### 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:**

Mr. Aaron Kuenzi, Mountain View Seeds

Mr. Ryan Jeffries, Columbia Seeds, Inc.

Dr. Cole Thompson, USGA Green Section

Dr. Charles Fontanier, Oklahoma State University

Dr. Alec Kowalewski, Oregon State University

Mr. Mike Selman, Buena Vista Turf Farm

Mr. Mark Johnson, Golf Course Superintendents Assoc. of America

Dr. Aaron Patton, Purdue University

Mr. Steve Reid, DLF Pickseed USA

Mr. Steve Rackliffe, University of Connecticut

#### FOR ADDITIONAL REPORTS OR INFORMATION CONTACT:

Kevin Morris, Executive Director National Turfgrass Evaluation Program Beltsville Agricultural Research Center-West Building 005, Room 307 Beltsville, Maryland 20705 kmorris@ntep.org www.ntep.org

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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, <a href="http://www.ntep.org">http://www.ntep.org</a>). 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 <a href="http://www.ntep.org/pdf/grandmean.mem.pdf">http://www.ntep.org/pdf/grandmean.mem.pdf</a>.

### **Other Ratings**

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

# 2016 NATIONAL SEASHORE PASPALUM TEST

# LOCATIONS SUBMITTING DATA FOR 2019

<u>State</u>	Location	Code
Alabama	Auburn	Al1
Arizona	Fayetteville	AR1
California	Riverside	CA3
Florida	Jay	FL3
Mississippi	Mississippi State	MS1
Oklahoma	Stillwater	OK1
Texas	College Station (Drought)	TX2

# 2016 National Seashore Paspalum Test Entries and Sponsors

Entry No	Name	Sponsor
*1	Salam	Standard
*2	Sea Isle 1	Standard
*3	SeaStar	The University of Georgia
4	UGA Hyb2	The University of Georgia
5	UGA 1743	The University of Georgia
6	UGA Sr15-14	The University of Georgia
7	UGA SR14-1E	The University of Georgia
8	UGP 73	The University of Georgia
9	UGP 94	The University of Georgia
10	UGA Sr15-15	The University of Georgia

<sup>\*</sup> Commercially Available in the US in 2020 or in any other country

TABLE A. 2019 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN THE 2016 NATIONAL SEASHORE PASPALUM 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	-	-	-	-	-	-	-	-
AR1	SILT LOAM AND SILT	6.1-6.5	61-150	151-240	4.1-5.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
CA3	SANDY LOAM	7.1-7.5	0-60	241-375	2.1-3.0	FULL SUN	0.6-1.0	TO PREVENT STRESS
FL3	SAND	4.6-5.5	151-270	0-150	2.1-3.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
MS1	SANDY LOAM	7.1-7.5	271-450	241-375	3.1-4.0	FULL SUN	0.6-1.0	TO PREVENT STRESS
OK1	LOAM	7.1-7.5	61-150	241-375	3.1-4.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
TX2	_	7.6-8.5	0-60	0-150	0.0-1.0	FULL SUN	0.6-1.0	TO PREVENT STRESS

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		X
AR1							X	X					X	X	X
CA3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FL3				X	X	X	X	X	X	X				X	
MS1				X	X	X	X	X	X	X				X	
OK1				X		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	COLOR RATINGS SEPTEMBER	COLOR RATINGS OCTOBER	COLOR RATINGS NOVEMBER	COLOR RATINGS DECEMBER		LAR SPOT RA SEPTEMBER	TINGS OCTOBER
AL1									X				Χ	X	X
AR1		X			X			X							
CA3	X	X	X									X			
FL3	X	X	X						X	X					
MS1	X										X				
OK1		X		X	X	X									
* TX2							X								

<sup>\*</sup> MORE DATA FOR TX2 IN TABLE 5.

# TURFGRASS QUALITY RATINGS OF SEASHORE PASPALUM CULTIVARS 1/GROWN IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1 \*\*/

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

NAME	# ENTRY	OK1
UGP 73 UGP 94 *SALAM *SEA ISLE 1 *SEASTAR UGA HYB2 UGA SR15-15 UGA 1743 UGA SR15-14 UGA SR14-1E	8 9 1 2 3 4 10 5 6 7	6.5 6.5 6.4 6.3 6.2 5.9 5.5
LSD VALUE C.V. (%)		0.5 5.4

- \*/ COMMERCIALLY 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 SEASHORE PASPALUM CULTIVARS 1/GROWN IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2 \*\*/
2019 DATA

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

NAME	CA3	FL3	MS1	MEAN
HCD 04	6.1	6.6	C 1	6.2
UGP 94			6.1	0.2
UGP 73	6.1	6.5	6.1	6.2
SALAM	6.0	6.5	5.9	6.1
SEA ISLE 1	6.0	6.4	5.9	6.1
UGA 1743	5.8	6.4	6.0	6.0
UGA SR15-15	5.8	6.3	5.8	5.9
SEASTAR	5.8	6.3	5.7	5.9
UGA HYB2	5.8	6.2	5.6	5.9
UGA SR15-14	5.5	6.0	5.6	5.7
UGA SR14-1E	5.2	5.8	5.5	5.5
LSD VALUE	0.5	0.5	0.5	0.5
C.V. (%)	5.8	5.3	5.8	5.6

<sup>\*/</sup> 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

<sup>1/</sup> 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).

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

TABLE 3.

# TURFGRASS QUALITY RATINGS OF SEASHORE PASPALUM CULTIVARS 1/GROWN IN LOCATION PERFORMANCE INDEX (LPI) GROUP 3 \*/ 2019 DATA

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

NAME	AL1
UGA 1743 UGP 94 UGP 73 UGA SR14-1E SEA ISLE 1 SALAM UGA SR15-15 UGA SR15-14 SEASTAR UGA HYB2	5.7 5.3 5.3 5.1 5.0 4.9 4.7
LSD VALUE C.V. (%)	0.5

- \*/ 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 4. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF SEASHORE PASPALUM CULTIVARS GROWN UNDER COLD TOLERANCE AT FAYETTEVILLE, AR 1/2019 DATA

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

	GENETIC	SPRING	LEAF	SUMMER	PERCENT GROUND	PERCENT WINTER				
NAME	COLOR	GREENUP	TEXTURE	DENSITY	COVER SUMMER	KILL	JUL	AUG	MEAN	
UGA SR15-14	7.3	5.0	7.3	7.3	97.3	48.3	8.7	8.7	8.7	
UGA SR15-15	8.0	7.0	7.7	7.3	97.7	13.3	8.0	8.3	8.2	
SEA ISLE 1	7.0	3.0	7.3	7.0	97.7	25.0	7.0	7.3	7.2	
SEASTAR	6.7	4.3	7.0	6.3	98.7	66.7	7.0	7.3	7.2	
UGA 1743	7.0	2.3	7.3	6.3	95.7	58.3	7.0	7.3	7.2	
UGP 94	6.7	4.0	7.3	7.3	96.7	45.0	7.0	7.0	7.0	
UGP 73	7.0	4.7	7.0	7.3	99.0	11.7	7.0	6.7	6.8	
UGA HYB2	6.3	6.3	7.0	6.7	98.0	16.7	7.0	6.3	6.7	
SALAM	6.7	6.3	7.0	7.0	98.0	28.3	5.7	6.0	5.8	
UGA SR14-1E	6.7	3.3	7.0	6.7	94.7	75.0	6.0	5.7	5.8	
LSD VALUE	1.6	3.4	1.4	1.9	2.2	11.7	0.4	0.9	0.4	
C.V. (%)	9.6	35.7	7.0	10.3	1.2	19.2	3.8	7.4	3.8	

<sup>1/</sup> 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).

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

# MEAN TURFGRASS QUALITY AND OTHER RATINGS OF SEASHORE PASPALUM CULTIVARS GROWN UNDER TRAFFIC STRESS AT COLLEGE STATION, TX 1/2019 DATA

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

	GENETIC	SPRING	LEAF	WINTER			~	ALITY RA			
NAME	COLOR	GREENUP	TEXTURE	COLOR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
UGA SR15-15	7.7	6.0	7.0	5.3	6.7	7.3	6.7	7.0	7.3	7.0	7.0
UGA SR15-14	7.7	5.3	7.7	6.0	6.3	6.0	6.7	6.7	7.3	7.0	6.7
UGP 73	7.7	5.7	6.3	5.0	6.7	6.3	6.7	6.7	7.3	6.7	6.7
SEASTAR	7.0	5.7	5.7	4.3	6.3	6.7	6.7	6.7	7.0	6.3	6.6
UGP 94	6.3	5.3	5.7	4.0	6.0	6.3	6.7	6.3	6.7	6.3	6.4
SALAM	6.5	6.5	5.5	4.5	6.5	6.5	6.0	6.0	6.5	6.0	6.3
UGA 1743	7.7	5.7	6.3	6.0	6.3	6.0	6.0	6.3	6.7	6.3	6.3
SEA ISLE 1	6.7	6.0	5.3	4.7	6.3	6.3	6.3	5.7	6.3	5.7	6.1
UGA HYB2	6.7	5.7	6.0	4.3	5.3	6.3	6.3	5.7	6.3	6.0	6.0
UGA SR14-1E	6.3	5.0	6.3	5.3	5.0	6.3	5.3	6.3	6.0	6.0	5.8
LSD VALUE	0.9	1.6	1.3	0.8	1.4	2.5	1.4	2.7	2.1	2.0	1.4
C.V. (%)	7.0	11.1	10.4	9.4	10.3	13.6	9.4	15.0	12.0	12.1	8.6

- 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 5. (CONT'D)

# MEAN TURFGRASS QUALITY AND OTHER RATINGS OF SEASHORE PASPALUM CULTIVARS GROWN UNDER TRAFFIC STRESS AT COLLEGE STATION, TX 1/2019 DATA

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

#### PERCENT GROUND COVER NO TRAFFIC NO TRAFFIC NO TRAFFIC NO TRAFFIC TRAFFIC TRAFFIC TRAFFIC TRAFFIC TRAFFIC TRAFFIC TRAFFIC NAME SEPT 10 SEPT 18 SEPT 27 OCT 7 OCT 17 OCT 23 SEPT 10 SEPT 18 SEPT 27 OCT 7 OCT 17 OCT 23 UGA SR15-15 84.0 86.7 85.3 86.0 77.7 73.0 82.0 76.3 87.0 86.7 84.3 70.7 UGA SR15-14 89.0 86.7 88.7 90.0 86.7 86.3 89.3 88.0 87.0 87.0 85.0 83.0 UGP 73 92.0 95.0 87.7 83.7 85.0 80.0 92.3 91.3 81.7 78.0 76.0 69.7 SEASTAR 92.7 93.7 90.7 91.0 86.7 88.0 92.3 93.0 90.3 85.3 79.3 86.3 UGP 94 86.3 89.3 85.0 88.7 85.3 76.3 84.0 83.3 80.7 79.3 77.7 73.0 SALAM 86.0 83.5 89.0 86.5 85.0 90.0 88.0 87.0 85.0 81.0 82.0 86.5 UGA 1743 94.0 93.0 88.7 94.0 93.0 89.3 90.7 95.0 91.7 92.0 81.0 74.7 SEA ISLE 1 88.7 85.7 84.3 87.0 83.7 83.0 83.7 83.0 83.3 79.0 80.3 84.0 89.0 UGA HYB2 89.3 93.3 92.7 82.7 81.7 87.0 88.7 86.0 85.0 80.0 81.0 UGA SR14-1E 88.3 86.7 90.7 88.7 91.0 89.0 82.0 87.7 85.0 83.3 87.3 76.7 17.0 LSD VALUE 18.2 12.1 17.7 13.7 17.6 23.2 20.6 23.9 16.1 22.3 25.5 C.V. (%) 7.3 5.8 7.0 6.8 6.3 8.6 9.3 8.4 9.6 7.8 10.1 12.5

<sup>1/</sup> 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).

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

TABLE 6. GENETIC COLOR RATINGS OF SEASHORE PASPALUM CULTIVARS  $1/2019~{\rm DATA}$ 

GENETIC	COLOR	RATINGS	1-9;	9=DARK	GREEN	2/
		3 T 1	~ ~ ~	0.771		

NAME	AL1	CA3	OK1	MEAN
UGA 1743 UGP 73 UGA SR15-15 SEA ISLE 1 UGA SR15-14 SALAM UGA HYB2 SEASTAR UGA SR14-1E UGP 94	8.3 6.0 5.0 7.7 6.7 6.7 5.7 5.7 7.0	5.7 6.3 6.0 5.3 6.0 6.0 6.0 5.3 6.0	6.3 7.0 6.7 6.0 6.3 7.0 7.0 6.0 5.7	7.0 6.8 6.7 6.7 6.6 6.3 6.3 6.2 6.2
LSD VALUE C.V. (%)	1.3 13.1	0.7 6.9	0.8 7.4	0.4 9.4

<sup>1/</sup> 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. SPRING GREENUP RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAME	CA3	FL3	MS1	OK1	MEAN
UGA SR15-15 SALAM UGA HYB2 UGP 73 SEASTAR UGP 94 UGA SR15-14 SEA ISLE 1 UGA 1743 UGA SR14-1E	6.0 6.0 6.0 6.0 6.0 5.7 6.0 5.7	3.3 3.7 3.0 3.3 4.0 3.0 3.0	4.3 4.3 4.7 5.0 5.0 4.7 4.3 3.7 5.0	5.7 5.3 5.3 5.0 5.0 5.3 5.7 5.0	5.4 5.1 4.9 4.9 4.8 4.7 4.5 4.3
LSD VALUE C.V. (%)	0.4 4.4	1.0 19.8	1.1 14.5	0.7 8.5	0.5 16.9

<sup>1/</sup> 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).

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

TABLE 8. LEAF TEXTURE RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

<sup>1/</sup> 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. SPRING DENSITY RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

DENSITY RATI	NGS 1-9;	9=MAXI	MUM DEN	SITY 2/
NAME	CA3	FL3	MS1	MEAN
UGP 73 UGP 94 SALAM SEA ISLE 1 SEASTAR UGA SR15-15 UGA 1743 UGA HYB2 UGA SR15-14 UGA SR14-1E	6.3 6.0 6.3 6.0 6.0 6.0 5.3 6.0 6.0	5.0 6.3 6.0 5.7 5.0 5.0 4.3 2.7	6.7 5.3 6.0 5.3 6.0 6.0 5.7 5.7	6.0 6.0 5.9 5.7 5.7 5.7 5.7 5.6 5.3 4.4
LSD VALUE C.V. (%)	0.7 7.6	1.5 19.2	0.8	0.6 11.8

<sup>1/</sup> 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).

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

TABLE 10. SUMMER DENSITY RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAME	CA3	FL3	OK1	MEAN
UGP 73 UGP 94 SEA ISLE 1 UGA SR15-15 UGA SR15-14 SALAM SEASTAR UGA HYB2 UGA 1743 UGA SR14-1E	6.3 6.0 6.0 6.0 5.7 6.0 6.0 5.7	6.7 8.0 6.7 6.0 5.7 6.3 7.0 6.3	8.0 6.3 6.7 6.7 6.0 6.0 6.3 6.7 5.3	7.1 6.5 6.5 6.3 6.3 6.3 6.3 5.8
LSD VALUE C.V. (%)	0.6 6.2	0.9	0.8 7.5	0.4 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 11. FALL DENSITY RATINGS OF SEASHORE PASPALUM CULTIVARS  $1/2019~\mathrm{DATA}$ 

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

NAME	CA3	FL3	MEAN
UGA SR15-15 SEA ISLE 1 UGA SR14-1E SALAM UGA HYB2 UGP 94 UGP 73 SEASTAR UGA SR15-14 UGA 1743	6.0 6.0 6.0 6.0 5.7 5.7 6.0 5.3	7.3 7.0 7.0 6.7 6.7 7.0 6.7 6.3 7.0	6.7 6.5 6.3 6.3 6.3 6.2 6.2 5.7
LSD VALUE C.V. (%)	0.6 6.3	1.8 15.9	0.9 12.6

<sup>1/</sup> 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).

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

TABLE 12. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	OK1
SALAM SEASTAR UGA SR15-14 UGP 73 UGA HYB2 UGP 94 UGA 1743 UGA SR15-15 SEA ISLE 1 UGA SR14-1E	98.0 98.0 98.0 98.0 97.7 97.7 97.3 97.3 97.0
LSD VALUE C.V. (%)	1.4

- 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 13. PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

NAME	Ξ.	OK1
SALA UGA SEA UGA UGA UGP UGA	STAR AM HYB2 ISLE 1 SR15-15 SR15-14	99.0 99.0 99.0 99.0 99.0 99.0 98.7 99.0 99.0
	VALUE	2.4 1.5

- 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 14. PERCENT LIVING GROUND COVER (FALL) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

PERCENT LIVING GROUND COVER IN FALL: LOCATIONS 2/

NAME	OK1
SALAM	99
SEA ISLE 1	99
SEASTAR	99
UGA 1743	99
UGA HYB2	99
UGA SR14-1E	99
UGA SR15-14	99
UGA SR15-15	99
UGP 73	99
UGP 94	99
LSD VALUE	0
C.V. (%)	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 15. FALL COLOR (SEPTEMBER) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAME	AL1	FL3	MEAN
UGA SR15-14 UGA 1743 UGP 73 SALAM SEA ISLE 1 UGA SR14-1E UGP 94 SEASTAR UGA SR15-15 UGA HYB2	7.0 7.0 6.3 6.5 7.0 6.3 6.0 5.0	7.3 7.0 6.7 6.0 6.7 6.0 6.7 6.0	7.2 7.0 6.7 6.6 6.5 6.5 6.5 6.5 8.5
LSD VALUE C.V. (%)	2.1 19.2	1.5 14.1	1.3 16.7

- 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 16. FALL COLOR (OCTOBER) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAME	FL3
UGA SR15 UGA SR15 UGP 73 UGP 94 UGA HYB2 SALAM SEA ISLE UGA SR14 SEASTAR	7.0 7.0 6.7 6.3 6.0 1 6.0
LSD VALUE C.V. (%)	E 1.6 15.6

- 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 (NOVEMBER) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAMI	Ξ	MS1
UGA UGA UGP UGA UGA SEA UGP	STAR SR14-1E SR15-14 94 HYB2 SR15-15 ISLE 1	4.0 3.7 3.3 3.3 3.0 3.0 2.7 2.7 2.3
	VALUE	0.9 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 18. FALL COLOR (DECEMBER) RATINGS OF SEASHORE PASPALUM CULTIVARS 1/2019 DATA

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

NAME	Ξ	CA3
SEAS UGA UGA UGP UGA UGA	ISLE 1 STAR SR14-1E SR15-15 73 1743 HYB2 SR15-14	6.0 6.0 6.0 6.0 6.0 5.7 5.7 5.7
	VALUE	0.5 5.5

- 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 19. DOLLAR SPOT RATINGS OF SEASHORE PASPALUM CULTIVARS AT AUBURN, AL  $\ 1/\ 2019$  DATA

DOLLAR SPOT RATINGS 1-9; 9=NO DISEASE 2/

NAME	JULY	SEPTEMBER	OCTOBER	MEAN
UGA SR15-15 UGP 73 SEASTAR UGP 94 UGA SR15-14 UGA HYB2 UGA SR14-1E UGA 1743 SALAM SEA ISLE 1	7.7 6.0 5.3 3.7 5.0 5.0 4.7 4.0 2.0 2.7	9.0 9.0 8.3 9.0 9.0 9.0 6.3 7.3 7.0 4.7	9.0 9.0 9.0 7.7 7.0 5.5 7.7 5.5	8.6 8.0 7.6 6.8 6.6 6.2 6.1 4.8 4.3
LSD VALUE C.V. (%)	6.7 55.4	5.3 26.6	8.3 38.2	4.5 28.3

- 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.

APPENDIX TABLE. SUMMARY OF TURFGRASS QUALITY RATINGS FOR SEASHORE PASPALUM CULTIVARS  $\star/$  2019 DATA

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

NAME	QUALITY MEAN 1/	MAXIMUM IN TOP 25% 2/
SALAM SEA ISLE 1 SEASTAR UGA 1743 UGA HYB2 UGA SR14-1E UGA SR15-14 UGA SR15-15 UGP 73 UGP 94	6.0 6.0 5.8 5.9 5.7 5.4 5.6 5.8 6.1	60 20 20 20 0 0 0 20 40
LSD VALUE C.V. (%)	0.2 5.7	

<sup>\*/</sup> 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).

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

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

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