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ON-SITE TESTING OF BENTGRASS AND BERMUDAGRASS CULTIVARS FOR GOLF COURSE PUTTING GREENS

INTRODUCTION

There is growing interest within the golfing industry to develop on-site testing of turfgrass cultivars. This concept is not new, but has not been a common practice in recent years. Therefore, the Golf Course Superintendents Association of America (GCSAA), United States Golf Association Green Section (USGA), and the National Turfgrass Evaluation Program (NTEP) have agreed to revitalize on-site testing of turfgrass cultivars on golf courses, particularly on putting greens. This project conducts evaluations of new bentgrass and bermudagrass cultivars on USGA specification putting greens constructed at golf courses across the country. This on-site testing program is designed to provide scientific information of a more applied nature about putting green turfgrass cultivar performance.

Information from this project is valuable to the golfing industry. These studies will determine the adaptation of grasses for golf course use. In addition, information obtained from on-site testing will be of particular value to plant breeders, researchers, extension educators, USGA agronomists, golf course architects, and superintendents, who need to select the best adapted putting green cultivars for a particular regional climate.

A five-person committee composed of Dr. Jeff Nus, GCSAA Research Director; Dr. Mike Kenna, USGA Research Director; Mr. James Moore, USGA Construction Education Coordinator, Mr. Kevin Morris, NTEP Executive Director; and Dr. Bob Shearman, NTEP Special Projects Coordinator determined the trial site locations and the trial specifics. Input from golf course superintendents, USGA agronomists and turfgrass researchers assisted the committee members' decision making process.

Location & Number of Trial Sites

These cultivar evaluation trials are jointly sponsored and supported by the GCSAA, USGA-Green Section, and NTEP. The USGA funded the construction of USGA specification greens for the trials. Trial sites are located on golf courses near a land grant university with a turfgrass research program or in a major metropolitan area which is readily accessible to a university turfgrass scientist. Sixteen (16) regional evaluation trial sites have been established. Trials are located in: a) northern locations for bentgrasses, b) southern locations for bermudagrass, and c) transition zone locations for both species. Trials are located where golfers practice putting and/or chipping. Host clubs provide daily maintenance of the putting green site at their own expense.

Trial Specifics

The NTEP functions as the coordinating agent for the cultivar trials. These trials are five years in duration. Trials are conducted under mutually agreed upon guidelines, procedures, and funding outlined in a research agreement agreed to and signed by the appropriate representatives of GCSAA, USGA, and NTEP and each research cooperator (i.e. university turfgrass researcher). Trials are conducted at each location under the leadership of the assigned research cooperator. These persons are responsible for establishing and conducting the trial, and collecting and transferring the data to NTEP according to the research agreement.

Trials are maintained by the golf course superintendent at each location using management procedures common to their golf course, the geographical area and in consultation with the research cooperator. No special management practices are prescribed as these trials are intended to receive real-world golf course conditions and stresses.

ON-SITE TESTING (continued)

These trials are conducted principally with commercially available, named cultivars. Experimental lines that will be commercially available in the near future (i.e. before the end of the test cycle) were also included in these trials at the sponsoring company's discretion.

The NTEP administers the program and its funding, sets the advisory committee and gathers their input and recommendations for each species trial. The NTEP organizes and distribute the seed and vegetative materials which constitute the entries for each trial location. The NTEP provides the maintenance and data collection protocols to each site; collects, analyzes and disseminates the performance data in annual and final reports; and conducts an annual site visit for each trial.

For more information or additional copies of reports, please contact:

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Beltsville Agricultural Research Center-West
Building 003, Room 217
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NTEP reports can also be found on the World Wide Web at <http://www.ntep.org>.

ON-SITE PUTTING GREEN TEST LOCATIONS

Golf Course	Location	Superintendent	Research Cooperator
<i>Bentgrass only</i>			
Crystal Springs Golf Course	Burlingame, California	Ray Davies	Dr. Ali Harivandi, California Cooperative Extension
Fox Hollow at Lakewood	Lakewood, Colorado	Bruce Nelson	Dr. Tony Koski, Colorado State University
Lassing Pointe Golf Course	Florence, Kentucky	Jerry Coldiron	Dr. A. J. Powell, University of Kentucky
North Shore Country Club	Glenview, Illinois	Dan Dinelli	Dr. Tom Voigt, University of Illinois
Purdue University Kampen Course	West Lafayette, Indiana	Jim Scott	Dr. Zac Reicher, Purdue University
Snoqualmie Ridge C. C.	Snoqualmie, Washington	Tom Wolff	Dr. Gwen Stahnke, Washington State University
Westchester Country Club	Rye, New York	Joe Alonzi	Dr. James Murphy, Rutgers University
Westwood Golf Course	Vienna, Virginia	Walter Montross	Dr. David Chalmers, Virginia Tech University
<i>Bentgrass and Bermudagrass</i>			
Bent Tree Country Club	Dallas, Texas	Keith Ihms	Dr. Milt Engelke, Texas A&M University
Country Club of Birmingham	Birmingham, Alabama	Lee McLemore	Dr. Elizabeth Guertal, Auburn University
Country Club of Green Valley	Green Valley, Arizona	Mike Bates	Dr. David Kopec, University of Arizona
The Missouri Bluffs	St. Charles, Missouri	Mike Vogt	Dr. John Dunn, University of Missouri
SCGA Members Club	Murrieta, California	John Martinez	Dr. Robert Green, University of California-Riverside
<i>Bermudagrass only</i>			
Country Club of Mobile	Mobile, Alabama	Ron Wright	Dr. Bryan Unruh, University of Florida
Jupiter Island Club	Hobe Sound, Florida	Rob Kloska	Dr. John Cisar, University of Florida
Lakeside Country Club	Houston, Texas	Mike Sandburg	Dr. Richard White, Texas A&M University

USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST

Entries and Sponsors

Entry No.	Name	Sponsor
1	L-93	Simplot Turf & Horticulture
2	Putter	Simplot Turf & Horticulture
3	Cato	Pickseed West, Inc.
4	Crenshaw	ProSeeds Marketing, Inc.
5	Grand Prix (LCB-103)	LESCO, Inc.
6	Penncross	Standard entry
7	Backspin	Turf Merchants, Inc.
8	Trueline	Turf Merchants, Inc.
9	Providence	Seed Research of Oregon
10	SR 1020	Seed Research of Oregon
11	SR 1119	Seed Research of Oregon
12	Viper	Cebeco International Seeds, Inc.
13	Century	ProSeeds Marketing, Inc.
14	Imperial	ProSeeds Marketing, Inc.
15	Penn A-1	Tee-2-Green Corp.
16	Penn A-4	Tee-2-Green Corp.
17	Penn G-6	Tee-2-Green Corp.
18	Penn G-1	Tee-2-Green Corp.

TABLE 1A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT BIRMINGHAM, AL (COUNTRY CLUB OF BIRMINGHAM)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	16-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)
Problems during	None		Foliar application applied weekly in Feb. - Nov.	1/10-1/32 lb N	March, May, late July, and Sept.	Pre-San	2 lbs. product
FACTORS OF PLAY			Granular application				
Date opened for play	year round	Feb., March, April	26-0-22 (Nutralene+KNO ₃)	0.5-0.6 lb. N			
Date closed for play		May, June	K ₂ SO ₄ (0-0-24)	1 lb. K ₂ O			
Type of spikes allowed	softspikes	September	26-0-22 (Nutralene+KNO ₃)	0.6 lb. N			
Uses of green	chipping	October	26-0-22 (Nutralene+KNO ₃)	0.6 lb. N			
MOWING					INSECTICIDES		
Initial height	0.25"		FUNGICIDES		Date(s)	Product	Rate (oz./M)
Current height	0.135 -0.150"						
Frequency	6-7 days/week	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)	as needed for cutworms	Talstar	1 lb./100 sq.ft.
Type of mower	Toro 800 walk				early May	Nemacur	2.3 lbs./1000 sq.ft.
Rollers used	Rolling as needed (1/2x/week)						
Groomers used	6-7x/week Oct-June	Fungicides applications are made from Feb. to early Dec. depending on weather conditions. Big problem with pythium so Alliette, Banol, Subdue, and Heritage are	Alliette	4			
CULTIVATION			Banol	2			
Aerfication - dates	5/8" hollow x 2 direction - Feb. 1/4" hollow tine (June-August). 5/8" tine - Sept. Hydroject every other week (Feb.- Nov.).	rotated and sprayed on a two weeks schedule in May-Nov.	Subdue Maxx	1	OTHER PRODUCTS		
Verticutting	Lightly verticut in April & June.		Dithane	4	Date(s)	Product	Rate (oz./M)
Dates of topdressing	Heavy topdressed after Feb. and Sept. aerifications to fill holes. Lightly topdressed biweekly during growing season.		Daconil Ultrex	4-8 oz.			
Other cultural practices	Rolled heavy after aerifications		Heritage	0.4	weekly as needed	Astron	1
			Consyst	4	weekly as needed	Perkup	3
			Terrazole	6	6-May-98	Primo	8 oz./Acre
					10-Jun-98	Primo	8 oz./Acre
NOTES/COMMENTS							
							This green gets a lot of play.

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TABLE 1B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT BIRMINGHAM, AL (COUNTRY CLUB OF BIRMINGHAM) 1/
 2000 DATA

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

NAME	GENETIC COLOR	LEAF TEXTURE	WINTER COLOR	FALL	FALL	FALL	FALL	QUALITY RATINGS												
				COLOR SEPTEMBER	COLOR OCTOBER	COLOR NOVEMBER	COLOR DECEMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-1	6.0	7.3	6.0	7.7	7.7	6.0	7.0	7.3	7.0	7.3	7.3	7.3	7.7	7.3	7.0	7.3	7.0	7.0	7.3	
PENN A-4	5.7	7.0	5.7	7.3	7.7	6.0	7.0	7.7	7.0	8.0	7.0	7.3	7.7	7.3	7.0	7.0	6.7	7.7	7.3	
CENTURY	5.0	7.3	5.0	7.3	7.0	6.3	6.3	6.7	7.0	6.7	7.0	7.0	7.3	7.7	5.7	7.0	7.0	6.7	7.0	
PENN G-1	5.7	6.3	5.7	7.3	7.3	6.3	6.3	6.7	7.0	6.7	7.0	7.0	7.0	7.0	7.0	7.0	7.3	6.3	6.9	
BACKSPIN	6.0	7.0	6.0	6.7	7.0	5.3	6.7	6.3	7.0	6.3	7.0	7.0	7.0	7.3	6.0	7.0	7.0	6.0	6.8	
GRAND PRIX (LCB-103)	5.3	6.7	5.3	7.0	6.7	5.0	7.0	6.0	7.0	7.7	6.7	7.0	7.0	7.0	6.7	6.7	7.0	6.7	6.8	
IMPERIAL	6.3	6.7	6.3	7.0	7.3	5.7	6.7	5.7	6.7	6.3	7.0	7.0	7.0	7.3	6.3	7.0	7.0	6.7	6.7	
SR 1020	6.3	6.3	6.3	6.0	6.7	6.0	6.3	6.7	7.0	6.7	7.0	7.0	6.7	7.0	7.0	5.7	7.0	6.3	6.0	
CRENSHAW	7.0	6.7	7.0	7.0	6.7	7.0	6.0	6.7	6.3	5.7	7.0	7.3	7.0	7.0	7.0	7.0	7.0	6.3	5.0	
PENN G-6	6.3	6.3	6.3	7.0	7.0	6.3	6.3	6.0	6.7	6.3	7.0	6.7	7.0	6.7	6.3	7.0	7.0	6.3	6.6	
PROVIDENCE	7.3	6.0	7.3	6.0	7.0	7.0	6.7	5.7	6.7	5.7	7.0	6.7	7.0	7.0	6.3	6.3	7.0	6.7	6.5	
SR 1119	7.7	6.3	7.7	6.3	7.0	7.7	6.7	6.0	6.7	5.7	7.0	6.7	6.7	7.0	6.7	7.0	6.7	6.7	5.7	
L-93	6.7	5.7	6.7	6.0	6.7	7.0	6.3	6.0	6.7	6.3	6.7	6.3	6.7	6.7	7.0	6.3	6.7	6.0	6.4	
PUTTER	6.3	5.3	6.3	5.7	6.3	6.3	6.3	6.7	7.0	5.7	6.7	6.0	6.0	6.0	6.3	5.7	6.7	6.0	6.2	
TRUELINE	7.0	5.7	7.0	5.7	6.3	6.3	6.3	6.0	6.3	6.0	7.0	6.3	6.3	6.3	6.0	6.0	6.0	6.0	5.7	
CATO	7.0	5.0	7.0	5.3	6.3	6.3	6.0	5.7	6.7	5.7	6.3	6.3	6.3	6.3	5.7	5.3	6.7	6.3	5.7	
VIPER	7.3	5.3	7.3	6.0	6.3	7.0	6.0	5.7	6.3	5.7	7.0	6.0	6.0	6.3	6.3	6.0	6.3	6.0	5.7	
PENNCROSS	6.0	4.7	6.0	4.7	6.0	5.7	6.0	5.3	6.0	5.0	5.7	6.3	5.7	6.0	4.3	4.7	5.3	5.0	4.7	
LSD VALUE	1.0	1.2	1.0	1.1	1.3	1.1	1.0	1.5	1.2	1.1	0.8	0.9	0.8	1.7	1.2	1.2	0.6	1.1	1.0	0.3
C.V. (%)	9.0	11.0	9.0	10.0	8.7	9.6	6.8	11.6	6.9	9.9	6.0	6.8	7.1	10.1	10.8	10.4	5.7	8.3	9.8	3.3

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 2A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT GREEN VALLEY, AZ (COUNTRY CLUB OF GREEN VALLEY)

ESTABLISHMENT		FERTILIZATION			INSECTICIDES		
Seeding date	October 1997	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	one plot washed out-replanted	start 10/ to 5/15 (bi-weekly)	Florentine liquid	0.25 lbs. N	April	Bill bugs adults treated with dilox at lable rate	
FACTORS OF PLAY		2/22, 3/30	15-15-15	1 lbs. N	May	Bill bugs and rove beetles treated with fonofos - crusade at lable rate	
Date opened for play	Open all year						
Date closed for play							
Type of spikes allowed	soft only						
Uses of green	Practice putting						
MOWING		FUNGICIDES			OTHER PRODUCTS		
Initial height	5/32"	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Current height	5/32"						
Frequency	6X/week	None					
Type of mower	walk (Mon.-Fri.), triplex - Sat.						
Rollers used	Grooved roller						
Groomers used	None						
CULTIVATION		HERBICIDES			NOTES/COMMENTS		
Aerification - dates	Quad tine - 3/30, 6/6	Date(s)	Product	Rate (oz./M)			
Aerification - type	Hollow tine - 11/24, 4/27						
Verticutting	Vert Lite - 10/6, 11/24, 1/25, 4/27, 3/30, 2/22						
Dates of topdressing	Same as lite vert dates						
Other cultural practices							

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TABLE 2B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT GREEN VALLEY, AZ (COUNTRY CLUB OF GREEN VALLEY) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	DENSITY RATINGS			PERCENT LIVING COVER			WINTER COLOR	FALL COLOR SEPT.	FALL COLOR OCT.	FALL COLOR NOV.	FALL COLOR DEC.	STIMPMETER READINGS		
				SPRING	SUMMER	FALL	SPRING	SUMMER	FALL						SPRING	SUMMER	FALL
PENN A-4	6.3	7.0	8.3	8.3	8.0	8.7	99.0	99.0	99.0	5.3	6.7	6.7	7.0	6.7	100.0	112.3	92.0
BACKSPIN	5.3	6.7	7.3	7.3	7.3	8.0	96.0	97.0	97.7	6.3	5.3	4.3	4.7	5.7	99.0	107.7	91.0
PENN A-1	5.7	5.3	7.3	6.7	7.0	7.3	93.0	97.0	97.7	5.7	6.7	6.0	6.0	6.3	106.3	115.0	99.3
SR 1119	6.7	7.0	7.3	7.7	7.0	7.3	98.3	97.3	98.7	7.0	7.0	6.3	6.7	6.7	95.0	115.7	88.7
CENTURY	5.3	5.0	7.7	8.0	6.7	7.7	95.3	94.0	99.0	5.3	6.0	5.3	5.3	5.7	115.7	106.0	104.3
GRAND PRIX (LCB-103)	4.7	4.7	7.7	8.0	7.7	7.7	98.7	98.7	98.7	5.0	5.0	4.3	4.3	5.0	99.3	110.3	97.0
L-93	5.7	6.3	6.7	7.0	7.0	7.7	97.3	97.0	98.7	6.7	6.3	5.3	6.0	6.3	104.3	108.0	98.0
SR 1020	5.3	6.3	6.7	6.7	6.0	7.0	93.3	91.7	96.7	6.3	6.0	4.0	5.0	6.3	110.3	108.0	96.3
PROVIDENCE	5.7	7.0	6.0	6.7	6.0	7.0	94.3	92.3	97.3	6.7	6.7	4.7	5.3	6.0	94.7	104.7	95.0
PENN G-1	5.7	7.0	7.3	8.0	7.7	7.7	98.3	98.3	99.0	5.7	5.3	5.0	5.3	5.3	104.0	112.7	92.3
IMPERIAL	5.0	6.0	7.3	7.7	7.0	7.7	97.7	97.0	97.7	5.3	6.0	4.7	5.0	5.0	102.7	109.3	100.3
TRUELINE	6.0	6.3	6.7	7.0	6.3	7.3	96.7	95.0	98.7	6.3	6.7	4.7	5.3	5.7	103.0	108.3	99.7
CRENSHAW	6.0	6.0	7.0	7.0	7.0	6.7	95.3	97.3	96.7	7.0	6.3	5.3	6.0	6.7	100.3	110.0	94.0
VIPER	6.0	7.3	6.7	7.0	6.7	6.7	95.0	94.0	97.3	7.3	7.7	4.7	6.0	7.0	103.0	110.0	96.3
PENN G-6	6.0	6.3	7.0	6.7	6.7	7.0	95.0	96.7	97.7	6.0	5.3	4.0	5.0	5.7	107.3	107.3	102.3
CATO	5.3	6.0	7.0	7.3	6.7	6.7	95.3	96.7	97.3	5.7	6.0	5.0	5.3	5.3	107.7	107.3	101.3
PUTTER	4.7	5.3	6.3	6.0	5.7	7.0	90.0	90.0	97.0	5.7	5.7	4.7	5.3	4.7	99.3	110.3	92.7
PENNCROSS	4.0	4.7	5.7	6.3	5.3	6.3	91.7	86.7	96.0	5.0	4.3	4.0	4.3	4.3	96.3	106.7	95.7
LSD VALUE	1.0	1.7	1.1	1.6	1.3	1.7	7.8	6.0	4.1	1.0	2.5	1.8	1.2	1.3	17.9	11.3	20.5
C.V. (%)	10.3	13.4	8.8	10.6	10.5	10.1	3.5	3.4	1.5	9.9	17.7	17.6	12.5	12.3	7.3	4.0	7.4

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 2B.
(CONT'D)

MEAN TURFGRASS QUALITY RATINGS OF BENTGRASS CULTIVARS IN THE
1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
AT GREEN VALLEY, AZ (COUNTRY CLUB OF GREEN VALLEY) 1/
2000 DATA

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

NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-4	6.7	7.0	7.0	8.3	6.7	8.3	8.0	6.7	6.3	7.0	6.7	8.7	7.3
BACKSPIN	6.7	7.3	7.7	8.0	6.0	7.0	6.7	6.3	4.7	6.0	6.0	6.7	6.6
PENN A-1	5.3	6.0	6.0	6.7	6.3	7.3	6.3	6.0	6.3	6.0	6.0	7.0	6.3
SR 1119	6.3	7.5	7.0	7.3	6.7	7.3	6.7	5.7	4.7	6.0	5.3	5.3	6.3
CENTURY	6.0	7.5	7.5	6.3	5.7	6.3	6.0	6.7	4.7	6.0	6.0	6.7	6.2
GRAND PRIX (LCB-103)	6.7	7.0	7.0	9.0	5.3	7.0	6.0	5.7	4.0	5.7	5.3	6.7	6.2
L-93	6.0	6.3	6.3	7.7	5.3	6.7	6.0	6.3	5.7	6.0	6.0	6.3	6.2
SR 1020	6.3	6.7	5.7	7.0	5.0	5.3	6.0	7.0	6.0	6.0	7.0	6.7	6.2
PROVIDENCE	6.0	6.7	7.3	7.7	4.7	5.7	5.7	6.0	5.3	5.7	6.0	6.3	6.1
PENN G-1	6.0	7.0	7.0	8.0	5.3	6.7	5.3	5.3	4.7	5.0	5.3	6.3	6.0
IMPERIAL	4.7	6.0	6.7	7.7	5.3	6.7	6.0	6.0	4.3	6.0	5.3	6.3	5.9
TRUELINE	6.7	6.7	6.7	8.0	5.0	5.7	6.0	5.0	4.0	5.3	5.0	6.3	5.9
CRENSHAW	5.3	6.3	5.7	7.0	5.0	7.0	6.5	6.0	5.0	5.7	5.7	5.0	5.8
VIPER	5.7	6.0	7.0	7.7	4.3	6.0	5.7	5.3	5.3	5.3	5.7	5.7	5.8
PENN G-6	5.3	7.0	6.5	7.0	5.7	6.3	5.7	5.0	5.0	5.0	4.7	6.7	5.7
CATO	5.7	6.3	5.7	7.3	4.7	6.3	5.7	5.3	4.3	5.0	5.0	5.7	5.6
PUTTER	5.0	6.7	6.7	6.7	4.3	5.3	4.7	5.3	5.7	4.7	5.3	6.7	5.6
PENNCROSS	6.3	7.0	7.0	6.7	2.7	4.7	4.7	4.7	3.7	4.7	4.3	6.7	5.3
LSD VALUE	2.8	-	3.1	2.8	2.3	1.6	2.7	-	3.8	3.1	3.7	1.8	2.0
C.V. (%)	16.9	19.1	15.8	13.8	20.9	13.4	17.9	21.1	26.6	18.8	21.7	13.9	11.9

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 3A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT BURLINGAME, CA (CRYSTAL SPRINGS GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	25-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None	10-Jan 13-Jan 3/21, 4/7 1-May	Floratine NOW 12-0-12 Milorganite 6-2-0 Seasource 16-4-8 Milorganite 6-2-0	2 fl. oz. 8.0 5.5 7.5	20-Jul	Triplet /2,4-D, MCPP, Dicamba	0.66 fl.oz./M
FACTORS OF PLAY		31-May 22-Jun	Scotts 29-2-3 Milorganite 6-2-0	3.2 fl. oz. 9.7			
Date opened for play	open all year	22-Aug	Milorganite 6-2-0	9.5			
Date closed for play		9/1, 9/15	Floratine NOW 6-12-3	1.9 fl. oz.	INSECTICIDES		
Type of spikes allowed	Softspikes encouraged	27-Sep	Nutralene 40-0-0	3.5			
Uses of green	putting only (80,000 rounds/year)	25-Oct	Milorganite 6-2-0	9.0	Date(s)	Product	Rate (oz./M)
		31-Oct	Floratine NOW 6-12-3	2.6 fl. oz.			
MOWING		12/6, 12/27	Floratine NOW 12-0-12	2.6 fl. oz.		None	
Initial height	5/32"				OTHER PRODUCTS		
Current height	5/32"						
Frequency	3 times/week						
Type of mower	walking	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Rollers used	None						
Groomers used	None	Date(s)	Product	Rate (oz./M)		None	
CULTIVATION		15-Feb	Cleary's 3336G /Tiophanate Methyl	3 lbs./M			
Aerification - dates	1/7, 3/21, 8/4 - 1/4" hollow tines.	11-May 5/31, 7/20 29-Aug	Cavalier 2G /Tiophanate Methyl Heritage/Azoxystrobin Scotts Systemic Fungicide /Tiophanate Methyl	3 lbs./M 0.4 2 lbs./M	NOTES/COMMENTS		
Aerification - type	6/14, 6/21, 6/28, 7/5, 7/27, 10/25, 12/5 - Toro Spiker	15-Sep 31-Oct	Heritage/Azoxystrobin Chipco 26019/Iprodione	0.4 3			
Verticutting	None						
Dates of topdressing	4/20, 9/7, 10/13 - Sand	21-Dec	Cleary's 3336G /Tiophanate Methyl	3 lbs./M			
Other cultural practices	None						

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 3B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT BURLINGAME, CA (CRYSTAL SPRINGS G.C.) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	LEAF TEXTURE	DENSITY FALL	POA ANNUA	PERCENT STIMPMETER READINGS		QUALITY RATINGS												
					MAY	OCTOBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
L-93	8.0	8.3	8.7	2.0	97.3	116.0	7.0	7.0	8.3	7.3	6.7	6.3	7.7	7.7	7.3	8.7	8.7	8.0	7.6
CRENSHAW	7.7	8.0	9.0	1.0	98.7	126.3	7.3	7.0	8.0	7.7	7.0	6.7	7.7	6.7	6.7	8.0	8.7	7.3	7.4
PENN A-4	6.7	7.7	8.0	2.0	108.3	129.7	6.0	6.7	7.7	7.0	8.0	6.7	7.7	7.7	6.7	7.3	8.7	8.3	7.4
PENN G-6	7.3	7.7	8.7	1.0	107.3	123.0	7.3	7.0	7.7	7.3	6.7	6.7	7.7	6.3	7.3	8.0	8.7	7.7	7.4
IMPERIAL	7.3	8.0	8.7	1.7	89.3	124.3	7.3	7.0	7.7	7.0	6.7	6.3	7.3	7.0	6.3	7.7	8.3	7.7	7.2
PENN A-1	6.7	8.0	8.0	1.0	102.7	123.7	7.0	7.0	8.0	7.3	6.7	6.3	7.3	7.0	7.3	6.7	8.7	7.3	7.2
SR 1119	7.7	8.0	8.3	3.3	97.3	128.0	6.3	6.7	7.0	7.3	7.0	6.3	7.7	7.0	7.3	8.0	8.7	7.3	7.2
BACKSPIN	8.0	8.3	9.0	1.0	98.0	121.3	6.7	7.0	7.7	7.0	6.3	6.3	7.0	6.3	7.3	8.3	7.7	7.1	7.1
CENTURY	7.3	8.7	8.3	1.0	99.3	121.3	6.3	7.0	8.0	6.3	6.7	6.7	7.3	8.0	7.0	7.3	7.7	7.3	7.1
PENN G-1	7.3	8.3	8.7	2.3	94.7	118.3	6.0	6.7	7.7	6.7	6.7	7.0	7.3	7.3	6.7	7.0	8.3	8.3	7.1
GRAND PRIX (ICB-103)	7.3	7.7	8.0	1.7	102.0	125.7	6.7	7.0	7.7	7.0	6.3	5.7	7.0	7.0	6.3	7.3	8.3	7.7	7.0
PROVIDENCE	7.3	7.7	8.7	2.7	99.3	125.0	6.7	6.7	7.0	7.3	7.3	6.7	7.0	5.7	6.0	7.7	8.3	7.7	7.0
SR 1020	6.0	7.7	7.7	2.3	103.3	124.7	6.3	7.3	7.7	6.7	7.0	7.0	7.0	6.0	5.3	6.3	7.7	7.3	6.8
VIPER	6.3	7.3	7.7	1.3	91.3	124.7	6.3	6.7	7.0	6.7	7.0	6.3	5.7	6.3	5.3	6.7	8.3	7.7	6.7
CATO	6.7	7.0	7.0	3.0	105.3	126.0	6.0	6.3	6.3	6.7	5.3	6.0	6.7	5.3	7.0	7.7	6.7	6.4	6.4
PUTTER	6.0	7.0	7.0	1.7	102.0	123.3	6.7	7.0	8.0	5.3	6.0	6.3	6.7	6.3	4.7	6.0	7.7	6.7	6.4
TRUELINE	6.7	7.7	7.7	3.3	100.0	127.7	6.3	6.3	6.7	6.3	5.3	5.7	6.7	6.7	5.0	7.0	8.3	7.0	6.4
PENNCROSS	5.7	6.3	6.3	1.7	111.7	131.7	6.0	5.3	5.3	6.0	4.7	4.7	5.0	7.3	6.0	5.7	7.3	6.3	5.8
LSD VALUE	1.9	1.7	1.7	3.0	20.0	13.4	1.4	2.0	1.2	2.7	2.3	1.8	1.3	1.5	1.6	2.1	1.8	1.8	0.7
C.V. (%)	12.5	9.5	10.5	61.8	8.0	4.3	9.3	10.6	9.3	13.8	15.4	12.0	10.2	11.5	13.6	13.0	8.3	10.0	5.8

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 4A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (The SCGA MEMBERS' CLUB)

ESTABLISHMENT		FUNGICIDES			INSECTICIDES		
Seeding date	Sept. 1997	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Problems during	None	19-Jan 2-Jun 27-Jul 3-Aug	Daconil WS Subdue (F) Daconil WS Alliette	2 2 2 4	11-Jul 14-Aug	Merit (75 WSP) Tempo 20 WP	0.19 5 grams/1000
FACTORS OF PLAY		3-Aug 14-Aug	Fore (WP) Subdue Maxx	8 1	HERBICIDES		
Date opened for play		14-Aug	Fore (WP)	8	Date(s)	Product	Rate (oz./M)
Date closed for play					28-Jan	Betasan	4
Type of spikes allowed	Softspikes only	14-Aug					
Uses of green	putting, chipping, target. Heavy use PPG.	20-Nov	26 Chipco GT Flo.	5			
MOWING					OTHER PRODUCTS		
Initial height	0.125"				Date(s)	Product	Rate (oz./M)
Current height	0.125"						
Frequency	7 days/week						
Type of mower	Triplex - GKV						
Rollers used	Groomers used						
Groomers used	approximate 4 days/week. Rollers used 1-2 times per month.						
CULTIVATION			NOTES/COMMENTS				
Aerification - dates	3/14, 10/10		Control of "Poa annua" continues to be our biggest problem. Some bentgrass varieties are very resistant to "Poa annua" in comparison to other varieties.				
Aerification - type	5/8" hollow tine		Site visits from other Club Officials and Superintendents are frequent.				
Verticutting	2-3 times per month depending upon thatch						
Dates of topdressing	Heavy topdressing w/USGA spec. sand on 3/14, 10/10, following aerification. Light topdressing w/#30 silica sand monthly except Jan. and Feb.						
Other cultural practices	Heavy brushing in Mar., Oct. Rolled for special tournament events which is 1-2 times/month. Flushed with 6" of irrigation water once every 3 weeks from June-Oct. to lower High E.C. (100% reclaimed irrigation use in 2000)						

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 4A. (CONT'D) 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)			Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K				N	P	K
5-Jan	Turf Partners	7-0-0	0.02			17-Mar	Crown Tech.	FeSO4			
5-Jan	Turf Partners	1-0-23			0.07	27-Mar	Nutriculture	28-8-18	0.08	0.02	0.05
5-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	27-Mar	Turf Partners	1-0-23			0.07
5-Jan	Crown Tech.	FeSO4				27-Mar	Turf Partners	7-32-6	0.02	0.1	0.02
14-Jan	Nutriculture	20-20-20	0.08	0.08	0.08	27-Mar	Crown Tech.	FeSO4			
14-Jan	Turf Partners	1-0-23			0.07	2-Apr	Turf Partners	Gypsum			
14-Jan	Turf Partners	7-0-0	0.02			3-Apr	Turf Partners	34-0-0	0.01		
14-Jan	Crown Tech.	FeSO4				3-Apr	Turf Partners	1-0-0 (8% Ca)			
14-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	3-Apr	Turf Partners	1-0-23			0.07
24-Jan	Turf Partners	1-0-23			0.07	3-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
24-Jan	Turf Partners	Eco-Mag				3-Apr	Nutriculture	24-0-0	0.07		
24-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	14-Apr	Turf Partners	34-0-0	0.1		
24-Jan	Turf Partners	7-0-0	0.02			14-Apr		0-0-34			0.09
9-Feb	Best	10-4-16	0.4	0.16	1.62	18-Apr	Best	18-3-18 (Polyon)	0.5	0.08	0.5
22-Feb	True Green	34-0-0	0.04			23-Apr	Turf Partners	0-0-34			0.2
22-Feb	Turf Partners	7-0-0	0.02			23-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
22-Feb	Turf Partners	Eco-Mag				23-Apr	Turf Partners	Eco-Mag			
22-Feb	Crown Tech.	FeSO4				23-Apr	Crown Tech.	FeSO4			
1-Mar	Nutriculture	28-8-18	0.08	0.02	0.05	26-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
1-Mar	Turf Partners	1-0-23			0.07	26-Apr	Turf Partners	1-0-23			0.07
1-Mar	Turf Partners	1-0-0 (8% Ca)				26-Apr	Turf Partners	Eco-Mag			
1-Mar	Turf Partners	7-32-6	0.02	0.1	0.02	26-Apr	promot	Promot			
1-Mar	Turf Partners	Eco-Mag				26-Apr	Crown Tech.	FeSO4			
1-Mar	Crown Tech.	FeSO4				1-May	Turf Partners	34-0-0	0.07		
2-Mar	Best	10-4-16	0.62	0.25	0.99	1-May	Crown Tech.	FeSO4			
8-Mar	Turf Partners	1-0-0 (8% Ca)				7-May	Best	18-3-18 (Polyon)	0.5	0.08	0.5
8-Mar	Turf Partners	1-0-23			0.07	12-May	Nutriculture	28-8-18	0.08	0.02	0.05
8-Mar	Turf Partners	7-32-6	0.02	0.1	0.02	12-May	Crown Tech.	FeSO4			
8-Mar	Turf Partners	7-0-0	0.02			12-May	Turf Partners	1-0-23			0.04
17-Mar	Nutriculture	20-20-20	0.06	0.06	0.06	12-May	Turf Partners	Eco-Mag			
17-Mar	Nutriculture	34-0-0	0.04			23-May	Nutriculture	20-20-20	0.06	0.06	0.06
17-Mar	Turf Partners	Eco-Mag				23-May	Turf Partners	1-0-23			0.04

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TABLE 4A. (CONT'D) 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)			Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K				N	P	K
23-May	Crown Tech.	FeSO4				1-Oct	Turf Partners	Gypsum			
31-May	Nutriculture	28-8-18	0.08	0.02	0.05	4-Oct	Best	10-4-16	0.26	0.11	0.42
31-May	Nutriculture	24-0-0	0.07			25-Oct	Turf Partners	0-0-34			0.1
14-Jun	Nutriculture	34-0-0	0.07			25-Oct	Nutriculture	28-8-18	0.08	0.02	0.05
14-Jun	Turf Partners	1-0-23			0.14	12-Nov	K-Power	34-0-0	0.1		
14-Jun	Turf Partners	8% chelated Fe				12-Nov	Turf Partners	1-0-23			0.07
19-Jun	Turf Partners	0-0-34			0.07	12-Nov	Crown Tech.	FeSO4			
19-Jun	Nutriculture	24-0-0	0.07			2-Nov	Turf Partners	Gypsum			
24-Jun	Pursell	0-0-46			1.1	15-Nov	Turf Partners	Eco-Mag			
10-Jul	Turf Partners	0-0-34			0.07	15-Nov	Turf Partners	1-0-23			0.14
10-Jul	Turf Partners	7-0-0	0.1			15-Nov	K-Power	13.75-0-46	0.04		0.13
16-Jul	Turf Partners	Gypsum				15-Nov	Nutriculture	20-20-20	0.06	0.06	0.06
27-Jul	Pac. Ag. & Turf	0-0-25			0.08	15-Nov	Crown Tech.	FeSO4			
27-Jul	Nutriculture	24-0-0	0.1			27-Nov	Turf Partners	0-0-34			0.07
8-Aug	Pac. Ag. & Turf	0-0-25			0.1	27-Nov	Nutriculture	28-8-18	0.08	0.02	0.05
8-Aug	Nutriculture	24-0-0	0.1			3-Dec	Lebenon S.G.	20-0-20	0.5		0.5
17-Aug	Turf Partners	Gypsum				7-Dec	K-Power	13.75-0-46	0.04		0.13
19-Aug	Turf Partners	0-0-34			0.07	7-Dec	Turf Partners	34-0-0			0.07
19-Aug	Nutriculture	28-8-18	0.08	0.02	0.05	7-Dec	Turf Partners	1-0-0-8Ca			
19-Aug	Sequestar	13% Fe				16-Dec	Best	10-4-16	0.4	0.16	1.62
5-Sep	Turf Partners	0-0-34			0.07	22-Dec	Nutriculture	28-8-18	0.08	0.02	0.05
5-Sep	K-Power	13.75-0-46	0.04		0.13	22-Dec	Turf Partners	34-0-0			0.07
5-Sep	Sequestar	13% Fe				22-Dec	Crown Tech.	FeSO4			
11-Sep	Turf Partners	1-0-0-8Ca				27-Dec	Turf Partners	34-0-0			0.1
11-Sep	Turf Partners	1-0-23			0.07	27-Dec	Nutriculture	20-20-20	0.1	0.1	0.1
11-Sep	Nutriculture	34-0-0	0.1					Total	6.03	1.89	11.59
19-Sep	Best	10-4-16	0.62	0.25	0.99						

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TABLE 4B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT MURRIETA, CA (SCGA MEMBERS CLUB) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	LEAF TEXTURE	PERCENT	PERCENT	PERCENT	STIMPMETER JULY	READINGS DECEMBER	QUALITY RATINGS							
			POA ANNUA MAR.	POA ANNUA OCT.	POA ANNUA DEC.			JAN	FEB	JUN	JUL	AUG	OCT	DEC	MEAN
PENN A-4	7.7	8.0	8.3	13.3	13.3	129.7	150.7	7.7	8.3	8.0	8.0	8.0	8.0	7.3	7.9
PENN A-1	7.3	8.0	23.3	31.7	26.7	122.0	159.7	7.7	8.0	7.0	8.0	8.0	7.0	7.3	7.6
PENN G-1	7.7	7.7	20.0	25.0	26.7	133.0	159.7	7.3	8.0	7.7	8.0	8.0	7.0	7.0	7.6
CENTURY	7.7	8.0	25.0	33.3	28.3	127.7	163.7	7.0	7.7	7.0	7.7	8.0	7.3	7.0	7.4
BACKSPIN	7.3	7.7	30.0	36.7	41.7	130.3	154.7	7.0	7.3	7.0	8.0	8.0	7.0	7.0	7.3
GRAND PRIX (LCB-103)	7.7	8.0	28.3	35.0	28.3	124.0	156.3	7.0	7.3	7.0	7.7	8.0	7.0	7.0	7.3
PENN G-6	8.0	8.0	16.7	21.7	21.7	141.7	153.0	7.0	7.3	7.3	7.7	8.0	7.0	7.0	7.3
CRENSHAW	7.3	7.3	50.0	58.3	46.7	133.3	159.3	7.0	7.0	7.0	7.7	7.7	7.0	7.0	7.2
L-93	7.3	7.3	45.0	55.0	46.7	143.7	156.0	7.0	7.0	7.0	7.3	8.0	7.0	7.0	7.2
CATO	7.3	7.0	53.3	58.3	53.3	145.0	160.0	7.0	7.0	7.0	7.0	8.0	7.0	7.0	7.1
IMPERIAL	7.7	7.3	36.7	46.7	43.3	138.3	158.3	7.0	7.0	7.0	7.3	7.7	7.0	7.0	7.1
PROVIDENCE	7.0	7.0	38.3	46.7	50.0	123.7	160.3	7.0	7.0	7.0	7.3	7.7	7.0	7.0	7.1
PUTTER	7.3	7.3	50.0	58.3	66.7	128.0	162.0	6.7	7.0	7.0	7.0	8.0	7.0	7.0	7.1
TRUELINE	7.3	7.0	36.7	41.7	53.3	134.7	162.7	7.0	7.0	6.7	7.3	8.0	7.0	7.0	7.1
SR 1020	7.0	7.0	46.7	51.7	56.7	135.0	161.0	7.0	7.0	6.7	7.0	7.3	6.7	7.0	7.0
SR 1119	7.3	7.7	50.0	60.0	51.7	125.0	158.7	6.7	7.0	7.0	7.0	7.3	7.0	7.0	7.0
VIPER	7.0	7.0	63.3	70.0	75.0	138.0	160.3	7.0	7.0	7.0	7.0	7.3	7.0	7.0	7.0
PENNCROSS	7.0	7.0	70.0	75.0	75.0	138.7	158.0	6.0	7.0	6.0	7.0	7.0	6.0	6.7	6.5
LSD VALUE	1.3	0.6	15.7	14.2	13.4	33.1	-	0.5	0.5	0.5	0.6	0.6	0.3	0.7	0.2
C.V. (%)	6.2	4.7	25.8	20.1	19.4	8.8	4.2	4.2	4.2	4.0	4.6	4.0	2.7	3.4	1.6

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 5A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT LAKEWOOD, CO (FOX HOLLOW AT LAKEWOOD)

ESTABLISHMENT		FERTILIZATION				FERTILIZATION			
Seeding date	4-Sep-97	Date(s)	Product	Rate (lbs./M)		Date(s)	Product	Rate (lbs./M)	
Problems during	None								
		7-Mar	Scott's Contec 17-3-17	0.51 lb.N		Sept. 29	Perk Up, Potassium	0.36 lb.N,	
		10-Apr	Scott's Pro-Turf 15-0-29	0.5 lb. N			Nitrate, Tiger Turf,	0.04 lb.P,	
FACTORS OF PLAY		20-Apr	Ammonium Sulfate 0.38lb, Turf Starter 7.67oz, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexmag 0.13oz, Primer 3oz, Heritage 0.4oz				Equalize, Astron,	0.93 lb.K,	
Date opened for play							Renaissance,	and Ca,	
Date closed for play		8-May	Nature Safe (8-3-5) 10lbs, Nitroform (38-0-0) 2.5lbs, Gypsum (CaS) 5.0lbs, Poly-K (0-0-50) 1.0 lb, Hy-Mag (17% Mg& 17% Ca) 5.5lbs, MAP (11-52-0) 2.0lbs				Calphplex, Maxi-Plex,	Mg, S, Fe	
			Primer 3oz, MaxiPlex 3oz, Roots Fe 8% 1oz.				Ferromec, Heritage		
Type of spikes allowed		16-May	Scott's Pro-Turf 15-0-29	0.25 lb. N					
		2-Jun	Tourney Pride 7.01oz, Turf Starter 7.01oz, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexman 0.13oz,						
Uses of green	putting, chipping,	19-Jun	Phlexmag 0.77oz, Primer 3oz, Roots Fe 8% 1oz, Heritage 0.4oz, Dye 0.50oz.			Date(s)	Product	Rate (oz./M)	
		5-Jul	Nature Safe (8-3-5)	0.4 lb. N		7-Jun	Heritage	0.4 lbs./M	
		24-Jul	Potassium Nitrate 0.42lbs, Turf Starter 0.33oz, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexman 0.13oz, Phlexmag 0.77oz, Primer 1.5oz, Roots Fe 8% 1oz, Heritage 0.4oz, Roots Stand up 3.0oz, Dye 0.50oz.			29-Sep	Heritage	0.4 lbs./M	
MOWING									
Initial height	0.190"	7-Aug	Tourney Pride 6.0oz, UHS "Feature" 3.05oz, Potassium Nitrate 42lbs, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexman 0.13oz, Phlexmag 0.77oz, Dye						
Current height	0.140"		Scott's Pro-Turf 15-0-29	0.3 lb. N					
Frequency	7 days/week		Nature Safe (8-3-5) 2.75lbs, Milogranite (6-2-0) 5.0 lbs, Nitroform (38-0-0) 2.5lbs, Gypsum (CaS) 5.0 lbs, Poly-K (0-0-50) 1.0 lb, Hy-Mag (17% Mg& 17% Ca) 5.0 lbs, MAP (11-52-0) 2.0 lbs						
Type of mower	walking	28-Aug							
Rollers used	Triplex	5-Sep							
Groomers used	Toro 1000								
CULTIVATION									
Aerification - dates	Spring and Fall	29-Sep	Tourney Pride 4.8oz, Ammonium Sulfate 0.25lb, Potassium Nitrate 0.25lbs, UHS "Feature" 1.5oz , Astron 0.9oz, Renaissance 1.5oz, Calpphlex 1oz , Phlexman 0.17oz, Phlexmag 0.32oz, MaxiPlex 1.25oz, Dye 0.5oz.						
Aerification - type	5/8" hollow tine								
Verticutting	2-3x weekly								
Dates of topdressing	light topdressing biweekly	23-Oct	Scott's Contec 17-3-17	0.26 lb.N		Date(s)	Product	Rate (oz./M)	
Other cultural practices									

NOTES/COMMENTS

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 5B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT LAKewood, CO (FOX HOLLOW AT LAKewood) 1/
 2000 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SUMMER DENSITY	QUALITY RATINGS							
					APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
PENN A-1	6.3	6.0	8.7	8.7	7.3	8.0	9.0	9.0	9.0	8.7	7.3	8.3
CENTURY	6.0	6.7	8.0	8.0	7.3	8.0	8.3	8.7	8.7	8.0	7.7	8.1
PENN A-4	7.0	6.0	9.0	8.7	7.7	8.0	8.7	8.7	8.7	8.0	7.3	8.1
L-93	7.7	6.7	8.0	8.0	7.3	8.0	8.0	8.7	8.3	8.0	7.3	8.0
EMPERIAL	6.3	6.3	8.3	8.0	7.3	7.7	8.3	8.0	8.0	8.0	7.0	7.8
PENN G-6	7.0	6.0	8.3	8.0	7.0	7.0	7.7	8.3	8.7	8.0	7.0	7.7
PENN G-1	7.0	6.0	8.0	8.0	7.0	7.3	7.7	8.0	8.3	8.0	7.0	7.6
BACKSPIN	6.0	6.3	7.7	8.0	7.0	8.0	8.0	7.7	7.3	7.0	7.0	7.4
CATO	7.0	5.7	7.0	7.3	7.0	7.3	7.7	7.3	8.0	7.3	7.0	7.4
CRENSHAW	7.0	5.3	7.7	7.3	7.0	7.3	7.7	8.0	8.0	7.0	7.0	7.4
SR 1119	7.0	6.7	7.7	8.0	7.0	7.0	7.3	8.0	8.0	7.3	7.0	7.4
GRAND PRIX (LCB-103)	6.0	5.3	8.0	7.7	7.0	7.7	7.7	7.3	7.3	7.0	7.0	7.3
PROVIDENCE	5.7	7.0	7.3	7.0	7.0	7.3	7.7	7.3	7.0	7.0	7.7	7.3
VIEER	8.0	5.3	7.3	7.7	7.0	7.0	7.0	7.3	7.3	7.0	7.0	7.1
SR 1020	6.3	5.0	7.3	7.0	6.3	7.0	7.0	8.0	7.7	6.7	6.0	7.0
TRUELINE	6.0	5.7	6.0	7.0	7.0	7.0	7.0	7.0	6.3	6.0	6.0	6.6
PUTTER	5.3	5.7	5.0	5.3	5.7	5.3	5.3	4.7	5.0	5.0	5.0	5.1
PENNCROSS	5.0	6.0	4.3	5.0	5.0	5.0	5.0	4.7	4.7	5.0	4.7	4.9
LSD VALUE	0.5	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.4	0.5	0.2
C.V. (%)	5.1	7.7	5.7	4.9	5.3	5.1	6.0	5.9	6.0	3.9	5.1	2.3

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 6A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

ESTABLISHMENT	OTHER PRODUCTS				INSECTICIDES		
Seeding date	28-Aug-97	Date(s)	Product	Rate (oz./M)			
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	26-Apr 26-Apr 26-Apr 26-Apr 26-Apr 16-May	Plant Growth Activator Maxicrop Soluale Seaweed Powder Maxicrop Liquid Dethatch Fresh Pak Super Shot 40	0.31 lb./M 1 1.5 0.16 lb./M 24.02 4	19-Jul	Battle	1.25
FACTORS OF PLAY						FUNGICIDES	
Date opened for play	16-May		Root Grow	16.01	Date(s)	Product	Rate (oz./M)
Date closed for play	16-May		Nutribac Growth Medium	16.01			
Type of spikes allowed	softspikes	16-May	Pseudomodas sp.	16.01	16-May	Nature's Best	10
Uses of green	putting, chipping, target	16-May 18-May 23-May	Plant helper Spot-Less Turfshield TM	0.30 lb./M 32.03 4.38 lb./M	28-Jun 19-Jul 9-Aug	Daconil	1.69 lbs/M 2.5 2.92
MOWING		3-Jun 20-Jun	Spot-Less Spot-Less	32.03 36.57	18-Sep 2-Nov	Daconil Nature's Best	2.92 4
Initial height		20-Jun	Plant helper	0.40 lb./M			
Current height		20-Jun	Super Shot 40	0.49			
Frequency	7 days/week	5-Jul	Turfshield TM	3 lb./M			
Type of mower	walking	24-Jul	LescoFlo	5.5			
Rollers used	None	28-Jul	Spot-Less	16.01		HERBICIDES	
Groomers used		28-Jul	SoilCond	0.23 lb./M			
CULTIVATION		28-Jul	B-1b Bacillus inoculant	0.12 lb./M	Date(s)	Product	Rate (oz./M)
Aerification - dates	7/6, 7/25, 9/15	7-Aug	Root Grow	16.01			
Aerification - type	Hydroject water injection	7-Aug	Spot-Less	16.01	None		
Verticutting		21-Aug	B-1b Bacillus inoculant	0.12 lb./M			
Dates of topdressing	4/24, 5/23, 7/5, 7/20, 8/15, 8/28, 9/4, 9/15, 10/17	15-Sep 15-Sep 15-Sep 15-Sep 15-Sep 15-Sep 15-Sep 15-Sep 15-Sep 2-Nov 2-Nov 2-Nov 2-Nov 2-Nov	Plant helper Super Shot 40 Plant helper Plant helper Super Shot 40 Earthworks N-hance Earthworks Base One Earthworks Kick Earthworks Potent Sea/plus Spot-Less Root Grow 	0.25 lb./M 4 1.25 1.25 1.25 32.03 16.01 24.02 2.5 2.5 2.5 2.5 3		NOTES/COMMENTS	
Other cultural practices	Brushed only for sand topdressing						

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 6A. (CONT'D)

2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

FERTILIZATION

FERTILIZATION

Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)
7-Apr	Perk (0-0-0)	19 lbs./7993 sq ft	24-Jul	Quelant Ca (5-0-0)	0.01 lb. N
7-Apr	White Gold (0-0-25)	2.08 lbs. K	24-Jul	Nutrigrow PK (0-28-26)	0.05 lb. K
12-Apr	Nature Safe (8-3-5)	0.33 lb. N	24-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
26-Apr	Fresh Pak (1-0-0)	0.01 lb. N	24-Jul	PanaSea Plus (0-0-0)	0.45 lb./3500 sq ft
26-Apr	Nature Safe (8-3-5)	0.37 lb. N	8-Aug	Plant Helper (0.6-0.9-0.2)	1.38 lbs./7993 sq ft
3-May	Nutraculture (10-20-30)	0.04 lb. K	8-Aug	Agriplex (0-4-4)	0.01 lb. K/app.
3-May	Agriplex (0-4-4)	0.01 lb. P/app.	9-Aug	Nutrigrow PK (0-28-26)	0.02 lb. K
3-May	Macrosorb Foliar (2-0-0-B,Mn,Zn)	0.01 lb. N/app.	9-Aug	Quelant Ca (5-0-0)	0.04 lb. N/app.
3-May	Quelant Ca (5-0-0)	0.03 lb. N/app.	9-Aug	Tuff Turf (1-0-14)	0.01 lb. K
3-May	Quelant K (1-0-30)	0.01 lb. K	14-Aug	Quelant K (1-0-30)	0.02 lb. K
3-May	3-D (0-0-14)	0.02 lb. K/app.	14-Aug	Sprint 330 (0-0-0)	
3-May	Biogain WSP (0-0-12)	0.02 lb. K/app.	14-Aug	Nutrigrow PK (0-28-26)	0.01 lb. K
3-May	Sprint 330 (0-0-0)	0.18 lb./7993 sq ft	14-Aug	Sea Quentia (7-0-1)	0.03 lb. N/app.
5-May	Soil Synergy (10-2-8)	0.44 lb. N	14-Aug	Iron Master (15-0-1)	
16-May	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.	14-Aug	Quelant Ca (5-0-0)	0.5 lbs./7993 sq ft
16-May	Nature's Best (0-0-0-Fe,Cu,B,Mo)	6.25 lbs./7993 sq ft	14-Aug	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
18-May	Nutraculture (28-8-18)	0.20 lb. N	21-Aug	Vtech Protamin (5-0-0)	0.01 lb. N
18-May	Biogain WSP (0-0-3)	0.02 lb. K	21-Aug	Nutrigrow PK (0-28-26)	0.06 lb. K
3-Jun	Nutrigrow PK (0-28-26)	0.04 lb. K	21-Aug	Nature Best (0-0-0)	6.25 lbs./7993 sq ft
20-Jun	PanaSea Plus (0-3-2)	0.01 lb. K	21-Aug	Biogain WSP (0-0-12)	0.01 lb. K/app.
20-Jun	Nutrigrow PK (0-28-26)	0.06 lb. K	21-Aug	Microbial Stimulant (1-0-0)	0.01 lb. N
20-Jun	Plant Helper (0.6-0.9-0.2)	1.41 lb./3500 sq ft	21-Aug	Plant Helper (0.6-0.9-0.2)	0.04 lb. N/app.
20-Jun	Microbial Stimulant (1-0-0)	0.03 lb. N	15-Sep	Biogain WSP (0-0-12)	0.01 lb. K
27-Jun	Nutrigrow PK (0-28-26)	0.21 lb. K	15-Sep	Biogain WSP (Fe) (0-0-3)	0.02 lb. K/app.
27-Jun	Lesco Chelated Fe+ (12-0-0)	0.04 lb. N	15-Sep	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.
27-Jun	Quelant Ca (5-0-0)	0.03 lb. N	15-Sep	Vtech Protamin (5-0-0)	0.01 lb. N
7-Jul	Nature Safe (8-3-5)	0.29 lb. N	15-Sep	Earthworks Base 1 (1-10-10-Cu,Zn,Mn)	0.01 lb. K
13-Jul	Soil Synergy (10-2-8)	0.44 lb. N	29-Sep	Lesco Greens Grade (18-4-18)	0.56 lb. N
19-Jul	Vtech Protamin (5-0-0)	0.03 lb. N/app.	20-Oct	Clesen's Professional (18-8-18)	0.68 lb. N
19-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.	14-Nov	Soil Synergy (10-2-8)	0.63 lb. N
19-Jul	Tuff Turf (1-0-14-Ca,Mg,Fe,Mn)	0.01 lb. K			

Total (lbs./M): 4.14 lbs. N, 0.80 lbs. P, and 5.32 lbs. K

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 6B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB) 1/
 2000 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS							
				APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
PENN A-1	6.0	6.7	7.3	7.7	8.3	9.0	6.7	6.7	8.3	7.7	7.8
PENN G-6	6.0	7.0	7.7	7.0	8.0	9.0	6.7	6.7	8.0	7.7	7.6
PENN G-1	6.0	6.0	8.3	6.7	8.0	8.0	5.7	6.3	8.0	7.7	7.2
L-93	6.3	5.3	7.0	7.3	7.3	7.3	5.7	6.0	8.0	7.7	7.0
PENN A-4	6.3	7.0	8.0	6.7	8.0	8.7	5.3	5.7	7.0	7.7	7.0
BACKSPIN	6.3	6.3	6.7	7.3	8.0	7.7	5.0	4.7	7.0	7.3	6.7
PROVIDENCE	6.0	5.7	7.0	6.7	7.3	7.3	5.7	5.7	7.7	6.7	6.7
TRUELINE	6.0	5.3	6.7	6.3	7.0	7.0	5.7	6.3	7.7	6.7	6.7
GRAND PRIX (LCB-103)	5.7	6.3	6.7	7.0	7.3	8.0	4.7	6.0	6.7	6.7	6.6
SR 1119	6.0	6.0	7.3	7.0	7.0	7.3	5.0	6.3	7.0	6.3	6.6
PUTTER	6.0	6.0	6.7	7.3	7.0	7.0	5.7	5.7	6.0	6.7	6.5
IMPERIAL	6.3	6.0	8.0	7.0	7.7	8.0	4.0	5.3	6.0	7.0	6.4
SR 1020	6.0	5.0	7.0	6.3	7.7	7.7	4.7	5.7	6.3	6.7	6.4
VIPER	6.3	4.7	7.0	6.3	7.0	7.7	5.0	5.3	6.0	6.7	6.3
CATO	6.3	5.0	6.7	5.7	6.3	7.7	4.3	5.7	6.7	6.7	6.1
CENTURY	5.3	6.0	7.7	6.7	7.3	7.7	4.3	4.7	5.3	6.0	6.0
CRENSHAW	6.3	4.3	7.0	6.3	6.7	7.3	4.7	5.3	5.3	6.3	6.0
PENNCROSS	6.0	5.3	5.3	6.7	5.7	6.3	5.3	5.3	5.7	5.7	5.8
LSD VALUE	1.1	1.2	1.4	2.7	1.4	0.8	1.3	1.4	1.4	1.8	0.5
C.V. (%)	6.8	11.8	10.0	13.2	9.8	6.5	13.5	12.0	11.9	11.6	4.8

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 7A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN GOLF COURSE)

ESTABLISHMENT		FERTILIZATION				HERBICIDES		
Seeding date	3-Oct-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Problems during	None	3-Apr 19-Apr 30-Jun 30-Jun	Scott's (9-18-18) Scott's (17-3-17) 18-3-4 + Micro Gary's Green 1-0-14 + Micro Tuff Turf	1.0 lb. K 1.0 lb. N 0.1 lb. N 0.1 lb. K	None			
FACTORS OF PLAY		5-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N	INSECTICIDES			
Date opened for play	Open all year around	5-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K				
Date closed for play	unless snow covered	7-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N	Date(s)	Product	Rate (oz./M)	
Type of spikes allowed	softspikes	7-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K				
Uses of green	putting	13-Jul 13-Jul 16-Aug	18-3-4 + Micro Gary's Green 1-0-14 + Micro Tuff Turf 18-3-4 + Micro Gary's Green	0.1 lb. N 0.1 lb. K 0.1 lb. N	13-May 7-Jun 11-Jul	Mach 2 Mach 2 Dylox 80 sp	1.5 1.5 2	
MOWING		22-Aug	1-0-14 + Micro Tuff Turf	0.1 lb. K				
Initial height	7/16"	16-Aug	Shaw's (17-3-17)	1.0 lb. N				
Current height	5/32"	22-Aug	Shaw's (17-3-17)	1.0 lb. N				
Frequency	7 days/week	14-Sep	Shaw's (17-3-17)	1.0 lb. N				
Type of mower	Triplex/Walking	4-Oct						
Rollers used	once a week - Jacobsen	2-Nov						
Groomers used	once a week - Jacobsen				OTHER PRODUCTS			
CULTIVATION					Date(s)	Product	Rate (oz./M)	
FUNGICIDES								
Aerification - dates		Date(s)	Product	Rate (oz./M)				
Aerification - type								
Verticutting	None	23-May 23-May	Chipco GT Alliette Signature	4 4				
Dates of topdressing	Every other week, starting in May. Used sand only. Same as what the green was built with.	12-Jun 12-Jun 30-Jun 30-Jun 12-Jul 12-Jul	Daconil Ultrex Alliette Signature Heritage Chipco GT Daconil Ultrex Alliette Signature	4 4 0.2 2 4 4	NOTES/COMMENTS			
Other cultural practices	Drag in sand with Metal mat or a brush.	16-Aug 16-Aug 26-Oct	Daconil Ultrex Alliette Signature Daconil Weatherstick	4 4 4	Located just east of the driving range and is used extensively.			

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 7B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN G.C.) 1/
 2000 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS								
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
PENN G-1	7.0	5.7	7.3	7.7	7.7	8.0	7.3	7.0	7.0	7.7	6.0	7.3
PENN A-4	7.3	5.7	7.7	7.3	7.3	7.3	7.3	7.0	7.0	8.0	6.0	7.2
PENN A-1	7.0	5.3	7.3	6.7	7.0	7.3	7.7	7.0	7.0	7.7	5.7	7.0
IMPERIAL	6.7	5.7	7.3	7.0	7.7	7.3	7.0	6.3	7.0	7.3	5.7	6.9
PENN G-6	7.3	5.0	7.0	7.0	6.7	7.0	7.0	7.0	7.0	7.7	5.3	6.8
CENTURY	6.0	5.3	7.7	6.3	7.0	7.0	7.3	6.7	6.7	7.0	5.3	6.7
GRAND PRIX (LCB-103)	6.3	5.0	7.3	6.7	7.3	7.3	6.7	6.7	6.3	7.0	5.3	6.7
L-93	7.7	3.7	6.3	6.7	7.0	7.3	6.7	6.0	6.7	7.7	5.3	6.7
CATO	6.3	4.7	6.7	7.0	6.7	6.7	6.3	6.0	7.0	7.0	5.3	6.5
SR 1020	7.0	5.0	6.7	6.7	6.7	7.0	6.7	6.3	6.7	7.0	5.3	6.5
SR 1119	8.0	3.7	7.0	6.7	7.0	7.0	6.7	6.0	6.7	7.0	5.3	6.5
PROVIDENCE	7.0	3.3	7.0	6.7	6.0	7.0	6.7	5.7	6.0	7.7	5.7	6.4
BACKSPIN	5.7	5.7	7.0	6.3	6.7	6.7	7.0	5.7	6.3	7.0	5.0	6.3
CRENSHAW	8.0	3.7	6.3	6.3	6.3	6.0	6.0	6.3	6.3	7.0	5.0	6.2
VIPER	7.3	3.7	6.7	6.3	6.0	6.7	6.3	5.3	6.0	7.0	5.3	6.1
TRUELINE	6.7	4.0	6.7	6.0	6.0	6.3	5.7	5.3	5.7	6.7	4.7	5.8
FUTTER	6.3	5.3	7.3	5.7	5.7	6.0	5.7	4.7	5.3	6.7	5.0	5.6
PENN CROSS	5.7	3.7	6.3	5.7	5.3	6.7	4.7	4.0	5.0	5.7	5.0	5.3
LSD VALUE	0.8	1.8	1.0	1.0	0.8	1.5	1.0	1.0	1.0	0.7	1.7	0.6
C.V. (%)	7.4	19.8	7.2	8.0	7.1	9.5	8.8	10.0	8.8	5.9	11.0	5.4

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 8A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT FLORENCE, KY (LASSING POINTE GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date Problems during	15-Sep-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		12-Jan 28-Mar 10-Apr 19-Apr	0-0-45 Milorganite 19-25-5 Starter Scotts STEP		5/15, 5/31, 6/19, 7/6, 7/27,	Acclaim	3
Date opened for play	31-Mar-00	4/24, 10/17	19-3-19				
Date closed for play		28-Mar	Milorganite				
Type of spikes allowed	softspikes	19-Jun	18/9/18 Fe Mn				
Uses of green	putting	24-Aug	Milorganite		Date(s)	Product	Rate (oz./M)
Others	40,000 rounds	24-Sep	18-9-18				
		12-Nov	19-25-5		3-May	Tempo	110 g./Acre
		2-Dec	STEP/Milorganite		5/31, 7/6, 7/24, 8/22, 9/1, 10/30	Delta Guard	22 oz./Acre
MOWING							
Initial height		8-Mar	Milorganite	45 lbs./green			
Current height	5/32"	3-May	Mn/Mz	2.5 gal. (ea)			
Frequency	7 days/week	5/15, 5/31	18-3-6 Scotts	2.5 gal. (ea)			
Type of mower	Toro Greens Master 310C	19-Jun	Liquid Fert.	2.5 gal./3 Acre			
Rollers used	rolled - 5/12, 6/5, 6/9-	6-Jul	Liquid Fert.	2.5 gal./.6 Acre			
Groomers used	13, 10/29	24-Jul	Mn	2.5 gal./.6 Acre			
CULTIVATION			Scotts Liquid Fert.	2.5 gal./.6 Acre			
Aerification - dates	5/28, 10/23	24-Jul	Scotts Mn/Mg	2.5 gal./.6 Acre	Date(s)	Product	Rate (oz./M)
Aerification - type		22-Aug	Scotts Liquid Fert.	5 gal./Acre			
Verticutting	5/3, 5/31, 10/3, 11/8	2-Oct	Scotts Liquid Fert.	5 gal./.6 Acre	3-May	Primo	5.5 oz./Acre
Dates of topdressing	2/29, 6/24, 10/26, 11/16	30-Oct	Scotts Liquid Fert.	10 gal./.6 Acre	5/15, 5/31, 6/19, 7/24, 9/1	Primo	3 oz./Acre
Other cultural practices	rolled with Toro triplex rollers on 5/12, 6/5, 6/9-13, 10/29				22-Aug	Primo	3.5 oz./Acre
					6/6, 6/20	Cascade (wetting agent)	2.75 gal./Acre
					6/19, 7/6, 7/27	Sea Quencial	2.5 gal./Acre
FUNGICIDES		Date(s)	Product	Rate (oz./Acre)			
		1/6, 8/22, 9/1	PMAS	22			
		3-May	Chipco GT 26	0.5 gal./Acre			
		5/15, 5/31, 8/2, 9/1	Chipco GT 26	1 gal./Acre			
		31-May	Bayleton	44			
		6/19, 9/1, 10/2, 10/30	Bayleton	22			
		6/19, 7/6,	Heritage	1 lbs./Acre			
		6-Jul	Banner Maxx	22			
		7/6, 10/2	Daconil	12 lbs./Acre			
		24-Jul	Daconil	11 lbs./Acre			
		30-Oct	Fore	8 lb./Acre			
						NOTES/COMMENTS	

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 8B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT FLORENCE, KY (LASSING POINTE GOLF COURSE) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	LEAF TEXTURE	DENSITY RATINGS			SPOT JUNE	SPOT JULY	STIMPMETER READINGS			QUALITY RATINGS								
			DOLLAR	DOLIAR	APRIL	AUGUST	OCTOBER	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN			
PENN A-4	8.0	8.3	7.7	9.0	8.7	5.0	1.7	121.2	120.5	129.5	7.0	8.0	8.7	9.0	8.0	8.7	7.3	8.0	8.1
PENN G-1	7.7	7.0	6.3	9.0	7.3	0.3	0.0	121.4	130.1	135.5	7.0	8.0	8.0	8.7	6.7	8.3	6.7	8.0	7.7
PENN G-6	7.7	8.3	6.3	8.0	7.7	4.0	0.7	118.1	118.9	124.2	6.7	8.0	7.0	8.0	7.3	8.0	7.3	7.0	7.4
PENN A-1	8.0	8.0	6.7	8.3	7.7	0.7	0.0	119.9	121.3	128.3	6.7	7.3	7.3	7.7	6.7	8.0	7.0	8.0	7.3
SR 1119	7.3	7.7	6.3	6.7	6.0	1.3	0.7	115.1	110.6	125.1	7.0	8.0	8.0	8.0	6.7	7.0	6.3	7.0	7.3
CENTURY	7.3	7.7	7.7	7.0	8.3	15.3	14.7	114.8	111.2	125.6	7.0	8.0	5.7	6.3	7.0	8.0	7.3	8.0	7.2
CRENSHAW	8.0	6.3	6.0	6.3	6.3	8.7	6.0	129.8	121.9	126.8	7.7	6.7	6.7	7.0	7.7	7.0	7.3	7.2	
CATO	8.0	7.7	6.0	6.0	6.7	1.3	0.0	126.9	121.6	129.8	6.3	7.3	7.7	7.7	5.7	7.0	7.3	7.0	7.0
IMPERIAL	7.3	8.0	6.3	7.7	7.7	6.0	6.0	118.7	115.6	125.3	7.0	7.0	7.0	7.3	7.3	7.0	7.0	6.7	7.0
BACKSPIN	8.3	8.3	6.3	7.0	8.0	12.3	9.0	115.6	112.7	115.7	6.3	7.7	5.7	6.7	7.0	7.0	7.0	7.0	6.8
GRAND PRIX (ICB-103)	8.0	7.3	6.7	7.7	7.3	0.7	0.7	113.5	123.8	125.4	5.7	7.0	7.3	6.3	7.3	7.0	6.7	7.3	6.8
L-93	7.7	7.0	6.3	6.7	5.7	0.0	0.0	125.3	123.5	130.3	6.3	7.3	6.7	7.7	6.7	5.7	6.0	7.0	6.7
PROVIDENCE	7.3	7.7	5.0	6.3	5.3	0.7	0.0	124.6	122.3	125.3	7.0	7.3	7.0	7.7	5.0	6.7	5.7	6.7	6.6
SR 1020	7.0	7.0	6.3	5.3	7.0	4.3	2.3	127.8	130.7	133.4	6.0	7.0	7.0	6.3	6.3	7.3	6.7	6.0	6.6
PUTTER	6.3	6.7	6.0	7.0	6.3	1.3	0.3	118.0	114.4	122.7	6.3	6.7	7.0	7.0	5.7	5.3	6.7	6.0	6.3
TRUELINE	8.7	6.7	5.7	6.0	5.7	0.7	0.3	110.3	101.3	113.9	6.7	7.0	7.0	6.0	5.7	5.3	6.3	5.3	6.2
VIPER	8.0	7.0	4.7	5.3	5.3	1.3	0.0	120.1	122.4	128.2	6.7	6.3	7.0	6.0	5.0	5.7	5.7	6.3	6.1
PENNCROSS	7.3	6.0	6.3	5.0	5.0	1.3	0.7	113.5	117.3	125.1	6.0	6.3	6.0	5.0	5.0	5.0	5.0	5.0	5.4
LSD VALUE	2.1	2.8	1.4	0.8	1.0	2.9	3.2	34.7	38.9	45.7	1.1	1.6	0.6	0.6	2.1	0.7	1.5	0.7	0.6
C.V. (%)	10.6	14.5	11.6	7.6	9.7	52.9	85.2	21.1	25.7	23.2	8.3	10.0	5.5	5.8	16.0	6.5	11.1	6.7	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 9A.

2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)

ESTABLISHMENT		FUNGICIDES		HERBICIDES			
Seeding date	15-Sep-97	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Problems during							
FACTORS OF PLAY							
10-Mar	Chipco GT	4					
10-Mar	Daconil Ultrex	10 lbs./A					
22-Mar	Daconil Ultrex	2					
25-Apr	Heritage	0.2					
MOWING							
open year round	25-Apr	Daconil Ultrex	2				
Date opened for play							
Date closed for play	19-May	Daconil Ultrex	1.5	Date(s)	Product	Rate (lbs. oz./M)	
Type of spikes allowed	Softspikes	2-Jun	Heritage	0.2			
Uses of green	Putting, Chipping	2-Jun	Daconil Ultrex	1.5	10-Feb	Milorganite (6-2-0)	1/3 lb. N
		12-Jun	Daconil Ultrex	1.5	10-Mar	Bio Basics Pro Gro	20 oz.
		28-Jun	Prostar	2.2	10-Mar	Bio Basics N 24-0-0	1 oz.
		28-Jun	Subdue Maxx	1	10-Mar	Bio Basics P 2-20-0	0.5 oz.
Initial height	0.156"	7/3, 7/10, 7/18	Daconil Ultrex	1.5	10-Mar	Bio Basics K 1-0-24	2 oz.
Current height	.145" (0.156" Winter	18-Jul	Heritage	0.2	22-Mar	Bio Basics N 24-0-0	1 oz.
Frequency	Daily	27-Jul	Daconil Ultrex	1.5	22-Mar	Bio Basics P 2-20-0	1 oz.
Type of mower	Triplex	7-Aug	Heritage	0.2	22-Mar	Bio Basics K 1-0-24	2 oz.
Rollers used	None	8/7, 8/15	Echo 720	7 pints/A	22-Mar	Micro Mix Plus (FE) 2-0-0-4	1 oz.
Groomers used	None	2-Sep	Subdue Maxx	1	22-Mar	Bio Basics Pro Gro	2 oz.
CULTIVATION		9/2, 9/23, 10/1	Daconil Ultrex	1.5	22-Mar	Macrosorb foliar	1 oz.
		13-Oct	Daconil Ultrex	4	27-Mar	Macrosorb Radicular	1 oz.
Aerification - dates	July	27-Nov	Echo 720	1.5	27-Mar	Bio Basics Cal 2.5-0-0-8	1 oz.
Aerification - type	Hydrojected		Chipco GT	3.8	27-Mar	Bio Basics Carb. 2-0-0	2 oz.
Verticutting	Mar., Apr., June, Sept.				27-Mar	Humega	1 gal./A
Dates of topdressing	every 2 weeks during season				31-Mar	Bio Basics N 24-0-0	5 oz.
Other cultural practices	None	Date(s)	Product	Rate (oz./M)	31-Mar	Bio Basics P 2-20-0	1 oz.
		10-Mar	Scimitar	10oz./A	31-Mar	Bio Basics K 1-0-24	2 oz.
		13-Jun	Conserve SC	32oz./A		Micro 2-0-0-4	1 oz.
		10-Jul	Dursban	2 lbs./Acre		Bio Basics Pro Gro	2 oz.
		15-Aug	Scimitar	9oz./A			
		6-Sep	Dylox	3			
NOTES/COMMENTS							
It is their second practice green, so there is not a heavy amount of traffic on the green.							
The green was topdresses very other week in the Spring and Fall. During the Summer, The green was topdressed once a month to help relieve stress.							
Topdressing began in March and continued through November. The topdressing sand was changed in the middle of the season from a fine dry sand to a sand that more closely resembled the original green mix.							
OTHER PRODUCTS							
		Date(s)	Product	Rate (oz./M)			
		None					

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 9A.
(Cont'd)

2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)

FERTILIZATION

FERTILIZATION

FERTILIZATION

Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)
31-Mar	Bio Basics Mag.	1 oz.	12-Jun	Bio Basics Minors	1 oz.	15-Aug	Bio Basics P 2-20-0	1.5 oz.
31-Mar	Macrosorb foliar	1 oz.	12-Jun	Macrosorb foliar	2 oz.	15-Aug	Bio Basics K 1-0-24	1.5 oz.
9-Apr	White Gold 0-0-24	1lb. K	20-Jun	Bio Basics N 24-0-0	3 oz.	15-Aug	Bio Basics Pro Gro	1.5 oz.
10-Apr	Bio Basics N 24-0-0	5 oz.	20-Jun	Bio Basics P 2-20-0	0.5 oz.	15-Aug	Bio Basics Mag	1 oz.
10-Apr	Bio Basics P 2-20-0	2 oz.	20-Jun	Bio Basics K 1-0-24	3 oz.	15-Aug	Macrosorb foliar	1 oz.
10-Apr	Bio Basics K 1-0-24	1 oz.	20-Jun	Bio Basics Pro Gro	3 oz.	2-Sep	Eco N 24-0-0	0.5 oz.
10-Apr	Bio Basics Minors	2 oz.	20-Jun	Macrosorb foliar	1 oz.	2-Sep	Eco P 2-20-0	1.5 oz.
10-Apr	Bio Basics Pro Gro	3 oz.	21-Jun	Bio Basics Pro Gro	1.5 oz.	2-Sep	Eco K 1-0-24	1.5 oz.
10-Apr	Bio Basics Micro	1 oz.	21-Jun	Turfmaster (Bio Flora) 12-5-3	2 oz.	2-Sep	Bio Basics Pro Gro	1.5 oz.
10-Apr	Bio Basics Mag.	1 oz.	26-Jun	Roots 15-3-8	3/8 lb. N	2-Sep	Macrosorb foliar	1 oz.
10-Apr	Macrosorb foliar	1 oz.	27-Jun	White Gold 0-0-24	1lb. K	2-Sep	Bio Basics Mag	1 oz.
17-Apr	Eco Carbo's	2 oz.	28-Jun	Macrosorb Radicular	1 oz.	4-Sep	Soil Synergy 10-2-8	0.2 lb. N
17-Apr	Macrosorb Radicular	2 oz.	28-Jun	Nature Safe 8-3-5	1/2 lb. N	4-Sep	White Gold 0-0-24	1 lb. K
25-Apr	Eco N 24-0-0	5 oz.	28-Jun	Soil Synergy 10-2-8	3/8 lb. N	4-Sep	Gypsum	3/4 lbs.
25-Apr	Eco P 2-20-0	2 oz.	3-Jul	Bio Basics N 24-0-0	1 oz.	23-Sep	Bio Basics N 24-0-0	3 oz.
25-Apr	Eco K 1-0-24	2 oz.	3-Jul	Bio Basics K 1-0-24	2 oz.	23-Sep	Bio Basics P 2-20-0	3 oz.
25-Apr	Bio Basics Pro Gro	4 oz.	3-Jul	Bio Basics Pro Gro	2 oz.	23-Sep	Bio Basics K 1-0-24	3 oz.
25-Apr	Bio Basics Minors, Micro	1 oz.	3-Jul	Bio Basics Minors	2 oz.	23-Sep	Bio Basics Pro Gro	3 oz.
25-Apr	Macrosorb foliar	1 oz.	3-Jul	Bio Flora iron	2 oz.	23-Sep	Bio Basics Cal	3 oz.
2-May	White Gold 0-0-24	1lb. K	3-Jul	Macrosorb foliar	1 oz.	1-Oct	Bio Basics N 24-0-0	1.5 oz.
15-May	Bio Basics Carb	1 gal./A	3-Jul	Roots Stand Up	3 oz.	1-Oct	Bio Basics P 2-20-0	1.5 oz.
15-May	Bio Basics Cal	1 gal./A	10-Jul	Bio Basics N 24-0-0	0.5 oz.	1-Oct	Bio Basics K 1-0-24	1.5 oz.
15-May	Macrosorb Radicular	1 oz.	10-Jul	Bio Basics P 2-20-0	2 oz.	1-Oct	Bio Basics Pro Gro	1.5 oz.
15-May	Sol-U-Bor	4 lbs./A	10-Jul	Bio Basics K 1-0-24	3 oz.	1-Oct	Bio Basics Cal	1.5 oz.
15-May	Magnesium	3 lbs./A	10-Jul	Bio Basics Minors	1 oz.	6-Oct	Scott's Iron	4 oz.
18-May	Roots 15-3-8	0.5 lb. N	10-Jul	Macrosorb foliar	2 oz.	12-Oct	Soil Synergy 10-2-8	3/8 lb. N
19-May	Eco N 24-0-0	0.5 oz.	18-Jul	Bio Basics N 24-0-0	1.5 oz.	13-Oct	Bio Basics N 24-0-0	1.5 oz.
19-May	Eco P 2-20-0	2 oz.	18-Jul	Bio Basics P 2-20-0	1.5 oz.	13-Oct	Bio Basics P 2-20-0	1.5 oz.
19-May	Eco K 1-0-24	3 oz.	18-Jul	Bio Basics K 1-0-24	1.5 oz.	13-Oct	Bio Basics K 1-0-24	1.5 oz.
19-May	Bio Basics Pro Gro	1 oz.	18-Jul	Bio Basics Pro Gro	1.5 oz.	13-Oct	Bio Basics Pro Gro	1.5 oz.
19-May	Bio Basics Minors	1 oz.	18-Jul	Macrosorb foliar	1 oz.	13-Oct	Bio Basics Minors	1.5 oz.
19-May	Macrosorb foliar	1 oz.	18-Jul	Roots Stand Up	1.5 oz.	13-Oct	Bio Basics Cal	1.5 oz.
1-Jun	White Gold 0-0-24	1lb. K	18-Jul	Soil Synergy 10-2-8	0.2 lb. N	26-Oct	Soil Synergy 10-2-8	1/4 lb. N
2-Jun	Macrosorb foliar	2 oz.	18-Jul	White Gold 0-0-24	0.5 lb. K	26-Oct	White Gold 0-0-24	1 lb. K
2-Jun	Bio Basics N 24-0-0	1 oz.	18-Jul	Gypsum	4 lbs.	13-Nov	Par Ex 21-3-16	1 lb. N
2-Jun	Bio Basics P 2-20-0	2 oz.	27-Jul	Bio Basics N 24-0-0	1 oz.	27-Nov	White Gold 0-0-24	1 lb. K
2-Jun	Bio Basics K 1-0-24	1 oz.	27-Jul	Bio Basics P 2-20-0	1 oz.	27-Nov	Gypsum	3/4 lbs.
2-Jun	Bio Basics Pro Gro	3 oz.	27-Jul	Bio Basics K 1-0-24	3 oz.	27-Nov	Turfmaster (Bio Flora) 12-5-3	1.5 oz.
2-Jun	Bio Basics Minors	1 oz.	27-Jul	Bio Basics Minors	1.5 oz.	27-Nov	Macrosorb Radicular	Bio Basics K 1-0-24
12-Jun	Bio Basics N 24-0-0	2 oz.	27-Jul	Bio Basics Pro Gro	1.5 oz.	27-Nov	Manganese Sulfate	3 lbs./A
12-Jun	Bio Basics P 2-20-0	2 oz.	27-Jul	Macrosorb foliar	1 oz.	27-Nov	Sol-U-Bor	4 lbs./A
12-Jun	Bio Basics K 1-0-24	1 oz.	27-Jul	Bio Basics Mag	1.5 oz.	27-Nov	Bio Basics N 24-0-0	Bio Basics K 1-0-24
12-Jun	Bio Basics Pro Gro	2 oz.	15-Aug	Bio Basics N 24-0-0	0.5 oz.	27-Nov	Bio Basics K 1-0-24	Bio Basics K 1-0-24

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 9B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT ST. CHARLES, MO (THE MISSOURI BLUFFS G.C.) 1/
 2000 DATA

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

NAME	GENETIC COLOR	LEAF LEAFTEX	QUALITY RATINGS									
			MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
PENN G-1	8.0	8.0	7.0	7.7	7.7	8.0	8.0	7.3	7.7	7.0	7.0	7.5
PENN A-1	8.0	8.0	6.7	7.7	7.7	7.3	7.7	7.3	7.3	7.3	7.3	7.4
PENN A-4	7.7	8.0	7.0	7.7	7.7	8.0	7.7	7.7	7.0	6.7	7.3	7.4
CENTURY	6.3	7.0	7.0	8.0	8.0	7.7	8.0	7.0	6.7	7.0	6.3	7.3
IMPERIAL	6.7	7.3	7.0	8.0	8.0	7.7	8.0	7.0	7.3	6.3	6.3	7.3
BACKSPIN	4.7	7.3	7.0	8.0	8.0	7.7	8.0	6.0	7.0	7.0	6.3	7.2
PENN G-6	8.0	8.0	6.3	7.0	7.3	7.3	8.0	7.3	7.0	6.7	7.0	7.1
GRAND PRIX (LCB-103)	7.3	7.0	6.3	7.3	7.7	7.3	7.7	6.7	6.7	6.7	6.7	7.0
L-93	7.7	6.7	6.3	7.3	7.3	7.3	7.3	7.0	6.3	6.3	6.3	6.9
SR 1020	7.3	7.0	6.0	7.0	7.3	7.3	7.0	6.3	6.3	6.3	6.3	6.7
SR 1119	7.0	7.0	6.7	7.3	7.3	7.0	7.0	6.7	6.0	6.3	6.0	6.7
CATO	7.0	6.7	6.7	7.3	7.3	7.0	7.0	6.7	5.7	6.0	6.0	6.6
CRENSHAW	7.7	7.0	6.3	7.0	7.0	6.7	7.0	6.7	6.3	6.0	6.0	6.6
PROVIDENCE	6.7	6.7	6.3	7.3	7.3	7.0	7.0	6.3	6.3	6.0	6.0	6.6
PUTTER	6.7	6.0	6.3	6.3	7.0	7.0	7.0	6.3	5.7	5.7	6.0	6.4
VIPER	7.0	6.3	6.0	7.0	7.0	6.7	7.0	6.3	6.0	5.3	6.3	6.4
TRUELINE	6.7	5.7	6.0	7.0	7.0	6.7	7.0	6.7	5.3	5.3	5.7	6.3
PENNCROSS	5.3	4.0	5.3	6.0	6.0	6.0	6.0	5.3	5.0	5.0	5.0	5.5
LSD VALUE	0.7	0.7	0.7	0.7	0.7	0.6	0.4	1.0	1.2	0.8	0.9	0.3
C.V. (%)	6.4	7.0	6.5	5.6	5.7	5.4	3.4	8.2	10.4	7.7	8.3	3.2

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 10.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT RYE, NY (WESTCHESTER COUNTRY CLUB) 1/
 2000 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	DENSITY SPRING	DENSITY SUMMER	DENSITY FALL	PERCENT COVER SUMMER	PERCENT COVER FALL	QUALITY RATINGS							
									APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
PENN A-4	5.7	6.0	8.7	8.7	9.0	8.7	94.3	97.0	8.0	9.0	9.0	8.3	8.7	9.0	8.7	8.7
PENN G-1	6.7	6.7	8.7	8.7	8.3	8.0	89.0	81.7	8.3	8.7	9.0	8.7	7.7	8.3	8.3	8.4
CENTURY	4.0	6.0	9.0	8.7	8.7	7.7	91.7	85.0	7.3	8.7	8.7	8.0	8.0	8.3	7.3	8.0
GRAND PRIX (LCB-103)	3.7	6.3	8.0	8.0	8.3	7.7	91.7	91.7	8.0	8.0	8.0	8.3	7.7	8.7	7.7	8.0
PENN A-1	6.0	6.3	8.3	8.7	8.3	8.3	80.7	90.0	7.7	9.0	8.3	8.0	6.3	8.0	8.7	8.0
PENN G-6	6.0	7.0	7.7	8.3	8.7	7.3	93.3	85.0	8.7	8.0	8.3	7.3	7.3	8.7	7.0	7.9
SR 1119	8.3	5.3	7.0	7.0	6.7	6.7	81.7	73.3	6.7	7.7	8.0	7.3	7.0	7.0	6.7	7.2
BACKSPIN	4.7	5.3	7.7	8.0	8.3	5.7	85.0	71.7	6.7	7.7	8.0	7.7	6.7	7.0	6.3	7.1
L-93	7.7	5.7	7.0	7.0	7.0	6.7	88.3	73.3	6.7	7.3	7.7	7.0	7.7	6.7	7.0	7.1
IMPERIAL	5.3	4.7	8.3	8.0	8.0	5.7	86.7	68.3	6.3	7.3	7.7	7.7	7.0	6.7	6.0	7.0
SR 1020	5.7	6.7	6.3	7.0	7.3	7.0	80.0	73.3	7.0	6.7	6.3	7.0	6.3	6.7	6.3	6.6
CRENSHAW	6.0	4.7	6.0	6.0	6.3	5.3	76.7	70.0	6.0	6.3	6.3	7.0	6.7	6.3	6.0	6.4
PROVIDENCE	6.3	6.0	6.3	6.3	5.7	5.7	70.0	70.0	6.0	6.3	6.3	6.7	5.3	5.3	6.0	6.0
CATO	7.0	4.7	6.3	6.3	5.7	5.0	70.0	68.3	5.3	6.7	6.0	6.0	5.3	5.3	5.7	5.8
TRUELINE	6.3	4.0	5.3	5.0	4.3	5.0	58.3	55.0	4.7	5.0	4.7	5.3	4.3	4.3	4.7	4.7
VIPER	8.3	3.7	5.7	5.3	3.7	4.3	48.3	55.0	4.3	5.0	5.0	5.3	3.7	4.0	5.0	4.6
PUTTER	4.0	3.0	4.3	4.0	4.0	3.3	50.0	45.0	3.7	4.3	3.7	4.7	2.3	3.7	3.7	3.7
PENNCROSS	3.3	3.7	4.0	4.0	3.7	2.7	55.0	40.0	3.7	4.0	3.3	3.0	2.7	3.3	3.3	3.3
LSD VALUE	1.4	1.2	0.8	0.7	0.8	1.2	9.7	10.1	1.0	0.8	0.7	0.8	1.0	1.2	0.7	0.5
C.V. (%)	15.3	14.3	7.8	6.6	8.2	12.5	8.3	9.3	9.9	8.0	6.7	8.0	11.3	11.9	7.6	4.9

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 11A.

2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT DALLAS, TX (BENT TREE COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION				FUNGICIDES		
Seeding date	10-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Problems during	None	Granular Fertilizer Applications				2 applications of Heritage in Spring and 2 applications in Fall for Take-all Prevention		
FACTORS OF PLAY		February	Par Ex 16-0-24	0.5 lb. N				
		March	Par Ex 16-0-24	0.5 lb. N				
Date opened for play	open every day except	May	Polyon 0-0-46	1 lb. K	HERBICIDES			
Date closed for play	Monday when club closed	June	Polyon 0-0-46	1 lb. K				
Type of spikes allowed	Softspikes	July	Polyon 0-0-46	1 lb. K				
Uses of green	Chipping and Putting	September	Polyon 0-0-46	1 lb. K				
		September	Scotts 13-2-26	0.5 lb. N				
		October	Polyon 0-0-46	1 lb. K				
		November	Scotts 15-0-29	0.5 lb. N				
MOWING		November	Polyon 0-0-46	0.5 lb. K				
Initial height		December	Scotts 15-0-29	0.5 lb. N	INSECTICIDES			
Current height	0.125"	December	Polyon 0-0-32	0.5 lb. K				
Frequency	6 days/week	Total - Granular app.	2.5 lbs. N, 0.10 lbs. P, 10.4 lbs. K					
Type of mower	Toro 1000 walking unit				Sprayed cutworms in May, June and July with Battle GC.			
Rollers used	Brush attachments used in							
Groomers used	growing season				Foliar Fertilizer Applications			
CULTIVATION		Every two weeks throughout year (24 Apps)				OTHER PRODUCTS		
Aerification - dates	Solid tine (1/4") in May, Sept.	Each Floratine app. consisted of:						
Aerification - type	Hydroject monthly in June, Total - Foliar app.	1.3 lbs. N, 0.7 lbs. P, 2.1 lbs. K						
Verticutting	Verticut biweekly April-June.							
	Verticut monthly July-Sept..							
	Verticut biweekly Oct.-Nov.							
Dates of topdressing	Topdressed biweekly during growing season - March through November at light rates with Turfco spinner unit. Heavy application following solid tine aerification.	Total Fertilizer app.	3.8 lbs. N, 0.8 lbs. P, 12.5 lbs. K			NOTES/COMMENTS		
Other cultural practices	Rolled before special events. 6 times in April-June. Rolled 7 times/week in Winter when nor necessary to mow.							

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 11B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT DALLAS, TX (BENT TREE COUNTRY CLUB) 1/
 2000 DATA

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

NAME	GENETIC COLOR	IEAF TEXTURE	DENSITY SPRING	DENSITY SUMMER	QUALITY RATINGS												MEAN
					JAN	FEB	MAR	APR	MAY	JUN	JUL	SEP	OCT	NOV	DEC		
PENN A-4	7.7	7.3	7.7	6.0	7.3	6.3	6.7	7.7	6.7	7.0	6.0	4.7	7.7	8.0	8.3	6.9	
IMPERIAL	6.0	6.3	7.0	6.0	7.0	7.0	6.7	7.3	6.3	5.3	6.3	6.0	6.3	7.7	8.3	6.8	
PENN A-1	5.3	7.7	8.0	6.3	7.3	6.3	6.7	7.7	5.7	5.3	6.3	5.7	7.7	8.3	7.7	6.8	
L-93	6.3	5.0	7.3	6.7	7.0	6.7	7.0	7.3	7.0	6.7	6.7	4.7	5.7	7.0	8.0	6.7	
PENN G-1	6.3	6.0	6.7	6.7	7.3	7.0	6.7	6.3	6.7	5.7	6.3	5.3	6.7	8.0	8.0	6.7	
SR 1119	7.0	5.3	8.0	6.3	6.7	5.7	6.0	8.3	7.3	6.3	6.3	5.3	5.7	7.3	8.3	6.7	
PENN G-6	6.3	5.7	7.3	4.7	6.3	6.3	7.7	7.0	6.3	6.3	5.0	5.7	7.0	7.7	7.7	6.6	
GRAND PRIX (LCB-103)	5.7	7.7	5.3	5.0	6.0	6.7	6.7	5.3	5.7	6.7	5.0	6.3	6.7	8.0	9.0	6.5	
SR 1020	5.7	6.0	7.7	4.7	7.7	7.0	7.7	7.7	5.3	5.0	5.3	5.3	5.7	7.7	7.7	6.5	
BACKSPIN	6.0	7.3	6.7	6.3	6.7	6.0	6.0	7.0	5.3	5.3	6.3	5.3	6.7	7.7	7.7	6.4	
CENTURY	6.0	7.7	7.0	6.3	5.7	6.3	6.3	6.7	5.7	5.7	6.0	5.3	7.0	8.0	7.7	6.4	
CATO	5.3	5.7	7.0	4.7	7.0	7.0	6.3	7.3	5.3	4.7	4.7	4.3	6.0	7.7	8.0	6.2	
CRENSHAW	4.7	6.7	7.7	4.7	6.3	6.0	6.7	7.3	5.3	6.0	5.0	5.7	6.0	7.3	7.0	6.2	
PUTTER	5.0	5.7	7.7	5.7	7.0	6.7	5.7	8.0	5.0	5.7	6.0	4.3	5.7	7.0	7.7	6.2	
TRUELINE	5.3	5.3	7.0	6.7	6.7	5.3	6.3	7.3	6.0	5.0	6.0	4.3	5.7	7.0	7.7	6.1	
PROVIDENCE	6.3	6.0	6.3	4.3	6.3	5.7	6.7	6.7	6.0	4.3	4.7	4.7	5.3	7.0	7.7	5.9	
VIPER	5.3	5.3	7.0	4.3	7.0	6.3	6.7	7.0	5.3	4.7	5.0	4.0	5.0	6.7	7.3	5.9	
PENNCROSS	4.3	4.0	8.0	4.0	7.0	6.3	5.7	7.7	4.7	4.0	4.3	4.0	5.0	6.0	7.7	5.7	
LSD VALUE	1.7	1.5	3.1	3.8	-	2.8	2.0	2.9	3.3	1.4	4.2	1.7	1.0	0.8	1.6	0.7	
C.V. (%)	15.1	14.5	15.3	26.2	14.6	14.4	12.2	14.7	20.1	14.0	24.3	15.9	9.5	6.5	8.1	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).

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

TABLE 12A.

2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT VIENNA, VA (WESTWOOD GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	5-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None	4/3, 4/11, 5/1 5/31, 8/14	18-3-12 14-1-11	0.5 N 0.5 N	5/8, 6/5, 7/27, 8/20	Acclaim	3 oz./Acre
FACTORS OF PLAY		28-Aug 10-Sep	18-3-12 14-1-11	0.5 N 0.5 N			
Date opened for play	20-Apr-98	22-Sep	18-3-12	0.5 N			
Date closed for play		3-Oct	14-1-11	0.5 N			
Type of spikes allowed	softspikes	10-Nov	17-3-17	0.6 N	INSECTICIDES		
Uses of green	putting, chipping		Total	5.1 lbs N/M	Date(s)	Product	Rate (oz./M)
MOWING					5/8, 5/26 27-Jul 25-Aug	Delta Guard Delta Guard Sevin	0.2 0.15 1
Initial height		FUNGICIDES					
Current height	0.125"		Date(s)	Product	Rate (oz./M)		
Frequency							
Type of mower							
Rollers used		27-Mar	Chipco GT 4oz./M., Embark 4oz./A.				
Groomers used		26-Apr	Embark 3oz./A, Ferromec 4oz./M, Echo 4oz./M				
CULTIVATION		8-May	Heritage 0.4oz./M, Curalan 1oz./M, Ferromec 4oz./M		OTHER PRODUCTS		
Aerification - dates	April, September	26-May	Echo 6	Date(s)	Product	Rate (oz./M)	
Aerification - type	Aerated - Egypt Farms 80/20 sterilized	5-Jun	Banner Maxx 4 oz., Heritage 0.4oz., Fore 4oz., Foliar 1.5oz., Radicular 1.5oz., Ferromec 4oz.		Growth Regulators		
Verticutting	None						
Dates of topdressing	Topdressed - Egypt Farms 80/20 sterilized (April, Sept.)	14-Jun	Echo 4 oz., Ferromec 4oz. Foliar 2oz., Radicular 2oz.	6/28, 8/8, 10/11	Primo	0.15	
		19-Jun	Echo 4				
		28-Jun	Banner Maxx 4oz, Subdue 1oz. Fore 4oz., Compass 0.15oz.				
Other cultural practices	None	6-Jul	Cleary's 8oz., Ferromec 6oz.		NOTES/COMMENTS		
		16-Jul	Echo 6				
		27-Jul	Echo 4oz, Fore 4oz., Subdue 1oz.				
		2-Aug	Echo 4				
		8-Aug	Echo 4oz, Fore 4oz., Subdue 1oz.				
		20-Aug	Echo 4oz., Ferromec 4oz., Heritage 0.25oz., Foliar 2oz., Radicular 2oz.				
		1-Sep	Bayleton 1oz, Echo 6oz., Compass 0.2oz., Fore 4oz.				
		11-Oct	Banner Maxx 1oz., Foliar 2oz., Radicular 2oz., Ferromec 4oz.				
		30-Nov	Echo 4oz, PMAS 0.6oz.				

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 12B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT VIENNA, VA (WESTWOOD GOLF COURSE) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS							
				MAR	APR	MAY	JUL	AUG	SEP	OCT	MEAN
PENN A-4	7.0	5.7	8.0	5.7	6.0	6.7	7.0	8.3	7.0	7.7	6.9
PENN A-1	7.3	5.7	7.7	6.3	5.3	6.0	7.3	8.0	7.3	7.3	6.8
PENN G-6	6.3	5.7	7.7	6.3	5.3	6.0	7.0	8.0	7.3	7.0	6.7
CENTURY	7.0	5.0	7.7	6.3	5.3	6.3	6.7	7.7	7.0	7.0	6.6
GRAND PRIX (LCB-103)	6.7	5.3	7.7	6.3	5.3	5.7	6.7	8.3	7.0	7.0	6.6
L-93	7.0	6.0	8.0	6.3	5.0	6.3	7.0	7.7	7.0	6.7	6.6
CATO	6.0	6.3	7.7	6.3	5.7	6.0	7.0	7.3	6.7	6.3	6.5
CRENSHAW	6.7	5.7	8.0	6.0	5.3	6.0	7.0	8.0	6.7	6.3	6.5
PENN G-1	6.0	5.3	8.3	6.0	5.0	5.3	7.0	8.0	6.3	7.0	6.4
SR 1020	6.0	5.3	8.0	6.0	5.3	5.7	7.3	8.0	6.3	6.0	6.4
BACKSPIN	7.3	5.0	8.0	6.0	5.0	6.0	6.3	7.7	7.7	5.7	6.3
IMPERIAL	6.0	6.0	8.0	6.0	5.3	6.0	6.7	7.7	6.3	6.3	6.3
PROVIDENCE	7.0	6.0	7.0	6.3	5.7	5.7	6.7	7.0	6.7	6.3	6.3
SR 1119	6.0	5.3	8.0	5.7	5.7	5.3	7.0	7.3	6.7	6.0	6.2
PUTTER	6.3	6.0	7.7	6.0	5.3	5.7	6.3	7.3	6.0	5.7	6.0
VIPER	6.3	5.3	6.3	5.3	5.3	5.7	6.3	7.0	6.7	5.7	6.0
TRUELINE	6.0	5.0	6.7	5.7	4.7	5.0	6.3	6.7	6.3	5.7	5.8
PENNCROSS	5.3	4.7	6.3	5.0	4.7	4.3	6.0	5.7	6.0	4.3	5.1
LSD VALUE	0.7	1.1	1.7	1.5	1.6	1.0	2.0	0.9	1.4	0.7	0.4
C.V. (%)	6.6	9.6	10.0	9.6	10.6	9.4	10.0	6.8	9.2	6.9	4.3

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 13A. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT SNOQUALMIE, WA (TPC AT SNOQUALMIE RIDGE)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date Problems during	8-Jun-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		31-Jan 3-Apr 24-Apr	Kpower (13.75-0-46) Kpower (13.75-0-46) N-Sure (28-0-0), KTS (0-0-25), DPE (Iron & Sulfur), Molasses	0.4 0.28 0.33N, 0.20K, 0.02Fe, 0.14S	21-Jan 13-Apr 24-Apr 5/25, 9/7	PenStar Dursban Heritage Heritage	4.5 1.5 lbs./M 0.4 0.35
Date opened for play		25-May	N-Sure (28-0-0), Molasses (5 gal./300 gal. Water)	0.50N, 0.30K, 0.02Fe, 0.14S	5-Oct	Heritage	0.42
Type of spikes allowed							
Uses of green	Putting	15-Jun	MAP (10-34-0), KTS (0-0-25), DPE (Iron & Sulfur), Molasses	0.33N, 0.30K, 0.02Fe, 0.21S		HERBICIDES	
MOWING		29-Jun	N-Sure (28-0-0), Molasses	0.33N, 0.15K, 0.03Fe, 0.10S		Date(s)	Product
Initial height	0.145"	7/18, 8/14	N-Sure (28-0-0), Molasses	0.33N, 0.20K, 0.14Fe, 0.36S		None	
Current height	0.187"						
Frequency	1-7x/week	24-Aug	N-Sure (28-0-0), Molasses	0.50N, 0.20K, 0.14Fe, 0.36S			
Type of mower	Walking Toro 1000						
Rollers used	Grooved type wiley roller	21-Sep	MAP (12-61-0)	0.44N		INSECTICIDES	
Groomers used	1x/week - 5/15/9/1	12-Oct	N-Sure (28-0-0)	0.33N, 0.20K, 0.14Fe, 0.36S		Date(s)	Product
CULTIVATION		27-Nov	Kpower (13.75-0-46)	0.4		None	Rate (oz./M)
Aerification - dates	5/30, 8/29	Total/year		4.50 lbs. N, 2.12 lbs. P, 5.36 lbs. K, 0.65 lb. Fe, 2.03 lbs. S			
Aerification - type	Hollow Tines						
Verticutting or other cultivation	Verticut - 4/18, 5/15, 6/26, 7/17, 8/18		Lime			OTHER PRODUCTS	
Dates of topdressing or other type products applied	Topdressed lightly (approx. 0.5 yard sand 500ft ²) - 4/18, 5/15, 5/30, 6/26, 7/17, 8/17, 8/29	3-Aug 8-Nov	Gypril Lime Dolopril-Lime	15 15		Date(s)	Product
Other cultural practices	Rolling - 5/19-20, 6/19, 7/10, 7/11, 7/15, 7/22, 7/29, 8/5, 8/12, 8/19, 8/26, 9/9, 9/16, 9/23		NOTES/COMMENTS		3-Jul 1-Aug	Primer Primer	4 6

Product and company names mentioned herein may be trademarks and/or registered trademarks of their respective owners

TABLE 13B.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT SNOQUALMIE, WA (TPC AT SNOQUALMIE RIDGE) 1/
 2000 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
 TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	FILLING						STIMPMETER READINGS						QUALITY RATINGS									
	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	DENSITY SUMMER	WINTER COLOR	AFTER AERIFICATION	APRIL	AUGUST	NOVEMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-4	7.0	7.0	9.0	9.0	6.0	6.3	103.3	148.3	134.0	6.0	6.3	7.0	6.3	6.0	7.7	8.0	8.0	6.7	7.0	7.0	6.0	6.8
CENTURY	5.7	5.0	9.0	9.0	5.7	6.7	98.3	134.3	127.7	5.7	7.0	7.0	6.3	6.3	7.0	7.7	8.3	6.3	7.0	6.0	5.3	6.7
L-93	7.0	6.7	7.7	8.0	4.0	6.3	96.3	138.0	129.0	5.0	6.0	6.7	5.7	5.7	7.0	8.0	8.0	6.7	7.7	6.7	6.3	6.6
PENN G-1	7.0	6.7	8.3	9.0	5.7	6.0	94.7	131.3	118.0	5.0	5.7	6.0	6.3	6.0	7.3	8.0	8.3	6.0	7.7	6.7	6.0	6.6
GRAND PRIX (LCB-103)	6.0	5.0	8.7	8.3	6.0	5.7	103.0	155.7	134.0	5.7	6.0	6.7	6.3	6.0	6.7	7.3	7.7	6.0	6.7	7.0	6.0	6.5
PENN A-1	7.0	6.0	9.0	9.0	5.0	5.7	95.7	139.0	127.3	5.7	5.7	7.0	5.7	5.3	7.0	8.0	8.0	6.3	7.0	6.7	5.7	6.5
IMPERIAL	5.7	6.0	8.3	8.3	4.7	6.3	99.7	136.7	122.3	5.0	5.7	6.3	5.7	5.7	7.3	6.7	8.3	6.3	6.7	6.3	5.7	6.3
BACKSPIN	6.0	6.0	8.0	8.3	4.0	6.0	104.0	136.7	124.3	5.0	6.0	5.7	6.0	5.3	7.0	7.7	7.3	6.3	6.7	6.0	5.3	6.2
SR 1020	6.7	6.0	8.0	8.0	5.0	5.3	101.3	141.3	126.0	5.7	5.0	6.0	5.7	5.7	6.7	7.0	7.3	5.7	7.0	6.3	6.3	6.2
PENN G-6	6.7	6.7	8.3	8.0	4.0	6.0	99.0	139.3	123.7	5.0	5.0	6.3	5.7	5.3	7.0	7.0	7.0	6.3	7.0	6.0	5.3	6.1
SR 1119	7.0	6.7	8.0	8.0	4.0	5.3	100.0	138.3	126.0	5.0	5.7	6.0	5.0	6.0	7.0	7.0	7.0	6.0	7.0	6.0	5.0	6.1
PROVIDENCE	6.7	5.7	7.0	8.0	4.0	6.3	104.0	141.0	132.7	5.0	5.7	6.3	5.0	5.7	6.7	6.3	7.3	6.0	6.3	6.0	5.3	6.0
CATO	7.0	6.0	7.7	8.0	4.0	5.3	97.3	134.0	137.3	5.0	5.7	5.3	5.7	5.7	6.3	7.0	7.3	5.3	6.0	5.0	5.7	5.8
TRUELINE	6.7	6.3	7.3	7.7	4.3	6.3	100.3	138.0	128.3	5.0	5.0	5.3	5.0	5.3	7.0	6.3	6.7	6.0	6.7	5.3	5.7	5.8
VIPER	6.7	7.0	8.0	8.0	4.0	5.7	100.3	135.7	136.3	5.0	5.3	5.7	5.0	5.0	6.7	7.0	7.0	6.0	6.0	6.0	5.3	5.8
CRENSHAW	7.0	6.7	7.3	8.0	3.0	6.0	105.0	147.7	141.7	4.3	4.0	5.3	5.0	5.3	6.0	7.0	7.0	6.3	6.7	4.7	4.7	5.5
PUTTER	6.0	6.0	7.0	7.3	5.0	5.7	98.3	143.3	131.7	5.0	5.0	5.0	5.0	4.7	5.7	6.0	6.0	5.3	5.3	5.7	5.3	5.3
PENNCROSS	5.7	5.0	6.7	7.0	4.0	6.0	98.0	135.7	139.0	5.0	4.0	4.0	4.3	4.0	6.0	5.0	5.7	5.0	5.3	4.3	4.7	4.8
LSD VALUE	0.6	0.7	0.6	0.5	0.4	1.5	-	28.9	24.2	0.5	0.7	0.6	0.9	0.8	1.0	0.7	0.7	0.8	1.0	0.8	1.0	0.3
C.V. (%)	6.0	7.1	5.0	3.8	6.1	9.9	7.3	7.2	7.2	6.0	8.3	6.3	9.4	8.2	7.5	6.7	6.1	7.1	8.5	8.1	9.3	2.8

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.