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, one member from the Sports Turf Managers Association of America (STMA), 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. Sean Chaney, DLF North America
Mr. Micah Gould, Barenbrug USA.
Dr. Cole Thompson, USGA Green Section
Dr. Barry Stewart, Mississippi State University
Dr. Chas Schmid, Oregon State University
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Mr. Mark Johnson, Golf Course Superintendents Assoc. of America
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CONTENTS

2020 National Bentgrass (PUTTING GREEN) Test – 2023 data

CONTENTS (Continued)

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*.

2020 NATIONAL BENTGRASS TEST
(Putting Green)

LOCATIONS SUBMITTING DATA FOR 2023

State	Location	Code
Illinois	Olympia Fields (Olympia Fields, CC)	IL5
Indiana	West Lafayette	IN1
Indiana	West Lafayette (Reduced Fungicides)	IN2
Kansas	Olathe (Shadow Glen, GC)	KS3
Massachusetts	Amherst	MA1
Minnesota	St. Paul	MN1
New Jersey	North Brunswick (Reduced Fungicides)	NJ1
North Carolina	Raleigh	NC1
Oklahoma	Stillwater (Karsten Creek CC)	OK1
Oregon	McKenzie Bridge (Tokatee GC)	OR6
Utah	Logan	UT1
Virginia	Blacksburg	VA1
Wisconsin	Madison	WI1

2020 NATIONAL BENTGRASS TEST
(Putting Green)

Entries and Sponsors

Entry No	Name	Species	Sponsor
*1	Penncross	Creeping	Standard
*2	Penn A-1	Creeping	Standard
*3	007XL	Creeping	DLF USA
4	CY-4	Creeping	Snow Brand Seed Co., Ltd.
*5	S1	Creeping	SiteOne Landscape Supply
*6	Piranha	Creeping	Standard
*7	Barracuda	Creeping	Mountain View Seeds
8	PSU-CBG1	Creeping	Penn State University
9	PSU-CBG2	Creeping	Penn State University
10	PSU-CBG3	Creeping	Penn State University
11	DLFPS-AP-3084	Creeping	DLF USA
12	PVF-PV-1	Creeping	Lebanon Turf
13	PVF-PV-2	Creeping	SiteOne Landscape
*14	Declaration	Creeping	Standard
*15	Spectrum (LNS 19)	Creeping	Landmark Turf & Native Seeds
*16	Oakley (PPG-AP-TV1)	Creeping	Mountain View Seeds
*17	Piper (PPG-AP-MTV2)	Creeping	Mountain View Seeds
18	PST-0DSF	Creeping	Pure-Seed Testing
19	PST-0HR	Creeping	Pure-Seed Testing
*20	L-93 XD	Creeping	Standard

* Commercially Available in the USA in 2024 or any Other Country

TABLE A. 2023 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN THE 2020 NATIONAL BENTGRASS (GREEN) 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
IL5	-	-	-	-	-	-	0.0-0.5	-
IN1	SAND	7.6-8.5	2	151-240	2.1-3.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
IN2	SAND	7.6-8.5	2	151-240	2.1-3.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
KS3	SAND	-	0-60	151-240	3.1-4.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
MA1	SAND	5.6-6.0	61-150	151-240	3.1-4.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
MN1	SAND	7.1-7.5	0-60	0-150	2.1-3.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
NC1	SILTY CLAY LOAM	6.1-6.5	61-150	0-150	3.1-4.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
NJ1	SAND	6.1-6.5	0-60	0-150	2.1-3.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
OK1	SAND	7.1-7.5	61-150	151-240	3.1-4.0	LIGHT SHADE	0.0-0.5	TO PREVENT STRESS
OR6	SILTY CLAY LOAM	6.1-6.5	0-60	0-150	2.1-3.0	PARTIAL SHADE	0.0-0.5	TO PREVENT STRESS
UT1	SAND	6.6-7.0	-	-	-	FULL SUN	0.0-0.5	TO PREVENT STRESS
VA1	SAND	5.6-6.0	0-60	0-150	4.1-5.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
WI1	SILT LOAM AND SILT	7.1-7.5	-	-	3.1-4.0	FULL SUN	-	TO PREVENT DORMANCY

TABLE B. LOCATIONS AND DATA COLLECTED IN 2023

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	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE
IL5				X	X	X	X			X				
IN1				X	X	X	X	X	X	X	X		X	X
IN2				X	X	X	X	X	X	X	X			
KS3			X		X	X	X	X			X	X	X	
MA1				X	X	X	X	X	X	X	X			
MN1					X	X	X	X	X	X		X	X	
NC1	X	X	X	X	X	X	X	X	X	X	X	X		X
NJ1				X	X	X	X	X	X	X		X	X	X
OK1						X	X	X	X	X		X		
OR6				X	X	X	X			X			X	X
UT1					X	X	X	X	X	X		X	X	
VA1				X	X	X	X	X	X	X		X		
WI1				X	X	X	X	X	X	X	X	X	X	

TABLE B. (CONT'D) LOCATIONS AND DATA COLLECTED IN 2023

LOCATION	SPRING DENSITY	SUMMER DENSITY	FALL DENSITY	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	WINTER COLOR	DOLLAR SPOT	BROWN PATCH WARM.TEMP	ANTHRACNOSE RATINGS	PYTHIUM ROOT ROT
IL5											
IN1	X	X						X			
IN2									X		
KS3	X							X	X		
MA1											
MN1				X		X					
NC1	X	X		X	X	X	X	X		X	X
NJ1			X					X			
OK1		X				X					
OR6											
UT1		X									
VA1	X						X	X	X		
WI1	X	X	X								

TABLE B. (CONT'D) LOCATIONS AND DATA COLLECTED IN 2023

LOCATION	FALL COLOR OCTOBER	FALL COLOR NOVEMBER	POA ANNUA	CRABGRASS RATINGS	SILVERY THREAD MOSS	DOLLAR SPOT RATINGS JUL	DOLLAR SPOT RATINGS AUG	DOLLAR SPOT RATINGS SEP	DOLLAR SPOT RATINGS OCT	DOLLAR SPOT RATINGS NOV	ALGAE RATINGS 3/1	ALGAE RATINGS 5/1	ALGAE RATINGS 5/30	YELLOW TUFT	BROWN PATCH JUN	BROWN PATCH JUL	WEAR TOLERANCE MAY	WEAR TOLERANCE JULY	WEAR TOLERANCE OCT
IL5	X		X																
IN1			X																
* IN2																			
KS3														X	X	X			
MA1																	X	X	X
MN1																			
NC1		X	X	X					X	X	X	X	X						
NJ1							X		X										
OK1																			
OR6	X																		
UT1		X																	
VA1					X	X		X											
WI1		X																	

* MORE DATA FOR IN2 IN TABLE 4.

TABLE 1. MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS GROWN ON 1/
A GREEN AT THREE LOCATIONS IN THE U.S. FOR LPI GROUP 1 **/
2023 DATA

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

NAME	# ENTRY	NC1
DLFPS-AP-3084	11	7.9
*SPECTRUM (LNS 19)	15	7.9
PVF-PV-2	13	7.8
*PIRANHA	6	7.8
PST-0HR	19	7.8
PVF-PV-1	12	7.7
*007XL	3	7.7
*OAKLEY (PPG-AP-MTV1)	16	7.7
*S1	5	7.7
*L-93 XD	20	7.7
CY-4	4	7.6
*BARRACUDA	7	7.6
*PIPER (PPG-AP-MTV2)	17	7.6
PST-0DSF	18	7.5
PSU-CBG1	8	7.4
PSU-CBG2	9	7.4
*DECLARATION	14	7.3
*PENN A-1	2	7.3
PSU-CBG3	10	7.2
*PENNCROSS	1	6.0
LSD VALUE		0.8
C.V. (%)		6.5

* COMMERCIALLY AVAILABLE IN THE USA IN 2023.

**/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS AMMI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE AN AMMI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON AMMI, GO TO WWW.NTEP.OR/AMMI_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. MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT THREE LOCATIONS IN THE U.S. FOR LPI GROUP 2 */ 1/
2023 DATA

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

NAME	# ENTRY	WI1	VA1	IN1	MN1	UT1	MEAN
PST-0HR	19	7.3	7.1	8.1	7.4	8.3	7.6
PVF-PV-1	12	7.1	6.8	7.6	6.8	7.3	7.1
SPECTRUM (LNS 19)	15	7.1	6.8	7.5	6.7	7.0	7.0
PIPER (PPG-AP-MTV2)	17	6.9	6.7	7.5	6.7	7.3	7.0
PSU-CBG2	9	6.8	6.6	7.4	6.7	7.4	7.0
PSU-CBG3	10	6.7	6.5	7.4	6.7	7.6	7.0
OAKLEY (PPG-AP-MTV1)	16	7.0	6.7	7.4	6.7	7.1	7.0
PSU-CBG1	8	6.8	6.6	7.4	6.7	7.3	7.0
PVF-PV-2	13	7.0	6.7	7.3	6.5	6.8	6.9
DLFPS-AP-3084	11	7.1	6.7	7.1	6.4	6.4	6.7
007XL	3	6.9	6.5	7.1	6.3	6.4	6.6
PST-0DSF	18	6.7	6.3	6.9	6.1	6.3	6.5
PIRANHA	6	6.9	6.4	6.8	6.0	5.8	6.4
S1	5	6.8	6.4	6.8	6.0	5.9	6.4
L-93 XD	20	6.8	6.4	6.8	6.0	5.9	6.4
BARRACUDA	7	6.6	6.2	6.4	5.6	5.3	6.0
CY-4	4	6.5	6.0	6.0	5.2	4.5	5.7
PENN A-1	2	6.2	5.7	5.9	5.1	4.5	5.5
DECLARATION	14	6.1	5.6	5.5	4.7	3.8	5.1
PENNCROSS	1	4.9	4.4	4.3	3.5	2.8	4.0
LSD VALUE		0.8	0.8	0.8	0.8	0.8	0.8
C.V. (%)		7.3	7.7	7.1	8.0	7.9	7.6

*/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS AMMI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE AN AMMI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON AMMI, GO TO WWW.NTEP.OR/AMMI_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 BENTGRASS CULTIVARS GROWN ON A GREEN UNDER TRAFFIC STRESS AT AMHERST, MA 1/
2023 DATA

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

	WEAR TOLERANCE			QUALITY RATINGS								
NAME	MAY	JULY	OCTOBER	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
PST-0HR	7.0	6.0	6.7	7.3	7.0	5.7	6.3	6.7	7.0	7.0	6.0	6.6
PSU-CBG2	5.7	5.3	5.7	6.7	6.7	6.3	6.3	6.3	6.3	7.0	5.7	6.4
PIPER (PPG-AP-MTV2)	5.3	4.7	5.0	6.7	6.3	6.0	6.7	6.3	7.0	6.3	5.3	6.3
PVF-PV-2	5.3	4.7	6.0	6.3	6.7	6.7	6.7	6.3	6.7	5.7	5.7	6.3
OAKLEY (PPG-AP-MTV1)	4.3	5.0	4.7	6.7	6.3	5.7	6.7	6.3	6.7	6.3	5.0	6.2
PIRANHA	4.3	5.0	6.0	6.3	6.7	6.3	6.0	6.3	6.3	6.0	5.3	6.2
CY-4	6.3	6.3	6.3	6.3	6.0	5.7	6.0	6.0	7.0	6.0	6.0	6.1
SPECTRUM (LNS 19)	4.7	4.7	5.0	6.0	6.3	6.7	5.7	6.3	6.3	6.3	5.3	6.1
007XL	4.0	4.7	5.3	6.7	6.3	6.3	6.3	6.0	5.7	6.0	5.0	6.0
BARRACUDA	5.3	5.3	5.3	6.3	6.3	6.3	6.0	5.7	6.3	6.0	5.0	6.0
PSU-CBG1	5.3	6.0	6.3	6.3	6.7	5.7	6.0	6.3	6.3	6.0	5.0	6.0
PSU-CBG3	6.0	5.0	5.7	6.3	6.3	5.7	5.3	5.7	6.7	6.3	5.3	6.0
PVF-PV-1	5.0	4.3	4.7	6.3	6.3	6.7	6.3	6.3	5.7	5.7	4.7	6.0
S1	4.7	5.0	5.7	6.3	6.0	6.3	5.7	6.3	6.0	5.7	5.3	6.0
DLFPS-AP-3084	4.0	4.7	5.0	5.7	6.0	5.7	5.7	6.0	5.3	6.3	5.0	5.7
DECLARATION	4.0	4.0	5.0	6.3	6.0	5.3	5.7	5.3	5.3	5.7	5.0	5.6
L-93 XD	6.0	5.3	6.0	6.3	5.3	5.3	5.3	5.7	5.7	6.0	5.0	5.6
PENN A-1	4.7	3.7	5.0	5.7	6.0	5.7	5.7	5.7	5.7	5.3	4.3	5.5
PST-0DSF	3.7	4.7	5.7	5.7	6.0	5.7	5.7	5.3	4.7	5.7	4.7	5.4
PENNCROSS	3.3	4.3	3.0	5.0	5.0	4.3	4.0	4.0	4.3	4.7	4.0	4.4
LSD VALUE	1.1	0.6	1.0	1.1	0.8	1.0	0.9	1.0	0.8	0.6	0.6	0.5
C.V. (%)	14.0	7.8	11.0	8.9	7.1	9.4	8.7	9.4	8.1	6.2	6.8	5.2

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 4. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN UNDER REDUCED FUNGICIDES AT WEST LAFAYETTE, IN 1/
2023 DATA

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

NAME	QUALITY RATINGS APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	6/30	7/7	7/16	7/26	8/13	8/30	9/30	MEAN
OAKLEY (PPG-AP-MTV1)	7.7	7.3	7.0	8.3	6.7	7.3	7.3	7.3	8.3	7.7	7.3	5.7	6.7	6.7	7.0	7.2
SPECTRUM (LNS 19)	6.7	7.3	7.3	8.0	7.0	7.3	7.3	7.3	8.0	7.3	7.0	7.0	6.7	6.7	7.7	7.2
007XL	7.0	6.7	7.0	8.3	5.7	8.0	7.0	7.3	8.3	7.0	6.7	6.3	5.0	6.0	7.3	6.9
DLFPS-AP-3084	7.0	7.3	6.3	8.3	6.3	7.0	7.0	7.3	8.3	7.0	6.3	6.0	6.0	6.3	7.0	6.9
PVF-PV-2	6.7	6.7	7.0	8.3	6.3	7.7	7.0	7.3	8.3	6.3	6.7	6.0	5.7	6.3	7.7	6.9
PVF-PV-1	6.7	7.3	7.0	8.0	5.7	8.0	6.7	6.7	8.0	7.3	6.7	5.7	5.3	6.0	7.0	6.8
PIPER (PPG-AP-MTV2)	7.3	7.0	6.7	6.7	5.3	8.0	7.0	7.7	8.0	6.0	6.0	6.0	5.0	6.0	7.7	6.7
PST-0DSF	6.3	7.0	7.7	7.7	4.7	8.0	7.7	7.7	8.0	6.0	6.3	5.0	4.7	5.7	7.3	6.6
PIRANHA	6.7	6.3	6.7	7.0	5.0	7.3	7.3	7.3	7.7	6.3	5.3	5.0	4.7	5.7	7.3	6.4
L-93 XD	6.0	7.0	7.0	6.7	5.0	7.3	6.7	7.3	7.3	6.0	5.7	5.0	4.7	5.7	7.0	6.3
S1	6.7	6.7	6.7	6.7	5.0	7.3	7.0	7.0	7.3	5.3	5.3	4.7	4.3	5.0	7.3	6.2
CY-4	6.0	6.0	6.0	7.0	5.7	6.7	6.0	6.0	7.0	6.3	5.7	5.7	5.7	5.7	6.0	6.1
PSU-CBG1	7.0	7.7	8.0	5.0	3.3	7.7	8.0	8.0	8.0	5.0	4.0	4.0	3.3	5.3	7.7	6.1
PST-0HR	7.0	7.7	7.3	4.0	3.3	7.3	8.3	8.0	8.0	4.3	4.0	3.7	3.3	5.3	7.7	6.0
PSU-CBG2	6.7	7.0	7.7	5.3	3.7	7.7	7.3	7.3	8.0	4.7	4.0	4.0	3.3	5.7	7.3	6.0
BARRACUDA	6.3	6.0	6.7	6.3	4.3	6.7	6.3	6.7	7.0	5.7	5.7	4.7	4.3	5.0	6.3	5.9
DECLARATION	6.3	6.0	6.0	5.7	5.0	6.3	6.3	6.3	6.7	5.0	5.0	5.0	4.0	5.0	6.3	5.7
PSU-CBG3	6.7	7.7	7.0	4.3	3.3	6.3	7.3	7.0	8.0	4.0	4.0	3.0	3.0	5.0	6.7	5.6
PENN A-1	5.7	6.0	6.0	5.0	4.0	6.3	5.7	5.7	6.0	5.0	4.7	4.3	3.7	5.0	5.7	5.2
PENNCROSS	4.3	4.7	4.7	3.7	2.7	4.0	4.3	4.3	5.0	3.3	3.3	3.0	2.7	3.7	4.3	3.9
LSD VALUE	1.6	0.9	0.8	1.3	1.0	0.9	1.4	1.1	0.8	1.1	1.1	0.9	0.9	0.8	0.9	0.4
C.V. (%)	11.9	8.4	7.3	12.9	13.3	8.0	11.6	9.7	6.7	11.9	13.0	11.1	13.1	8.9	8.4	4.4

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 4. (CONT'D)

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN UNDER REDUCED FUNGICIDES AT WEST LAFAYETTE, IN 1/
2023 DATA

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

NAME	BROWN PATCH WARM TEMP	FAIRY RING	DOLLAR SPOT INFECTION CENTER COUNTS 7/2	7/7	7/16
OAKLEY (PPG-AP-MTV1)	9.0	9.0	0.0	2.0	0.7
SPECTRUM (LNS 19)	9.0	7.7	0.0	0.7	1.0
007XL	9.0	8.7	0.7	1.0	0.7
DLFPS-AP-3084	8.0	8.0	1.0	0.7	2.0
PVF-PV-2	8.0	6.7	2.3	4.7	1.7
PVF-PV-1	9.0	5.0	3.0	3.7	2.3
PIPER (PPG-AP-MTV2)	9.0	6.0	14.0	13.0	8.7
PST-0DSF	9.0	7.0	0.7	11.5	7.7
PIRANHA	8.0	6.3	12.0	19.0	18.7
L-93 XD	9.0	6.3	2.0	14.7	17.7
S1	9.0	6.3	28.7	28.7	18.3
CY-4	9.0	9.0	0.7	2.3	1.0
PSU-CBG1	8.3	7.7	35.7	43.0	56.3
PST-0HR	9.0	7.3	71.7	79.3	70.3
PSU-CBG2	9.0	6.3	49.0	53.3	52.3
BARRACUDA	8.0	5.7	8.0	25.0	19.7
DECLARATION	9.0	9.0	7.3	24.7	22.3
PSU-CBG3	9.0	6.0	79.7	85.0	79.3
PENN A-1	6.7	7.3	20.3	36.3	34.7
PENNCROSS	6.7	9.0	72.7	81.3	73.7
LSD VALUE	2.2	4.3	40.8	32.6	26.3
C.V. (%)	11.4	24.3	114.9	74.1	68.0

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. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN UNDER REDUCED FUNGICIDES AT NORTH BRUNSWICK, NJ 1/ 2023 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	FALL DENSITY	DOLLAR SPOT AUGUST	DOLLAR SPOT OCTOBER	SOD WEB WORM	QUALITY RATINGS APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
SPECTRUM (LNS 19)	8.0	6.7	8.0	8.3	9.0	8.7	4.3	8.0	7.7	8.0	8.3	8.7	8.0	7.7	8.0
PIPER (PPG-AP-MTV2)	7.7	7.7	8.7	7.7	7.7	7.3	5.0	8.7	7.3	8.0	7.7	7.3	6.7	6.0	7.4
OAKLEY (PPG-AP-MTV1)	7.3	6.0	7.3	6.3	7.7	7.3	4.7	8.0	8.3	7.7	6.3	7.3	7.3	5.3	7.2
007XL	7.3	6.3	7.7	6.0	8.3	7.7	5.3	8.0	7.0	7.0	7.3	7.7	7.3	5.7	7.1
PVF-PV-1	7.3	7.3	8.0	6.7	7.7	7.0	5.0	7.7	6.7	8.3	8.3	6.7	7.0	5.0	7.1
PVF-PV-2	7.0	7.3	7.7	6.3	7.3	7.7	4.7	8.0	7.0	7.3	8.0	7.0	6.7	5.3	7.0
CY-4	8.7	5.0	7.7	7.0	8.0	8.7	6.7	6.7	5.0	5.7	5.7	6.0	6.7	7.0	6.1
DLFPS-AP-3084	7.3	4.3	6.7	5.3	8.0	7.3	5.0	6.7	5.7	6.3	5.3	6.7	6.0	5.0	6.0
PIRANHA	6.3	6.7	5.0	4.3	6.3	5.3	6.0	6.3	6.0	7.3	6.3	5.3	5.3	3.3	5.7
S1	6.3	6.0	6.7	5.3	7.3	5.3	5.7	7.0	5.3	6.0	5.0	6.0	5.0	3.7	5.4
L-93 XD	6.7	4.7	6.0	5.0	7.7	5.3	5.7	6.0	5.7	5.7	5.0	6.3	4.7	3.3	5.2
BARRACUDA	5.0	4.3	5.7	4.3	7.3	6.0	6.0	6.3	4.7	5.0	4.3	5.3	5.0	3.7	4.9
PSU-CBG2	6.0	2.7	7.3	6.0	4.0	2.7	2.3	6.7	6.7	6.3	5.3	3.3	4.3	1.7	4.9
PST-0DSF	4.0	3.3	4.7	4.3	6.3	4.3	2.0	6.3	4.7	5.0	5.3	5.0	4.3	3.0	4.8
PSU-CBG1	6.0	3.0	8.0	7.0	3.0	1.7	2.7	7.3	6.7	6.0	4.0	2.7	3.3	1.0	4.4
PSU-CBG3	5.0	1.7	7.7	7.0	3.0	1.7	2.7	6.7	6.0	5.3	3.7	1.7	2.7	1.0	3.9
DECLARATION	2.7	4.3	3.3	2.3	7.7	6.7	7.3	4.0	3.3	4.0	4.0	3.3	3.0	3.7	3.6
PENN A-1	3.7	2.0	4.0	3.0	6.0	4.7	5.0	4.0	3.3	3.3	4.3	4.0	3.7	2.3	3.6
PST-0HR	7.0	3.7	7.7	7.0	2.7	2.3	3.0	5.0	5.3	5.7	4.0	1.0	2.7	1.0	3.5
PENNCROSS	1.0	1.3	3.3	1.0	8.0	6.7	7.7	2.0	1.7	2.0	2.0	1.7	1.3	3.0	2.0
LSD VALUE	1.0	1.8	1.1	1.2	0.9	1.5	2.0	1.7	0.9	1.5	1.3	1.2	1.3	1.2	0.7
C.V. (%)	11.6	24.2	11.5	14.0	9.0	17.2	24.8	16.7	10.7	15.5	15.5	15.5	16.7	20.5	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 6. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT OLYMPIA FIELDS (OLYMPIA FIELDS CC), IL 1/
2023 DATA

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

NAME	COLOR OCTOBER	POA ANNUA	QUALITY RATINGS APR	MAY	JUN	JUL	OCT	MEAN
PSU-CBG1	8.0	9.0	7.3	8.7	7.0	8.0	8.0	7.8
PST-0HR	7.7	9.0	7.3	8.3	7.0	8.0	8.0	7.7
PSU-CBG2	7.7	9.0	7.3	7.7	7.7	8.0	8.0	7.7
PSU-CBG3	8.0	9.0	7.0	8.0	7.0	7.7	7.7	7.5
OAKLEY (PPG-AP-MTV1)	7.3	9.0	6.0	7.0	7.3	7.0	7.3	6.9
PVF-PV-1	6.7	9.0	6.3	7.7	6.7	6.7	7.0	6.9
SPECTRUM (LNS 19)	6.7	9.0	6.3	7.0	7.0	6.7	7.3	6.9
PIPER (PPG-AP-MTV2)	7.0	9.0	6.0	7.3	6.3	6.7	7.3	6.7
007XL	7.3	9.0	6.0	7.3	5.3	6.3	7.7	6.5
PVF-PV-2	7.3	9.0	6.0	6.7	5.3	7.0	7.0	6.4
CY-4	6.0	9.0	5.0	6.7	5.0	6.3	6.3	5.9
DLFPS-AP-3084	6.7	9.0	4.7	6.0	5.7	6.3	6.7	5.9
L-93 XD	7.0	8.7	4.7	6.7	5.7	6.0	6.7	5.9
PIRANHA	7.3	9.0	4.7	6.0	5.7	5.7	7.3	5.9
S1	6.3	9.0	5.0	6.0	5.3	6.3	7.0	5.9
BARRACUDA	6.0	9.0	5.0	5.7	6.0	4.7	5.7	5.4
PST-0DSF	5.7	7.7	4.3	4.7	5.7	5.3	5.3	5.1
PENN A-1	5.3	8.7	3.7	4.3	4.7	5.0	4.7	4.5
DECLARATION	4.3	8.0	3.7	4.0	5.3	5.0	4.0	4.4
PENNCROSS	4.0	8.0	3.0	3.7	4.7	4.0	3.7	3.8
LSD VALUE	1.0	0.5	1.1	1.0	1.9	0.8	1.1	0.6
C.V. (%)	9.9	3.5	13.1	10.2	16.5	8.4	10.3	6.1

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 7. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT OLATHE (SHADOW GLEN G.C.), KS 1/ 2023 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	SPRING DENSITY	DOLLAR SPOT	YELLOW TUFT JULY	BROWN PATCH JUNE	WARM TEMP. JULY	QUALITY RATINGS MAR	MAY	JUN	JUL	AUG	NOV	MEAN
PIRANHA	7.7	6.7	6.3	9.0	8.3	9.0	6.7	6.3	6.0	7.0	5.7	4.7	5.3	5.8
PST-0HR	7.3	5.3	6.3	9.0	7.7	9.0	7.7	6.0	5.7	6.7	6.3	4.3	4.7	5.6
007XL	6.7	6.3	6.3	9.0	8.7	9.0	6.0	6.0	6.3	6.3	4.3	4.3	5.0	5.4
PENN A-1	6.7	6.0	5.7	9.0	6.7	9.0	6.3	5.7	5.3	6.7	4.7	5.0	5.0	5.4
PIPER (PPG-AP-MTV2)	7.0	5.7	7.0	8.3	8.3	8.0	6.0	6.3	6.0	6.3	4.7	4.3	5.0	5.4
PVF-PV-1	6.0	6.0	5.3	9.0	7.7	8.3	5.7	6.3	5.0	5.7	4.7	5.0	6.0	5.4
S1	6.0	5.7	5.3	9.0	8.7	9.0	6.3	6.0	5.0	6.3	4.7	5.7	5.0	5.4
BARRACUDA	6.7	6.3	6.3	9.0	8.0	9.0	7.0	6.3	5.7	6.7	4.7	4.0	4.7	5.3
CY-4	7.0	6.3	6.3	9.0	8.7	7.7	5.3	6.0	5.7	6.3	4.7	4.3	5.0	5.3
PSU-CBG1	7.0	6.3	6.3	9.0	8.7	9.0	7.3	6.0	5.7	6.0	5.7	4.0	4.3	5.3
PSU-CBG2	7.7	6.0	7.7	9.0	8.3	9.0	8.0	6.0	6.7	6.3	5.3	3.0	4.3	5.3
PSU-CBG3	6.3	5.7	6.3	9.0	7.3	9.0	8.0	5.7	5.3	5.7	6.0	3.7	4.7	5.2
PVF-PV-2	6.3	5.3	6.7	8.7	7.7	9.0	6.0	6.0	5.3	6.3	4.7	4.3	4.7	5.2
DECLARATION	6.0	5.7	5.3	9.0	8.0	9.0	5.7	5.3	4.7	6.7	4.0	5.0	5.0	5.1
DLFPS-AP-3084	5.7	5.3	5.0	9.0	7.3	9.0	6.7	5.7	4.0	6.0	4.7	5.7	4.3	5.1
PENNCROSS	6.7	5.3	5.7	9.0	7.0	9.0	6.3	5.3	4.7	6.0	4.3	5.0	5.3	5.1
SPECTRUM (LNS 19)	5.3	5.3	4.7	9.0	7.3	9.0	8.0	5.3	4.3	6.0	5.7	4.7	4.3	5.1
OAKLEY (PPG-AP-MTV1)	7.0	6.3	6.0	9.0	7.7	8.0	6.0	5.7	5.7	6.0	4.3	4.0	3.7	4.9
PST-0DSF	6.3	5.3	4.7	8.0	7.0	9.0	8.3	5.3	4.0	5.7	5.0	4.7	4.3	4.8
L-93 XD	5.0	4.7	4.7	9.0	6.0	9.0	4.3	5.0	4.0	6.0	3.3	4.7	4.0	4.5
LSD VALUE	3.0	1.6	2.6	1.4	3.1	2.5	4.4	2.0	3.6	2.7	2.8	3.3	3.9	1.1
C.V. (%)	17.1	11.7	18.5	5.2	14.8	9.0	24.8	11.7	24.1	12.8	22.2	24.5	23.9	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 8. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT STILLWATER (KARSTEN CREEK C.C), OK 1/
2023 DATA

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

NAME	GENETIC COLOR	SUMMER DENSITY	PERCENT GROUND COVER FALL	QUALITY RATINGS JUN	JUL	AUG	SEP	OCT	MEAN
S1	6.3	6.7	94.7	6.3	5.3	5.3	5.0	7.3	5.9
PIRANHA	6.7	7.0	91.3	6.3	5.7	5.0	3.7	6.7	5.5
007XL	6.3	5.7	82.7	6.0	5.0	4.7	4.0	6.7	5.3
PVF-PV-2	6.0	7.3	75.0	6.3	6.3	5.3	3.0	5.7	5.3
BARRACUDA	6.0	5.7	89.3	6.3	5.0	4.7	3.7	6.3	5.2
SPECTRUM (LNS 19)	6.7	6.7	83.3	7.0	5.7	4.3	3.7	5.3	5.2
L-93 XD	5.7	6.7	73.3	6.0	5.7	4.3	3.0	6.3	5.1
DLFPS-AP-3084	5.7	7.0	60.0	6.3	5.3	4.3	3.0	5.3	4.9
PVF-PV-1	6.3	7.3	53.7	6.7	6.3	3.3	2.3	5.0	4.7
PIPER (PPG-AP-MTV2)	5.3	7.0	65.0	7.0	6.0	3.7	2.0	4.3	4.6
CY-4	5.7	6.5	70.0	5.3	5.0	3.7	3.7	5.0	4.5
PENN A-1	6.7	6.0	81.7	6.3	5.0	4.0	3.0	4.3	4.5
DECLARATION	6.0	6.0	90.0	4.7	2.7	4.7	3.3	6.0	4.3
OAKLEY (PPG-AP-MTV1)	6.0	7.0	51.7	7.7	5.0	3.0	2.3	3.3	4.3
PST-0HR	6.7	8.0	41.7	8.3	5.7	2.7	2.0	2.7	4.3
PSU-CBG2	6.3	8.0	20.0	8.0	4.3	2.7	1.3	2.7	3.8
PSU-CBG3	6.7	8.7	10.3	8.0	4.7	2.7	1.7	1.0	3.6
PSU-CBG1	5.7	8.0	4.0	8.0	3.3	1.3	1.0	1.0	2.9
PENNCROSS	.	.	.	.	.	.	.	.	.
PST-0DSF	.	.	.	.	.	.	.	.	.
LSD VALUE	1.1	1.4	38.1	1.7	2.3	1.6	1.5	7.3	1.9
C.V. (%)	8.5	11.0	35.6	13.8	21.5	24.3	30.7	60.0	18.9

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 9. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT MCKENZIE BRIDGE (TOKATEE G.C.), OR 1/
2023 DATA

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

NAME	SPRING GREENUP	LEAF TEXTURE	COLOR OCTOBER	QUALITY RATINGS APR	MAY	JUN	JUL	OCT	MEAN
PST-0HR	5.7	7.3	7.7	5.3	6.0	6.7	7.3	6.7	6.4
PIPER (PPG-AP-MTV2)	4.7	6.0	6.0	5.3	5.7	6.3	6.7	6.3	6.1
PSU-CBG1	5.3	7.7	6.0	5.0	5.7	6.0	6.7	6.0	5.9
OAKLEY (PPG-AP-MTV1)	4.7	6.7	5.7	5.3	5.7	6.3	5.7	5.3	5.7
PSU-CBG2	4.7	7.3	6.3	5.0	5.7	6.0	6.3	5.7	5.7
PSU-CBG3	4.7	7.0	7.3	4.7	5.3	6.0	6.3	6.3	5.7
BARRACUDA	4.0	5.3	5.3	4.7	5.0	5.7	6.0	6.3	5.5
PIRANHA	4.3	6.0	5.7	4.3	5.3	6.0	6.0	6.0	5.5
CY-4	3.7	5.0	4.0	3.7	5.3	6.3	6.3	5.3	5.4
DLFPS-AP-3084	4.0	5.3	5.3	4.7	5.3	5.3	6.0	5.7	5.4
PVF-PV-2	4.3	6.3	5.0	4.0	5.3	6.3	5.7	5.7	5.4
007XL	5.0	6.3	5.7	5.0	5.3	5.3	5.3	5.7	5.3
SPECTRUM (LNS 19)	4.7	6.0	5.3	4.7	5.3	5.3	5.3	5.0	5.1
L-93 XD	4.3	5.7	5.7	4.7	4.3	5.0	5.0	5.3	4.9
PVF-PV-1	3.7	6.7	5.7	4.0	4.7	5.3	5.3	5.0	4.9
PENN A-1	3.0	4.3	4.3	3.7	4.7	5.3	5.3	5.0	4.8
S1	4.3	5.7	5.0	4.0	4.3	5.0	5.3	4.7	4.7
PST-0DSF	3.3	6.3	5.0	3.7	4.3	5.0	4.7	4.7	4.5
PENNCROSS	2.3	3.3	3.3	3.3	3.7	4.3	5.7	4.7	4.3
DECLARATION	2.3	4.0	3.3	3.3	4.0	4.7	4.3	4.3	4.1
LSD VALUE	1.5	0.8	1.5	1.2	1.4	1.3	2.9	1.8	1.2
C.V. (%)	20.3	8.8	16.6	15.1	13.8	12.0	18.9	15.0	12.0

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 10. GENETIC COLOR RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	MN1	NC1	UT1	VA1	WI1	MEAN
PST-0HR	7.7	8.7	8.0	7.0	7.7	7.8
PST-0DSF	5.0	8.3	9.0	7.7	7.7	7.5
PSU-CBG2	5.7	8.7	7.7	6.3	7.7	7.2
PSU-CBG3	4.7	9.0	8.3	6.7	7.3	7.2
PSU-CBG1	4.7	8.0	8.3	6.7	7.0	6.9
PENN A-1	3.3	8.7	8.0	7.3	7.3	6.9
PVF-PV-1	5.7	8.3	6.3	6.3	7.0	6.7
SPECTRUM (LNS 19)	6.3	8.0	6.0	6.3	7.0	6.7
PIRANHA	3.7	8.0	7.3	7.0	7.0	6.6
PVF-PV-2	4.7	8.3	7.0	6.3	6.7	6.6
DLFPS-AP-3084	4.3	8.3	6.3	5.7	7.7	6.5
S1	4.0	8.0	7.0	6.3	7.0	6.5
L-93 XD	4.0	8.0	7.0	6.0	7.0	6.4
DECLARATION	2.0	8.0	7.0	7.7	7.0	6.3
PIPER (PPG-AP-MTV2)	4.7	7.7	7.0	6.0	6.3	6.3
BARRACUDA	3.3	8.0	7.0	6.3	6.7	6.3
OAKLEY (PPG-AP-MTV1)	4.3	7.7	6.0	5.7	7.3	6.2
007XL	3.7	8.0	6.3	5.7	6.3	6.0
PENNCROSS	2.0	7.0	6.7	6.7	6.0	5.7
CY-4	3.0	8.0	5.3	4.7	6.7	5.5
LSD VALUE	2.3	0.6	1.0	0.9	1.0	0.6
C.V. (%)	33.7	4.8	8.4	8.8	8.4	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 11. SPRING GREENUP RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	IN1	MN1	UT1	WI1	MEAN
PVF-PV-1	6.3	7.0	7.3	5.0	6.4
PIPER (PPG-AP-MTV2)	6.0	6.3	7.0	4.7	6.0
SPECTRUM (LNS 19)	6.0	6.0	6.7	5.0	5.9
007XL	6.3	6.3	6.7	4.3	5.9
S1	6.3	6.3	7.0	4.0	5.9
PSU-CBG1	4.7	7.0	7.7	4.0	5.8
BARRACUDA	6.3	6.3	6.3	4.0	5.8
DLFPS-AP-3084	6.3	4.7	7.3	4.7	5.8
OAKLEY (PPG-AP-MTV1)	5.7	5.3	7.7	4.3	5.8
PVF-PV-2	6.0	5.0	7.0	4.7	5.7
L-93 XD	6.0	4.7	6.7	4.7	5.5
PIRANHA	6.3	5.0	5.7	5.0	5.5
PST-0HR	4.3	5.0	7.7	5.0	5.5
PSU-CBG3	4.3	5.7	7.3	4.7	5.5
DECLARATION	6.7	4.7	5.3	4.7	5.3
CY-4	5.0	4.7	5.7	5.0	5.1
PST-0DSF	5.3	4.3	6.0	3.3	4.8
PSU-CBG2	3.7	3.7	6.7	4.7	4.7
PENN A-1	5.3	4.7	5.3	3.0	4.6
PENNCROSS	4.3	2.0	5.0	4.3	3.9
LSD VALUE	2.1	2.6	1.4	0.9	0.9
C.V. (%)	23.4	30.9	13.1	12.0	21.2

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 12.

LEAF TEXTURE RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	IN1	NC1	MEAN
PST-0HR	8.7	9.0	8.8
PSU-CBG3	8.0	9.0	8.5
PIPER (PPG-AP-MTV2)	8.0	8.3	8.2
PST-0DSF	7.3	9.0	8.2
PSU-CBG1	7.3	9.0	8.2
PSU-CBG2	7.7	8.7	8.2
S1	7.3	8.3	7.8
SPECTRUM (LNS 19)	7.0	8.7	7.8
L-93 XD	7.0	8.3	7.7
OAKLEY (PPG-AP-MTV1)	7.0	8.3	7.7
007XL	7.0	7.7	7.3
DLFPS-AP-3084	6.7	8.0	7.3
PIRANHA	6.3	8.3	7.3
PVF-PV-1	6.3	8.3	7.3
PVF-PV-2	6.7	8.0	7.3
BARRACUDA	6.3	8.0	7.2
PENN A-1	5.3	8.3	6.8
CY-4	5.0	8.3	6.7
DECLARATION	4.7	7.3	6.0
PENNCROSS	4.0	6.0	5.0
LSD VALUE	1.1	0.9	0.7
C.V. (%)	10.0	6.6	8.2

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 13. SPRING DENSITY RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	IN1	NC1	VA1	WI1	MEAN
PST-0HR	8.3	9.0	7.3	7.0	7.9
PSU-CBG1	8.3	9.0	7.3	6.3	7.8
PSU-CBG3	8.3	9.0	6.3	7.0	7.7
007XL	7.7	8.3	7.3	6.0	7.3
OAKLEY (PPG-AP-MTV1)	8.7	8.0	6.7	5.7	7.3
PIPER (PPG-AP-MTV2)	7.7	8.3	7.0	6.0	7.3
PVF-PV-2	7.7	8.7	7.0	5.7	7.3
S1	7.7	8.3	6.7	6.0	7.2
PVF-PV-1	7.7	8.0	6.7	6.0	7.1
PST-0DSF	8.0	8.7	6.0	5.7	7.1
PSU-CBG2	7.3	8.7	6.3	6.0	7.1
SPECTRUM (LNS 19)	7.0	8.3	6.7	6.3	7.1
DLFPS-AP-3084	7.0	7.7	7.0	6.0	6.9
PIRANHA	7.3	8.0	6.0	6.0	6.8
BARRACUDA	6.7	8.0	6.7	5.7	6.8
L-93 XD	7.0	8.0	6.0	6.0	6.8
CY-4	5.7	7.3	5.7	6.0	6.2
PENN A-1	6.7	7.3	5.7	5.0	6.2
DECLARATION	5.3	7.0	5.0	5.7	5.8
PENNCROSS	3.3	6.0	4.3	4.3	4.5
LSD VALUE	1.5	0.7	1.3	0.8	0.6
C.V. (%)	12.6	5.1	12.8	8.2	10.0

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 14. SUMMER DENSITY RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	IN1	NC1	UT1	WI1	MEAN
PST-0HR	9.0	9.0	8.7	9.0	8.9
PSU-CBG1	9.0	9.0	8.3	8.7	8.8
PSU-CBG2	8.7	9.0	8.3	8.7	8.7
PSU-CBG3	8.7	9.0	8.0	8.3	8.5
PST-0DSF	8.0	9.0	7.7	8.0	8.2
PVF-PV-1	7.7	9.0	7.7	8.0	8.1
PVF-PV-2	7.3	9.0	8.0	8.0	8.1
OAKLEY (PPG-AP-MTV1)	7.3	9.0	7.7	8.0	8.0
DLFPS-AP-3084	7.7	9.0	7.3	7.7	7.9
PIPER (PPG-AP-MTV2)	7.0	9.0	7.7	8.0	7.9
007XL	7.3	9.0	6.7	8.0	7.8
SPECTRUM (LNS 19)	6.7	9.0	7.0	7.7	7.6
S1	7.0	9.0	6.3	8.0	7.6
PIRANHA	7.0	8.7	6.3	8.0	7.5
L-93 XD	6.3	8.3	7.0	7.7	7.3
CY-4	6.7	8.3	6.0	7.7	7.2
BARRACUDA	6.3	8.3	6.7	7.0	7.1
PENN A-1	5.7	9.0	6.0	7.3	7.0
DECLARATION	5.3	8.0	5.3	7.3	6.5
PENNCROSS	4.3	7.0	3.7	6.0	5.3
LSD VALUE	1.1	0.4	1.1	1.0	0.5
C.V. (%)	9.7	3.0	9.4	7.5	7.5

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 15. FALL DENSITY RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	WI1
PSU-CBG1	8.0
PSU-CBG2	8.0
PST-0HR	7.7
PSU-CBG3	7.7
OAKLEY (PPG-AP-MTV1)	7.3
SPECTRUM (LNS 19)	7.3
007XL	7.0
BARRACUDA	7.0
CY-4	7.0
DECLARATION	7.0
DLFPS-AP-3084	7.0
PIPER (PPG-AP-MTV2)	7.0
PIRANHA	7.0
PVF-PV-1	7.0
PVF-PV-2	7.0
S1	7.0
L-93 XD	6.7
PST-0DSF	6.7
PENN A-1	6.0
PENNCROSS	6.0
LSD VALUE	0.8
C.V. (%)	7.1

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 16. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	MN1	NC1	MEAN
PSU-CBG1	76.3	99	87.7
BARRACUDA	76.0	99	87.5
007XL	73.3	99	86.2
PVF-PV-1	73.3	99	86.2
S1	72.0	99	85.5
CY-4	70.3	99	84.7
OAKLEY (PPG-AP-MTV1)	70.3	99	84.7
SPECTRUM (LNS 19)	70.3	99	84.7
PSU-CBG3	70.0	99	84.5
PIPER (PPG-AP-MTV2)	68.7	99	83.8
PST-0HR	68.3	99	83.7
L-93 XD	66.0	99	82.5
DLFPS-AP-3084	65.0	99	82.0
DECLARATION	63.3	99	81.2
PVF-PV-2	61.7	99	80.3
PIRANHA	60.0	99	79.5
PENN A-1	57.3	99	78.2
PSU-CBG2	56.7	99	77.8
PST-0DSF	55.3	99	77.2
PENNCROSS	47.3	99	73.2
LSD VALUE	13.8	0	6.9
C.V. (%)	12.9	0	7.3

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 17. PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

NAME	NC1
007XL	99.0
BARRACUDA	99.0
CY-4	99.0
DECLARATION	99.0
DLFPS-AP-3084	99.0
L-93 XD	99.0
OAKLEY (PPG-AP-MTV1)	99.0
PENN A-1	99.0
PENNCROSS	99.0
PIPER (PPG-AP-MTV2)	99.0
PIRANHA	99.0
PVF-PV-1	99.0
PVF-PV-2	99.0
S1	99.0
SPECTRUM (LNS 19)	99.0
PST-0DSF	98.3
PST-0HR	98.3
PSU-CBG3	97.0
PSU-CBG2	96.3
PSU-CBG1	95.0
LSD VALUE	1.0
C.V. (%)	0.6

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 18. PERCENT LIVING GROUND COVER (FALL) RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

PERCENT LIVING GROUND COVER IN FALL: LOCATIONS 2/

NAME	MN1	NC1	MEAN
PSU-CBG1	97.7	99.0	98.3
PST-0DSF	97.7	98.3	98.0
PSU-CBG3	95.7	98.7	97.2
PST-0HR	95.7	98.3	97.0
BARRACUDA	94.7	98.3	96.5
PSU-CBG2	94.3	98.7	96.5
PIRANHA	94.7	98.0	96.3
PENN A-1	94.3	98.3	96.3
007XL	93.7	98.7	96.2
DECLARATION	93.3	98.7	96.0
PIPER (PPG-AP-MTV2)	93.3	98.7	96.0
PVF-PV-2	93.3	98.7	96.0
CY-4	92.7	99.0	95.8
L-93 XD	93.0	98.7	95.8
PVF-PV-1	93.0	98.7	95.8
SPECTRUM (LNS 19)	92.7	99.0	95.8
OAKLEY (PPG-AP-MTV1)	92.3	99.0	95.7
DLFPS-AP-3084	92.0	99.0	95.5
S1	93.0	98.0	95.5
PENNCROSS	90.7	94.3	92.5
LSD VALUE	2.9	1.7	1.7
C.V. (%)	1.9	1.1	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 19. WINTER COLOR RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	NC1	VA1	MEAN
007XL	8.0	5.0	6.5
OAKLEY (PPG-AP-MTV1)	8.0	5.0	6.5
PVF-PV-2	8.0	4.7	6.3
S1	8.0	4.7	6.3
PVF-PV-1	8.0	4.0	6.0
BARRACUDA	7.7	4.0	5.8
L-93 XD	7.7	4.0	5.8
SPECTRUM (LNS 19)	8.0	3.7	5.8
PIPER (PPG-AP-MTV2)	8.0	3.3	5.7
PST-0HR	7.7	3.7	5.7
CY-4	7.0	4.3	5.7
PIRANHA	7.7	3.3	5.5
DECLARATION	6.0	4.7	5.3
PSU-CBG3	7.0	3.3	5.2
DLFPS-AP-3084	7.3	3.0	5.2
PSU-CBG1	7.0	3.0	5.0
PSU-CBG2	7.0	3.0	5.0
PENN A-1	5.3	3.3	4.3
PST-0DSF	5.3	2.7	4.0
PENNCROSS	4.0	3.0	3.5
LSD VALUE	0.7	1.4	0.8
C.V. (%)	5.7	22.6	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 20. DOLLAR SPOT RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	IN1	NC1	VA1	MEAN
DLFPS-AP-3084	9.0	9.0	8.7	8.9
SPECTRUM (LNS 19)	9.0	8.7	8.3	8.7
007XL	9.0	7.0	9.0	8.3
CY-4	9.0	8.0	8.0	8.3
PVF-PV-2	9.0	7.0	8.7	8.2
PVF-PV-1	9.0	7.0	8.3	8.1
DECLARATION	9.0	7.3	8.0	8.1
OAKLEY (PPG-AP-MTV1)	9.0	7.3	7.7	8.0
PIPER (PPG-AP-MTV2)	9.0	6.3	8.7	8.0
PST-0DSF	9.0	5.3	9.0	7.8
S1	9.0	5.3	9.0	7.8
PIRANHA	9.0	5.0	9.0	7.7
L-93 XD	9.0	5.7	8.0	7.6
BARRACUDA	9.0	5.0	8.7	7.6
PENN A-1	9.0	5.3	8.3	7.6
PSU-CBG1	9.0	5.3	8.0	7.4
PSU-CBG2	9.0	5.7	7.3	7.3
PSU-CBG3	8.3	5.7	7.7	7.2
PENNCROSS	9.0	4.7	7.7	7.1
PST-0HR	9.0	4.7	7.3	7.0
LSD VALUE	0.4	1.5	1.7	0.8
C.V. (%)	2.9	15.3	13.0	10.8

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 21. BROWN PATCH (WARM TEMPERATURE) RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	VA1
PVF-PV-1	8.7
PSU-CBG1	8.0
PSU-CBG2	8.0
PVF-PV-2	8.0
SPECTRUM (LNS 19)	8.0
007XL	7.7
DLFPS-AP-3084	7.3
PENNCROSS	7.3
PIRANHA	7.3
CY-4	7.0
PSU-CBG3	7.0
BARRACUDA	6.7
OAKLEY (PPG-AP-MTV1)	6.7
PST-0DSF	6.3
PST-0HR	6.3
PIPER (PPG-AP-MTV2)	6.0
L-93 XD	5.3
PENN A-1	5.3
S1	5.0
DECLARATION	4.7
LSD VALUE	2.7
C.V. (%)	24.9

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 22.

ANTHRACNOSE RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

ANTHRACNOSE RATINGS 1-9; 9=NO DISEASE 2/

NAME	NC1
CY-4	9.0
DECLARATION	9.0
L-93 XD	9.0
PENNCROSS	9.0
PIPER (PPG-AP-MTV2)	9.0
PIRANHA	9.0
PST-0DSF	9.0
PVF-PV-2	9.0
S1	9.0
BARRACUDA	8.7
PST-0HR	8.7
007XL	8.3
PENN A-1	8.3
PSU-CBG1	8.3
PVF-PV-1	8.3
DLFPS-AP-3084	8.0
OAKLEY (PPG-AP-MTV1)	7.7
PSU-CBG2	7.7
SPECTRUM (LNS 19)	7.7
PSU-CBG3	7.3
LSD VALUE	1.3
C.V. (%)	9.2

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 23. PYTHIUM ROOT ROT RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

PYTHIUM ROOT ROT RATINGS 1-9; 9=NO DISEASE 2/

NAME	NC1
DLFPS-AP-3084	9.0
OAKLEY (PPG-AP-MTV1)	9.0
PIPER (PPG-AP-MTV2)	9.0
PVF-PV-1	9.0
PVF-PV-2	9.0
SPECTRUM (LNS 19)	9.0
007XL	8.7
DECLARATION	8.7
L-93 XD	8.7
PENNCROSS	8.7
S1	8.3
BARRACUDA	8.0
PIRANHA	7.7
PST-0HR	7.7
CY-4	7.3
PENN A-1	7.3
PST-0DSF	7.3
PSU-CBG2	6.0
PSU-CBG3	6.0
PSU-CBG1	5.3
LSD VALUE	1.0
C.V. (%)	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 24. FALL COLOR (NOVEMBER) RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

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

NAME	NC1	UT1	WI1	MEAN
PIPER (PPG-AP-MTV2)	8.0	6.0	6.7	6.9
PST-0HR	8.3	6.0	6.3	6.9
OAKLEY (PPG-AP-MTV1)	8.0	6.0	6.3	6.8
PVF-PV-2	8.7	5.3	6.3	6.8
DLFPS-AP-3084	8.0	5.3	6.7	6.7
PIRANHA	8.3	4.7	6.7	6.6
PSU-CBG3	9.0	4.7	6.0	6.6
PVF-PV-1	8.3	5.0	6.3	6.6
SPECTRUM (LNS 19)	8.0	5.7	6.0	6.6
S1	8.0	5.0	6.3	6.4
PSU-CBG2	8.7	4.3	6.0	6.3
CY-4	8.0	4.0	6.7	6.2
L-93 XD	8.0	4.7	6.0	6.2
PSU-CBG1	8.3	5.3	5.0	6.2
007XL	8.0	4.7	5.3	6.0
BARRACUDA	8.0	4.0	6.0	6.0
DECLARATION	8.0	3.3	5.7	5.7
PST-0DSF	9.0	3.0	4.0	5.3
PENN A-1	8.7	3.0	4.0	5.2
PENNCROSS	7.0	2.0	4.7	4.6
LSD VALUE	0.5	1.0	1.1	0.5
C.V. (%)	4.2	13.2	11.5	9.0

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 25. POA ANNUA RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

POA ANNUA RATINGS 1-9; 9=NONE 2/

NAME	IN1	NC1	MEAN
007XL	9.0	9.0	9.0
BARRACUDA	9.0	9.0	9.0
DLFPS-AP-3084	9.0	9.0	9.0
OAKLEY (PPG-AP-MTV1)	9.0	9.0	9.0
PIPER (PPG-AP-MTV2)	9.0	9.0	9.0
PIRANHA	9.0	9.0	9.0
PSU-CBG1	9.0	9.0	9.0
PSU-CBG2	9.0	9.0	9.0
PVF-PV-1	9.0	9.0	9.0
SPECTRUM (LNS 19)	9.0	9.0	9.0
CY-4	9.0	8.7	8.8
L-93 XD	9.0	8.7	8.8
PST-0HR	9.0	8.7	8.8
PSU-CBG3	9.0	8.7	8.8
PVF-PV-2	9.0	8.7	8.8
S1	9.0	8.3	8.7
PST-0DSF	9.0	7.7	8.3
PENN A-1	8.7	8.0	8.3
DECLARATION	8.3	7.3	7.8
PENNCROSS	8.3	5.0	6.7
LSD VALUE	0.4	0.7	0.4
C.V. (%)	2.5	5.0	3.9

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 26. CRABGRASS RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

CRABGRASS RATINGS 1-9; 9=NONE 2/

NAME	NC1
007XL	9.0
PIPER (PPG-AP-MTV2)	9.0
PVF-PV-2	9.0
SPECTRUM (LNS 19)	9.0
BARRACUDA	8.7
DLFPS-AP-3084	8.7
OAKLEY (PPG-AP-MTV1)	8.7
PIRANHA	8.7
PSU-CBG2	8.7
L-93 XD	8.3
PVF-PV-1	8.3
PENN A-1	8.0
PST-0DSF	8.0
PSU-CBG1	8.0
PSU-CBG3	8.0
S1	8.0
PST-0HR	7.7
CY-4	7.3
DECLARATION	6.7
PENNCROSS	6.3
LSD VALUE	1.1
C.V. (%)	8.5

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 27. SILVERY THREAD MOSS RATINGS OF BENTGRASS CULTIVARS 1/
GROWN ON A GREEN
2023 DATA

SILVERY THREAD MOSS RATINGS 1-9; 9=NO DAMAGE 2/

NAME	VA1
007XL	8.0
BARRACUDA	8.0
PENN A-1	8.0
PIPER (PPG-AP-MTV2)	8.0
S1	8.0
SPECTRUM (LNS 19)	8.0
DLFPS-AP-3084	7.7
PST-0HR	7.7
L-93 XD	7.3
PIRANHA	7.3
PSU-CBG2	7.3
PSU-CBG3	7.3
PVF-PV-1	7.3
PVF-PV-2	7.3
CY-4	7.0
DECLARATION	7.0
PST-0DSF	7.0
PSU-CBG1	6.7
OAKLEY (PPG-AP-MTV1)	6.3
PENNCROSS	5.7
LSD VALUE	1.8
C.V. (%)	15.4

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 28. DOLLAR SPOT RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT RALEIGH, NC 1/ 2023 DATA

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

NAME	OCTOBER	NOVEMBER	MEAN
DLFPS-AP-3084	8.7	9.0	8.8
SPECTRUM (LNS 19)	8.7	8.7	8.7
CY-4	8.7	8.0	8.3
OAKLEY (PPG-AP-MTV1)	8.3	7.3	7.8
DECLARATION	8.0	7.3	7.7
007XL	8.0	7.0	7.5
PVF-PV-1	7.7	7.0	7.3
PVF-PV-2	7.7	7.0	7.3
PIPER (PPG-AP-MTV2)	7.7	6.3	7.0
L-93 XD	7.7	5.7	6.7
PSU-CBG3	7.7	5.7	6.7
PSU-CBG1	7.7	5.3	6.5
PSU-CBG2	7.3	5.7	6.5
PENN A-1	7.3	5.3	6.3
PST-0DSF	7.3	5.3	6.3
S1	7.3	5.3	6.3
BARRACUDA	7.3	5.0	6.2
PENNCROSS	7.7	4.7	6.2
PIRANHA	7.3	5.0	6.2
PST-0HR	7.3	4.7	6.0
LSD VALUE	1.4	1.4	1.1
C.V. (%)	7.7	13.9	9.5

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 29. DOLLAR SPOT RATINGS OF BENTGRASS CULTIVARS GROWN ON A GREEN AT BLACKSBURG, VA 1/ 2023 DATA

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

NAME	JULY	SEPTEMBER	MEAN
007XL	9.0	9.0	9.0
PIRANHA	9.0	9.0	9.0
PST-0DSF	9.0	9.0	9.0
S1	9.0	9.0	9.0
BARRACUDA	8.7	9.0	8.8
DLFPS-AP-3084	8.7	9.0	8.8
PIPER (PPG-AP-MTV2)	8.7	8.7	8.7
PVF-PV-1	8.3	9.0	8.7
PVF-PV-2	8.7	8.7	8.7
SPECTRUM (LNS 19)	8.3	9.0	8.7
CY-4	8.0	9.0	8.5
DECLARATION	8.0	9.0	8.5
L-93 XD	8.0	9.0	8.5
PENN A-1	8.3	8.3	8.3
PENNCROSS	7.7	8.7	8.2
OAKLEY (PPG-AP-MTV1)	7.7	8.7	8.2
PSU-CBG2	7.3	8.3	7.8
PSU-CBG1	8.0	7.3	7.7
PST-0HR	7.3	7.7	7.5
PSU-CBG3	7.7	7.3	7.5
LSD VALUE	3.4	1.9	2.0
C.V. (%)	13.0	9.1	8.9

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 30. ALGAE RATINGS OF BENTGRASS CULTIVARS
GROWN ON A GREEN AT RALEIGH, NC 1/
2023 DATA

ALGAE RATINGS 1-9; 9=BEST 2/

NAME	MARCH	APRIL	MAY	MEAN
PSU-CBG2	9.0	9.0	9.0	9.0
PSU-CBG3	9.0	9.0	9.0	9.0
SPECTRUM (LNS 19)	9.0	9.0	8.7	8.9
PSU-CBG1	9.0	9.0	8.3	8.8
PVF-PV-2	9.0	9.0	8.3	8.8
OAKLEY (PPG-AP-MTV1)	9.0	9.0	8.0	8.7
PIPER (PPG-AP-MTV2)	9.0	9.0	8.0	8.7
PST-0HR	9.0	9.0	8.0	8.7
PVF-PV-1	9.0	9.0	8.0	8.7
007XL	9.0	9.0	7.0	8.3
CY-4	9.0	9.0	7.0	8.3
DLFPS-AP-3084	9.0	9.0	7.0	8.3
DECLARATION	9.0	8.7	5.7	7.8
S1	9.0	8.3	6.0	7.8
BARRACUDA	9.0	8.0	5.7	7.6
PENN A-1	9.0	8.7	5.0	7.6
PIRANHA	9.0	8.0	5.7	7.6
PST-0DSF	9.0	8.3	5.3	7.6
L-93 XD	9.0	8.0	5.3	7.4
PENNCROSS	6.7	6.0	5.3	6.0
LSD VALUE	0.2	0.7	2.4	0.8
C.V. (%)	1.5	5.2	19.0	6.1

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.

APPENDIX TABLE. SUMMARY OF TURFGRASS QUALITY RATINGS FOR BENTGRASS CULTIVARS GROWN ON A GREEN 2023 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

NAME	QUALITY MEAN 1/	MAXIMUM IN TOP 25% 2/
007XL	6.8	16.7
BARRACUDA	6.3	0.0
CY-4	6.0	0.0
DECLARATION	5.5	0.0
DLFPS-AP-3084	6.9	33.3
L-93 XD	6.6	0.0
OAKLEY (PPG-AP-MTV1)	7.1	50.0
PENN A-1	5.8	0.0
PENNCROSS	4.3	0.0
PIPER (PPG-AP-MTV2)	7.1	16.7
PIRANHA	6.6	16.7
PST-0DSF	6.6	16.7
PST-0HR	7.6	83.3
PSU-CBG1	7.0	50.0
PSU-CBG2	7.1	50.0
PSU-CBG3	7.0	33.3
PVF-PV-1	7.2	33.3
PVF-PV-2	7.0	33.3
S1	6.6	0.0
SPECTRUM (LNS 19)	7.2	50.0
LSD VALUE	0.3	
C.V. (%)	7.4	

*/ 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.