

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 American Sod Producers Association, a national director, and an executive coordinator. The program will 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. The national director is responsible for the overall coordination and operation of the NTEP, including (1) soliciting entries and distribution of test seed sets to evaluators, (2) data summarization and distribution, and, (3) management of test materials, facilities, and finances.

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LOCATIONS SUBMITTING DATA FOR 1992

<u>State</u>	<u>Location</u>	<u>Code</u>
Arizona	Tucson	AZ1
California	Santa Clara	CA1
Georgia	Griffin	GA1
Kansas	Manhattan	KS1
Kentucky	Lexington	KY1
Massachusetts	Deerfield	MA1
Michigan	East Lansing	MI1
Texas	Dallas	TX1
Washington	Puyallup	WA3

1989 NATIONAL BENTGRASS TEST

(Greens-Modified Soil)

Entries and Sponsors

<u>Entry No.</u>	<u>Name</u>	<u>Species</u>	<u>Sponsor</u>
1	BR 1518	A. castellana (dryland bent)	USGA Green Section
2	Carmen	creeping	Advanta Seeds West, Inc.
3	Tracenta	colonial	Advanta Seeds West, Inc.
4	Putter	creeping	Jacklin Seed Co.
5	SR 1020	creeping	Seed Research of OR, Inc.
6	Providence	creeping	Seed Research of OR, Inc.
7	Bardot	colonial	Barenbrug USA
8	Penncross	creeping	Tee-2-Green Corp.
9	Pennlinks	creeping	Tee-2-Green Corp.
10	18th Green (UM 84-01)	creeping	Johnson Seeds, Ltd.
11	Egmont	A. capillaris (browntop bent)	Olsen-Fennell Seed Co.
12	Regent (Normarc 101)	creeping	Barenbrug USA
13	PRO/CUP (Forbes 89-12)	creeping	Forbes Seed & Grain
14	Lopez (WVPB 89-D-15)	creeping	Finelawn Research Corp.
15	National	creeping	Pickseed West, Inc.
16	88.CBE	creeping	International Seeds, Inc.
17	88.CBL	creeping	International Seeds, Inc.
18	Cobra	creeping	International Seeds, Inc.
19	Emerald	creeping	International Seeds, Inc.
20	TAMU 88-1	creeping	Texas A&M University
21	Allure	colonial	Willamette Seed Co.
22	MSCB-6	creeping	Mississippi St. Univ.
23	MSCB-8	creeping	Mississippi St. Univ.

TABLE A.

1992 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN
THE 1989 NATIONAL BENTGRASS (MODIFIED SOIL 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
AZ1	SAND	7.1-7.5	0-60	241-375	4.1-5.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
CA1	LOAM	6.1-6.5	61-150	0-150	3.1-4.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
GA1	SAND	5.6-6.0	0-60	0-150	5.1-6.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
KS1	SAND	6.6-7.0	151-270	241-375	4.1-5.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
KY1	SAND	7.1-7.5	0-60	0-150	4.1-5.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
MA1	SAND	5.6-6.0	0-60	0-150	5.1-6.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
MI1	-	6.6-7.0	-	-	8.1+	FULL SUN	0.0-0.5	TO PREVENT STRESS
TX1	LOAMY SAND	6.1-6.5	0-60	0-150	7.1-8.0	FULL SUN	0.0-0.5	TO PREVENT STRESS
WA3	SAND	5.6-6.0	0-60	151-240	5.1-6.0	FULL SUN	0.0-0.5	TO PREVENT STRESS

FUNGICIDE USE IN 1992 (SUBMITTED TO NTEP)

LOCATION	FUNGICIDE	RATE (OZ./1000 SQ. FT.)	DATE(S) OF APPLICATION
KS1	IPRODIONE	-	6/3, 7/15
	THIOPHANATE-ETHYL	-	8/6
MA1	BENOMYL	-	6/9, 9/9
	IPRODIONE	-	7/16, 8/20
MI1	PROPOCONAZOLE	-	7/6
	FENARIMOL	-	8/5
TX1	CHLOROTHALONIL	-	1/9, 2/27, 5/13, 6/23, 7/29, 8/12, 9/14, 10/22
	FENARIMOL	-	5/26, 11/6

TABLE B.

LOCATIONS AND DATA COLLECTED IN 1992

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 RATING	SPRING GREENUP RATING
AZ1		X	X	X	X	X	X	X	X	X	X	X	X	X
CA1	X		X		X	X	X	X	X	X	X	X		
GA1				X	X		X	X	X	X				
KS1			X	X	X	X	X							
KY1			X	X	X	X	X	X	X	X			X	
MA1					X	X	X	X	X	X	X			
MI1				X		X	X	X	X					
TX1	X	X	X	X	X	X	X	X	X					
WA3	X	X	X	X		X	X	X	X	X	X	X	X	

TABLE B. (continued)

LOCATIONS AND DATA COLLECTED IN 1992

LOCATION	LEAF TEXTURE RATING	SEEDLING VIGOR	SPRING DENSITY	SUMMER DENSITY	FALL DENSITY	THATCH MEASUREMENTS	DOLLAR SPOT	BROWN PATCH	PCT POA MAY	PCT POA JUN	PCT POA JUL	PCT POA AUG	PCT POA SEP
AZ1	X	X											
CA1								X	X	X	X	X	X
GA1			X	X	X								
KS1							X						
KY1													
MA1								X					
MI1													
TX1													
WA3			X		X								

TABLE 1. MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS GROWN ON A MODIFIED SOIL GREEN AT NINE LOCATIONS IN THE U.S.
1992 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 1/									MEAN
	AZ1	CA1	GA1	KS1	KY1	MA1	MI1	TX1	WA3	
* PROVIDENCE	7.2	.	7.7	8.0	8.3	7.2	6.3	5.4	5.8	7.0
* PUTTER	7.2	5.6	6.7	7.9	6.6	7.4	5.9	6.1	6.3	6.6
88.CBL	7.1	.	7.1	7.4	6.6	7.0	6.1	5.7	5.6	6.6
* SR 1020	7.1	5.9	6.6	7.2	7.5	6.9	6.1	6.0	5.4	6.5
88.CBE	7.2	4.5	6.9	7.5	7.4	7.4	6.3	5.7	5.0	6.5
* COBRA	7.1	6.2	6.6	7.3	7.0	6.6	6.2	5.6	5.5	6.5
* REGENT (NORMARC 101)	7.2	5.6	7.1	7.6	7.0	7.0	6.0	5.6	5.1	6.5
* PRO/CUP (FORBES 89-12)	6.9	5.5	7.3	7.1	6.6	7.0	5.9	6.0	5.4	6.4
* PENNLINKS	7.0	5.4	6.8	7.4	6.4	6.6	6.3	5.4	5.5	6.3
* PENNCROSS	6.5	5.4	7.3	7.5	6.2	6.7	6.3	5.5	5.0	6.3
* LOPEZ (WVPB 89-D-15)	7.2	5.0	7.1	7.3	6.4	6.7	5.7	5.6	5.2	6.2
MSCB-6	6.5	.	6.6	6.9	5.8	6.2	6.2	.	5.2	6.2
TAMU 88-1	6.6	5.7	6.2	6.9	6.2	6.6	5.8	5.6	5.5	6.1
MSCB-8	6.7	5.4	6.8	7.1	5.8	6.1	6.1	.	4.8	6.1
* CARMEN	6.8	5.0	6.4	7.1	6.2	6.5	6.0	5.4	5.2	6.1
* BISKA (UM 84-01)	7.0	4.4	6.5	6.8	6.7	6.7	5.0	5.5	4.5	5.9
* NATIONAL	6.3	4.5	7.3	6.7	5.8	6.0	5.3	5.6	5.3	5.9
* EMERALD	6.0	5.2	6.2	6.8	5.2	5.5	5.5	5.2	5.2	5.6
* BARDOT	4.9	4.6	5.9	7.3	4.4	6.0	3.3	5.6	5.7	5.3
* TRACENTA	4.9	4.6	6.1	6.9	4.6	6.2	3.1	5.6	5.5	5.3
* EGMONT	4.9	5.3	5.0	7.0	3.9	5.9	3.3	5.3	5.4	5.1
ALLURE	4.4	4.1	5.8	7.1	5.6	5.6	3.4	.	4.4	5.1
BR 1518	4.6	4.2	5.8	7.1	4.1	5.2	3.3	5.6	3.5	4.8
LSD VALUE	0.4	1.0	0.8	0.6	0.8	0.8	0.6	0.6	0.6	0.2

* COMMERCIALY AVAILABLE IN THE UNITED STATES IN 1993

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).

TABLE 2.

MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS FOR EACH MONTH
GROWN ON A MODIFIED SOIL GREEN AT NINE LOCATIONS IN THE U.S.
1992 DATA

NAME	TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF: MONTHS 1/												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PROVIDENCE	4.8	5.4	6.3	7.0	7.6	7.3	7.8	6.9	7.0	7.2	5.7	5.3	7.0
FUTTER	5.7	6.1	6.1	6.6	7.0	6.8	7.1	6.6	6.6	6.6	5.9	6.2	6.6
88.CBL	4.8	5.7	6.1	6.3	7.1	6.6	7.0	6.6	6.4	7.0	6.0	6.2	6.6
SR 1020	5.6	6.0	6.8	6.6	7.0	6.5	6.8	6.4	6.3	6.3	6.0	5.8	6.5
88.CBE	4.1	5.3	6.2	6.7	6.8	6.6	6.7	6.3	6.4	6.7	5.6	5.7	6.5
COBRA	5.2	5.8	6.2	6.6	6.6	6.5	6.7	6.4	6.3	6.7	6.1	6.4	6.5
REGENT (NORMARC 101)	4.4	5.8	6.0	6.5	6.8	6.5	6.7	6.6	6.5	6.7	5.5	5.8	6.5
PRO/CUP (FORBES 89-12)	5.0	5.7	5.8	6.2	6.7	6.5	6.8	6.5	6.6	6.7	5.7	5.6	6.4
FENNLINKS	5.1	5.6	5.8	6.2	6.4	6.3	6.6	6.3	6.3	6.5	6.0	5.6	6.3
FENNCROSS	4.7	5.6	5.9	6.4	6.6	6.1	6.8	6.1	6.2	6.2	5.4	5.2	6.3
LOPEZ (WVPB 89-D-15)	4.4	5.6	5.8	6.3	6.5	6.3	6.6	6.5	6.5	6.1	5.4	5.2	6.2
MSCB-6	4.3	5.5	6.0	6.2	6.3	6.6	6.5	6.2	6.4	5.8	5.1	5.2	6.2
TAMU 88-1	4.8	5.6	5.8	6.3	6.3	6.4	6.4	6.0	6.2	6.2	5.3	5.8	6.1
MSCB-8	4.5	5.5	5.9	6.2	6.3	6.5	6.2	5.8	6.2	6.1	5.2	5.2	6.1
CARMEN	4.9	5.3	5.8	6.3	6.2	6.2	6.3	6.2	6.1	6.0	5.1	5.3	6.1
BISKA (UM 84-01)	3.4	4.8	5.2	5.9	6.8	6.3	6.4	6.5	6.0	5.7	4.9	4.2	5.9
NATIONAL	5.1	5.4	5.2	6.0	5.9	5.6	6.0	5.8	6.3	6.4	5.2	4.9	5.9
EMERALD	5.1	5.2	5.1	5.4	5.7	5.7	6.1	5.6	5.6	5.8	5.0	5.1	5.6
TRACENTA	5.3	5.8	5.1	5.2	5.9	5.1	4.9	5.2	5.2	5.6	4.8	4.7	5.3
BARDOT	5.6	5.9	5.3	5.5	5.7	5.0	5.2	5.0	5.4	5.6	4.1	4.0	5.3
EGMONT	6.1	6.0	5.3	5.0	5.4	5.4	5.0	4.8	4.8	5.3	4.2	4.8	5.1
ALLURE	4.8	5.3	5.1	5.2	5.3	4.9	4.8	4.9	5.0	4.8	4.3	4.2	5.1
ER 1518	4.7	4.9	4.7	4.3	5.2	4.6	4.7	4.6	5.0	4.9	4.0	4.0	4.8
LSD VALUE	1.0	1.0	0.8	1.0	0.8	0.9	0.7	0.6	0.6	0.7	0.8	1.0	0.5

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).

TABLE 3. RANKING OF MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS GROWN ON A MODIFIED SOIL GREEN AT NINE LOCATIONS IN THE U.S. 1/ 1992 DATA

QUALITY RANKINGS; 1=HIGHEST MEAN: STATE LOCATIONS REPORTING 2/

NAME	AZ1	CA1	GA1	KS1	KY1	MA1	MI1	TX1	WA3	MEAN
PROVIDENCE	2.5	.	1.0	1.0	1.0	3.0	4.0	16.0	2.0	1
PUTTER	4.5	4.5	11.0	2.0	8.5	1.5	12.0	1.0	1.0	2
88.CBL	8.0	.	5.0	6.0	7.0	5.0	7.5	5.0	4.0	3
SR 1020	7.0	2.0	13.5	11.0	2.0	7.0	9.0	3.0	11.0	4
88.CBE	2.5	16.0	8.0	4.0	3.0	1.5	1.5	4.0	19.0	5
COBRA	6.0	1.0	12.0	8.0	4.0	11.5	5.5	12.0	7.0	6
REGENT (NORMARC 101)	1.0	4.5	6.5	3.0	5.0	5.0	10.5	6.5	17.0	7
PRO/CUP (FORBES 89-12)	11.0	6.0	3.5	15.0	8.5	5.0	13.0	2.0	9.0	8
PENNLINKS	10.0	9.0	9.5	7.0	10.0	11.5	1.5	17.5	8.0	9
PENNCROSS	15.0	7.0	2.0	5.0	12.0	8.0	3.0	14.0	18.0	10
LOPEZ (WVPB 89-D-15)	4.5	12.0	6.5	9.5	11.0	9.5	15.0	9.0	15.0	11
MSCB-6	16.0	.	13.5	18.0	16.0	15.5	5.5	.	13.5	12
TAMU 88-1	14.0	3.0	17.5	20.0	13.5	13.0	14.0	9.0	5.5	13
MSCB-8	13.0	8.0	9.5	13.0	16.0	17.0	7.5	.	20.0	14
CARMEN	12.0	13.0	16.0	15.0	13.5	14.0	10.5	17.5	13.5	15
BISKA (UM 84-01)	9.0	18.0	15.0	21.0	6.0	9.5	18.0	15.0	21.0	16
NATIONAL	17.0	17.0	3.5	23.0	16.0	18.0	17.0	12.0	12.0	17
EMERALD	18.0	11.0	17.5	22.0	19.0	22.0	16.0	20.0	16.0	18
BARDOT	20.0	14.5	20.0	9.5	21.0	19.0	22.0	6.5	3.0	19
TRACENTA	20.0	14.5	19.0	19.0	20.0	15.5	23.0	9.0	5.5	20
EGMONT	20.0	10.0	23.0	17.0	23.0	20.0	20.5	19.0	10.0	21
ALLURE	23.0	20.0	21.5	12.0	18.0	21.0	19.0	.	22.0	22
BR 1518	22.0	19.0	21.5	15.0	22.0	23.0	20.5	12.0	23.0	23

1/ THIS TABLE CONTAINS NO STATISTICAL VALUES (LSD VALUES), THEREFORE IT SHOULD ONLY BE USED TO DETERMINE THE GENERAL PERFORMANCE OF AN ENTRY OR ENTRIES ACROSS SEVERAL LOCATIONS OR REGIONS. TO ASSESS STATISTICAL DIFFERENCES AMONG ENTRIES, REFER TO THE MEANS AND LSD VALUES FOUND IN TABLE 1.

2/ RANKING OF MEAN TURFGRASS QUALITY IS ACHIEVED BY ASSIGNING "1" TO THE HIGHEST MEAN, "2" TO THE SECOND HIGHEST MEAN, ETC. FOR EACH LOCATION. FOR EXAMPLE, IF TWO MEANS ARE TIED FOR THE SECOND AND THIRD RANKS, BOTH ARE ASSIGNED "2.5".

TABLE 4. GENETIC COLOR RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	AZ1	KY1	WA3	MEAN
PROVIDENCE	7.7	8.0	8.0	7.9
BISKA (UM 84-01)	7.3	8.3	7.0	7.6
88.CBL	7.3	7.3	7.7	7.4
PRO/CUP (FORBES 89-12)	8.0	7.0	7.3	7.4
88.CBE	7.7	7.3	7.0	7.3
REGENT (NORMARC 101)	7.3	6.3	7.7	7.1
LOPEZ (WVPB 89-D-15)	8.0	6.0	6.7	6.9
COBRA	7.3	7.0	6.3	6.9
SR 1020	7.0	7.3	6.0	6.8
PENNLINKS	8.0	5.7	6.3	6.7
PENNCROSS	8.0	5.7	6.0	6.6
TAMU 88-1	8.0	6.3	5.0	6.4
PUTTER	7.0	6.3	5.7	6.3
MSCB-6	7.7	5.3	5.7	6.2
MSCB-8	7.7	6.0	5.0	6.2
NATIONAL	5.0	6.7	6.3	6.0
CARMEN	6.0	6.7	5.0	5.9
EMERALD	5.3	3.7	4.7	4.6
ALLURE	6.0	5.0	2.3	4.4
TRACENTA	6.3	3.7	3.3	4.4
BR 1518	7.0	2.3	3.3	4.2
BARDOT	6.7	3.0	2.7	4.1
EGMONT	6.3	2.7	2.0	3.7
LSD VALUE	1.1	1.5	1.0	0.7

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).

TABLE 5. SPRING GREENUP RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	AZ1	MEAN
BISKA (UM 84-01)	8.7	8.7
88.CBE	8.3	8.3
88.CBL	8.3	8.3
ALLURE	8.0	8.0
BR 1518	8.0	8.0
TRACENTA	8.0	8.0
BARDOT	7.7	7.7
SR 1020	7.3	7.3
EMERALD	7.0	7.0
REGENT (NORMARC 101)	7.0	7.0
PROVIDENCE	7.0	7.0
PRO/CUP (FORBES 89-12)	6.7	6.7
PENNCROSS	6.7	6.7
CARMEN	6.3	6.3
COBRA	6.3	6.3
PUTIER	6.3	6.3
TAMU 88-1	6.3	6.3
LOPEZ (WVPB 89-D-15)	6.3	6.3
MSCB-8	6.0	6.0
EGMONT	5.3	5.3
MSCB-6	5.3	5.3
NATIONAL	5.3	5.3
PENNLINKS	5.3	5.3
LSD VALUE	1.2	1.2

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).

TABLE 6. LEAF TEXTURE RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	AZ1	MEAN
BARDOT	7.3	7.3
CARMEN	7.3	7.3
ALLURE	6.7	6.7
BISKA (UM 84-01)	6.7	6.7
COBRA	6.7	6.7
EGMONT	6.7	6.7
PUTIER	6.7	6.7
SR 1020	6.7	6.7
TAMU 88-1	6.7	6.7
TRACENTA	6.7	6.7
BR 1518	6.3	6.3
PRO/CUP (FORBES 89-12)	6.3	6.3
NATIONAL	6.3	6.3
REGENT (NORMARC 101)	6.3	6.3
PENNLINKS	6.3	6.3
PROVIDENCE	6.3	6.3
LOPEZ (WVPB 89-D-15)	6.3	6.3
88.CBE	6.0	6.0
MSCB-6	6.0	6.0
MSCB-8	6.0	6.0
88.CBL	5.7	5.7
EMERALD	5.3	5.3
PENNCROSS	5.0	5.0
LSD VALUE	1.0	1.0

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).

TABLE 7. SEEDLING VIGOR RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

SEEDLING VIGOR RATINGS 1-9; 9=MAXIMUM VIGOR 1/

NAME	AZ1	MEAN
PUTIER	9.0	9.0
MSCB-8	8.3	8.3
NATIONAL	8.3	8.3
REGENT (NORMARC 101)	8.3	8.3
LOPEZ (WVPB 89-D-15)	8.3	8.3
COBRA	8.0	8.0
PRO/CUP (FORBES 89-12)	8.0	8.0
MSCB-6	8.0	8.0
PENNCROSS	8.0	8.0
SR 1020	8.0	8.0
TAMU 88-1	8.0	8.0
88.CBL	7.7	7.7
BARDOT	7.7	7.7
BR 1518	7.7	7.7
EGMONT	7.7	7.7
PENNLINKS	7.7	7.7
88.CBE	7.3	7.3
ALLURE	7.3	7.3
BISKA (UM 84-01)	7.3	7.3
EMERALD	7.3	7.3
PROVIDENCE	7.3	7.3
TRACENTA	7.3	7.3
CARMEN	7.0	7.0
LSD VALUE	1.1	1.1

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).

TABLE 8. SPRING DENSITY RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	GA1	WA3	MEAN
PENNLINKS	8.0	7.7	7.8
SR 1020	8.0	7.7	7.8
EGMONT	7.0	8.7	7.8
PUTTER	8.0	7.3	7.7
CARMEN	7.7	7.3	7.5
PROVIDENCE	8.3	6.7	7.5
TRACENTA	8.0	7.0	7.5
REGENT (NORMARC 101)	8.0	6.7	7.3
BARDOT	6.7	7.7	7.2
TAMU 88-1	8.0	6.3	7.2
88.CBL	8.0	6.0	7.0
ALLURE	7.3	6.7	7.0
PRO/CUP (FORBES 89-12)	8.0	6.0	7.0
BISKA (UM 84-01)	7.7	5.7	6.7
COBRA	7.7	5.7	6.7
88.CBE	8.0	5.0	6.5
MSCB-8	8.0	4.0	6.0
NATIONAL	8.0	4.0	6.0
LOPEZ (WBPB 89-D-15)	7.7	4.3	6.0
EMERALD	7.3	4.0	5.7
MSCB-6	7.7	3.3	5.5
PENNCROSS	8.0	2.0	5.0
BR 1518	7.0	2.7	4.8
LSD VALUE	0.7	1.6	0.9

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).

TABLE 9. SUMMER DENSITY RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	GA1	MEAN
LOPEZ (WVPB 89-D-15)	7.7	7.7
88.CBE	7.3	7.3
CARMEN	7.3	7.3
PRO/CUP (FORBES 89-12)	7.3	7.3
NATIONAL	7.0	7.0
PENNCROSS	7.0	7.0
PROVIDENCE	7.0	7.0
88.CBL	6.7	6.7
BISKA (UM 84-01)	6.7	6.7
MSCB-6	6.7	6.7
REGENT (NORMARC 101)	6.7	6.7
PUTTIER	6.7	6.7
ALLURE	6.3	6.3
COBRA	6.3	6.3
MSCB-8	6.3	6.3
PENNLINKS	6.3	6.3
TRACENTA	6.3	6.3
EMERALD	6.0	6.0
BR 1518	5.7	5.7
BARDOT	5.3	5.3
EGMONT	5.3	5.3
SR 1020	5.3	5.3
TAMU 88-1	5.3	5.3
LSD VALUE	1.8	1.8

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).

TABLE 10. FALL DENSITY RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	GA1	WA3	MEAN
PROVIDENCE	7.7	6.7	7.2
PRO/CUP (FORBES 89-12)	8.0	6.3	7.2
88.CBE	8.0	6.0	7.0
PENNLINKS	8.0	6.0	7.0
SR 1020	7.7	6.3	7.0
88.CBL	7.7	6.0	6.8
BISKA (UM 84-01)	7.7	6.0	6.8
REGENT (NORMARC 101)	8.0	5.7	6.8
COBRA	7.7	5.7	6.7
EGMONT	6.3	7.0	6.7
PUTTER	7.0	6.3	6.7
TAMU 88-1	6.3	6.7	6.5
NATIONAL	8.0	4.7	6.3
PENNCROSS	8.0	4.7	6.3
LOPEZ (WVPB 89-D-15)	7.0	5.7	6.3
BARDOT	7.0	5.3	6.2
CARMEN	6.7	5.3	6.0
EMERALD	7.0	4.7	5.8
TRACENTA	7.0	4.7	5.8
MSCB-8	7.3	4.0	5.7
MSCB-6	7.0	4.0	5.5
BR 1518	7.7	3.0	5.3
ALLURE	7.0	3.7	5.3
LSD VALUE	1.2	1.0	0.8

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).

TABLE 11. THATCH MEASUREMENTS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

THATCH MEASUREMENTS IN MILLIMETERS 1/		
NAME	CA1	MEAN
PENNCROSS	28.0	28.0
TAMU 88-1	27.7	27.7
COBRA	27.3	27.3
EMERALD	26.7	26.7
SR 1020	26.7	26.7
BARDOT	26.0	26.0
PRO/CUP (FORBES 89-12)	25.7	25.7
PUTTER	25.7	25.7
EGMONT	25.3	25.3
REGENT (NORMARC 101)	25.0	25.0
MSCB-8	24.3	24.3
88.CBE	22.3	22.3
CARMEN	22.0	22.0
TRACENTA	22.0	22.0
NATIONAL	20.7	20.7
PENNLINKS	20.7	20.7
LOPEZ (WVPB 89-D-15)	20.3	20.3
ALLURE	20.0	20.0
BISKA (UM 84-01)	20.0	20.0
BR 1518	19.0	19.0
LSD VALUE	5.9	5.9

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).

TABLE 12. DOLLAR SPOT RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	KS1	MEAN
88.CBE	9.0	9.0
88.CBL	9.0	9.0
ALLURE	9.0	9.0
BARDOT	9.0	9.0
BR 1518	9.0	9.0
CARMEN	9.0	9.0
COBRA	9.0	9.0
EGMONT	9.0	9.0
PRO/CUP (FORBES 89-12)	9.0	9.0
MSCB-6	9.0	9.0
MSCB-8	9.0	9.0
NATIONAL	9.0	9.0
REGENT (NORMARC 101)	9.0	9.0
PENNCROSS	9.0	9.0
PENNLINKS	9.0	9.0
PROVIDENCE	9.0	9.0
PUTTER	9.0	9.0
TAMU 88-1	9.0	9.0
TRACENTA	9.0	9.0
LOPEZ (WVPB 89-D-15)	9.0	9.0
EMERALD	8.7	8.7
SR 1020	7.7	7.7
BISKA (UM 84-01)	5.7	5.7
LSD VALUE	1.1	1.1

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).

TABLE 13. BROWN PATCH RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

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

NAME	MA1	MEAN
88.CBL	9.0	9.0
CARMEN	9.0	9.0
COBRA	9.0	9.0
EMERALD	9.0	9.0
PRO/CUP (FORBES 89-12)	9.0	9.0
MSCB-6	9.0	9.0
REGENT (NORMARC 101)	9.0	9.0
PENNCROSS	9.0	9.0
PENNLINKS	9.0	9.0
PROVIDENCE	9.0	9.0
PUTTER	9.0	9.0
SR 1020	9.0	9.0
LOPEZ (WVPB 89-D-15)	9.0	9.0
88.CBE	8.0	8.0
BISKA (UM 84-01)	8.0	8.0
EGMONT	8.0	8.0
NATIONAL	8.0	8.0
MSCB-8	7.3	7.3
TAMU 88-1	7.0	7.0
BR 1518	6.7	6.7
ALLURE	6.0	6.0
BARDOT	4.5	4.5
TRACENTA	3.3	3.3
LSD VALUE	2.4	2.4

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).

TABLE 14. PERCENT POA ANNUA (MAY) RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

PERCENT POA ANNUA: LOCATIONS 1/		
NAME	CA1	MEAN
BISKA (UM 84-01)	53.3	53.3
BR 1518	50.0	50.0
ALLURE	46.7	46.7
TRACENTA	46.7	46.7
NATIONAL	43.3	43.3
BARDOT	33.3	33.3
88.CEE	31.7	31.7
EGMONT	26.7	26.7
PRO/CUP (FORBES 89-12)	26.7	26.7
CARMEN	25.0	25.0
MSCB-8	23.3	23.3
LOPEZ (WVPB 89-D-15)	18.3	18.3
PENNLINKS	16.7	16.7
EMERALD	15.0	15.0
REGENT (NORMARC 101)	15.0	15.0
COBRA	10.0	10.0
PENNCROSS	5.0	5.0
PUTTER	5.0	5.0
TAMU 88-1	5.0	5.0
SR 1020	1.7	1.7
LSD VALUE	28.8	28.8

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).

TABLE 15. PERCENT POA ANNUA (JUNE) RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

PERCENT POA ANNUA: LOCATIONS 1/

NAME	CA1	MEAN
TRACENTA	36.7	36.7
ALLURE	33.3	33.3
BR 1518	33.3	33.3
NATIONAL	33.3	33.3
88.CEE	25.0	25.0
BARDOT	23.3	23.3
BISKA (UM 84-01)	23.3	23.3
EGMONT	20.0	20.0
PRO/CUP (FORBES 89-12)	20.0	20.0
CARMEN	15.0	15.0
EMERALD	15.0	15.0
LOPEZ (WVPB 89-D-15)	15.0	15.0
COBRA	10.0	10.0
REGENT (NORMARC 101)	10.0	10.0
PUTTER	10.0	10.0
MSCB-8	5.0	5.0
PENNCROSS	5.0	5.0
PENNLINKS	5.0	5.0
TAMU 88-1	5.0	5.0
SR 1020	3.3	3.3
LSD VALUE	16.7	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).

TABLE 16. PERCENT POA ANNUA (JULY) RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

PERCENT POA ANNUA: LOCATIONS 1/		
NAME	CA1	MEAN
BR 1518	46.7	46.7
ALLURE	45.0	45.0
TRACENTA	36.7	36.7
NATIONAL	35.0	35.0
88.CBE	26.7	26.7
BISKA (UM 84-01)	23.3	23.3
BARDOT	21.7	21.7
PRO/CUP (FORBES 89-12)	20.0	20.0
MSCB-8	13.3	13.3
LOPEZ (WVPB 89-D-15)	12.3	12.3
EGMONT	11.7	11.7
CARMEN	11.0	11.0
REGENT (NORMARC 101)	10.0	10.0
PENNCROSS	10.0	10.0
EMERALD	7.7	7.7
PENNLINKS	6.0	6.0
TAMU 88-1	5.0	5.0
COBRA	4.0	4.0
PUTTER	4.0	4.0
SR 1020	3.7	3.7
LSD VALUE	21.4	21.4

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).

TABLE 17. PERCENT POA ANNUA (AUGUST) RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

PERCENT POA ANNUA: LOCATIONS 1/		
NAME	CA1	MEAN
ALLURE	37.7	37.7
BR 1518	36.0	36.0
NATIONAL	28.3	28.3
TRACENTA	26.0	26.0
88.CBE	22.7	22.7
BARDOT	22.7	22.7
BISKA (UM 84-01)	19.0	19.0
PRO/CUP (FORBES 89-12)	19.0	19.0
EGMONT	13.0	13.0
LOPEZ (WVPB 89-D-15)	12.7	12.7
MSCB-8	12.3	12.3
REGENT (NORMARC 101)	11.7	11.7
EMERALD	10.7	10.7
PENNCROSS	10.7	10.7
CARMEN	10.3	10.3
SR 1020	8.0	8.0
TAMU 88-1	7.3	7.3
PENNLINKS	6.7	6.7
COBRA	6.3	6.3
PUTTER	5.3	5.3
LSD VALUE	16.7	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).

TABLE 18. PERCENT POA ANNUA (SEPTEMBER) RATINGS OF BENTGRASS CULTIVARS
GROWN ON A MODIFIED SOIL GREEN
1992 DATA

PERCENT POA ANNUA: LOCATIONS 1/		
NAME	CA1	MEAN
ALLUPE	31.7	31.7
BR 1518	31.0	31.0
BARDOT	27.7	27.7
NATIONAL	27.3	27.3
TRACENTA	24.3	24.3
88.CEE	23.3	23.3
BISKA (UM 84-01)	19.0	19.0
EGMONT	15.7	15.7
CARMEN	12.3	12.3
EMERALD	12.3	12.3
PRO/CUP (FORBES 89-12)	10.7	10.7
LOPEZ (WVPB 89-D-15)	10.7	10.7
MSCB-8	10.3	10.3
REGENT (NORMARC 101)	10.0	10.0
PENNCROSS	9.7	9.7
TAMU 88-1	7.0	7.0
SR 1020	6.7	6.7
COBRA	6.0	6.0
PUTTER	5.7	5.7
PENNLINKS	5.3	5.3
LSD VALUE	12.3	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).