	7.0	5.0	4.3	3.3	5.1
FSA 1608	6.0	4.0	7.0	5.0	4.0	3.0	4.8
RALEIGH	7.0	2.3	6.7	4.7	5.3	3.0	4.8
DALSA 1501	5.3	4.3	7.3	4.3	4.0	3.0	4.7
DALSA 1623	3.7	4.0	8.3	4.7	4.0	3.3	4.7
FSA 1613	5.0	4.3	7.3	4.7	4.0	2.0	4.6
FSA 1601	4.7	4.3	8.7	4.7	2.0	2.3	4.4
CITRABLUE (FSA 1602)	5.3	3.7	8.3	3.7	3.3	2.0	4.4
FSA 1607	3.7	4.7	7.0	4.0	3.7	3.0	4.3
DALSA 1323	2.0	4.0	7.0	5.0	4.0	3.7	4.3
FSA 1603	3.7	3.7	8.0	4.7	3.7	2.0	4.3
DALSA 1316	3.0	4.7	7.0	4.7	3.0	3.0	4.2
FSA 1610	3.7	4.0	8.7	4.0	2.0	2.7	4.2
DALSA 1404	2.7	4.0	8.3	4.3	2.7	2.7	4.1
FSA 1614	4.0	3.7	7.3	4.0	2.7	2.3	4.0
FSA 1605	3.0	3.7	7.3	3.7	2.7	2.0	3.7
FSA 1606	2.0	4.0	7.3	3.7	2.7	1.7	3.6
FSA 1604	2.7	3.0	7.7	3.7	1.7	2.0	3.4
FSA 1609	2.0	3.7	7.0	3.7	2.0	2.3	3.4
FLORATAM	3.0	2.0	7.0	3.3	2.0	2.0	3.2
XSA10403	1.7	3.3	7.3	3.0	1.3	1.3	3.0
XSA11168	2.3	3.0	7.0	2.7	1.3	1.0	2.9
FSA 1611	1.3	2.0	7.0	3.3	1.7	1.0	2.7
FSA 1612	1.3	2.3	7.0	2.7	1.7	1.0	2.7
LSD VALUE	2.2	1.2	0.8	1.0	1.4	0.8	0.5
C.V. (%)	35.9	19.7	6.3	15.0	27.0	21.2	20.0

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. LEAF TEXTURE RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	AL1	FL5	MS1	TX1	MEAN
FSA 1603	7.3	3.7	6.0	6.7	5.9
FSA 1610	7.7	4.0	5.3	6.3	5.8
FSA 1601	7.3	3.7	5.0	6.0	5.5
XSA10403	7.7	3.0	5.0	6.3	5.5
FSA 1605	6.7	3.0	5.0	6.7	5.3
FSA 1609	6.0	3.3	5.0	6.7	5.3
XSA11168	6.3	3.0	4.7	6.0	5.0
FSA 1608	6.0	3.7	4.0	5.7	4.8
FSA 1607	5.0	3.0	5.0	6.0	4.8
PALMETTO	6.0	3.3	4.0	5.7	4.8
FSA 1604	3.3	3.7	4.7	6.7	4.6
UGA/TX SA26	5.0	4.0	4.3	5.0	4.6
RALEIGH	4.7	3.0	4.0	5.7	4.3
FSA 1606	3.7	3.0	4.3	6.0	4.3
FSA 1611	4.0	2.7	3.3	5.3	3.8
FSA 1613	2.7	2.7	4.3	5.7	3.8
DALSA 1323	4.3	2.3	3.7	4.7	3.8
DALSA 1501	3.3	2.0	4.3	5.0	3.7
CITRABLUE (FSA 1602)	1.3	3.3	3.0	5.7	3.3
DALSA 1404	2.0	2.3	3.7	5.0	3.3
DALSA 1618	1.3	2.3	4.0	5.0	3.2
FSA 1612	3.0	2.0	2.7	5.0	3.2
DALSA 1316	2.7	2.0	3.7	4.3	3.2
FLORATAM	2.7	2.7	2.3	4.7	3.1
DALSA 1502	1.7	2.0	4.0	4.3	3.0
DALSA 1623	2.0	2.3	3.3	4.3	3.0
FSA 1614	1.0	2.7	2.3	4.7	2.7
LSD VALUE	1.2	0.7	0.8	0.8	0.4
C.V. (%)	17.9	14.8	11.5	9.2	13.3

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 8. SPRING DENSITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	FL3	FL5	MEAN
CITRABLU (FSA 1602)	7.3	8.7	8.0
DALSA 1404	6.7	7.7	7.2
DALSA 1501	6.7	7.7	7.2
FSA 1607	6.0	8.3	7.2
FSA 1609	6.3	8.0	7.2
FSA 1610	6.3	8.0	7.2
DALSA 1618	7.0	7.0	7.0
FSA 1606	5.7	8.3	7.0
FSA 1613	6.3	7.7	7.0
PALMETTO	6.3	7.7	7.0
DALSA 1623	7.0	6.7	6.8
FSA 1604	6.3	7.3	6.8
FSA 1601	5.7	7.7	6.7
XSA11168	5.3	8.0	6.7
FSA 1603	5.7	7.3	6.5
FSA 1605	5.7	7.3	6.5
FSA 1608	6.0	7.0	6.5
FSA 1614	6.3	6.7	6.5
UGA/TX SA26	5.7	7.3	6.5
XSA10403	6.0	7.0	6.5
DALSA 1502	6.0	6.7	6.3
FLORATAM	5.7	7.0	6.3
RALEIGH	5.7	7.0	6.3
DALSA 1316	6.3	6.0	6.2
DALSA 1323	6.0	5.7	5.8
FSA 1611	5.0	6.7	5.8
FSA 1612	4.3	6.7	5.5
LSD VALUE	0.9	1.7	1.0
C.V. (%)	9.7	14.4	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 9. SUMMER DENSITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

DENSITY RATINGS 1-9; 9=MAXIMUM DENSITY 2/				
NAME	FL3	TX1	MEAN	
DALSA 1502	7.3	8.3	7.8	
DALSA 1323	6.7	7.7	7.2	
DALSA 1623	6.7	7.7	7.2	
DALSA 1501	7.3	6.7	7.0	
DALSA 1618	7.0	7.0	7.0	
DALSA 1404	7.0	6.7	6.8	
FSA 1608	6.7	7.0	6.8	
DALSA 1316	6.3	7.0	6.7	
FSA 1607	7.0	6.0	6.5	
FSA 1614	6.7	6.3	6.5	
CITRABLUE (FSA 1602)	7.7	5.0	6.3	
FSA 1609	6.7	6.0	6.3	
FSA 1610	7.0	5.7	6.3	
FSA 1613	6.7	6.0	6.3	
PALMETTO	6.3	6.3	6.3	
FSA 1601	6.3	6.0	6.2	
RALEIGH	6.0	6.3	6.2	
FSA 1603	7.3	4.7	6.0	
UGA/TX SA26	6.0	6.0	6.0	
FSA 1604	6.0	5.7	5.8	
FSA 1605	6.3	5.3	5.8	
FSA 1606	6.3	5.0	5.7	
FLORATAM	5.7	5.0	5.3	
XSA10403	6.3	4.0	5.2	
XSA11168	6.0	3.3	4.7	
FSA 1611	5.0	4.0	4.5	
FSA 1612	5.0	3.7	4.3	
LSD VALUE	1.1	1.0	0.7	
C.V. (%)	10.5	10.7	10.6	

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.

TABLE 10. FALL DENSITY RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

DENSITY RATINGS 1-9; 9=MAXIMUM DENSITY 2/			
NAME	FL3	FL5	MEAN
CITRABLU (FSA 1602)	9.0	8.7	8.8
FSA 1609	8.0	8.0	8.0
FSA 1607	7.3	8.3	7.8
FSA 1606	7.0	8.3	7.7
DALSA 1501	8.0	7.3	7.7
FSA 1610	7.3	8.0	7.7
FSA 1603	7.0	7.7	7.3
FSA 1613	7.3	7.3	7.3
FSA 1601	6.7	7.7	7.2
PALMETTO	6.7	7.7	7.2
DALSA 1404	7.0	7.3	7.2
XSA11168	6.3	8.0	7.2
FSA 1604	6.7	7.3	7.0
XSA10403	7.0	7.0	7.0
DALSA 1618	6.7	7.0	6.8
FSA 1605	6.3	7.3	6.8
DALSA 1502	6.7	6.7	6.7
DALSA 1623	6.7	6.7	6.7
FSA 1608	6.3	7.0	6.7
RALEIGH	6.3	7.0	6.7
UGA/TX SA26	6.0	7.3	6.7
FLORATAM	6.0	7.0	6.5
FSA 1611	6.3	6.7	6.5
FSA 1614	6.3	6.7	6.5
DALSA 1316	6.7	6.0	6.3
FSA 1612	5.7	6.7	6.2
DALSA 1323	6.3	5.7	6.0
LSD VALUE	1.1	1.6	1.0
C.V. (%)	9.8	13.8	12.1

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. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/				
NAME	FL5	MS1	NC1	MEAN
UGA/TX SA26	99.0	85.0	86.7	90.2
RALEIGH	99.0	76.7	88.3	88.0
FSA 1613	99.0	85.0	76.7	86.9
DALSA 1502	94.3	86.7	78.3	86.4
DALSA 1618	99.0	85.0	75.0	86.3
FSA 1608	96.0	86.7	75.0	85.9
PALMETTO	99.0	85.0	73.3	85.8
DALSA 1501	99.0	85.0	66.7	83.6
DALSA 1623	92.7	83.3	73.3	83.1
DALSA 1323	94.3	81.7	68.3	81.4
DALSA 1404	99.0	81.7	60.0	80.2
DALSA 1316	96.0	81.7	61.7	79.8
FSA 1603	96.0	86.7	55.0	79.2
FSA 1606	99.0	76.7	58.3	78.0
FSA 1605	99.0	73.3	55.0	75.8
CITRABLUE (FSA 1602)	99.0	70.0	55.0	74.7
FSA 1607	99.0	63.3	60.0	74.1
FSA 1614	99.0	75.0	41.7	71.9
FSA 1601	99.0	86.7	26.7	70.8
FSA 1604	99.0	76.7	28.3	68.0
FLORATAM	99.0	63.3	40.0	67.4
FSA 1609	99.0	73.3	30.0	67.4
FSA 1610	99.0	80.0	23.3	67.4
FSA 1611	99.0	60.0	27.7	62.2
XSA11168	99.0	58.3	11.0	56.1
XSA10403	99.0	58.3	8.3	55.2
FSA 1612	99.0	46.7	6.7	50.8
LSD VALUE	5.6	13.8	27.6	10.4
C.V. (%)	3.6	11.3	32.8	14.9

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 12. PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

NAME	FL5	NC1	MEAN
RALEIGH	99.0	99.0	99.0
UGA/TX SA26	99.0	98.3	98.7
DALSA 1502	99.0	94.3	96.7
FSA 1613	99.0	94.3	96.7
DALSA 1623	99.0	91.7	95.3
DALSA 1618	97.7	92.7	95.2
FSA 1608	99.0	90.7	94.8
PALMETTO	99.0	89.7	94.3
CITRABLUE (FSA 1602)	99.0	88.3	93.7
DALSA 1323	99.0	86.3	92.7
DALSA 1404	99.0	85.0	92.0
DALSA 1501	99.0	84.0	91.5
FSA 1603	99.0	83.3	91.2
FSA 1606	99.0	83.3	91.2
FSA 1607	99.0	81.7	90.3
FLORATAM	99.0	73.3	86.2
DALSA 1316	96.0	75.0	85.5
FSA 1605	99.0	71.7	85.3
FSA 1614	99.0	68.3	83.7
FSA 1601	99.0	60.0	79.5
FSA 1609	99.0	60.0	79.5
FSA 1610	99.0	58.3	78.7
FSA 1604	99.0	50.0	74.5
FSA 1611	99.0	48.3	73.7
XSA10403	99.0	36.7	67.8
XSA11168	99.0	33.3	66.2
FSA 1612	99.0	31.7	65.3
LSD VALUE	1.8	24.2	12.1
C.V. (%)	1.1	20.2	12.3

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 13. PERCENT LIVING GROUND COVER (FALL) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

PERCENT LIVING GROUND COVER IN FALL: LOCATIONS 2/

NAME	FL5
CITRABLUE (FSA 1602)	99.0
FSA 1606	99.0
FSA 1607	99.0
FSA 1609	99.0
FSA 1610	99.0
FSA 1611	99.0
XSA11168	99.0
FLORATAM	98.7
FSA 1613	98.7
FSA 1604	97.7
DALSA 1501	96.0
DALSA 1502	94.7
DALSA 1323	93.0
DALSA 1404	93.0
FSA 1612	93.0
FSA 1603	91.7
FSA 1608	91.0
UGA/TX SA26	91.0
FSA 1614	89.7
FSA 1601	89.3
PALMETTO	89.3
DALSA 1618	88.0
XSA10403	86.3
DALSA 1623	86.0
RALEIGH	82.7
FSA 1605	81.3
DALSA 1316	80.0
LSD VALUE	20.3
C.V. (%)	13.6

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.

TABLE 14.

PERCENT WINTER KILL RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

PERCENT WINTER KILL RATINGS: LOCATIONS 2/

NAME	TX1
FSA 1611	93.3
FSA 1612	93.3
XSA10403	90.0
XSA11168	90.0
FSA 1604	85.0
FSA 1606	81.7
CITRABLUE (FSA 1602)	73.3
FLORATAM	71.7
FSA 1609	70.0
FSA 1605	68.3
FSA 1603	65.0
FSA 1613	58.3
FSA 1614	58.3
FSA 1601	56.7
FSA 1610	55.0
RALEIGH	45.0
DALSA 1316	36.7
PALMETTO	36.7
DALSA 1404	35.0
DALSA 1623	35.0
FSA 1607	35.0
FSA 1608	35.0
DALSA 1501	31.7
UGA/TX SA26	25.0
DALSA 1618	23.3
DALSA 1323	21.7
DALSA 1502	18.3
LSD VALUE	22.7
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 15.

GRAY LEAF SPOT RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

GRAY LEAF SPOT RATINGS 1-9; 9=NO DISEASE 2/

NAME	FL5	NC1	MEAN
CITRABLUE (FSA 1602)	9.0	9.0	9.0
FSA 1609	9.0	8.7	8.8
DALSA 1501	8.3	8.7	8.5
FSA 1610	9.0	8.0	8.5
FSA 1611	9.0	8.0	8.5
FSA 1604	8.7	7.7	8.2
XSA11168	8.7	7.7	8.2
DALSA 1618	7.3	8.7	8.0
FSA 1601	8.0	8.0	8.0
FSA 1603	7.7	8.0	7.8
FSA 1613	8.7	7.0	7.8
DALSA 1623	7.3	8.0	7.7
FSA 1606	9.0	6.3	7.7
DALSA 1502	8.0	7.0	7.5
UGA/TX SA26	7.7	7.3	7.5
FSA 1605	6.7	8.0	7.3
FSA 1608	7.7	7.0	7.3
FSA 1612	7.7	7.0	7.3
DALSA 1404	7.3	6.7	7.0
PALMETTO	7.7	6.3	7.0
FSA 1614	7.3	6.3	6.8
FSA 1607	9.0	4.3	6.7
FLORATAM	8.7	4.3	6.5
RALEIGH	7.0	6.0	6.5
XSA10403	6.3	5.7	6.0
DALSA 1323	7.0	4.3	5.7
DALSA 1316	6.0	4.3	5.2
LSD VALUE	2.8	1.4	1.6
C.V. (%)	21.8	12.6	18.4

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 16.

FALL COLOR (SEPTEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	FL3	FL5	MEAN
CITRABLUE (FSA 1602)	8.7	9.0	8.8
FSA 1601	7.7	7.7	7.7
FSA 1605	7.0	8.0	7.5
FSA 1606	6.7	8.3	7.5
FSA 1604	7.3	7.3	7.3
FSA 1610	7.3	7.3	7.3
FSA 1614	6.7	7.7	7.2
FSA 1607	7.0	7.3	7.2
DALSA 1618	7.3	6.7	7.0
FLORATAM	7.0	7.0	7.0
FSA 1613	7.0	7.0	7.0
PALMETTO	6.7	7.0	6.8
FSA 1603	7.3	6.3	6.8
FSA 1609	6.3	7.3	6.8
DALSA 1501	6.7	6.7	6.7
RALEIGH	6.7	6.7	6.7
UGA/TX SA26	6.7	6.7	6.7
DALSA 1502	6.3	7.0	6.7
DALSA 1404	5.7	7.0	6.3
DALSA 1623	6.0	6.7	6.3
FSA 1608	6.3	6.3	6.3
DALSA 1323	6.0	6.3	6.2
XSA10403	5.3	7.0	6.2
FSA 1611	5.3	6.3	5.8
DALSA 1316	5.0	6.3	5.7
XSA11168	5.0	6.3	5.7
FSA 1612	5.3	5.3	5.3
LSD VALUE	1.1	1.2	0.8
C.V. (%)	10.3	10.8	10.6

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.

TABLE 17.

FALL COLOR (OCTOBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	FL3
CITRABLUE (FSA 1602)	8.0
FSA 1603	7.3
FSA 1606	7.3
DALSA 1618	7.0
FSA 1604	7.0
FSA 1607	7.0
FSA 1609	7.0
FSA 1605	6.7
FSA 1608	6.7
FSA 1610	6.7
FSA 1613	6.7
FSA 1614	6.7
DALSA 1323	6.3
DALSA 1501	6.3
DALSA 1502	6.3
FLORATAM	6.3
RALEIGH	6.3
DALSA 1623	6.0
FSA 1601	6.0
PALMETTO	6.0
UGA/TX SA26	6.0
DALSA 1404	5.7
XSA10403	5.7
FSA 1612	5.3
DALSA 1316	5.0
FSA 1611	5.0
XSA11168	5.0
LSD VALUE	0.9
C.V. (%)	9.1

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 18.

FALL COLOR (DECEMBER) RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

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

NAME	FL5
FSA 1610	8.7
CITRABLUE (FSA 1602)	7.7
FSA 1606	7.7
FSA 1613	7.0
PALMETTO	7.0
DALSA 1501	6.7
FLORATAM	6.7
FSA 1605	6.7
FSA 1607	6.7
FSA 1609	6.7
RALEIGH	6.7
FSA 1601	6.3
FSA 1604	6.3
FSA 1608	6.3
FSA 1614	6.3
UGA/TX SA26	6.3
XSA11168	6.3
DALSA 1404	6.0
DALSA 1618	6.0
FSA 1603	6.0
FSA 1611	6.0
DALSA 1502	5.7
DALSA 1623	5.7
FSA 1612	5.7
XSA10403	5.7
DALSA 1316	5.0
DALSA 1323	5.0
LSD VALUE	1.9
C.V. (%)	18.6

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.

TABLE 19.

SEEDHEAD RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

NAME	SEEDHEAD RATINGS 1-9; 9=NONE 2/		
	NC1	TX1	MEAN
FSA 1611	9.0	9.0	9.0
FSA 1612	9.0	9.0	9.0
DALSA 1502	8.7	9.0	8.8
FLORATAM	8.3	8.3	8.3
FSA 1601	7.3	9.0	8.2
DALSA 1316	7.0	9.0	8.0
DALSA 1404	7.7	7.7	7.7
DALSA 1623	7.0	8.3	7.7
FSA 1607	5.7	8.7	7.2
DALSA 1618	7.3	6.3	6.8
FSA 1613	6.7	6.3	6.5
FSA 1614	4.0	9.0	6.5
PALMETTO	7.0	5.0	6.0
UGA/TX SA26	6.7	5.3	6.0
XSA11168	5.0	7.0	6.0
FSA 1603	2.7	9.0	5.8
CITRABLUE (FSA 1602)	3.0	8.3	5.7
FSA 1609	3.0	8.3	5.7
FSA 1606	2.3	8.7	5.5
XSA10403	4.0	7.0	5.5
DALSA 1501	5.7	5.0	5.3
RALEIGH	6.0	4.7	5.3
FSA 1605	3.3	7.3	5.3
FSA 1604	3.0	7.3	5.2
FSA 1610	4.0	6.0	5.0
FSA 1608	5.0	4.0	4.5
DALSA 1323	3.3	4.7	4.0
LSD VALUE	2.7	1.5	1.5
C.V. (%)	29.3	12.8	20.7

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 20.

WINTER KILL RATINGS OF ST. AUGUSTINEGRASS CULTIVARS 1/
2019 DATA

WINTER KILL RATINGS 1-9; 9=LEAST KILL 2/

NAME	AL1
DALSA 1502	8.7
FSA 1613	8.3
PALMETTO	8.3
UGA/TX SA26	8.3
FSA 1608	8.0
RALEIGH	8.0
CITRABLUE (FSA 1602)	7.7
DALSA 1501	7.7
DALSA 1618	7.3
DALSA 1623	6.3
FSA 1601	6.3
FSA 1607	6.3
FSA 1610	6.3
FSA 1614	6.0
FSA 1603	5.7
FSA 1606	5.3
DALSA 1316	5.0
FLORATAM	5.0
FSA 1605	5.0
DALSA 1404	4.7
FSA 1604	4.0
XSA11168	4.0
DALSA 1323	2.3
XSA10403	2.3
FSA 1612	2.0
FSA 1609	1.7
FSA 1611	1.7
LSD VALUE	2.8
C.V. (%)	30.3

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 21.

SEEDHEAD RATINGS OF ST. AUGUSTINEGRASS CULTIVARS
AT DALLAS, TX 1/
2019 DATA

SEEDHEAD RATINGS 1-9; 9=NONE 2/

NAME	JUNE	JULY	MEAN
DALSA 1502	9.0	9.0	9.0
FSA 1603	9.0	9.0	9.0
FSA 1611	9.0	9.0	9.0
FSA 1612	9.0	9.0	9.0
FSA 1601	9.0	8.7	8.8
FSA 1614	9.0	8.3	8.7
DALSA 1316	9.0	8.0	8.5
FSA 1607	8.7	8.3	8.5
CITRABLUE (FSA 1602)	8.3	8.3	8.3
DALSA 1623	8.3	8.0	8.2
FSA 1609	8.3	8.0	8.2
FLORATAM	8.3	7.7	8.0
FSA 1606	8.7	7.3	8.0
FSA 1604	7.3	8.0	7.7
DALSA 1404	7.7	7.3	7.5
FSA 1605	7.3	7.0	7.2
XSA11168	7.0	7.3	7.2
XSA10403	7.0	6.7	6.8
FSA 1613	6.3	6.7	6.5
DALSA 1618	6.3	6.3	6.3
FSA 1610	6.0	6.3	6.2
UGA/TX SA26	5.3	6.0	5.7
DALSA 1501	5.0	6.0	5.5
DALSA 1323	4.7	6.0	5.3
RALEIGH	4.7	6.0	5.3
PALMETTO	5.0	5.0	5.0
FSA 1608	4.0	5.3	4.7
LSD VALUE	1.5	1.1	1.1
C.V. (%)	13.0	9.8	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.

APPENDIX TABLE. SUMMARY OF TURFGRASS QUALITY RATINGS FOR ST. AUGUSTINEGRASS CULTIVARS */
2019 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF **/

NAME	QUALITY	MAXIMUM
	MEAN 1/	IN TOP 25% 2/
CITRABLU (FSA 1602)	6.5	33.3
DALSA 1316	5.4	0.0
DALSA 1323	4.9	0.0
DALSA 1404	6.0	16.7
DALSA 1501	6.5	83.3
DALSA 1502	6.4	50.0
DALSA 1618	6.6	66.7
DALSA 1623	5.9	16.7
FLORATAM	5.4	0.0
FSA 1601	5.5	16.7
FSA 1603	5.2	16.7
FSA 1604	5.2	0.0
FSA 1605	5.6	16.7
FSA 1606	5.7	16.7
FSA 1607	5.6	33.3
FSA 1608	6.3	33.3
FSA 1609	5.2	16.7
FSA 1610	5.6	16.7
FSA 1611	4.5	0.0
FSA 1612	4.2	0.0
FSA 1613	6.5	66.7
FSA 1614	5.8	16.7
PALMETTO	6.4	33.3
RALEIGH	5.9	16.7
UGA/TX SA26	6.0	33.3
XSA10403	4.6	0.0
XSA11168	4.9	0.0
LSD VALUE	0.5	
C.V. (%)	14.1	

*/ 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).

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

1/ MEAN AN AVERAGE OF ALL THE TURFGRASS QUALITY RATINGS FROM ALL LOCATIONS.

2/ MAXIMUM IN TOP 25% THE PERCENTAGE OF LOCATIONS WHERE THAT ENTRY FINISHED IN THE TOP 25% OF ALL ENTRIES.