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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 distributes 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:

Kevin Morris, Executive Director
National Turfgrass Evaluation Program
Beltsville Agricultural Research Center-West
Building 003, Room 217
Beltsville, Maryland 20705 USA

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	Alan Zelko	Dr. Barb Corwin, 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 / Jacklin Seed
2	Putter	Simplot Turf / Jacklin Seed
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. 1998 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)
Problems during	None						
		every week, Feb. - Nov.		0.06 - 0.125 lb. of N & K20, 0.03 lb. of P205	16-Mar-98 26-May-98	Pre-San Pre-San	2 lbs. product/M 2 lbs. product/M
FACTORS OF PLAY		February	Nature Safe 8-3-5	0.5 lb. N			
		March	Nature Safe 8-3-5	0.5 lb. N			
Date opened for play		April	Nature Safe 8-3-5	0.5 lb. N			
Date closed for play	not closed	May	Nature Safe 8-3-5	0.5 lb. N			
Type of spikes allowed	softspikes	September	Nature Safe 8-3-5	0.5 lb. N			
Uses of green	chipping	October	Nature Safe 8-3-5	0.5 lb. N			
		weekly as needed	Multigreen/Maxigreen	2-4 oz./M			
MOWING		weekly as needed	Lesco Micromix & Iron	2-4 oz./M			
					INSECTICIDES		
Initial height	0.275"						
Current height	0.15 -0.16"				Date(s)	Product	Rate (oz./M)
	0.14" for short periods						
Frequency	6 days/week				as needed for cutworms	Talstar	
Type of mower	walking						
Rollers used							
Groomers used	Toro GM800 set .005" below bedknife used daily except mid-June through mid-Sept.						
		FUNGICIDES			OTHER PRODUCTS		
CULTIVATION		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Aerification	10/13/98 using 1/2" coring times	every 2-3 wks, Feb. - mid-Dec.	Alternate Banol, Alliette,	labeled preventative rates	weekly as needed	Astron	1
Aerification	high pressure water injection		Heritage and Subdue		weekly as needed	Perkup	3
	every 2 wks, Feb. - Nov.		with either Mancozeb		06-May-98	Primo	8 oz./Acre
Verticutting	lightly 2 times in spring 1998		or Daconil		10-Jun-98	Primo	8 oz./Acre
Dates of topdressing	lightly every 2 wks during growing season. Heavier after aerification.						
					NOTES/COMMENTS		
Other cultural practices	Rolled after coring. Rolled three times in spring 1998						

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TABLE 1B. 1999 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 appl. weekly, Feb. - Nov.	20-5-20 ProSol	1/8-1/32 lb N/1000 sq.ft (4 lbs N/year)	March, May, late July, and Sept.	Pre-San	2 lbs. product
FACTORS OF PLAY		Granular application - Feb.	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
		Granular application - March	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
Date opened for play	Dec. 1997	Granular application - April	HHI natural organic + nutralene	0.7 lb. N			
Date closed for play		Granular application - Sept.	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
Type of spikes allowed	softspikes	Granular application - April	HHI natural organic + nutralene	0.6 lb. N			
Uses of green	chipping						
MOWING					INSECTICIDES		
Initial height	0.25"	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Current height	0.135 -0.155"						
Frequency	6-7 days/week	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)			
Type of mower	walking				as needed for cutworms early May	Talstar Nemacur	1 lb./100 sq.ft. 2.3 lbs./1000 sq.ft.
Rollers used	As needed (2-4x/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 rotated and sprayed on a two weeks schedule in May-Nov.	Alliette Banol Subdue Maxx Dithane Daconil Ultrex Heritage Consyst Terrazole	4 2 1 4 4-8 oz. 0.4 4 6			
CULTIVATION					OTHER PRODUCTS		
					Date(s)	Product	Rate (oz./M)
Aerfication - dates	5/8" hollow - Mar. & Sept., 1/2 " hollow - May, 1/4" quad hollow - July & Aug				weekly as needed weekly as needed 6-May 10-Jun	Astron Perkup Primo Primo	1 3 8 oz./Acre 8 oz./Acre
Aerification - type	Hydroject - bi-weekly From Feb. to Nov.						
Verticutting	Heavy=1.25" deep w/ graden - April. Light verticut per month from Feb. to May.				NOTES/COMMENTS		
Dates of topdressing	Heavy to fill holes after aerifications - Mar. May & Sep. Very Lightly bi-weekly Feb-Nov.				This green gets pounded with ballmarks.		
Other cultural practices	Rolled heavy after aerifications						

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TABLE 1C. 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				
FACTORS OF PLAY		applied weekly in Feb. - Nov.		1/10-1/32 lb N	March, May, late July, and Sept.	Pre-San	2 lbs. product
			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		FUNGICIDES			INSECTICIDES		
Initial height	0.25"						
Current height	0.135 -0.150"						
Frequency	6-7 days/week	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)			
Type of mower	Toro 800 walk				as needed for cutworms early May	Talstar	1 lb./100 sq.ft.
Rollers used	Rolling as needed (1/2x/week)					Nemacur	2.3 lbs./1000 sq.ft.
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 rotated and sprayed on a two weeks schedule in May-Nov.	Alliette	4	OTHER PRODUCTS		
CULTIVATION			Banol	2			
			Subdue Maxx	1			
			Dithane	4			
			Daconil Ultrex	4-8 oz.	Date(s)	Product	Rate (oz./M)
			Heritage	0.4			
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.).		Consyst	4	weekly as needed	Astron	1
			Terrazole	6	weekly as needed	Perkup	3
					6-May	Primo	8 oz./Acre
Verticutting	Lightly verticut in April & June.				10-Jun	Primo	8 oz./Acre
Dates of topdressing		Heavy topdressed after Feb. and Sept. aerifications to fill holes. Lightly topdressed biweekly during growing season.	NOTES/COMMENTS				
Other cultural practices		Rolled heavy after aerifications	This green gets a lot of play.				

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TABLE 1D. 2001 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)
Problems during	None						(1000 sq.ft.)
FACTORS OF PLAY		applied weekly in Feb. - Nov.	Foliar application	1/10-1/32 lb N	March, May, late July, and Sept.	Pre-San	2 lbs. product
			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		FUNGICIDES			INSECTICIDES		
Initial height	0.25"				Date(s)	Product	Rate (oz./M)
Current height	0.135 -0.150"						
Frequency	6-7 days/week	Date(s)	Product	Rate (oz./M)			
Type of mower	Toro 800 walk			(1000 sq.ft.)	as needed for cutworms	Talstar	1 lb./100 sq.ft.
Rollers used	Rolling as needed (1/2x/week)				early May	Nemacur	2.3 lbs./1000 sq.ft.
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 rotated and sprayed on a two weeks schedule in May-Nov.	Alliette	4	OTHER PRODUCTS		
CULTIVATION			Banol	2			
			Subdue Maxx	1			
			Dithane	4			
			Daconil Ultrex	4-8 oz.	Date(s)	Product	Rate (oz./M)
			Heritage	0.4			
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.).		Consyst	4	weekly as needed	Astron	1
			Terrazole	6	weekly as needed	Perkup	3
Verticutting	Lightly verticut in April & June.				6-May	Primo	8 oz./Acre
					10-Jun	Primo	8 oz./Acre
Dates of topdressing		Heavy topdressed after Feb. and Sept. aerifications to fill holes. Lightly topdressed biweekly during growing season.	NOTES/COMMENTS				
Other cultural practices		Rolled heavy after aerifications	This green gets a lot of play.				

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TABLE 1E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	LEAF TEXTURE	WINTER COLOR 2000-01	PERCENT ESTABLISHMENT FALL	STIMPMETER READINGS 1999	QUALITY RATINGS												
						JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-4	5.8	7.5	6.3	65.0	107.3	7.2	7.4	7.4	7.0	7.3	6.9	6.5	6.3	6.8	6.8	6.7	7.1	6.8
PENN A-1	6.1	7.0	6.5	43.3	103.7	6.8	6.9	7.0	7.2	7.2	6.7	6.3	6.3	6.6	7.1	6.7	6.9	6.6
PENN G-1	5.8	7.3	6.0	56.7	104.0	6.6	6.8	6.8	7.0	6.5	6.8	5.8	5.9	6.3	6.8	6.4	6.5	6.5
GRAND PRIX (LCB-103)	5.0	7.2	5.7	63.3	104.7	6.8	6.8	6.8	6.8	6.5	6.8	5.8	5.9	6.1	6.6	6.4	6.3	6.4
IMPERIAL	5.6	6.7	6.2	66.7	104.0	6.3	6.5	6.2	6.8	6.3	6.7	6.7	6.3	6.0	6.6	6.4	6.4	6.4
CRENSHAW	7.0	6.3	7.2	66.7	105.7	6.1	6.8	6.5	6.6	6.4	6.4	5.9	6.0	6.2	6.8	6.2	5.9	6.3
CENTURY	5.0	7.2	5.7	66.7	103.7	6.2	7.1	6.7	6.6	6.4	6.7	6.0	5.3	5.9	5.9	6.1	6.3	6.2
SR 1020	5.9	5.8	6.3	65.0	103.0	6.1	6.4	6.4	6.5	6.3	6.1	5.9	5.8	5.8	6.5	6.1	6.3	6.2
BACKSPIN	5.2	6.7	6.0	63.3	102.3	6.0	6.5	6.3	6.7	6.4	6.6	6.1	5.8	5.8	6.3	5.9	6.3	6.1
L-93	5.9	5.7	6.5	63.3	104.0	6.2	6.4	6.3	6.3	5.9	5.8	5.5	5.8	5.5	6.1	6.1	6.1	6.1
PENN G-6	6.1	6.3	6.7	55.0	104.0	5.9	6.8	6.4	6.3	6.1	6.1	5.3	4.8	5.8	6.3	6.3	5.9	6.0
SR 1119	7.0	5.8	7.8	63.3	105.7	6.0	6.3	6.3	6.3	6.3	6.0	5.5	5.4	5.7	6.1	6.0	5.7	5.9
PROVIDENCE	6.4	5.7	7.2	58.3	101.0	5.7	6.1	6.1	6.3	6.1	6.3	5.3	5.3	5.3	5.8	5.9	5.7	5.8
PUTTER	5.9	5.3	6.2	71.7	103.0	5.8	6.1	5.7	6.3	5.6	5.3	5.3	5.1	5.2	6.1	5.6	5.9	5.7
TRUELINE	6.3	6.0	6.8	53.3	98.7	5.4	5.9	5.8	5.9	5.3	5.9	5.3	5.2	5.3	6.0	5.7	5.7	5.6
VIPER	7.0	5.5	7.2	66.7	102.7	5.7	5.9	5.8	6.2	5.7	5.8	5.2	4.8	5.1	5.6	5.6	5.7	5.6
PENNCROSS	5.3	5.0	6.0	63.3	103.3	5.7	6.3	5.5	5.4	4.7	5.1	4.8	4.3	4.4	5.1	5.5	5.4	5.4
CATO	6.3	5.3	7.0	65.0	102.3	4.3	5.7	5.6	5.3	5.2	5.3	4.3	3.9	4.6	5.5	5.4	5.3	5.1
LSD VALUE	0.8	1.2	0.8	25.7	16.4	1.0	1.0	0.9	0.7	0.7	0.6	1.3	1.1	0.9	1.0	1.0	0.5	0.4
C.V. (%)	13.8	15.5	10.2	15.9	4.5	19.0	16.3	16.4	12.7	14.2	12.1	24.1	23.0	19.5	17.4	17.6	12.9	9.5

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 2A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT GREEN VALLEY, AZ (COUNTRY CLUB OF GREEN VALLEY)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	October 1997	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	one plot washed out-replanted	Annually		3.0-3.5 lbs. N/year			
		Annually		1.0-1.5 lbs. P/year			
FACTORS OF PLAY		Annually		1.0-1.5 lbs. K/year			
Date opened for play	November 1997			no more than 1/8			
Date closed for play	not closed			lb. N/M June-Sept.			
Type of spikes allowed	softspikes						
Uses of green	putting						
MOWING					INSECTICIDES		
Initial height	3/16"				Date(s)	Product	Rate (oz./M)
Current height	5/32"						
Frequency	6 days/week				May	Dursban	
Type of mower	walking						
Rollers used	smooth						
Groomers used	None						
CULTIVATION							
Aerification - dates	3/10, 4/16	FUNGICIDES			OTHER PRODUCTS		
Aerification - type							
Verticutting	3/7, 4/13, 5/6, 11/10	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
	light verticut - one direction	July	Heritage		Eight times/year	Ferromec	3
Dates of topdressing	3/10, 4/16, 5/6, 11/10						
Other cultural practices							
NOTES/COMMENTS							

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

TABLE 2B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT GREEN VALLEY, AZ (COUNTRY CLUB OF GREEN VALLEY)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	October 1997	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	one plot washed out-replanted	March	16-4-8	0.65 lbs. N			
		April	15-15-15	0.5 lbs. N			
FACTORS OF PLAY		May	21-7-14	1.5 lbs.			
		May	14-0-8	0.25 lbs.			
Date opened for play	Open all year	September	34-0-0	0.25 lbs.			
Date closed for play		October	15-5-8	0.90 lbs.			
Type of spikes allowed	softspikes						
Uses of green	Practice putting						
MOWING					INSECTICIDES		
Initial height	5/32"				Date(s)	Product	Rate (oz./M)
Current height	5/32"						
Frequency	6X/week						
Type of mower	22" walker				March	Dursban	
Rollers used	Wiehle rollers						
Groomers used							
CULTIVATION							
Aerification - dates	Apr., May, Oct., Nov.	FUNGICIDES			OTHER PRODUCTS		
Aerification - type	solid tines						
Verticutting	Mar., May, Jun., Nov.	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Dates of topdressing	Apr., May, Oct., Nov.	March	Heritage	1x label rate	6-8 times/year	Panasea	1x label rate
	(following aerification), plus, light topdressing after each verticutting	April	Heritage	1x label rate			
					NOTES/COMMENTS		
Other cultural practices	rolled to promote smoothness after May topdressing.						

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

TABLE 2C. 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 dulox at label 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 label 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)			
Current height	5/32"						
Frequency	6X/week	None			Date(s)	Product	Rate (oz./M)
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							

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

TABLE 2D. 2001 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	Feb	15-15-15	0.25 lb. N			
		March	15-15-15	0.4 lb. N			
FACTORS OF PLAY		April	20-10-6	1.25 lb. N			
		May	20-10-6	0.75 lb. N			
Date opened for play	Open all year	June	Methylene urea	0.25 lb. N			
Date closed for play		Oct	15-5-8	0.25 lb. N			
Type of spikes allowed	soft spikes only	Nov	Lesco slo	0.50 lb. N			
Uses of green	Practice putting	Feromec applied 5 times at 3 oz./M					
MOWING							
Initial height	5/32"	FUNGICIDES			OTHER PRODUCTS		
Current height	5/32"						
Frequency	6X/week	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Type of mower	22" walker						
Rollers used	Wiehle roller				Florantine Root enhancer applied six times year at 1x rate.		
Groomers used	None	None					
CULTIVATION							
Aerfication - dates	solide tines - May, Oct., Nov.	HERBICIDES			NOTES/COMMENTS		
Aerification - type	Core April 1/2" 2x 4 spacing						
Verticutting	Medium - March, lite - May, June, October	Date(s)	Product	Rate (oz./M)			
Dates of topdressing	May, Oct, Nov and April; plus , light topdressing after each verticutting.						
Other cultural practices	Brushed after topdressings. Hand broom or cocco-mat.						

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

TABLE 2E.

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/
1998-2001 DATA

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

NAME	DENSITY RATINGS			PERCENT LIVING COVER			FROST TOLERANCE 2001	WINTER COLOR	PERCENT ESTABLISHMENT FALL	STIMPMETER READINGS			
										SPRING	SUMMER	FALL	WINTER
	SPRING	SUMMER	FALL	SPRING	SUMMER	FALL				1998-01	1998-01	1998 2000-01	1998-01
PENN A-4	8.0	8.1	8.0	99.0	99.0	93.2	7.5	5.7	97.0	94.4	102.4	94.2	101.8
L-93	6.9	7.0	7.4	98.3	98.3	91.4	7.7	6.3	92.7	97.1	101.3	95.8	102.9
BACKSPIN	7.2	7.5	7.4	97.6	98.3	92.2	6.3	5.7	94.7	95.0	101.7	94.9	99.6
GRAND PRIX (LCB-103)	7.3	7.6	7.6	98.8	98.9	96.9	7.7	5.3	94.3	93.3	101.7	98.4	97.7
SR 1119	7.0	7.0	6.8	98.7	98.4	90.8	7.2	6.8	94.0	90.9	102.3	98.8	101.8
IMPERIAL	7.3	7.3	7.3	98.1	98.3	96.3	6.0	5.6	97.0	95.3	102.3	100.9	104.4
PENN A-1	6.8	7.0	6.8	96.6	98.3	88.3	6.7	5.4	91.7	97.2	103.3	103.7	99.9
PROVIDENCE	7.0	6.6	6.9	96.9	96.8	93.8	7.8	6.3	96.0	93.0	96.7	98.9	96.3
CENTURY	7.2	7.3	7.2	97.8	97.3	85.4	7.7	5.4	92.7	101.3	97.2	105.6	106.8
PENN G-1	7.3	7.6	7.7	98.8	98.8	96.6	7.2	5.4	91.7	93.3	104.3	96.7	101.0
PENN G-6	6.8	7.1	7.1	97.2	98.2	90.6	6.8	5.6	97.0	99.9	100.3	98.2	101.8
SR 1020	7.1	6.4	6.7	96.3	96.6	89.7	7.2	6.0	97.0	97.2	97.1	103.6	103.7
TRUELINE	6.8	6.6	7.1	98.1	97.7	98.0	6.5	6.1	97.3	95.1	101.0	99.4	98.4
CRENSHAW	6.3	6.6	6.6	97.0	98.4	94.3	6.0	6.6	96.0	92.7	102.2	98.9	99.7
VIPER	6.5	6.4	6.4	97.1	97.3	94.8	6.5	6.4	94.7	96.1	103.3	96.7	100.7
CATO	6.5	6.5	6.4	97.2	98.2	94.3	6.8	5.7	93.3	98.5	99.7	99.2	98.2
PUTTER	6.2	5.8	6.7	95.3	96.0	93.6	6.3	5.1	96.0	91.7	103.3	98.0	97.1
PENNCROSS	6.4	5.4	6.2	95.6	94.9	97.2	7.8	5.1	95.7	91.4	97.6	96.8	95.4
LSD VALUE	0.7	0.6	0.9	3.6	4.6	28.1	2.1	0.7	7.0	22.9	30.5	47.7	64.6
C.V. (%)	11.3	11.4	12.5	2.7	3.0	14.1	17.6	13.2	2.9	13.2	14.3	19.2	24.6

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 2E.
(CONT'D)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/
1998-2001 DATATURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SEEDLING VIGOR	QUALITY RATINGS												
					JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-4	6.2	6.3	8.1	3.7	7.2	7.5	7.3	7.5	7.3	8.2	7.3	6.3	6.4	6.7	6.8	7.2	7.1
L-93	6.4	6.8	6.8	3.0	6.3	6.3	6.5	6.6	5.8	6.9	6.2	6.0	6.3	6.9	6.8	6.7	6.4
BACKSPIN	5.3	6.3	7.3	2.7	6.3	6.5	6.5	6.8	6.2	7.2	6.5	5.6	5.8	6.1	6.8	6.4	6.3
GRAND PRIX (LCB-103)	5.1	5.0	7.3	4.3	6.8	6.8	6.5	6.5	5.5	6.9	6.2	5.9	6.1	6.2	6.2	6.6	6.3
SR 1119	6.5	7.0	7.3	2.3	5.8	6.5	6.7	6.8	6.6	7.2	6.3	5.4	5.6	6.2	6.6	6.0	6.3
IMPERIAL	5.1	5.9	7.4	2.7	6.1	6.6	6.6	6.5	5.8	6.7	6.1	5.5	5.7	6.1	6.2	6.2	6.2
PENN A-1	5.9	5.9	7.1	1.7	5.9	6.4	6.0	6.3	6.1	7.0	6.5	5.8	6.3	6.3	6.6	5.8	6.2
PROVIDENCE	6.0	6.5	6.5	3.0	6.6	6.6	6.9	6.6	5.7	6.2	5.6	5.5	5.8	6.0	6.7	6.7	6.2
CENTURY	5.0	5.4	7.8	2.7	6.9	6.5	6.9	6.1	5.8	6.8	6.0	5.3	5.6	5.6	6.2	6.2	6.1
PENN G-1	6.1	6.2	7.1	3.3	5.9	6.3	6.3	6.7	5.6	6.8	6.0	5.8	6.2	5.7	6.3	6.0	6.1
PENN G-6	5.8	6.1	6.8	4.0	6.0	6.5	6.4	6.3	5.8	6.5	6.3	5.8	6.4	5.6	6.2	6.1	6.1
SR 1020	5.6	6.3	7.0	2.0	6.9	6.7	6.3	6.3	5.5	5.8	5.3	5.3	5.6	6.4	6.9	6.8	6.1
TRUELINE	6.3	6.3	6.7	4.0	6.4	6.5	6.2	6.5	5.4	6.1	5.6	5.3	4.9	5.7	5.9	6.8	5.9
CRENSHAW	6.6	6.9	6.8	3.7	5.4	6.3	6.2	5.8	5.5	6.7	5.9	5.6	5.8	5.9	6.2	5.7	5.8
VIPER	6.7	7.3	6.8	4.0	5.6	5.9	6.7	6.0	5.0	6.0	5.6	5.0	5.4	5.6	5.9	5.9	5.7
CATO	5.7	6.1	6.8	2.7	5.8	6.1	5.8	5.9	5.3	6.2	5.8	5.1	4.9	5.4	5.8	6.2	5.6
PUTTER	5.1	5.6	6.3	5.0	5.8	5.9	6.1	5.3	4.7	5.4	4.9	4.7	5.8	5.2	6.1	6.2	5.4
PENNCROSS	4.7	5.4	5.7	2.7	6.6	5.8	6.2	5.5	4.0	4.7	4.5	4.5	4.6	5.1	5.6	6.1	5.2
LSD VALUE	0.4	0.5	0.5	2.0	0.9	1.2	2.3	1.3	0.9	0.7	0.9	2.3	2.3	1.2	2.5	2.1	0.6
C.V. (%)	9.3	11.5	10.1	30.7	16.8	16.3	21.5	19.5	20.3	13.8	19.0	28.4	25.8	17.5	20.4	19.0	11.4

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 3A. 1998 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						
		17-Apr-98	Best 15-15-15	0.5 lb. N	None		
		24-May-98	Best 15-15-15	0.5 lb. N			
FACTORS OF PLAY		21-Jun-98	Best 15-15-15	0.5 lb. N			
		23-Jul-98	Milorganite	0.5 lb. N			
Date opened for play	01-Apr-98	27-Aug-98	Milorganite	0.5 lb. N			
Date closed for play		21-Sep-98	Best 15-15-15	0.5 lb. N			
Type of spikes allowed	Metal, softspikes	06-Nov-98	Seasource 16-4-8	0.75 lb. N			
Uses of green	putting, chipping	17-Nov-98	Seasource 16-4-8	0.5 lb. N			
		30-Dec-98	0-0-50	0.9 lb. K			
MOWING					INSECTICIDES		
Initial height	1/4"				Date(s)	Product	Rate (oz./M)
Current height	5/32"						
Frequency	daily during season						
Type of mower	walking				None		
Rollers used							
Groomers used	always used	FUNGICIDES					
CULTIVATION		Date(s)	Product	Rate (oz./M)			
Aerfication - dates	07-Aug-98	17-Mar-98	Fore		OTHER PRODUCTS		
Aerification - type	3/8" solid tines	12-May-98	Scotts Fungicide X				
Verticutting	None				Date(s)	Product	Rate (oz./M)
Dates of topdressing	07-Aug-98						
Other cultural practices	rolled on 3/26, 6/24, 7/25, 9/12				None		
NOTES/COMMENTS							

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

TABLE 3B. 1999 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						
		20-Feb	Seasource 16-4-8	4.8	23-Dec-99	Riverdale	0.66 fl.oz./M
		12-Mar	Floratine NOW 18-0-3	6 fl. oz.		Triplet	
FACTORS OF PLAY		30-Mar	Floratine NOW 18-0-3	6 fl. oz.		/2,4-D,	
		10-May	Milorganite 6-2-0	7.5		MCPP,	
Date opened for play	Open all year	28-Jun	Seasource 16-4-8	4.8		Dicamba	
Date closed for play		12-Aug	Milorganite 6-2-0	7.0			
Type of spikes allowed	Softspikes encouraged	6-Sep	Milorganite 6-2-0	7.5			
Uses of green	putting, chipping	19-Oct	Milorganite 6-2-0	8.4	INSECTICIDES		
	(77,700 rounds/year)	9-Nov	Seasource 16-4-8	5.5			
		29-Nov	Milorganite 6-2-0	6.5	Date(s)	Product	Rate (oz./M)
		23-Dec	Floratine NOW 18-0-3	4 fl. oz.			
MOWING					None		
Initial height	1/4"						
Current height	5/32"				OTHER PRODUCTS		
Frequency	3 times/week						
Type of mower	walking	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Rollers used							
Groomers used		Date(s)	Product	Rate (oz./M)	None		
		11-Sep	Heritage/Azoxystrobin	0.4			
CULTIVATION		18-Oct	Heritage/Azoxystrobin	0.4			
		9-Nov			NOTES/COMMENTS		
Aerfication - dates	Oct.15,20,25, Dec.20,30,	29-Nov	Cleary's 3336G /Tiophanate Methyl	3 lbs./1000sq.ft.			
Aerification - type	Toro Spiker						
	1/4" hollow tines-Nov.		Scotts Fungi. X/Iprodione	4.1 lbs./1000sq.ft.			
Verticutting	None						
Dates of topdressing	Nov.11 - Sand						
Other cultural practices	None						

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

TABLE 3C. 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	Floratine NOW 12-0-12	2 fl. oz.	20-Jul	Triplet	0.66 fl.oz./M
		13-Jan	Milorganite 6-2-0	8.0		/2,4-D,	
FACTORS OF PLAY		3/21, 4/7	Seasource 16-4-8	5.5		MCP, P,	
		01-May	Milorganite 6-2-0	7.5		Dicamba	
Date opened for play	open all year	31-May	Scotts 29-2-3	3.2 fl. oz.			
Date closed for play		22-Jun	Milorganite 6-2-0	9.7			
Type of spikes allowed	Softspikes encouraged	22-Aug	Milorganite 6-2-0	9.5			
Uses of green	putting only (80,000 rounds/year)	9/1, 9/15	Floratine NOW 6-12-3	1.9 fl. oz.	INSECTICIDES		
		27-Sep	Nutralene 40-0-0	3.5			
		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"						
Current height	5/32"				OTHER PRODUCTS		
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		
		15-Feb	Cleary's 3336G /Tiophanate Methyl	3 lbs./M			
CULTIVATION		11-May	Cavalier 2G /Tiophanate Methyl	3 lbs./M	NOTES/COMMENTS		
Aerification - dates	1/7, 3/21, 8/4 - 1/4" hollow tines.	5/31, 7/20	Heritage/Azoxystrobin	0.4			
Aerification - type	6/14, 6/21, 6/28, 7/5, 7/27, 10/25, 12/5 - Toro Spiker	29-Aug	Scotts Systemic Fungicide /Tiophanate Methyl	2 lbs./M			
		15-Sep	Heritage/Azoxystrobin	0.4			
Verticutting	None	31-Oct	Chipco 26019/Iprodione	3			
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 3D. 2001 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						
		04-Jan	16-4-8 granular	0.5 lb.	16-Mar	Triplet	0.1oz./M
		08-Feb	Now 12-0-12 liquid	0.5 oz.		/2,4-D,	
FACTORS OF PLAY		09-Feb	16-4-8 granular	0.5 lb.		MCP, P,	
		15-Mar	Now 12-0-12 liquid	0.5 oz.		Dicamba	
Date opened for play	open all year	05-Apr	16-4-8 granular	0.5 lb.			
Date closed for play		24-Apr	6-2-0 Milorganite	1 lb.			
Type of spikes allowed	Softspikes preferred	30-May	Now 12-0-12 liquid	0.5 oz.			
Uses of green	chipping and putting	15-Jun	6-2-0 Milorganite	1.5 lbs.	INSECTICIDES		
		06-Jul	Now 12-0-12 liquid	0.5 oz.			
		12-Jul	6-2-0 Milorganite	1 lb.	Date(s)	Product	Rate (oz./M)
		8/8, 9/17, 10/8	Now 12-0-12 liquid	0.5 oz.			
MOWING		03-Dec	6-2-0 Milorganite	1 lb.	None		
Initial height	0.25"						
Current height	0.125"				OTHER PRODUCTS		
Frequency	daily						
Type of mower	walking	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Rollers used	None						
Groomers used	None	Date(s)	Product	Rate (oz./M)	None		
		16-Feb	Cleary's 3336	0.5 lb./M			
CULTIVATION		08-Mar	Scott's Fungicide X	0.5 lb./M			
		5/30, 7/6, 8/10, 9/15	Heritage (azoxystrobin)	0.5 oz.	NOTES/COMMENTS		
Aerification - dates	4/42 7/25, 10/4	11/23, 12/7	Cleary's 3336	0.5 lb./M			
Aerification - type	1/4" hollow tines.	26-Dec	Scott's Fungicide X	0.5 lb./M			
Verticutting	5/16, 6/17, 8/18, 9/17 Spiking						
Dates of topdressing	11/10, 11/28 - light sand						
Other cultural practices	None						

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

TABLE 3E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	LEAF TEXTURE	DENSITY SPRING	DENSITY SUMMER	DENSITY FALL	PERCENT LIVING COVER RATINGS			PERCENT POA ANNUA 2000-01	STIMPMETER READINGS			
						SPRING	SUMMER	FALL		SPRING 1998	SUMMER 1998-99	FALL 1998-01	WINTER 1998
L-93	7.8	7.8	8.7	8.7	8.7	95.0	95.0	95.7	3.5	92.3	88.8	105.3	92.7
PENN A-4	6.9	7.8	8.7	8.3	8.2	95.0	93.3	95.7	3.5	100.9	98.2	112.8	96.0
PENN G-6	7.2	7.8	8.3	9.0	8.2	95.0	93.3	94.0	3.8	95.8	94.0	113.4	94.0
PENN A-1	6.8	7.6	8.0	8.7	8.2	91.7	91.7	94.8	3.8	94.7	95.3	112.7	93.3
GRAND PRIX (LCB-103)	6.9	7.9	7.0	8.7	8.0	95.0	93.3	96.5	3.3	96.2	94.5	114.0	96.0
IMPERIAL	7.2	7.8	8.7	8.7	8.3	93.3	93.3	94.7	5.8	89.3	91.0	110.1	91.3
PENN G-1	7.2	7.5	7.7	7.7	8.3	93.3	91.7	94.3	4.4	91.7	90.8	108.8	90.7
SR 1119	7.2	7.7	8.0	9.0	7.8	91.7	88.3	90.3	5.8	90.2	93.2	114.0	94.7
BACKSPIN	6.9	8.0	8.7	8.0	8.2	95.0	93.3	93.2	4.7	93.7	92.7	109.2	94.7
CRENSHAW	7.1	7.5	8.3	7.7	8.0	93.3	88.3	93.2	3.8	95.1	93.5	116.3	94.7
CENTURY	6.6	8.0	7.7	8.3	8.3	95.0	90.0	96.3	3.8	94.4	95.0	110.5	94.7
SR 1020	6.7	7.5	7.0	8.0	7.3	93.3	91.7	90.5	6.2	95.8	92.7	111.3	94.0
VIPER	6.7	7.4	7.0	7.0	7.5	93.3	85.0	93.7	4.8	92.7	95.8	114.2	93.3
PROVIDENCE	7.2	7.5	8.0	6.7	7.5	93.3	86.7	88.5	5.0	96.7	93.7	114.6	94.7
PUTTER	6.5	7.3	6.3	8.7	7.2	95.0	91.7	91.2	5.8	94.2	94.5	113.3	94.3
TRUELINE	6.8	7.8	7.7	8.3	7.5	91.7	88.3	91.7	6.7	95.9	91.8	114.3	97.0
CATO	6.8	7.5	7.0	8.3	7.3	90.0	88.3	88.8	7.3	96.9	93.3	113.3	95.3
PENNCROSS	5.8	6.3	7.7	7.7	6.5	95.0	90.0	92.2	5.8	101.9	93.7	116.2	95.3
LSD VALUE	1.4	0.6	1.9	1.9	1.5	7.4	6.2	12.6	11.2	33.5	17.2	27.0	6.0
C.V. (%)	16.5	8.9	11.1	10.3	12.3	2.8	3.4	6.4	85.2	15.3	7.2	12.2	2.5

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 3E.
(CONT'D)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/
1998-2001 DATATURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	QUALITY RATINGS												MEAN
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
L-93	7.5	7.3	7.6	7.7	7.4	7.5	8.1	7.6	7.9	7.8	7.8	7.2	7.6
PENN A-4	7.1	7.6	7.7	7.5	7.4	7.9	7.9	7.1	7.5	7.3	7.5	7.2	7.5
PENN G-6	7.6	7.3	7.5	7.3	7.1	7.6	7.4	7.0	7.9	7.3	7.3	7.1	7.4
PENN A-1	7.4	7.2	7.5	7.3	7.2	7.3	7.8	7.3	7.5	6.8	7.4	7.1	7.3
GRAND PRIX (LCB-103)	7.2	7.3	7.5	7.0	6.9	7.1	7.5	7.3	7.5	7.3	7.3	6.8	7.2
IMPERIAL	7.5	7.3	7.5	7.4	7.2	7.1	6.9	7.0	6.8	7.0	7.6	7.0	7.2
PENN G-1	7.2	6.6	7.4	7.2	7.2	7.5	7.7	7.3	7.5	6.8	7.1	7.2	7.2
SR 1119	7.1	7.0	7.0	7.4	7.1	7.5	8.1	6.8	7.7	7.1	7.3	6.7	7.2
BACKSPIN	7.2	7.0	7.4	7.5	7.0	7.1	7.0	6.7	7.3	7.0	7.2	6.6	7.1
CRENSHAW	7.3	6.7	7.1	7.2	7.1	6.9	6.9	6.9	7.4	7.0	7.5	6.5	7.0
CENTIURY	7.1	7.0	7.1	7.1	6.8	6.8	7.2	7.4	6.5	6.7	6.6	6.8	6.9
SR 1020	7.2	6.9	7.3	7.2	6.8	6.8	7.3	6.4	7.1	6.2	7.2	6.7	6.9
VIPER	7.3	7.0	7.2	6.7	6.9	6.8	7.0	6.7	6.8	6.4	7.0	6.7	6.9
PROVIDENCE	7.3	6.8	7.0	7.4	7.1	6.6	6.8	5.9	7.1	6.3	6.8	6.7	6.8
PUTTER	7.0	6.8	7.3	6.7	6.5	6.8	7.0	6.4	6.4	6.2	6.8	6.7	6.7
TRUELINE	6.8	6.4	7.2	6.8	6.4	6.9	6.9	6.4	6.5	6.3	7.1	6.3	6.7
CATO	6.5	6.4	6.7	6.7	6.5	6.9	7.1	6.2	6.8	5.8	6.3	6.3	6.5
PENNCROSS	6.2	5.7	6.5	6.1	5.8	5.9	5.8	6.3	6.0	5.8	6.0	5.6	6.0
LSD VALUE	0.7	0.9	1.2	0.7	1.0	1.0	0.7	1.0	1.0	1.0	1.4	1.1	0.4
C.V. (%)	10.3	13.6	13.0	11.7	13.9	14.8	12.6	15.4	15.9	17.0	17.0	15.1	6.9

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 4A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

ESTABLISHMENT		FUNGICIDES			OTHER PRODUCTS		
Seeding date	Sept. 1997	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
FACTORS OF PLAY		16-Jan-98	Chipco 26019	4	16-Jan-98	1-0-0 (w/8% calcium)	34
		19-Feb-98	Daconil 2787	4	16-Jan-98	Deep Green chelated iron	34
		19-Feb-98	Chipco GT	4	23-Jan-98	Deep Green chelated iron	34
		24-Mar-98	ProStar	2	23-Jan-98	1-0-0 (w/8% calcium)	34
Date opened for play	April 1998	27-Mar-98	Subdue	2	29-Jan-98	Deep Green chelated iron	34
Date closed for play	not closed	15-Jun-98	Fore	7	29-Jan-98	1-0-0 (w/8% calcium)	34
Type of spikes allowed	metal,softspikes	19-Jun-98	Heritage	0.4	26-Feb-98	Deep Green FeSO4	1.6 lbs./M
Uses of green	putting, chipping, target from bunker	01-Jul-98	Daconil	4	06-Mar-98	Deep Green FeSO4	1.6 lbs./M
		14-Jul-98	Alliette	4	06-Mar-98	1-0-0 (w/8% calcium)	34
MOWING		11-Aug-98	Fore	8	13-Mar-98	Deep Green FeSO4	1.1 lbs./M
		21-Aug-98	Clearys 3336	8	24-Mar-98	Eco-Mag	21
Initial height	0.25"	02-Sep-98	Subdue	2	24-Mar-98	Deep Green FeSO4	1.4 lbs./M
Current height	0.13"	02-Sep-98	Fore	8	02-Apr-98	Eco-Mag	34
Frequency	7 days/week	14-Sep-98	Daconil 2787	5	02-Apr-98	Deep Green FeSO4	1.3 lbs./M
Type of mower	walking, triplex	24-Oct-98	Subdue	2	07-Apr-98	Roots	34
Rollers used	on triplex only	24-Oct-98	Fore	8	20-Apr-98	Eco-Mag	34
Groomers used	on triplex only	25-Nov-98	Fore	8	20-Apr-98	Deep Green FeSO4	1.3 lbs./M
		22-Dec-98	Chipco 26 GT	6	06-May-98	Turf Partners FeSO4	1.6 lbs./M
CULTIVATION					26-May-98	Turf Partners FeSO4	1.6 lbs./M
					01-Jun-98	Deep Green FeSO4	0.86 lbs./M
Aerfication - dates	03-Sep-98	HERBICIDES			05-Jun-98	Roots 1-2-3	34
Aerification - type	solid				10-Jun-98	Turf Partners Eco-Mag	34
Verticutting	first week of April, May, June, Sept., Oct.				10-Jun-98	Deep Green FeSO4	1.6 lb./M
Dates of topdressing	first week of April, May, June, Sept., Oct.	Date(s)	Product	Rate (oz./M)	15-Jun-98	Deep Green FeSO4	1.3 lb./M
		None			19-Jun-98	Roots 1-2-3	34
Other cultural practices	brushed green monthly				01-Jul-98	Turf Partners Eco-Mag	34
	rolled green monthly with Jacobsen rollers	INSECTICIDES			04-Aug-98	Turf Partners Eco-Mag	34
					25-Aug-98	Turf Partners Eco-Mag	34
					14-Sep-98	Roots	17
					22-Sep-98	Roots	34
		Date(s)	Product	Rate (oz./M)	08-Oct-98	Roots	17
					06-Nov-98	Turf Partners Eco-Mag	34
		10-Aug-98	Merit	1.6	06-Nov-98	Thio-cal (6% calcium)	68
					17-Nov-98	Crown Tech FeSO4	1.6 lbs./M
					17-Nov-98	Lesco Micro-Mix	34
		NOTES/COMMENTS			25-Nov-98	Crown Tech FeSO4	1.3 lbs./M
					08-Dec-98	Crown Tech FeSO4	1.3 lbs./M
					08-Dec-98	Turf Partners Eco-Mag	34
					22-Dec-98	Crown Tech FeSO4	1.3 lbs./M

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

TABLE 4A. (CONT'D)

1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

FERTILIZATION			FERTILIZATION			FERTILIZATION		
Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)
16-Jan-98	Turf Partners 7-0-0	0.02 lbs. N	27-Apr-98	Turf Partners 7-0-0	0.02 lbs. N	17-Aug-98	Nutriculture 28-8-18	0.08 lbs. N
16-Jan-98	Turf Partners 2-20-0	0.06 lbs. P	27-Apr-98	Turf Partners 0-0-50	0.15 lbs. N	25-Aug-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
16-Jan-98	Turf Partners 1-0-23	0.07 lbs. K	04-May-98	Best 5-16-22	0.41 lbs. N	25-Aug-98	Nutriculture 28-8-18	0.08 lbs. N
23-Jan-98	Turf Partners 2-20-0	0.06 lbs. P	06-May-98	Turf Partners 24-0-0	0.07 lbs. N	02-Sep-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
23-Jan-98	Turf Partners 1-0-23	0.07 lbs. K	06-May-98	Nutriculture 20-20-20	0.03 lbs. N	09-Sep-98	Peters 20-10-20	0.06 lbs. N
29-Jan-98	Turf Partners 7-0-0	0.02 lbs. N	06-May-98	Turf Partners 7-0-0	0.02 lbs. N	14-Sep-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
29-Jan-98	Turf Partners 1-0-23	0.07 lbs. K	06-May-98	Turf Partners 1-0-23	0.03 lbs. K	14-Sep-98	Peters 20-10-20	0.06 lbs. N
29-Jan-98	Turf Partners 2-20-0	0.06 lbs. P	26-May-98	Nutriculture 28-8-18	0.08 lbs. N	14-Sep-98	Nutriculture 28-8-18	0.08 lbs. N
30-Jan-98	Best 10-4-16	0.58 lbs. N	26-May-98	K-Power 14-0-46	0.04 lbs. N	22-Sep-98	Peters 20-10-20	0.06 lbs. N
30-Jan-98	Eco-Turf 0-0-50	2.9 lbs. K	01-Jun-98	Nutriculture 28-8-18	0.08 lbs. N	22-Sep-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
16-Feb-98	Best 10-4-16	0.41 lbs. N	01-Jun-98	Turf Partners 15-0-0	0.03 lbs. N	23-Sep-98	Best 10-4-16	0.41 lbs. N
19-Feb-98	Turf Partners 7-0-0	0.02 lbs. N	05-Jun-98	K-Power 14-0-46	0.04 lbs. N	30-Sep-98	Best 10-4-16	0.41 lbs. N
19-Feb-98	Turf Partners 1-0-23	0.07 lbs. K	05-Jun-98	Turf Partners 24-0-0	0.07 lbs. N	08-Oct-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
19-Feb-98	Turf Partners 2-20-0	0.06 lbs. P	09-Jun-98	Par-Ex 25-4-8	0.55 lbs. N	08-Oct-98	K-Power 14-0-46	0.04 lbs. N
26-Feb-98	Turf Partners 7-0-0	0.02 lbs. N	10-Jun-98	Turf Partners 1-0-23	0.07 lbs. K	08-Oct-98	Peters 20-10-20	0.06 lbs. N
26-Feb-98	Nutriculture 13-0-44	0.04 lbs. N	10-Jun-98	Turf Partners 24-0-0	0.07 lbs. N	16-Oct-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
26-Feb-98	Nutriculture 20-20-20	0.06 lbs. N	10-Jun-98	Nutriculture 28-8-18	0.08 lbs. N	16-Oct-98	Peters 20-10-20	0.06 lbs. N
02-Mar-98	Best 10-4-16	0.41 lbs. N	15-Jun-98	Turf Partners 24-0-0	0.07 lbs. N	16-Oct-98	Turf Partners 3-0-14	0.02 lbs. K
05-Mar-98	Best 11-55-0	0.33 lbs. N	15-Jun-98	Turf Partners 1-0-23	0.07 lbs. K	24-Oct-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
06-Mar-98	Nutriculture 13-0-44	0.04 lbs. N	16-Jun-98	Best 25-4-8	0.73 lbs. N	24-Oct-98	Peters 20-20-20	0.06 lbs. N
06-Mar-98	Nutriculture 20-20-20	0.06 lbs. N	01-Jul-98	Turf Partners 1-0-23	0.07 lbs. K	30-Oct-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
13-Mar-98	K-Power 14-0-46	0.17 lbs. N	01-Jul-98	Nutriculture 28-8-18	0.08 lbs. N	30-Oct-98	Peters 20-10-20	0.06 lbs. N
24-Mar-98	Turf Partners 1-0-23	0.07 lbs. K	01-Jul-98	Turf Partners 24-0-0	0.07 lbs. N	31-Oct-98	Best 10-4-16	0.58 lbs. N
24-Mar-98	Turf Partners 24-0-0	0.07 lbs. N	03-Jul-98	Turf Partners 1-0-23	0.07 lbs. K	06-Nov-98	Turf Partners 1-0-23	0.07 lbs. K
27-Mar-98	Turf Partners 7-0-0	0.02 lbs. N	03-Jul-98	Nutriculture 28-8-18	0.08 lbs. N	06-Nov-98	Turf Partners 7-0-0	0.02 lbs. N
02-Apr-98	Turf Partners 1-0-23	0.07 lbs. K	13-Jul-98	Turf Partners 1-0-23	0.28 lbs. N	13-Nov-98	Turf Partners 1-0-23	0.07 lbs. K
02-Apr-98	Turf Partners 24-0-0	0.07 lbs. N	13-Jul-98	Nutriculture 28-8-18	0.08 lbs. N	13-Nov-98	Turf Partners 7-0-0	0.02 lbs. N
02-Apr-98	Nutriculture 28-8-18	0.08 lbs. N	14-Jul-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N	13-Nov-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N
03-Apr-98	Pursell 0-0-41	0.81 lbs. K	14-Jul-98	Nutriculture 28-8-18	0.08 lbs. N	13-Nov-98	Nutriculture 28-8-18	0.08 lbs. N
03-Apr-98	Best 10-4-16	0.41 lbs. N	16-Jul-98	Best 5-16-22	0.41 lbs. N	17-Nov-98	Turf Partners 1-0-23	0.07 lbs. K
07-Apr-98	Turf Partners 7-0-0	0.02 lbs. N	04-Aug-98	Turf Partners 1-0-23	0.07 lbs. K	17-Nov-98	Turf Partners 7-32-6	0.02 lbs. N
07-Apr-98	Turf Partners 1-0-23	0.07 lbs. K	04-Aug-98	Turf Partners 24-0-0	0.07 lbs. N	25-Nov-98	Turf Partners 7-0-0	0.02 lbs. N
15-Apr-98	Turf Partners 24-0-0	0.07 lbs. N	04-Aug-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N	25-Nov-98	Turf Partners 7-32-6	0.02 lbs. N
15-Apr-98	Turf Partners 1-0-23	0.07 lbs. K	11-Aug-98	Turf Partners 1-0-23	0.07 lbs. K	25-Nov-98	Turf Partners 1-0-23	0.07 lbs. K
15-Apr-98	Nutriculture 28-8-18	0.08 lbs. N	15-Aug-98	Best 25-4-8	0.55 lbs. N	03-Dec-98	Best 10-4-16	0.47 lbs. N
20-Apr-98	Turf Partners 7-0-0	0.02 lbs. N	17-Aug-98	Gold-N-Grow 10-0-0 w/iron	0.03 lbs. N			
							TOTAL - 1998	11.09 lbs. N
								7.56 lbs. P
								14.49 lbs. K

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

TABLE 4B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

ESTABLISHMENT		FUNGICIDES			HERBICIDES		
Seeding date	Sept. 1997	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		26-Jan	Chipco 26 (GT Flo)	8	None		
		02-Apr	Chipco 26 (GT Flo)	4			
FACTORS OF PLAY		21-Jun	Subdue (F)	2			
			Fore (WP)	8	INSECTICIDES		
Date opened for play	May 1998						
Date closed for play	not closed	05-Aug	Alliette	4	Date(s)	Product	Rate (oz./M)
Type of spikes allowed	metal,softspikes		Fore (WP)	8			
Uses of green	putting, chipping, bunker shots	07-Sep	Daconil 2787	5	12-Jul	Merit (75 WSP)	0.19
MOWING		14-Sep	Alliette	4	OTHER PRODUCTS		
			Fore (WP)	8			
Initial height	1/4"				Date(s)	Product	Rate (oz./M)
Current height	3/25"						
Frequency	7 days/week				None		
Type of mower	triplex						
Rollers used	Jacobsen GreensKing V -						
Groomers used	triplex attachments for groomers and rollers						
CULTIVATION		NOTES/COMMENTS					
		Very high traffic practice green!					
Aerfication - dates	3/15 - 1/4" hollow tine,	-Continued difficulty controlling Poa annua invasion due to the fact that existing golf course greens and fairways are predominantly Poa annua. Due to budget constraints, we were unable have a separate dedicated mower for the trial, however we made our best effort to rinse reels before mowing the trial green.					
Aerification - type	9/16 - 5/8" hollow tine, followed by topdressing (USGA spec.)						
Verticutting	monthly on Mar., Apr., May, Jun., Sept., Oct.	tube spot applicator.					
Dates of topdressing	light to moderate - monthly on Apr., May, Jun., Jul., Sept., Oct., Nov.	-Penn A-4 is very resistant to Poa annua invasion so far.					
Other cultural practices	rolled and brushed for tournament dates	-Green is irrigated to prevent stress					
		-Green is flushed monthly w/ 6" of water due to high sodium levels					

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TABLE 4B. (CONT'D) 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

FERTILIZATION			FERTILIZATION			FERTILIZATION		
Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)
11-Jan	Turf Partners 7-0-0	0.02 lbs. N	08-Apr	Turf Partners 1-0-0-8Ca		07-Sep	Turf Partners 1-0-23	0.07 lbs. K
	Turf Partners 1-0-23	0.07 lbs. K		Turf Partners 1-0-23	0.07 lbs. K		K-Power 13.75-0-46	0.13 lbs. K
	Turf Partners - Eco-Mag			Nutriculture 28-8-18	0.08 lbs. N		Sequestar - 13% Fe	
	Turf Partners 7-32-6	0.10 lbs. P		Nutriculture 24-0-0	0.07 lbs. N	14-Sep	Turf Partners 1-0-0-8Ca	
	Crown Tech. (FeSO4)		12-Apr	Best 18-3-18 (Polyon)	0.50 lbs. N		Turf Partners 1-0-23	0.07 lbs. K
16-Jan	Nutriculture 28-8-18	0.08 lbs. N	23-Apr	Nutriculture 28-8-18	0.08 lbs. N		Nutriculture 24-0-0	0.07 lbs. N
	Turf Partners 1-0-23	0.07 lbs. K		Turf Partners - Eco-Mag		20-Sep	Best 10-4-16	0.35 lbs. N
	Turf Partners 7-0-0	0.02 lbs. N		Crown Tech. (FeSO4)		04-Oct	Best 10-4-16	0.26 lbs. N
	Crown Tech. (FeSO4)			Turf Partners (Gypsum)		25-Oct	Turf Partners 1-0-23	0.10 lbs. K
	Turf Partners 7-32-6	0.10 lbs. P	28-Apr	Nutriculture 28-8-18	0.08 lbs. N		Nutriculture 28-8-18	0.08 lbs. N
26-Jan	Turf Partners 1-0-23	0.07 lbs. K		Turf Partners 1-0-23	0.07 lbs. K	09-Nov	K-Power 13.75-0-46	0.13 lbs. K
	Turf Partners 7-32-6	0.10 lbs. P		Turf Partners - Eco-Mag			Turf Partners 1-0-0-8Ca	
	Turf Partners 7-0-0	0.02 lbs. N		promot			Turf Partners 1-0-23	0.07 lbs. K
02-Feb	Best 10-4-16	1.02 lbs. N		Crown Tech. (FeSO4)			Crown Tech. (FeSO4)	
09-Feb	True Green 12-0-1	0.04 lbs. N	03-May	Nutriculture 24-0-0	0.07 lbs. N	11-Nov	Turf Partners 1-0-0-8Ca	
	Turf Partners 7-0-0	0.02 lbs. N		Crown Tech. (FeSO4)			Turf Partners 1-0-23	0.14 lbs. K
	Turf Partners - Eco-Mag		04-May	Best 18-3-18 (Polyon)	0.53 lbs. N		K-Power 13.75-0-46	0.13 lbs. K
	Crown Tech. (FeSO4)		10-May	Nutriculture 28-8-18	0.08 lbs. N		Nutriculture 20-20-20	0.06 lbs. N
17-Feb	Best 10-4-16	0.50 lbs. N		Crown Tech. (FeSO4)			Crown Tech. (FeSO4)	
22-Feb	Best 10-4-16	0.43 lbs. N		Turf Partners 1-0-23	0.04 lbs. K	29-Nov	Turf Partners 1-0-23	0.07 lbs. K
01-Mar	Nutriculture 28-8-18	0.08 lbs. N		Turf Partners - Eco-Mag			Turf Partners 1-0-0-8Ca	
	Turf Partners 1-0-23	0.07 lbs. K	21-May	Nutriculture 20-20-20	0.06 lbs. N		Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners 1-0-0-8Ca			Turf Partners 1-0-23	0.04 lbs. K	02-Dec	Lebenon S.G. 20-0-20	0.46 lbs. N
	Turf Partners 7-32-6	0.10 lbs. P		Crown Tech. (FeSO4)		07-Dec	K-Power 13.75-0-46	0.13 lbs. K
	Turf Partners - Eco-Mag		27-May	Nutriculture 28-8-18	0.08 lbs. N		Turf Partners 1-0-23	0.07 lbs. K
	Crown Tech. (FeSO4)			Crown Tech. (FeSO4)			Turf Partners 1-0-0-8Ca	
04-Mar	Nutriculture 13-0-44	0.13 lbs. K	31-May	Nutriculture 28-8-18	0.08 lbs. N	08-Dec	Lebenon S.G. 20-0-20	0.63 lbs. N
	Nutriculture 20-20-20	0.06 lbs. N		Nutriculture 24-0-0	0.07 lbs. N	09-Dec	Turf Partners 1-0-0-8Ca	
	Turf Partners 1-0-0-8Ca		10-Jun	Nutriculture 24-0-0	0.07 lbs. N		Bio-Flora 8-0-0-8Ca	0.02 lbs. N
	Crown Tech. (FeSO4)			Turf Partners 1-0-23	0.14 lbs. K		Nutriculture 28-8-18	0.08 lbs. N
12-Mar	Turf Partners 1-0-23	0.07 lbs. K		Turf Partners 8% chelated Fe		14-Dec	Best 10-4-16	0.46 lbs. N
	Turf Partners 7-32-6	0.10 lbs. P	21-Jun	Turf Partners 1-0-23	0.07 lbs. K	20-Dec	Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners 7-0-0	0.02 lbs. N		Nutriculture 24-0-0	0.07 lbs. N		Turf Partners 1-0-0-8Ca	
19-Mar	Nutriculture 20-20-20	0.06 lbs. N	22-Jun	Pursell 0-0-46	2.6 lbs. K		Turf Partners 1-0-23	0.07 lbs. K
	Nutriculture 13-0-44	0.13 lbs. K	25-Jun	Turf Partners (Gypsum)			Crown Tech. (FeSO4)	
	Turf Partners - Eco-Mag		06-Jul	Turf Partners 1-0-23	0.07 lbs. K	28-Dec	Turf Partners 1-0-23	0.07 lbs. K
	Crown Tech. (FeSO4)			Nutriculture 24-0-0	0.07 lbs. N		Turf Partners 1-0-0-8Ca	
29-Mar	Nutriculture 28-8-18	0.08 lbs. N	21-Jul	Pac. Ag. & Turf 0-0-25	0.08 lbs. K		Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners 1-0-23	0.07 lbs. K		Nutriculture 24-0-0	0.10 lbs. N		Crown Tech. (FeSO4)	
	Turf Partners 7-32-6	0.10 lbs. P	16-Aug	Pac. Ag. & Turf 0-0-25	0.08 lbs. K			
	Crown Tech. (FeSO4)			Nutriculture 24-0-0	0.07 lbs. N			
02-Apr	Nutriculture 20-20-20	0.06 lbs. N	19-Aug	Turf Partners 1-0-23	0.07 lbs. K		TOTAL - 1999	8.34 lbs. N
	Nutriculture 24-0-0	0.07 lbs. N		Nutriculture 28-8-18	0.08 lbs. N			2.84 lbs. P
05-Apr	Best 10-4-16	0.50 lbs. N		Sequestar - 13% Fe				14.18 lbs. K

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TABLE 4C. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (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	Daconil WS	2	11-Jul	Merit (75 WSP)	0.19
		02-Jun	Subdue (F)	2	14-Aug	Tempo 20 WP	5 grams/1000
FACTORS OF PLAY		27-Jul	Daconil WS	2			
		03-Aug	Alliette	4			
Date opened for play		03-Aug	Fore (WP)	8			
Date closed for play		14-Aug	Subdue Maxx	1	HERBICIDES		
Type of spikes allowed	Softspikes only	14-Aug	Fore (WP)	8			
Uses of green	putting, chipping, target. Heavy use PPG.	20-Nov	26 Chipco GT Flo.	5	Date(s)	Product	Rate (oz./M)
					28-Jan	Betasan	4
MOWING							
Initial height	0.125"				OTHER PRODUCTS		
Current height	0.125"						
Frequency	7 days/week				Date(s)	Product	Rate (oz./M)
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						
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)						

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

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K
05-Jan	Turf Partners	7-0-0	0.02		
05-Jan	Turf Partners	1-0-23			0.07
05-Jan	Turf Partners	7-32-6	0.02	0.1	0.02
05-Jan	Crown Tech.	FeSO4			
14-Jan	Nutriculture	20-20-20	0.08	0.08	0.08
14-Jan	Turf Partners	1-0-23			0.07
14-Jan	Turf Partners	7-0-0	0.02		
14-Jan	Crown Tech.	FeSO4			
14-Jan	Turf Partners	7-32-6	0.02	0.1	0.02
24-Jan	Turf Partners	1-0-23			0.07
24-Jan	Turf Partners	Eco-Mag			
24-Jan	Turf Partners	7-32-6	0.02	0.1	0.02
24-Jan	Turf Partners	7-0-0	0.02		
09-Feb	Best	10-4-16	0.4	0.16	1.62
22-Feb	True Green	34-0-0	0.04		
22-Feb	Turf Partners	7-0-0	0.02		
22-Feb	Turf Partners	Eco-Mag			
22-Feb	Crown Tech.	FeSO4			
01-Mar	Nutriculture	28-8-18	0.08	0.02	0.05
01-Mar	Turf Partners	1-0-23			0.07
01-Mar	Turf Partners	1-0-0 (8% Ca)			
01-Mar	Turf Partners	7-32-6	0.02	0.1	0.02
01-Mar	Turf Partners	Eco-Mag			
01-Mar	Crown Tech.	FeSO4			
02-Mar	Best	10-4-16	0.62	0.25	0.99
08-Mar	Turf Partners	1-0-0 (8% Ca)			
08-Mar	Turf Partners	1-0-23			0.07
08-Mar	Turf Partners	7-32-6	0.02	0.1	0.02
08-Mar	Turf Partners	7-0-0	0.02		
17-Mar	Nutriculture	20-20-20	0.06	0.06	0.06
17-Mar	Nutriculture	34-0-0	0.04		
17-Mar	Turf Partners	Eco-Mag			

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K
17-Mar	Crown Tech.	FeSO4			
27-Mar	Nutriculture	28-8-18	0.08	0.02	0.05
27-Mar	Turf Partners	1-0-23			0.07
27-Mar	Turf Partners	7-32-6	0.02	0.1	0.02
27-Mar	Crown Tech.	FeSO4			
02-Apr	Turf Partners	Gypsum			
03-Apr	Turf Partners	34-0-0	0.01		
03-Apr	Turf Partners	1-0-0 (8% Ca)			
03-Apr	Turf Partners	1-0-23			0.07
03-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
03-Apr	Nutriculture	24-0-0	0.07		
14-Apr	Turf Partners	34-0-0	0.1		
14-Apr		0-0-34			0.09
18-Apr	Best	18-3-18 (Polyon)	0.5	0.08	0.5
23-Apr	Turf Partners	0-0-34			0.2
23-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
23-Apr	Turf Partners	Eco-Mag			
23-Apr	Crown Tech.	FeSO4			
26-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
26-Apr	Turf Partners	1-0-23			0.07
26-Apr	Turf Partners	Eco-Mag			
26-Apr	promot	Promot			
26-Apr	Crown Tech.	FeSO4			
01-May	Turf Partners	34-0-0	0.07		
01-May	Crown Tech.	FeSO4			
07-May	Best	18-3-18 (Polyon)	0.5	0.08	0.5
12-May	Nutriculture	28-8-18	0.08	0.02	0.05
12-May	Crown Tech.	FeSO4			
12-May	Turf Partners	1-0-23			0.04
12-May	Turf Partners	Eco-Mag			
23-May	Nutriculture	20-20-20	0.06	0.06	0.06
23-May	Turf Partners	1-0-23			0.04

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

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K
23-May	Crown Tech.	FeSO4			
31-May	Nutriculture	28-8-18	0.08	0.02	0.05
31-May	Nutriculture	24-0-0	0.07		
14-Jun	Nutriculture	34-0-0	0.07		
14-Jun	Turf Partners	1-0-23			0.14
14-Jun	Turf Partners	8% chelated Fe			
19-Jun	Turf Partners	0-0-34			0.07
19-Jun	Nutriculture	24-0-0	0.07		
24-Jun	Pursell	0-0-46			1.1
10-Jul	Turf Partners	0-0-34			0.07
10-Jul	Turf Partners	7-0-0	0.1		
16-Jul	Turf Partners	Gypsum			
27-Jul	Pac. Ag. & Turf	0-0-25			0.08
27-Jul	Nutriculture	24-0-0	0.1		
08-Aug	Pac. Ag. & Turf	0-0-25			0.1
08-Aug	Nutriculture	24-0-0	0.1		
17-Aug	Turf Partners	Gypsum			
19-Aug	Turf Partners	0-0-34			0.07
19-Aug	Nutriculture	28-8-18	0.08	0.02	0.05
19-Aug	Sequestar	13% Fe			
05-Sep	Turf Partners	0-0-34			0.07
05-Sep	K-Power	13.75-0-46	0.04		0.13
05-Sep	Sequestar	13% Fe			
11-Sep	Turf Partners	1-0-0-8Ca			
11-Sep	Turf Partners	1-0-23			0.07
11-Sep	Nutriculture	34-0-0	0.1		
19-Sep	Best	10-4-16	0.62	0.25	0.99

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K
01-Oct	Turf Partners	Gypsum			
04-Oct	Best	10-4-16	0.26	0.11	0.42
25-Oct	Turf Partners	0-0-34			0.1
25-Oct	Nutriculture	28-8-18	0.08	0.02	0.05
12-Nov	K-Power	34-0-0	0.1		
12-Nov	Turf Partners	1-0-23			0.07
12-Nov	Crown Tech.	FeSO4			
02-Nov	Turf Partners	Gypsum			
15-Nov	Turf Partners	Eco-Mag			
15-Nov	Turf Partners	1-0-23			0.14
15-Nov	K-Power	13.75-0-46	0.04		0.13
15-Nov	Nutriculture	20-20-20	0.06	0.06	0.06
15-Nov	Crown Tech.	FeSO4			
27-Nov	Turf Partners	0-0-34			0.07
27-Nov	Nutriculture	28-8-18	0.08	0.02	0.05
03-Dec	Lebenon S.G.	20-0-20	0.5		0.5
07-Dec	K-Power	13.75-0-46	0.04		0.13
07-Dec	Turf Partners	34-0-0			0.07
07-Dec	Turf Partners	1-0-0-8Ca			
16-Dec	Best	10-4-16	0.4	0.16	1.62
22-Dec	Nutriculture	28-8-18	0.08	0.02	0.05
22-Dec	Turf Partners	34-0-0			0.07
22-Dec	Crown Tech.	FeSO4			
27-Dec	Turf Partners	34-0-0			0.1
27-Dec	Nutriculture	20-20-20	0.1	0.1	0.1
		Total	6.03	1.89	11.59

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TABLE 4D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (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						
		07-Jan	26 Chipco GT Flo.	5	02-Jul	Merit (75 WSP)	0.19
		18-Jun	Subdue (F)	2	14-Sep	Tempo 20 WP	5 grams/1000
FACTORS OF PLAY		18-Jun	Fore (WP)	8			
		18-Jul	Alliette	4			
Date opened for play		18-Jul	Fore (WP)	8			
Date closed for play		30-Jul	Daconil WS	2	HERBICIDES		
Type of spikes allowed	Softspikes only	25-Aug	Subdue Maxx	1			
Uses of green	putting, chipping, target.	25-Aug	Fore (WP)	8	Date(s)	Product	Rate (oz./M)
	Heavy use PPG.	29-Nov	26 Chipco GT Flo.	5			
					18-Jan	Betasan 4E	4
MOWING							
Initial height	0.125"				OTHER PRODUCTS		
Current height	0.125"						
Frequency	7 days/week				Date(s)	Product	Rate (oz./M)
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	3/12, 10/9				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						
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 were 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 2001)						

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TABLE 4E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	LEAF TEXTURE	STIMPMETER READINGS							QUALITY RATINGS												
			PERCENT POA ANNUA RATINGS				SUMMER	FALL	WINTER													
			MARCH 2000-01	SEP 2001	OCT 2000	DEC 2000-01	1998 2000	1999 2001	1998-01	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
PENN A-4	7.6	8.0	13.3	26.7	13.3	23.3	115.8	109.5	128.2	7.8	7.8	7.8	8.0	8.0	7.9	7.8	7.7	7.7	7.7	7.4	7.5	7.7
CENTURY	7.3	7.7	37.5	33.3	33.3	46.7	115.0	108.8	131.8	7.2	7.2	7.3	7.5	7.7	7.2	7.5	7.6	7.5	7.1	7.1	7.1	7.3
PENN A-1	7.4	7.9	36.7	25.0	31.7	35.0	112.8	110.3	134.3	7.7	7.3	7.0	7.3	8.0	7.2	7.3	7.7	7.2	6.8	7.2	7.2	7.2
PENN G-1	7.4	7.6	30.8	41.7	25.0	36.7	116.2	110.2	131.6	7.3	7.3	7.3	7.5	7.7	7.3	7.3	7.4	7.3	6.8	7.0	7.0	7.2
GRAND PRIX (LCB-103)	7.3	7.6	41.7	33.3	35.0	42.5	113.5	103.5	131.6	7.3	7.1	7.0	7.2	7.7	7.2	7.3	7.7	7.3	6.7	6.9	7.0	7.1
PENN G-6	7.3	7.6	27.5	48.3	21.7	28.3	117.7	105.2	128.6	7.0	7.1	7.0	7.2	8.0	7.2	7.3	7.6	7.2	6.8	6.9	6.9	7.0
BACKSPIN	7.3	7.2	44.2	41.7	36.7	45.8	115.5	107.2	132.7	7.0	7.0	7.0	7.0	7.0	7.0	7.3	7.3	7.0	6.6	6.9	6.9	6.9
IMPERIAL	7.3	7.0	48.3	55.0	46.7	55.8	119.8	107.7	134.0	7.0	7.0	7.0	6.8	7.0	7.0	7.2	7.3	7.0	6.4	7.0	6.8	6.9
L-93	7.2	7.0	52.5	58.3	55.0	54.2	120.8	109.7	133.4	7.0	7.0	7.0	7.2	7.0	7.0	7.1	7.6	6.8	6.7	6.8	6.8	6.9
SR 1119	7.2	7.1	60.0	61.7	60.0	58.3	113.5	109.5	133.2	6.8	7.0	7.0	7.0	7.3	7.0	7.2	7.2	7.0	6.7	6.7	6.8	6.9
CATO	7.0	6.9	68.3	60.0	58.3	62.5	121.0	113.2	134.6	7.0	6.8	7.0	6.8	7.0	7.0	6.8	7.6	6.7	6.3	6.7	6.8	6.8
CRENSHAW	7.0	7.0	59.2	45.0	58.3	50.8	116.5	113.5	136.6	7.0	6.8	6.8	6.8	7.0	6.9	7.3	7.2	7.0	6.3	6.8	6.8	6.8
PROVIDENCE	7.1	6.7	57.5	61.7	46.7	59.2	110.5	113.2	133.1	7.0	6.8	7.0	6.8	7.0	6.9	7.1	7.2	6.8	6.3	6.7	6.8	6.8
SR 1020	6.8	7.0	60.0	65.0	51.7	65.0	116.7	112.3	133.8	7.0	6.9	6.8	7.0	7.0	6.7	6.8	7.3	6.7	6.2	6.6	6.8	6.7
TRUELINE	7.1	6.8	55.0	61.7	41.7	60.0	117.0	110.5	133.8	7.0	6.9	6.8	6.7	7.0	6.7	7.0	7.2	6.5	6.3	6.7	6.8	6.7
PUTTER	6.9	6.8	66.7	65.0	58.3	67.5	112.8	109.8	133.3	6.8	6.8	6.7	6.5	7.0	6.7	6.7	7.2	6.2	6.3	6.6	6.8	6.6
VIPER	6.7	6.7	74.2	71.7	70.0	71.7	120.5	112.2	135.3	7.0	6.9	6.8	6.5	7.0	6.8	6.8	6.8	6.8	6.3	6.3	6.7	6.6
PENNCROSS	6.6	6.7	80.8	76.7	75.0	74.2	115.8	107.7	130.4	6.2	6.6	6.7	6.5	7.0	6.3	6.3	6.2	6.3	5.8	6.2	6.2	6.2
LSD VALUE	0.6	0.5	18.5	15.5	14.2	13.1	64.4	14.4	54.3	0.3	0.4	0.5	0.5	0.4	0.3	0.8	1.2	2.2	0.4	0.4	0.6	0.4
C.V. (%)	8.4	7.9	32.9	18.8	20.0	23.4	17.8	6.1	17.6	4.2	5.8	5.3	5.9	3.6	5.4	11.4	11.9	14.5	7.3	6.6	9.0	7.1

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	04-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
FACTORS OF PLAY		04-Sep-97	Scotts Starter	0.49 lb./N			
		15-Sep-97	Scotts HD Super Greens	0.53 lb. N	07-Oct-97	Chipco 26019	
		26-Sep-97	Floratine Equalize & pkg.	0.08 lb. N	Late fall 1997	FF II	labeled
		07-Oct-97	Ammonium Sulfate	0.05 lb. N	02-Apr-98	Heritage	1
Date opened for play	01-Jul-98	10-Oct-97	15-3-18	0.5 lb. N			
Date closed for play	not closed	20-Oct-97	Ammonium Sulfate	0.2 lb. N	OTHER PRODUCTS		
	except for snow	04-Mar-98	Nature Safe 8-3-5	0.53 lb. N			
	covered periods	27-Apr-98	Scotts 20-0-17	0.33 lb. N	Date(s)	Product	Rate (oz./M)
Type of spikes allowed	softspikes	06-May-98	Nature Safe 8-3-5	0.6 lb. N			
		06-May-98	Nitroform 38-0-0	1.14 lb. N	28-Aug-97	Scotts STEP (trace elements)	
		06-May-98	Map 11-52-0	1 lb. P	20-Oct-97	Floratine Equalize & pkg.	
		06-May-98	Poly-K 0-0-50	1.5 lb. K	23-Mar-98	Scotts STEP (trace elements)	
Uses of green	putting,	15-May-98	Scotts 31-3-10	0.62 lb. N	06-May-98	Pro-Mag 36 (Mg)	
	chipping,	09-Jun-98	Ammonium Sulfate	0.096 lb. N	06-May-98	Gypsum	
		09-Jun-98	Now Tiger Turf	0.02 lb. N	09-Jun-98	Astron (Ca, Fe)	
		09-Jun-98	Equalizer	0.034 lb. N	09-Jun-98	Renaissance (Mg, S, Fe, Mn)	
		17-Jun-98	Scotts STEP	0.9 lb. N	09-Jun-98	Calphex (Ca)	
MOWING		25-Jun-98	Ammonium Sulfate	0.1 lb. N	09-Jun-98	Phlexmag (Mg)	
		25-Jun-98	Potassium Nitrate 14-0-46	0.07 lb. N	09-Jun-98	Phlexman (Mn)	
Initial height	0.290"	21-Jul-98	Ammonium Sulfate	0.08 lb. N	25-Jun-98	Ruffin Fe	
Current height	0.190"	21-Jul-98	Potassium Nitrate 14-0-46	0.07 lb. N	25-Jun-98	Calphex	
Frequency	7 days/week	19-Aug-98	Ammonium Sulfate	0.08 lb. N	25-Jun-98	Phlexmag	
Type of mower	walking	19-Aug-98	Potassium Nitrate	0.04 lb. N	25-Jun-98	Phlexman	
Rollers used	None	19-Aug-98	Tiger Turf	0.01 lb. N	25-Jun-98	Surfside (wetting agent)	
Groomers used	biweekly	19-Aug-98	Equalizer	0.01 lb. N	21-Jul-98	Renaissance	
		04-Sep-98	Ammonium Sulfate	0.1 lb. N	21-Jul-98	Perk-Up (Ca 8%)	
CULTIVATION		04-Sep-98	Potassium Nitrate	0.02 lb. N	21-Jul-98	Phlexmag	
		04-Sep-98	Now Turf Starter	0.03 lb. P	21-Jul-98	Phlexman	
Aerfication - dates	09-Sep-98	09-Sep-98	Nature Safe 8-3-5	0.6 lb. N	21-Jul-98	Flexx (Fe, Mg, Mn)	
Aerfication - type	hollow time	09-Sep-98	Nitroform 38-0-0	1.14 lb. N	19-Aug-98	Renaissance	
Verticutting	None	09-Sep-98	Map 11-52-0	1 lb. P	19-Aug-98	Calphex	
Dates of topdressing	biweekly	09-Sep-98	Poly-K 0-0-50	1.5 lb. K	19-Aug-98	Phlexmag	
	after grooming	29-Sep-98	Ammonium Sulfate	0.08 lb. N	19-Aug-98	Phlexman	
Other cultural practices	None	29-Sep-98	Potassium Nitrate	0.04 lb. N	19-Aug-98	Astron	
		29-Sep-98	Tiger Turf	0.01 lb. N	04-Sep-98	Calphex	
		29-Sep-98	Equalizer	0.01 lb. N	04-Sep-98	Maxi-Plex (humates)	
		21-Oct-98	Scotts Contec 17-3-17	0.5 lb. N	04-Sep-98	Renaissance	
					04-Sep-98	Phlexmag	
					04-Sep-98	Phlexman	
					09-Sep-98	Pro-Mag	
		Date(s)	Product	Rate (oz./M)	09-Sep-98	Gypsum	
					29-Sep-98	Astron	
		None			29-Sep-98	Calphex	
					29-Sep-98	Maxi-Plex (humates)	
		INSECTICIDES			29-Sep-98	Renaissance	
					29-Sep-98	Phlexmag	
		Date(s)	Product	Rate (oz./M)	29-Sep-98	Phlexman	
		None			NOTES/COMMENTS		

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TABLE 5B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT LAKEWOOD, CO (FOX HOLLOW AT LAKEWOOD)

ESTABLISHMENT		FERTILIZATION			FERTILIZATION		
Seeding date	04-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)
Problems during	None						
FACTORS OF PLAY		16-Mar	Scotts Contec 17-3-17	0.560 lb.N	Sept. 29	Perk Up, Potassium Nitrate, Tiger Turf,	0.36 lb.N,
		21-Apr	Scotts Contec 17-3-17	0.440 lb. N		Equalize, Astron,	0.04 lb.P,
		12-May	Scotts Contec 17-3-17	0.520 lb. N		Renaissance, Calphlex,	0.93 lb.K,
		Aug. 26	Scotts Contec 17-3-17	0.380 lb. N		Maxi-Plex, Ferromec,	and Ca, Mg,
Date opened for play	01-Jul-98	Oct. 20	Scotts Contec 17-3-17	0.750 lb. N		Heritage	S, Fe
Date closed for play	not closed except for snow covered periods	07-Apr	Ammonium Sulfate, Tiger Turf, Turf Starter, Astron, Calpphlex, Phlexmag, Phlexman	0.20 lb.N, 0.004 lb.P, 0.015 lb.K, S, Fe, Mn, Ca, Mg, Mn	Total: 7.329 lbs. N, 2.914 lbs. P, and 8.125 lbs. K		
Type of spikes allowed	softspikes				FUNGICIDES		
		03-May	NH4+, Turf Starter, Ferromec, Turf Colorant	0.25 lb.N, 0.06 lb.P, 0.01 lb.K			
Uses of green	putting, chipping,	May 17-19	Nature Safe, Nitroform, Gypsum, Poly-K, MAP	1.94 lb.N, 1.23 lb.P, 1.88 lb.K, Ca, S	Date(s)	Product	Rate (oz./M)
		07-Jun	NH4+, Turf Starter, Tiger Turf, Primer(H2O Agent), Astron, Calpphlex, Phlexmag, Phlexman, Heritage, Turf Colorant	0.102 lb.N, 0.040 lb.P, 0.020 lb.K, and Ca, Mg, S, Fe, Mn	07-Jun 29-Sep	Heritage Heritage	0.4 lbs./M 0.4 lbs./M
MOWING					HERBICIDES		
Initial height	0.190"				Date(s)	Product	Rate (oz./M)
Current height	0.155"	Jul. 1-2	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk Up, Phlexmag, Phlexman	0.107 lb.N, 0.020 lb.P, 0.250 lb.K, and Ca, Mg, S, Fe, Mn	None		
Frequency	7 days/week				INSECTICIDES		
Type of mower	walking						
Rollers used	None						
Groomers used	1-2X/week	Jul. 20-21	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk Up, Phlexmag, Phlexman, Ammonium Sulfate	0.160 lb.N, 0.020 lb.P, 0.250 lb.K, and Ca, Mg, S, Fe, Mn	Date(s)	Product	Rate (oz./M)
CULTIVATION					None		
Aerification - dates	5/19, 9/9				OTHER PRODUCTS		
Aerification - type	5/8" hollow tine	Aug. 9-10	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk Up, Phlexmag, Phlexman, Ammonium Sulfate	0.160 lb.N, 0.020 lb.P, 0.250 lb.K, and Ca, Mg, S, Fe, Mn	Date(s)	Product	Rate (oz./M)
Verticutting	None						
Dates of topdressing	light-2X/month after grooming						
Other cultural practices	Grooming only	Sept. 7-13	Nature Safe, Nitroform, Gypsum, Poly-K, ProMag, Dominant Bent Seed, MAP	1.920 lb.N, 1.01 lb.P, 1.88 lb.K, Ca, S	None		
NOTES/COMMENTS							

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

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

ESTABLISHMENT		FERTILIZATION			FERTILIZATION			
Seeding date	04-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)	
Problems during	None							
FACTORS OF PLAY		07-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,	
		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,	
						Renaissance, Calphlex,	and Ca,	
Date opened for play						Maxi-Plex, Ferromec,	Mg, S, Fe	
Date closed for play		08-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		Total: 7.329 lbs. N, 2.914 lbs. P, and 8.125 lbs. K			
Type of spikes allowed		16-May	Primer 3oz, MaxiPlex 3oz, Roots Fe 8% 1oz.		FUNGICIDES			
		02-Jun	Scott's Pro-Turf 15-0-29	0.25 lb. N				
		19-Jun	Tourney Pride 7.01oz, Turf Starter 7.01oz, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexman 0.13oz, Phlexmag 0.77oz, Primer 3oz, Roots Fe 8% 1oz, Heritage 0.4oz, Dye 0.50oz.					
Uses of green	putting, chipping,				Date(s)	Product	Rate (oz./M)	
		05-Jul	Nature Safe (8-3-5)	0.4 lb. N	07-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					HERBICIDES			
Initial height	0.190"	07-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 0.50oz.		Date(s)	Product	Rate (oz./M)	
Current height	0.140"							
Frequency	7 days/week				None			
Type of mower	walking	28-Aug	Scott's Pro-Turf 15-0-29	0.3 lb. N	INSECTICIDES			
Rollers used	Triplex	05-Sep	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			Date(s)	Product	Rate (oz./M)
Groomers used	Toro 1000							
CULTIVATION								
		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.		None			
Aerfication - dates	Spring and Fall				OTHER PRODUCTS			
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					None			

NOTES/COMMENTS

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TABLE 5D.

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/
1998-2000 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			ESTABLISHMENT VIGOR		CORE CULTIVATION STIMPMETER		QUALITY RATINGS									
				SPRING	SUMMER	FALL	SEP	NOV	RECOVERY 1999	READINGS 1999	APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN		
PENN A-1	7.1	5.8	8.4	9.0	8.7	8.7	4.0	5.3	4.0	127.3	6.3	7.1	8.1	8.6	8.8	8.4	7.8	7.9		
CENTURY	6.0	6.6	8.1	8.0	8.0	8.0	4.0	6.3	6.0	139.3	6.8	7.7	8.0	8.2	8.3	8.1	7.8	7.8		
PENN A-4	7.7	6.1	8.9	9.0	8.7	8.7	5.7	6.0	3.7	129.0	6.6	7.1	8.0	8.2	8.6	8.3	7.9	7.8		
L-93	7.9	6.6	8.0	8.0	8.0	8.0	4.0	5.3	6.0	127.0	6.1	7.3	7.4	8.2	8.2	8.1	7.7	7.6		
IMPERIAL	6.4	6.0	8.0	8.0	8.0	7.7	5.0	6.3	6.0	142.0	6.8	7.2	7.7	7.7	7.8	8.0	7.3	7.5		
BACKSPIN	5.9	6.3	7.4	8.0	8.0	8.0	4.0	6.7	4.0	113.7	6.1	7.0	7.2	7.3	7.3	7.3	7.3	7.1		
CRENSHAW	7.1	5.3	7.6	7.7	7.3	7.0	5.7	6.7	6.0	129.3	6.2	6.7	7.1	7.7	7.6	7.3	7.3	7.1		
SR 1119	7.3	6.4	7.7	8.0	8.0	8.0	5.0	6.7	5.0	116.0	6.1	6.3	7.2	7.6	7.7	7.6	7.2	7.1		
GRAND PRIX (LCB-103)	6.0	5.8	8.0	8.0	7.7	7.7	4.7	6.0	5.0	118.3	5.9	6.8	7.0	7.2	7.1	7.4	7.2	7.0		
PROVIDENCE	5.7	6.8	7.0	7.3	7.0	6.7	5.7	6.3	5.7	113.3	6.4	6.8	7.1	7.1	6.9	7.1	7.6	7.0		
CATO	7.4	5.9	7.2	7.7	7.3	8.0	4.7	5.3	4.3	116.0	6.1	6.6	7.0	7.0	7.2	7.4	7.2	6.9		
PENN G-1	7.0	5.8	8.2	8.0	8.0	7.7	6.0	5.7	5.0	112.7	5.9	6.2	6.7	7.3	7.6	7.8	7.1	6.9		
PENN G-6	7.2	5.8	8.3	8.0	8.0	7.3	5.0	6.0	4.0	122.3	5.9	6.1	6.7	7.3	7.7	7.8	7.1	6.9		
VIPER	8.2	5.8	7.2	7.7	7.7	8.0	5.3	5.3	6.3	117.7	5.7	6.1	6.4	6.7	7.1	7.0	6.8	6.5		
SR 1020	6.4	5.1	7.0	7.0	7.0	6.7	4.3	5.7	3.7	115.0	5.4	5.9	6.2	6.8	6.9	6.8	6.2	6.3		
TRUELINE	6.7	5.7	5.9	7.0	7.0	6.0	5.3	6.7	3.7	126.0	5.8	6.1	6.1	6.2	6.0	6.2	6.1	6.1		
PUTTER	6.0	6.0	5.4	5.7	5.3	6.3	4.7	6.3	4.3	121.7	4.8	4.9	5.1	4.9	5.0	5.8	5.8	5.2		
PENNCROSS	4.8	5.9	4.2	4.7	5.0	4.3	5.3	6.0	7.0	127.0	4.8	4.9	4.9	4.4	4.3	5.0	4.8	4.7		
LSD VALUE	0.4	0.4	0.4	0.4	0.6	0.7	1.1	1.4	1.9	38.1	2.7	1.3	0.9	0.7	0.5	0.4	0.4	0.5		
C.V. (%)	7.0	8.3	6.8	3.8	4.9	6.1	12.4	10.4	20.9	11.3	26.8	19.6	15.2	11.0	8.4	7.0	7.3	9.1		

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 6A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION			INSECTICIDES		
Seeding date	28-Aug-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	26-Mar-98	K-Power 12-0-42	0.6 lb. N	06-Jul-98	Conserve	0.77
		26-Mar-98	16-4-16	1 lb. N	13-Jul-98	Conserve	2.5
		30-Mar-98	Nutraculture 12-31-14	0.05 lb. N	12-Aug-98	Conserve	1.25
		09-Apr-98	Nature Safe 8-3-5	0.8 lb. N	17-Aug-98	Mach 2	0.53
		13-Apr-98	Ringer 5-10-3	0.31 lb. N			
		22-Apr-98	K-Power 13-24-12	0.31 lb. N			
FACTORS OF PLAY		22-Apr-98	K-Power 16-4-16	0.44 lb. N	FUNGICIDES		
Date opened for play	15-May-98	29-Apr-98	Biocomposte Forte	0.26 lb. N	Date(s)	Product	Rate (oz./M)
Date closed for play	15-Nov-98	27-May-98	Ringers 5-10-3	0.29 lb. N			
Type of spikes allowed	softspikes	27-May-98	Huma Base 4-3-0	0.04 lb. N	30-Mar-98	Bayleton	4.6
Uses of green	putting, chipping, target	15-Jun-98	Biosol 6-3-1	0.27 lb. N	10-Apr-98	Daconil	5.5
		26-Jun-98	Quelant Ca 5-0-0	0.01 lb. N	10-Apr-98	Banol	2.5
MOWING		02-Jul-98	Quelant Ca 5-0-0	0.01 lb. N			
		06-Jul-98	Quelant Ca 5-0-0	0.01 lb. N	HERBICIDES		
Initial height	0.310"	13-Jul-98	Quelant Ca 5-0-0	0.01 lb. N			
Current height	0.135"	20-Jul-98	Quelant Ca 5-0-0	0.01 lb. N	Date(s)	Product	Rate (oz./M)
Frequency	7 days/week	23-Jul-98	Biosol 6-3-1	0.27 lb. N			
Type of mower	walking	23-Jul-98	Biocomposte Forte	0.13 lb. N	None		
Rollers used	None	17-Aug-98	Quelant Ca 5-0-0	0.01 lb. N			
Groomers used	None	17-Aug-98	Link 24 24-0-0	0.02 lb. N			
		24-Aug-98	Plasma 12-5-3	0.06 lb. N	NOTES/COMMENTS		
CULTIVATION		28-Aug-98	Plasma 12-5-3	0.06 lb. N			
		04-Sep-98	Plasma 12-5-3	0.09 lb. N			
Aerfication - dates	None	08-Sep-98	Plasma 12-5-3	0.01 lb. N			
Aerification - type		10-Sep-98	Nature Safe 8-3-5	0.36 lb. N			
Verticutting	None	12-Sep-98	Biosol 6-3-1	0.23 lb. N			
Dates of topdressing	3/24, 4/6, 4/13, 5/11, 6/1, 6/14, 7/6, 8/24, 9/21, 9/28, 10/26, 11/3, 11/5	14-Sep-98	Biosol 6-3-1	0.18 lb. N			
		30-Sep-98	MAP 12-61-0	0.30 lb. N			
		02-Oct-98	K-Power 12-0-42	0.33 lb. N			
		09-Oct-98	Nutraculture 10-20-20	0.31 lb. N			
		09-Oct-98	Plasma 12-5-3	0.06 lb. N			
Other cultural practices	None	23-Oct-98	0-0-38	0.71 lb. K			
		27-Oct-98	Lesco IBDU 10-18-22	0.20 lb. N			
		16-Dec-98	Milorganite	1.07 lb. N			

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

TABLE 6A. (CONT'D)

1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

OTHER PRODUCTS

OTHER PRODUCTS

Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
10-Apr-98	Biogain WSP Fe	0.03 lb./M	06-Jul-98	Biogain WSP Fe	0.03 lb./M
13-Apr-98	BioTrek 22G	0.38 lb./M	13-Jul-98	Macro-sorb foliar	0.09 lb./M
13-Apr-98	Greensand	10 lbs./M	13-Jul-98	Tuff-Turf	0.11 lb./M
29-Apr-98	Greensand	5 lbs./M	13-Jul-98	3-D	0.09 lb./M
29-Apr-98	BioTrek 22G	5.63 lbs./M	13-Jul-98	Biogain WSP	0.03 lb./M
03-May-98	Rootshield (Trichoderma)	1.06	13-Jul-98	Agri-Plex	0.05 lb./M
03-May-98	A-13 Bacillus Subtilis	1.7	20-Jul-98	Biogain WSP Fe	0.03 lb./M
03-May-98	Naturalis-T	4	20-Jul-98	Agri-Plex	0.15 lb./M
03-May-98	P. areofacios	16	20-Jul-98	Bio-F	24
03-May-98	Companion	16	20-Jul-98	Plant Growth Activator	0.63 lb./M
27-May-98	TX-1	4	20-Jul-98	Pseudomonas	8
27-May-98	Nutribac	32	20-Jul-98	BioTrek 22G	5
27-May-98	Gnatrol	16	17-Aug-98	Macro-sorb foliar	0.09 lb./M
27-May-98	Compost Tea	16	17-Aug-98	Tuff-Turf	0.13 lb./M
27-May-98	Organic Garden Tea	0.25	17-Aug-98	Agri-Plex	0.04 lb./M
27-May-98	Plant Growth Activator	2	17-Aug-98	Amino Acid	0.05 lb./M
27-May-98	Mycostop Streptomyces	2.5 gr./M	17-Aug-98	3-D	0.05 lb./M
27-May-98	Azosparillum	8	17-Aug-98	Calphex	0.53
27-May-98	Astron	1.25	24-Aug-98	Tuff-Turf	0.19 lb./M
27-May-98	Bioterra Plus	48	24-Aug-98	Agri-Plex	0.06 lb./M
27-May-98	Biogain WSP Fe	0.03 lb./M	24-Aug-98	Macro-sorb foliar	0.19 lb./M
27-May-98	Biogain WSP	0.03 lb./M	24-Aug-98	3-D	0.19 lb./M
26-Jun-98	Macro-sorb foliar	0.05 lb./M	24-Aug-98	Amino Acid	0.06 lb./M
26-Jun-98	Tuff-Turf	0.16 lb./M	24-Aug-98	Bio B	5.63
26-Jun-98	Agri-Plex	0.05 lb./M	24-Aug-98	Astron	3
26-Jun-98	Nutrobac Growth Medium	40	24-Aug-98	Perk-Up	3
26-Jun-98	Pseudomonas	16	28-Aug-98	Amino Acid	0.08 lb./M
26-Jun-98	Azospirillum brasilense	16	28-Aug-98	Bio B	12.39
26-Jun-98	Organica Plant Growth Activator	0.63 lb./M	04-Sep-98	Tuff-Turf	0.05 lb./M
26-Jun-98	3D	0.875	04-Sep-98	D2B from Ecosoils	
26-Jun-98	Mycostop Streptomyces	0.63 gr./M	04-Sep-98	Bio B	40
02-Jul-98	Macro-sorb foliar	0.078 lb./M	04-Sep-98	Earthworm Biotea	80
02-Jul-98	Agri-Plex	0.06 lb./M	08-Sep-98	Tuff-Turf	0.02 lb./M
02-Jul-98	3-D	0.14 lb./M	08-Sep-98	Agri-Plex	0.007 lb./M
02-Jul-98	Tuff-Turf	0.14 lb./M	08-Sep-98	Biogain WSP	0.03 lb./M
02-Jul-98	Naturalist	2	10-Sep-98	Perk-Up	2.375 lb./M
06-Jul-98	Macro-sorb foliar	0.05 lb./M	30-Sep-98	Perk-Up	1.625 lb./M
06-Jul-98	Tuff-Turf	0.08 lb./M	09-Oct-98	Biogain WSP	0.03 lb./M
06-Jul-98	Agri-Plex	0.05 lb./M	09-Oct-98	Amino Acid	0.125 lb./M

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TABLE 6B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION			INSECTICIDES		
Seeding date	28-Aug-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	02-Mar	Green-Pro 12-3-8	0.75 lb. N	29-May	Mach 2	1.5
		08-Apr	Biocomposte Forte 7-5-0	0.26 lb. N	04-Jun	Mach 2	1.75
		27-Apr	Agriplex 0-4-4	1 lb. Prod./7993 sq.ft.	18-Aug	Mach 2	1.88
		03-May	Mycor Turf Saver 4-1-2	0.75 lb. N	23-Sep	Mavrik	0.24
FACTORS OF PLAY		13-May	Agriplex 0-4-4	0.5 lb. Prod./7993 sq.ft.	27-Sep	Mavrik	0.25
		21-May	Refresh 1-0-0	2 lb. Prod./7993 sq.ft.			
Date opened for play	April 1	29-May	Bent Special 28-8-18	0.14 lb. N			
Date closed for play	Nov.15	04-Jun	Agriplex 0-4-4	0.88 lb. Prod./7993 sq.ft.	FUNGICIDES		
Type of spikes allowed	softspikes		Nutraculture 28-8-18	0.07 lb. N			
Uses of green	putting, chipping, target		Macrosorb Follar 2-0-0	0.88 lb. Prod./7993 sq.ft.	Date(s)	Product	Rate (oz./M)
		11-Jun	Nutraculture 10-20-30	0.10 lb. N			
		14-Jun	Nutraculture 28-8-18	0.11 lb. N	11-Jun	3336	2
MOWING		27-Jun	1-0-14	1 lb. Prod./7993 sq.ft.	12-Jun	Daconil	4.5
		28-Jun	Dried Blood 12-0-0	0.24 lb. N	27-Jun	Touche	0.25
Initial height			0-2-30	1.00 lb. K	12-Jul	Prostar	6
Current height		30-Jun	Peters Professional 9-45-15	0.01 lb. N	12-Jul	Daconil	3.2
Frequency	7 days/week	11-Aug	Nature Safe 8-3-5	0.22 lb. N	12-Jul	Heritage	0.4
Type of mower	walking	18-Aug	Peters Professional 9-45-15	0.08 lb. N	22-Jul	Banol	1.5
Rollers used	None	30-Aug	Milorganite 6-2-0	0.39 lb. N			
Groomers used	Shallow - 1-2X/week	08-Sep	Peters Professional 15-20-25	0.20 lb. N			
		17-Sep	Nature Safe 8-3-5	0.45 lb. N	HERBICIDES		
CULTIVATION			White Gold 0-0-25	0.67 lb. K			
		04-Oct	Milorganite 6-2-0	0.51 lb. N	Date(s)	Product	Rate (oz./M)
Aerfication - dates	Aug. 8, 1999		White Gold 0-0-25	1.09 lb. K			
Aerification - type	Hydroject water injection		Perk-Up (Fine) 0-0-0	21 lbs. Prod./7993 sq.ft.	None		
Verticutting	None	18-Nov	IBDU 10-18-22	0.34 lb. N			
		06-Dec	Milorganite 6-2-0	0.99 lb. N			
Dates of topdressing	3/29, 4/14, 4/26, 5/3, 5/17, 6/1, 6/14, 6/30, 7/12, 8/16, 9/17, 10/19, 10/21	Total (lbs./M): 5.60 lbs. N, 1.38 lbs. P, 5.29 lbs. K			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 6B. (CONT'D)

1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

OTHER PRODUCTS

Date(s)	Product	Rate (oz./M)
14-Apr	Turfshield	5 lbs/M
20-Apr	Perk-Up Micronutrient Mix	3.12 lbs./M
27-Apr	Greenreleaf Bio B+	0.16 gal./M
27-Apr	Greenreleaf Bio F+	0.16 gal./M
27-Apr	Greenreleaf Bio A+	0.16 gal./M
27-Apr	Organica PGA	0.13 lbs./M
01-May	Agri-energy Biotea	0.63 gal./M
03-May	Mycor Turf Saver	18.70 lbs./M
13-May	Agri-energy Biotea	0.63 gal./M
13-May	Azospirillum	0.06 gal./M
13-May	Bacillus	31.28 grams/M
13-May	Back-Pac	0.13 quarts/M
13-May	MPM (Agri-energy)	0.13 gal./M
13-May	Enzwell	0.88 pints/M
13-May	AgriPlex	0.88
13-May	Vigroot	0.13 lbs./M
14-May	Agri-energy Biotea	0.63 gal./M
14-May	Azospirillum	0.06 gal./M
14-May	Back-Pac	0.13 quarts/M
14-May	MPM (Agri-energy)	0.13 gal./M
14-May	Enzwell	0.88 pints/M
14-May	Vigroot	0.13 lbs./M
21-May	Enzwell	0.19 gal./M
21-May	MPM (Agri-energy)	0.25 gal./M
21-May	Agri-energy Biotea	1.13 gal./M
21-May	Refresh	3
29-May	Back-Pac	0.06 gal./M
29-May	Organica PGA	0.11 lbs./M

OTHER PRODUCTS

Date(s)	Product	Rate (oz./M)
04-Jun	Nutrobac	0.31 gal./M
04-Jun	D-2b Pseudomonas	0.13 gal./M
04-Jun	Az-1b Azospirillum brasilense	0.13 gal./M
04-Jun	Greenreleaf Bio A	0.19 gal./M
04-Jun	Greenreleaf Bio B+	0.13 gal./M
14-Jun	Biotea	1.25 gal./M
27-Jun	Pana Sea	1.25
27-Jun	Vitech Experimental Amino Acid	2
30-Jun	W/S-Envirogreen Fertility Product	0.5 lbs./M
30-Jun	CBG-Envirogreen Fertility Product	12
30-Jun	BP-Envirogreen Fertility Product	1 packet/7993 sq.ft.
30-Jun	MSE-Envirogreen Fertility Product	16
12-Jul	Sprint Iron	0.32
12-Jul	Break Thru	0.25
22-Jul	Break Thru	0.25
08-Sep	Vitech Experimental Amino Acid	0.8
08-Sep	CBG-Envirogreen Fertility Product	3.25
08-Sep	W/S-Envirogreen Fertility Product	0.4 lbs./M
08-Sep	Biotea	0.3 gal./M
08-Sep	Plant Growth Activator	1.63
08-Sep	Sprint 330 Iron	1.63
23-Sep	Dethatch	4
23-Sep	Sprint 330 Iron	2
23-Sep	Plant Growth Activator	2
23-Sep	Macro-sorb foliar	2
27-Sep	Calphex	12
04-Oct	Fine Perk	2.63 lbs./M

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

TABLE 6C. 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)	Date(s)	Product	Rate (oz./M)
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	26-Apr	Plant Growth Activator	0.31 lb./M	19-Jul	Battle	1.25
		26-Apr	Maxicrop Soluale Seaweed Powder	1			
		26-Apr	Maxicrop Liquid	1.5			
		26-Apr	Dethatch	0.16 lb./M			
FACTORS OF PLAY		26-Apr	Fresh Pak	24.02	FUNGICIDES		
		16-May	Super Shot 40	4			
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	Plant helper	0.30 lb./M	28-Jun	Daconil	1.69 lbs/M
		18-May	Spot-Less	32.03	19-Jul	Daconil	2.5
		23-May	Turfshield TM	4.38 lb./M	09-Aug	Daconil	2.92
MOWING		03-Jun	Spot-Less	32.03	18-Sep	Daconil	2.92
		20-Jun	Spot-Less	36.57	02-Nov	Nature's Best	4
Initial height		20-Jun	Plant helper	0.40 lb./M			
Current height		20-Jun	Super Shot 40	0.49			
Frequency	7 days/week	05-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			
		28-Jul	B-1b Bacillus inoculant	0.12 lb./M	Date(s)	Product	Rate (oz./M)
CULTIVATION		28-Jul	Root Grow	16.01			
		07-Aug	Spot-Less	16.01	None		
Aerfication - dates	7/6, 7/25, 9/15	07-Aug	B-1b Bacillus inoculant	0.12 lb./M			
Aerfication - type	Hydroject water injection	07-Aug	Plant helper	0.17			
Verticutting		21-Aug	Super Shot 40	487.93 ml/M			
		21-Aug	Plant helper	0.75 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	Plant helper	0.25 lb./M	NOTES/COMMENTS		
		15-Sep	Super Shot 40	4			
		15-Sep	Earthworks N-hance	1.25			
		15-Sep	Earthworks Base One	1.25			
Other cultural practices	Brushed only for sand topdressing	15-Sep	Earthworks Kick	1.25			
		15-Sep	Earthworks Potent Sea/plus	1.25			
		15-Sep	Spot-Less	32.03			
		15-Sep	Root Grow	16.01			
		15-Sep	Fresh Pak	24.02			
		02-Nov	Earthworks N-hance	2.5			
		02-Nov	Earthworks Base One	2.5			
		02-Nov	Earthworks Kick	2.5			
		02-Nov	Earthworks Potent Sea/plus	2.5			
		02-Nov	Super Shot 40	3			

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TABLE 6C. (CONT'D)

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

FERTILIZATION

Date(s)	Product	Rate (lbs./M)
07-Apr	Perk (0-0-0)	19 lbs./7993 sq ft
07-Apr	White Gold (0-0-25)	2.08 lbs. K
12-Apr	Nature Safe (8-3-5)	0.33 lb. N
26-Apr	Fresh Pak (1-0-0)	0.01 lb. N
26-Apr	Nature Safe (8-3-5)	0.37 lb. N
03-May	Nutraceutical (10-20-30)	0.04 lb. K
03-May	Agriplex (0-4-4)	0.01 lb. P/app.
03-May	Macrosorb Foliar (2-0-0-B,Mn,Zn)	0.01 lb. N/app.
03-May	Quelant Ca (5-0-0)	0.03 lb. N/app.
03-May	Quelant K (1-0-30)	0.01 lb. K
03-May	3-D (0-0-14)	0.02 lb. K/app.
03-May	Biogain WSP (0-0-12)	0.02 lb. K/app.
03-May	Sprint 330 (0-0-0)	0.18 lb./7993 sq ft
05-May	Soil Synergy (10-2-8)	0.44 lb. N
16-May	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.
16-May	Nature's Best (0-0-0-Fe,Cu,B,Mn)	6.25 lbs./7993 sq ft
18-May	Nutraceutical (28-8-18)	0.20 lb. N
18-May	Biogain WSP (0-0-3)	0.02 lb. K
03-Jun	Nutrigrow PK (0-28-26)	0.04 lb. K
20-Jun	PanaSea Plus (0-3-2)	0.01 lb. K
20-Jun	Nutrigrow PK (0-28-26)	0.06 lb. K
20-Jun	Plant Helper (0.6-0.9-0.2)	1.41 lb./3500 sq ft
20-Jun	Microbial Stimulant (1-0-0)	0.03 lb. N
27-Jun	Nutrigrow PK (0-28-26)	0.21 lb. K
27-Jun	Lesco Chelated Fe+ (12-0-0)	0.04 lb. N
27-Jun	Quelant Ca (5-0-0)	0.03 lb. N
07-Jul	Nature Safe (8-3-5)	0.29 lb. N
13-Jul	Soil Synergy (10-2-8)	0.44 lb. N
19-Jul	Vtech Protamin (5-0-0)	0.03 lb. N/app.
19-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
19-Jul	Tuff Turf (1-0-14-Ca,Mg,Fe,Mn)	0.01 lb. K

FERTILIZATION

Date(s)	Product	Rate (lbs./M)
24-Jul	Quelant Ca (5-0-0)	0.01 lb. N
24-Jul	Nutrigrow PK (0-28-26)	0.05 lb. K
24-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
24-Jul	PanaSea Plus (0-0-0)	0.45 lb./3500 sq ft
08-Aug	Plant Helper (0.6-0.9-0.2)	1.38 lbs./7993 sq ft
08-Aug	Agriplex (0-4-4)	0.01 lb. K/app.
09-Aug	Nutrigrow PK (0-28-26)	0.02 lb. K
09-Aug	Quelant Ca (5-0-0)	0.04 lb. N/app.
09-Aug	Tuff Turf (1-0-14)	0.01 lb. K
14-Aug	Quelant K (1-0-30)	0.02 lb. K
14-Aug	Sprint 330 (0-0-0)	
14-Aug	Nutrigrow PK (0-28-26)	0.01 lb. K
14-Aug	Sea Quential (7-0-1)	0.03 lb. N/app.
14-Aug	Iron Master (15-0-1)	
14-Aug	Quelant Ca (5-0-0)	0.5 lbs./7993 sq ft
14-Aug	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
21-Aug	Vtech Protamin (5-0-0)	0.01 lb. N
21-Aug	Nutrigrow PK (0-28-26)	0.06 lb. K
21-Aug	Nature Best (0-0-0)	6.25 lbs./7993 sq ft
21-Aug	Biogain WSP (0-0-12)	0.01 lb. K/app.
21-Aug	Microbial Stimulant (1-0-0)	0.01 lb. N
21-Aug	Plant Helper (0.6-0.9-0.2)	0.04 lb. N/app.
15-Sep	Biogain WSP (0-0-12)	0.01 lb. K
15-Sep	Biogain WSP (Fe) (0-0-3)	0.02 lb. K/app.
15-Sep	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.
15-Sep	Vtech Protamin (5-0-0)	0.01 lb. N
15-Sep	Earthworks Base 1 (1-10-10-Cu,Zn,Mn)	0.01 lb. K
29-Sep	Lesco Greens Grade (18-4-18)	0.56 lb. N
20-Oct	Clesen's Professional (18-8-18)	0.68 lb. N
14-Nov	Soil Synergy (10-2-8)	0.63 lb. N

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 6D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT GLENVIEW, IL (NORTH SHORE COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	28-Aug-97	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	08-Mar	Milorganite (8-3-6)	0.8 lb. N	01-Mar	Daconil Ultrex	5
		31-Mar	Macrosorb Foliar (2-0-0)	0.001 lb. N	31-Mar	Chipco alliete signature 4oz; Chipco 26019	
		18-Apr	Tuff Turf (1-0-14)	0.01 lb. K		1.5oz; Cleary's 3336 2oz; Banol 0.38oz.	
		18-Apr	Sprint 330	0.03lb. Product/M	18-Apr	Daconil Ultrex 0.11 lb./M; Banol 0.5oz.	
FACTORS OF PLAY		18-Apr	PanaSea Plus (0-3-2)	0.03lb. Product/M	20-Jun	Daconil Ultrex	0.11 lb./M
		18-Apr	Lesco Chelated Fe+ (12-0-0)	0.01 lb. N	13-Jul	Daconil Ultrex	0.13 lb./M
Date opened for play		18-Apr	Nutraculture (10-20-30)	0.03 lb. K	13-Jul	Cleary's 3336	0.13lb/M
Date closed for play		18-Apr	Macrosorb Foliar (2-0-0)	0.001 lb. N	24-Jul	Daconil Ultrex	0.13 lb./M
Type of spikes allowed		30-Apr	Macrosorb Foliar (2-0-0)	0.001 lb. N	27-Aug	Daconil Ultrex 0.23lb./M; Cleary's 3336	
Uses of green		30-Apr	Quelant K (1-0-30)	0.01 lb. K		0.13lb/M; Banol 1.13oz.	
		01-May	Nutraculture (10-20-30)	0.13 lb. K	16-Nov	Cleary's 3336 0.25lb./M; Consyst 0.42lb./M;	
		02-May	14-0-28 Plus Turf Enhancer	0.37 lb. K		Chipco GT 2.63oz/M	
MOWING		30-May	Biogain WSP (Fe) (0-0-3)	0.003 lb. K			
		30-May	Turf Vigor (9-3-6)	0.13 lb. N			
Initial height		03-Jun	Potassium Nitrate (13.75-0-46)	0.10 lb. K	INSECTICIDES		
Current height		03-Jun	Nutraculture (10-20-30)	0.06 lb. K			
Frequency		11-Jun	Turf Vigor (9-3-6)	0.11 lb. N	Date(s)	Product	Rate (oz./M)
Type of mower		15-Jun	Lex (1-0-0)	0.001 lb. N			
Rollers used		15-Jun	PK Plus (3-21-18)	0.01 lb. K	18-Apr	Cavalier 4.5F	0.63
Groomers used		15-Jun	Agriplex Micromix (0-3-5)	0.001 lb. K	20-Jun	Mach 2	0.63
		15-Jun	Sprint 330	0.06lb. Product/M			
CULTIVATION		20-Jun	Nutragreen (5-10-5)	0.02 lb. N	HERBICIDES		
		20-Jun	Tuff Turf (1-0-14)	0.01 lb. K			
Aerfication - dates	5/29, 6/26, 8/13	20-Jun	Perk up	0.03lb. Product/M			
Aerification - type	Hydrojet	20-Jun	Lex (1-0-0)	0.03lb. Product/M	Date(s)	Product	Rate (oz./M)
Verticutting		20-Jun	Agriplex Micromix (0-3-5)	0.03lb. Product/M			
		27-Jun	Turf Vigor (9-3-6)	0.06 lb. N	None		
Dates of topdressing	4/5, 5/14, 5/29, 6/26,	27-Jun	PK Plus (3-21-18)	0.02 lb. K	OTHER PRODUCTS		
	7/2, 7/17, 8/7, 8/13,	06-Jul	Turf Vigor (9-3-6)	0.07 lb. N			
	9/5, 11/7	06-Jul	PK Plus (3-21-18)	0.02 lb. K			
Other cultural practices		14-Aug	Turf Vigor (9-3-6)	0.01 lb. N	Date(s)	Product	Rate (oz./M)
		27-Aug	PK Plus (3-21-18)	0.04 lb. K			
		27-Aug	Lesco Chelated Fe+ (12-0-0)	0.01 lb. N	30-Apr	LescoFlo	5
		27-Aug	Perk-up	0.16lb. Product/M	5/30, 6/11, 6/27	Thatchless	3
		27-Aug	Sprint 330	0.1lb. Product/M	14-Aug	Green Relief	8.01
		04-Oct	Turf Enhancer (14-0-28)	0.70 lb. K	27-Aug	Primo	0.13
		07-Nov	IBDU (10-18-22)	1.83 lb. K			
		16-Nov	PK Plus (3-21-18)	0.15 lb. K			
NOTES/COMMENTS							

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

TABLE 6E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SEEDLING VIGOR	DENSITY	STIMPMETER READINGS		QUALITY RATINGS							
					FALL 1998	SUMMER 1999	FALL 1999	APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
PENN A-1	5.8	6.7	8.2	4.7	8.0	108.7	126.8	7.9	7.7	8.2	7.5	7.2	7.3	7.8	7.6
PENN G-6	5.6	7.1	8.1	3.7	7.7	106.3	127.5	7.8	7.4	7.6	7.0	7.2	7.6	7.9	7.5
PENN A-4	5.6	7.1	8.4	4.3	8.3	111.2	129.3	7.3	8.1	7.8	7.1	6.8	7.1	7.8	7.4
PENN G-1	5.5	6.1	8.3	4.7	8.7	107.3	132.5	7.4	7.7	7.6	6.9	7.0	7.2	7.8	7.4
L-93	5.8	6.3	7.3	5.0	7.7	113.3	133.0	7.2	7.3	7.3	6.8	6.8	7.7	7.8	7.3
BACKSPIN	5.2	6.8	7.3	5.0	8.0	112.3	130.0	6.7	7.0	6.9	6.5	6.6	7.0	7.5	6.9
GRAND PRIX (LCB-103)	5.3	6.5	7.5	4.0	8.0	116.2	130.8	6.6	7.3	7.2	6.6	6.8	6.8	7.1	6.9
IMPERIAL	5.7	6.7	7.8	5.0	7.7	107.8	124.2	7.0	6.9	7.2	6.4	6.5	6.9	7.3	6.9
PROVIDENCE	6.2	6.3	7.3	4.3	7.7	109.5	129.5	7.3	7.1	7.0	6.5	6.3	6.8	7.3	6.9
SR 1119	6.0	6.5	7.6	3.7	7.3	107.8	130.3	6.9	7.0	7.2	6.3	6.8	7.1	7.1	6.9
TRUELINE	6.0	6.0	7.3	4.7	7.0	110.7	129.0	6.8	6.8	6.8	6.6	6.9	6.7	7.5	6.9
PUTTER	5.4	5.8	7.1	5.7	6.7	110.0	128.5	7.2	7.1	6.8	6.7	6.3	6.5	6.9	6.8
SR 1020	5.8	5.3	7.2	3.7	7.0	110.2	129.5	6.6	7.3	6.8	6.2	6.3	6.9	7.3	6.8
CATO	6.1	5.8	7.1	4.0	7.3	114.3	133.8	6.0	6.3	6.9	6.3	6.2	6.8	7.3	6.5
VIPER	6.3	6.1	7.3	3.7	7.7	113.0	127.3	6.3	6.3	6.8	6.0	6.4	6.5	6.8	6.5
CENTURY	4.7	6.5	8.1	4.7	8.3	114.0	131.5	5.7	6.3	6.8	6.1	6.4	6.4	6.6	6.4
CRENSHAW	6.3	6.1	7.2	5.0	7.7	115.7	132.3	5.7	6.3	6.3	6.3	6.4	6.4	6.5	6.3
PENNCROSS	5.3	5.9	5.8	5.3	6.0	121.0	129.2	6.1	5.3	5.8	5.5	6.0	6.2	6.2	5.9
LSD VALUE	0.5	0.8	0.5	2.1	0.9	57.2	84.1	0.8	0.9	0.7	1.2	1.0	1.0	0.7	0.3
C.V. (%)	11.3	14.8	8.4	19.1	6.8	17.1	20.2	13.1	15.6	11.8	17.3	13.9	14.6	11.2	6.2

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 7A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	03-Oct-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		03-Oct-97	Milorganite	1.0 lb. N	None		
		03-Oct-97	14-28-14	1.0 lb. N			
FACTORS OF PLAY		28-Oct-97	Milorganite	1.0 lb. N			
		21-Nov-97	18-4-10 + micros	1.0 lb. N			
Date opened for play	27-Jun-98	03-Mar-98	Milorganite	1.0 lb. N			
Date closed for play	Dec. 98	03-Mar-98	16-28-10	2.0 lbs. P			
Type of spikes allowed	softspikes only	27-Mar-98	18-4-10 + micros	1.0 lb. N			
Uses of green	putting, chipping	03-Apr-98	18-4-10 + micros	1.0 lb. N			
		15-Apr-98	14-28-14	1.0 lb. P			
MOWING		22-Apr-98	18-4-10 + micros	1.0 lb. N	INSECTICIDES		
		18-May-98	18-4-10 + micros	1.0 lb. N			
Initial height	1/4"	03-Jun-98	18-4-10 + micros	1.0 lb. N			
Current height	5/32"	01-Jul-98	18-4-10 + micros	1.0 lb. N			
Frequency	7 days/week	27-Jul-98	18-4-10 + micros	1.0 lb. N			
Type of mower	triplex	03-Aug-98	14-28-14	1.0 lb. P	06-Jul-98	Conserve	2
Rollers used	Wiehle	26-Aug-98	18-4-10 + micros	1.0 lb. N	13-Jul-98	Merit	6.4
Groomers used	None	08-Sep-98	8-3-24	1.0 lb. K	14-Aug-98	Conserve	2
		17-Sep-98	18-4-10 + micros	1.0 lb. N	09-Oct-98	Dylox	2
CULTIVATION		05-Oct-98	18-4-10 + micros	1.0 lb. N			
		16-Oct-98	8-3-24	1.0 lb. K			
Aerification - dates	None	06-Nov-98	25-5-15	1.0 lb. N	OTHER PRODUCTS		
Aerification - type	None	09-Nov-98	8-3-24	1.0 lb. K			
Verticutting	July, September	02-Dec-98	20-0-20	1.0 lb. N			
Dates of topdressing	24-May-98						
	15-Jun-98	FUNGICIDES			None		
	20-Jul-98						
	07-Sep-98	Date(s)	Product	Rate (oz./M)			
	21-Sep-98						
	12-Oct-98	24-Jun-98	Chipco 26GT	4	NOTES/COMMENTS		
	19-Oct-98	24-Jun-98	Alliette Signature	4			
	26-Oct-98	07-Aug-98	Heritage	0.2			
	02-Nov-98	18-Aug-98	Chipco 26GT	4			
	16-Nov-98	18-Aug-98	Alliette Signature	4			
	22-Nov-98	22-Sep-98	Bayleton	0.5			
	30-Nov-98	09-Dec-98	Daconil Weatherstick	6			
		09-Dec-98	Chipco 26GT	4			
Other cultural practices	None						

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

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

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	03-Oct-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		03-Apr	Scott's (9-18-18)	1.0 lb. K	None		
		19-Apr	Scott's (17-3-17)	1.0 lb. N			
FACTORS OF PLAY		30-Jun	18-3-4 + Micro Gary's Green	0.1 lb. N			
		30-Jun	1-0-14 + Micro Tuff Turf	0.1 lb. K			
Date opened for play	Open all year around	05-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N	INSECTICIDES		
Date closed for play	unless snow covered	05-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K			
Type of spikes allowed	softspikes	07-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N			
Uses of green	putting	07-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K	Date(s)	Product	Rate (oz./M)
		13-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N	13-May	Mach 2	1.5
MOWING		13-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K	07-Jun	Mach 2	1.5
		16-Aug	18-3-4 + Micro Gary's Green	0.1 lb. N	11-Jul	Dylox 80 sp	2
Initial height	7/16"	16-Aug	1-0-14 + Micro Tuff Turf	0.1 lb. K	22-Sep	Dylox 80 sp	2
Current height	5/32"	22-Aug	18-3-4 + Micro Gary's Green	0.1 lb. N			
Frequency	7 days/week	22-Aug	1-0-14 + Micro Tuff Turf	0.1 lb. K			
Type of mower	Triplex/Walking	14-Sep	Shaw's (17-3-17)	1.0 lb. N			
Rollers used	once a week - Jacobsen	04-Oct	Shaw's (17-3-17)	1.0 lb. N			
Groomers used	once a week - Jacobsen	02-Nov	Shaw's (17-3-17)	1.0 lb. N	OTHER PRODUCTS		
CULTIVATION					Date(s)	Product	Rate (oz./M)
		FUNGICIDES					
Aerification - dates							
Aerification - type		Date(s)	Product	Rate (oz./M)			
Verticutting	None						
		23-May	Chipco GT	4			
		23-May	Alliette Signature	4			
Dates of topdressing	Every other week,	12-Jun	Daconil Ultrex	4			
	starting in May. Used	12-Jun	Alliette Signature	4			
	sand only. Same as what	30-Jun	Heritage	0.2			
	the green was built with.	30-Jun	Chipco GT	2	NOTES/COMMENTS		
		12-Jul	Daconil Ultrex	4			
		12-Jul	Alliette Signature	4			
Other cultural practices	Drag in sand with Metal	16-Aug	Daconil Ultrex	4	Located just east of the driving range and is used extensively.		
	mat or a brush.	16-Aug	Alliette Signature	4			
		26-Oct	Daconil Weatherstick	4			

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

TABLE 7D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	03-Oct-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		25-Apr	18-4-10	0.5lb. N	None		
		04-May	22-0-22	1.0 lb. N			
FACTORS OF PLAY		14-May	18-4-10	0.5lb. N			
		21-May	22-0-22	1.0 lb. N			
Date opened for play	Open all year around	24-Aug	21-3-16	0.75 lb. N	INSECTICIDES		
Date closed for play	unless snow covered	17-Sep	21-3-16	0.75 lb. N			
Type of spikes allowed	softspikes	24-Oct	21-3-16	0.75 lb. N			
Uses of green	putting				Date(s)	Product	Rate (oz./M)
					01-Aug	Merit	0.15
MOWING							
Initial height		FUNGICIDES					
Current height	1/8"						
Frequency	7 days/week	Date(s)	Product	Rate (oz./M)			
Type of mower	Triplex/Walking						
Rollers used	No	08-May	Daconil Ultrex	4	OTHER PRODUCTS		
Groomers used	No	19-May	Chipco GT	4			
		07-Jun	Daconil Ultrex	4			
CULTIVATION		07-Jun	Alliette Signature	4	Date(s)	Product	Rate (oz./M)
		22-Jun	Chipco GT	4			
Aerification - dates		22-Jun	Alliette Signature	4			
Aerification - type		05-Jul	Heritage	0.4			
Verticutting	once every 2-3 weeks,	05-Jul	Chipco GT	2			
	Grooming - once a week	22-Jul	03-Aug	03-Aug			
		22-Jul	Alliette Signature	4			
Dates of topdressing	once every 2-3 weeks	03-Aug	Chipco GT	4			
		03-Aug	Alliette GT	4			
		17-Aug	Daconil Ultrex	4			
		17-Aug	Alliette	2	NOTES/COMMENTS		
		30-Aug	Daconil Ultrex	4			
		30-Aug	Chipco Alliette	4			
Other cultural practices	No	28-Sep	Banner	1	Located just east of the driving range and is used extensively.		
		16-Nov	Heritage	0.4			

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TABLE 7E.

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/
1998-2001 DATA

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

NAME	STIMPMETER READINGS					PERCENT ESTABLISHMENT RATINGS				
	FALL 1998	AVERAGE 1999	FAST 1999	SLOW 2001	MEDIUM 2001	NOV 97	MAR 98	APR 98	MAY 98	JUN 98
PENN A-4	100.3	128.0	129.7	116.0	128.7	58.3	70.0	88.3	93.3	98.7
PENN A-1	104.3	124.0	131.3	124.0	132.3	58.3	66.7	85.0	90.0	98.7
PENN G-1	99.3	118.3	121.7	113.7	123.7	55.0	61.7	86.7	91.7	98.3
CENTURY	101.7	121.0	131.3	114.0	126.0	56.7	68.3	88.3	90.0	98.0
GRAND PRIX (LCB-103)	105.3	118.7	129.7	112.0	129.0	68.3	73.3	88.3	94.3	98.3
IMPERIAL	105.0	125.3	128.7	120.7	126.7	56.7	71.7	90.0	91.7	98.3
PENN G-6	104.7	115.0	128.3	117.3	131.3	63.3	66.7	88.3	96.0	98.3
L-93	104.3	123.0	127.3	124.0	129.3	60.0	66.7	83.3	95.0	99.0
BACKSPIN	104.0	124.7	135.7	118.7	131.3	56.7	65.0	85.0	90.0	98.3
SR 1119	105.3	123.0	131.7	130.7	132.7	56.7	60.0	85.0	93.3	98.7
CATO	103.3	126.3	135.3	127.3	128.0	58.3	68.3	85.0	93.3	98.0
CRENSHAW	106.0	125.3	133.7	123.0	130.3	61.7	70.0	86.7	91.7	98.0
PROVIDENCE	107.3	124.3	130.3	121.0	121.7	53.3	63.3	81.7	91.7	98.7
SR 1020	108.7	123.7	138.3	117.7	133.7	51.7	58.3	81.7	88.3	98.0
TRUELINE	106.0	124.3	133.0	122.3	129.7	56.7	63.3	86.7	92.7	98.0
VIPER	103.0	122.0	129.0	123.0	127.7	58.3	65.0	83.3	91.7	98.3
PUTTER	107.0	124.0	137.3	119.0	129.3	68.3	71.7	86.7	95.0	98.0
PENNCROSS	106.7	124.0	131.0	112.3	123.7	60.0	68.3	86.7	91.7	98.0
LSD VALUE	15.1	13.8	17.3	18.7	24.6	11.8	14.7	9.6	8.6	0.9
C.V. (%)	4.6	4.1	4.8	6.2	5.7	9.2	8.9	4.2	3.4	0.4

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 7E. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 (CONT'D) 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN G.C.) 1/
 1998-2001 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								
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
PENN A-4	7.1	5.3	7.8	6.0	6.6	7.6	7.0	7.0	6.8	7.7	6.3	6.9
PENN A-1	7.1	4.7	7.5	5.7	6.3	7.4	7.4	6.9	6.8	7.4	6.0	6.8
PENN G-1	6.9	4.9	7.2	5.8	6.3	7.4	7.0	7.0	6.9	7.3	6.3	6.8
CENTURY	6.1	4.7	7.4	5.5	6.1	7.2	7.1	6.8	6.6	7.0	5.5	6.5
GRAND PRIX (LCB-103)	6.2	4.8	7.3	5.6	6.1	7.2	7.0	6.6	6.5	6.9	5.8	6.5
IMPERIAL	6.3	5.3	7.1	5.8	6.3	7.3	6.8	6.6	6.5	7.0	5.6	6.5
PENN G-6	6.8	4.8	6.9	5.9	6.1	7.0	6.6	6.7	6.8	7.2	5.6	6.5
L-93	7.2	4.8	6.3	5.9	6.4	7.0	6.6	6.3	6.4	6.8	5.6	6.4
BACKSPIN	6.0	4.9	7.1	5.3	6.0	6.7	6.6	6.3	6.4	6.8	5.2	6.2
SR 1119	7.5	4.1	6.9	5.6	6.0	6.7	6.5	6.3	6.3	6.8	5.3	6.2
CATO	6.9	4.7	6.4	5.7	5.8	6.6	6.4	6.0	6.1	6.5	5.5	6.1
CRENSHAW	7.6	3.9	6.3	5.4	6.0	6.3	6.6	6.4	6.3	6.8	5.2	6.1
PROVIDENCE	6.9	4.2	6.8	5.7	5.7	6.8	6.7	6.0	5.8	6.7	5.6	6.1
SR 1020	6.9	4.3	6.3	5.4	5.6	6.5	6.1	6.2	6.1	6.6	5.5	6.0
TRUELINE	6.8	3.7	6.3	5.2	5.6	6.3	6.3	6.0	5.9	6.4	4.9	5.8
VIER	7.1	3.8	6.3	5.2	5.4	6.3	6.4	5.8	5.7	6.4	5.2	5.8
PUTTER	6.4	4.4	6.4	5.2	5.3	6.1	5.8	5.6	5.5	6.1	5.0	5.6
PENNCROSS	6.1	4.2	5.8	5.0	5.2	5.8	5.3	5.3	5.4	5.7	4.9	5.3
LSD VALUE	0.5	1.1	0.5	2.5	1.6	0.5	0.4	0.5	0.5	0.5	0.5	0.3
C.V. (%)	9.2	21.1	8.9	23.9	20.6	9.9	8.9	10.3	11.1	9.6	12.2	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 8A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT FLORENCE, KY (LASSING POINTE GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	15-Sep-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		06-Jan-98	0-0-45	2 lbs. K	None		
		06-Jan-98	Magnesium sulfate	2 lbs.			
FACTORS OF PLAY		15-Apr-98	Scotts starter/STEP micros	0.75 lb. N	INSECTICIDES		
		01-Jun-98	Milorganite				
Date opened for play	06-Jun-98	15-Jun-98	Milorganite		Date(s)	Product	Rate (oz./M)
Date closed for play	01-Nov-98	22-Jun-98	Scotts 19-3-19	0.75 lb. N			
Type of spikes allowed	softspikes	05-Aug-98	Milorganite		22-May-98	Tempo	0.25 lb./Acre
Uses of green	putting	28-Sep-98	Scotts 18-9-18	0.75 lb. N	24-Jun-98	Tempo	0.25 lb./Acre
		05-Nov-98	Scotts 19-3-19	0.75 lb. N	10-Jul-98	Tempo	0.25 lb./Acre
MOWING					21-Jul-98	Tempo	0.25 lb./Acre
					12-Aug-98	Tempo	0.25 lb./Acre
Initial height	3/16"	FUNGICIDES			15-Sep-98	Tempo	0.25 lb./Acre
Current height	5/32"				20-Oct-98	Tempo	0.25 lb./Acre
Frequency	7 days/week	Date(s)	Product	Rate (oz./M)			
Type of mower	triplex				OTHER PRODUCTS		
Rollers used	Wheilie	14-Jan-98	Scotts FF11				
Groomers used	None	20-Feb-98	PMAS	1	Date(s)	Product	Rate (oz./M)
		06-Apr-98	Daconil Ultrex	6.5 lb./Acre			
CULTIVATION		28-Apr-98	Daconil Ultrex	6.5 lb./Acre	06-Apr-98	Primo	3 oz./Acre
		06-May-98	Bayleton	1	28-Apr-98	Primo	3 oz./Acre
Aerfication - dates	5/13, 6/25, 10/15	06-May-98	Daconil Ultrex	6.5 lb./Acre	22-May-98	Cascade (wetting agent)	8
Aerification - type		03-Jun-98	Chipco 26 GT	3	03-Jun-98	Primo	3 oz./Acre
Verticutting	None	15-Jun-98	Chipco 26 GT	3	15-Jun-98	Primo	3 oz./Acre
Dates of topdressing	5/26, 7/13, 9/8,	10-Jul-98	Daconil Ultrex	6.5 lb./Acre	30-Jun-98	Cascade (wetting agent)	8
	10/1, 10/26, 11/16	21-Jul-98	Daconil Ultrex	6.5 lb./Acre	12-Aug-98	Primo	3 oz./Acre
Other cultural practices	rolled with Toro	03-Aug-98	Chipco 26019 GT	3	30-Aug-98	Primo	3 oz./Acre
	triplex rollers on	03-Aug-98	Fore	12 lb./Acre	15-Sep-98	Primo	3 oz./Acre
	6/1 and 6/25	12-Aug-98	Chipco 26019 GT	3	09-Oct-98	Primo	3 oz./Acre
		30-Aug-98	Daconil Ultrex	6.5 lb./Acre			
		15-Sep-98	Fore	12 lb./Acre	NOTES/COMMENTS		
		09-Oct-98	Bayleton	0.5			
					Every time greens were sprayed, we alternated 1/8 lb. of Scotts fluid 18-3-6 w/ Iron and Scotts fluid Mn/Mg w/ micros. Also, spoonfeeding of 9-0-32 was applied monthly.		

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

TABLE 8B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT FLORENCE, KY (LASSING POINTE GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	15-Sep-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		05-Jan	2 lbs. 0-0-45 and 2lbs. Magnesium		10-Jun	Acclaim	3
		02-Apr	3/4 lb. 19-25-5 Scotts starter/STEP micros		25-Jun	Acclaim	3
FACTORS OF PLAY		30-Apr	19-3-19	3/4 lb.	19-Jul	Acclaim	3
		19-May	Milorganite		29-Jul	Acclaim	3
Date opened for play	early Spring	24-May	18-9-18 Fe Mn	3/4 lb.	16-Oct	Bent Trimec	44
Date closed for play	late Fall	11-Jun	Milorganite				
Type of spikes allowed	softspikes	30-Sep	19-3-19	3/4 lb.			
Uses of green	putting	18-Oct	Milorganite		INSECTICIDES		
Others	40,000 rounds	21-Nov	19-25-5	1 lb.			
		10-Dec	Scotts STEP micros package		Date(s)	Product	Rate (oz./M)
MOWING					5/12, 7/7, 8/24, 9/23,	Tempo	110 g./Acre
Initial height	3/16"	Date(s)	Product	Rate (oz./Acre)			
Current height	5/32"				OTHER PRODUCTS		
Frequency	7 days/week	1/19, 4/20	PMAS	22			
Type of mower	Toro Greens Master	12-May	Bayleton	88	Date(s)	Product	Rate (oz./M)
Rollers used	Wiehle	02-Jun	Bayleton	88			
Groomers used	None	10-Jun	Daconil	10 lbs./Acre	5/20, 5/27	Cascade (wetting agent)	2.75 gal./Acre
		25-Jun	Daconil Ultrex	10 lb./Acre	6/10, 7/19,	Primo	3 oz./Acre
CULTIVATION		07-Jul	Fore	8 lb./Acre	23-Jul-00	Primo	5.5 oz./Acre
		19-Jul	Daconil	10 lbs./Acre	7/29, 8/11, 8/24, 9/23,	Primo	3 oz./Acre
Aerification - dates	4/20, 6/7, 10/5	23-Jul	Heritage	4 lb./Acre	12-May	Greens Edge	2.5 gal./tank
Aerification - type		23-Jul	Aliette	11 lbs./Acre	12-May	Fertilizer	2.5 gal./tank
Verticutting	5/3, 5/31, 10/3, 11/8	29-Jul	Daconil	10 lbs./Acre			
Dates of topdressing	5/3, 5/31, 10/3, 11/8	8/11, 8/24	Daconil	10 lbs./Acre			
Other cultural practices	rolled with Toro	8/24, 9/23,	Banner Maxx	22			
	triplex rollers on	16-Oct	Daconil	2.5 gal./Acre	NOTES/COMMENTS		
	5/4 and 5/12	18-Oct	PMAS	22			
		18-Oct	Daconil/Zn	2.5 ?/Acre	Liquid fertilizer (spoon-feeding) every couple weeks through season. Alternated treatments of 18-3-6 and 4-0-0 Mn/Mg and 9-0-32.		

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

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

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	15-Sep-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		12-Jan	0-0-45		5/15, 5/31, 6/19, 7/6, 7/27,	Acclaim	3
FACTORS OF PLAY		28-Mar	Milorganite				
		10-Apr	19-25-5 Starter				
		19-Apr	Scotts STEP				
Date opened for play	31-Mar-00	4/24, 10/17	19-3-19				
Date closed for play		28-Mar	Milorganite		INSECTICIDES		
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		03-May	Tempo	110 g./Acre
		02-Dec	STEP/Milorganite		5/31, 7/6, 7/24, 8/22,9/1, 10/30	Delta Guard	22 oz./Acre
MOWING		08-Mar	Milorganite	45 lbs./green			
Initial height		03-May	Mn/Mz	2.5 gal. (ea)			
Current height	5/32"	03-May	18-3-6 Scotts	2.5 gal. (ea)			
Frequency	7 days/week	5/15, 5/31	Liquid Fert.	2.5 gal./3 Acre			
Type of mower	Toro Greens Master 3100	19-Jun	Liquid Fert.	2.5 gal./6 Acre			
Rollers used	rolled - 5/12, 6/5, 6/9-13,	06-Jul	Mn	2.5 gal./6 Acre	OTHER PRODUCTS		
Groomers used	10/29	24-Jul	Scotts Liquid Fert.	2.5 gal./6 Acre			
		24-Jul	Scotts Mn/Mg	2.5 gal./6 Acre	Date(s)	Product	Rate (oz./M)
CULTIVATION		22-Aug	Scotts Liquid Fert.	5 gal./Acre			
		02-Oct	Scotts Liquid Fert.	5 gal./6 Acre	03-May	Primo	5.5 oz./Acre
Aerfication - dates	5/28, 10/23	30-Oct	Scotts Liquid Fert.	10 gal./6 Acre	5/15, 5/31, 6/19, 7/24, 9/1	Primo	3 oz./Acre
Aerification - type					22-Aug	Primo	3.5 oz./Acre
Verticutting	5/3, 5/31, 10/3, 11/8				6/6, 6/20	Cascade (wetting agent)	2.75 gal./Acre
Dates of topdressing	2/29, 6/24, 10/26, 11/16	FUNGICIDES			6/19, 7/6, 7/27	Sea Quencial	2.5 gal./Acre
Other cultural practices	rolled with Toro triplex rollers on 5/12, 6/5, 6/9-13, 10/29	Date(s)	Product	Rate (oz./Acre)			
		1/6, 8/22, 9/1	PMAS	22			
		03-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	NOTES/COMMENTS		
		6/19, 7/6,	Heritage	1 lbs./Acre			
		06-Jul	Banner Maxx	22			
		7/6, 10/2	Daconil	12 lbs./Acre			
		24-Jul	Daconil	11 lbs./Acre			
		30-Oct	Fore	8 lb./Acre			

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TABLE 8D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT FLORENCE, KY (LASSING POINTE GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	15-Sep-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./Acre)
Problems during		17-Jan	0-0-45		1/16, 5/22	PMAS	22oz Per Acre
		17-Jan	Magnesium Sulfate		4/12, 5/22, 6/1	Daconil	12lb per acre
FACTORS OF PLAY		17-Jan	Step		4/12, 5/2	Scotts Liquid Fert.	2.5 gal per 6 acres
		29-Apr	19-26-5		21-May	Cascade	2.75 gal per acre
Date opened for play	02/31/2001	29-Apr	STEP		5/22, 6/13, 7/9	Banner Max	22oz per acre
Date closed for play		29-Apr	Sand Aid		6/1, 6/13, 7/9	Liquid Fert.	2.5 gal per 6 acres
Type of spikes allowed	softspikes	20-May	19-26-5		6/13, 6/25, 7/9	Daconil	12lb per acre
Uses of green		10-Sep	25-20 with Cascade		6/25, 8/14	Eagle	22 oz per acre
Others	40,000 rounds	1-Oct	18-9-18		7/23, 8/14, 9/3	Daconil	12lb per acre
		1-Oct	STEP		7/23, 7/31, 8/27	Liquid Fert.	2.5 gal per 6 acres
		1-Oct	Sand Aid		23-Jul	Alliette	11 lb per acre
MOWING		29-Oct	0-0-50		31-Jul	Chipco Signature	1 gal per acre
		12-Dec	18-9-18		7/31, 8/27	Chipco 26 GT	1 gal per acre
Initial height		20-Dec	0-0-50		27-Aug	Pro Star	4 lb per acre
Current height	5/32"	20-Dec	Magnesium Sulfate		3-Sep	Banner Maxx	22 oz per acre
Frequency	7 days/week	20-Dec	STEP				
Type of mower	Toro Greens Master 3100	20-Dec	Sand Aid				
Rollers used	rolled - 5/21, 8/27, 11/12				HERBICIDES		
Groomers used	A cleanup pass was mowed every other day				Date(s)	Product	Rate (oz./M)
CULTIVATION		OTHER PRODUCTS			6/1, 6/13, 6/25, 7/9	Acclaim	3oz per acre
Aerfication - dates	5/4, 10/2	Date(s)	Product		31-Jul	Acclaim	3 oz per acre
Aerification - type							
Verticutting	5/14, 8/20, 11/5	4/12, 6/1, 6/13	Primo	5.5oz per acre			
Dates of topdressing	5/4, 5/14, 8/20, 10/2, 11/5	4/12, 5/2,	Sequential	2.5 gal per 6 acres	INSECTICIDES		
Other cultural practices	rolled with Toro	5/2, 6/25	CPR	2.5 gal per 6 acres			
	triplex rollers on	6/25, 7/9, 7/23	Primo	3 oz per acre	Date(s)	Product	
	5/12, 6/5, 6/9-13, 10/29	7/31, 8/14, 8/27, 9/3	Primo	3 oz per acre			
		8/14, 9/3	CPR	2.5 gal per 6 acres	4/12, 6/1, 6/25, 27-Aug	Delta Guard	22oz per acre
						Delta Guard	22 oz per acre

NOTES/COMMENTS

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

TABLE 8E.

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/
1998-2001 DATA

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

NAME	PERCENT	DOLIAR	SPOT	PERCENT	PERCENT	% POA	PERCENT	UNIFORMITY RATINGS		STIMPMETER READINGS		
	JUNE 2000-01		JULY 2000	SNOW MOLD 1998	BROWN PATCH 1998-99	ANNUA NOVEMBER 2001	ESTABLISHMENT FALL	APRIL 1998	MAY 1998	SPRING 2000	SUMMER 1999-2001	FALL 1999-2001
PENN A-4	2.5		1.7	2.3	23.3	6.0	86.3	7.7	8.3	117.6	116.5	125.6
PENN G-6	2.0		0.7	3.0	8.2	5.7	81.3	7.0	7.7	114.2	118.8	120.6
PENN G-1	0.7		0.0	1.3	9.3	10.0	92.0	7.0	7.7	118.0	126.0	130.4
SR 1119	3.8		0.7	1.7	2.3	1.0	77.7	6.3	7.3	111.5	112.0	119.7
BACKSPIN	7.7		9.0	2.0	5.3	6.7	79.0	5.7	7.0	113.2	109.8	113.8
CENTURY	10.7		14.7	1.7	25.7	9.3	73.3	7.3	8.0	111.4	108.8	121.0
PENN A-1	0.3		0.0	15.7	9.0	3.0	63.3	6.0	6.7	115.7	117.3	124.1
CRENSHAW	6.8		6.0	3.0	8.5	13.7	74.3	5.3	6.0	125.0	118.3	123.5
IMPERIAL	3.0		6.0	0.7	4.8	5.3	91.7	6.7	7.0	116.1	111.7	121.1
CATO	0.7		0.0	18.0	7.0	5.7	82.7	6.0	7.0	123.1	118.3	125.0
GRAND PRIX (LCB-103)	0.3		0.7	1.3	11.5	6.0	89.3	6.3	6.3	110.4	118.3	121.7
L-93	0.0		0.0	3.3	4.0	6.0	88.7	5.3	6.7	121.7	120.6	126.0
SR 1020	2.7		2.3	6.7	3.5	3.0	90.0	7.0	5.7	123.2	125.0	127.5
VIPER	0.7		0.0	0.7	2.2	4.0	91.7	4.7	6.3	115.1	116.0	122.6
PUTTER	2.7		0.3	3.7	2.2	5.7	96.3	6.0	5.0	115.0	112.5	119.6
TRUELINE	2.0		0.3	11.0	4.0	12.7	91.7	5.0	6.0	108.7	100.7	111.3
PROVIDENCE	0.3		0.0	3.0	2.3	7.0	96.3	6.0	6.0	119.7	116.5	121.5
PENNCROSS	0.7		0.7	5.3	7.7	8.3	85.0	5.0	5.7	110.7	113.5	120.8
LSD VALUE	5.0		3.2	6.6	17.2	11.5	20.7	1.0	0.8	32.8	31.4	35.1
C.V. (%)	153.2		85.2	84.2	148.4	69.8	11.9	9.8	7.9	21.7	25.1	22.2

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 8E.
(CONT'D)

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/
1998-2001 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 SPRING	<u>PERCENT LIVING</u> <u>GROUND COVER</u>		<u>QUALITY RATINGS</u>								
					SPRING	SUMMER									
					1998,2001	2001	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
PENN A-4	7.4	7.0	8.2	7.8	97.5	87.7	7.3	6.4	6.9	8.1	7.4	7.8	7.4	7.9	7.4
PENN G-6	7.1	7.0	7.2	6.8	98.0	91.0	7.1	6.5	6.3	7.8	7.0	7.5	7.1	7.1	7.1
PENN G-1	7.3	7.7	7.1	7.3	96.3	86.3	7.1	6.6	6.8	7.8	6.5	7.2	6.5	7.3	7.0
SR 1119	7.3	7.0	7.2	7.1	92.5	83.0	6.9	6.7	6.9	7.8	6.6	7.0	7.3	6.8	7.0
BACKSPIN	6.9	6.3	7.8	7.3	96.5	88.0	6.8	6.5	6.5	7.7	6.4	7.0	6.7	7.3	6.9
CENTURY	6.4	6.7	7.8	7.8	94.2	78.0	7.2	6.7	6.1	7.0	6.3	7.6	6.7	7.4	6.9
PENN A-1	6.4	6.7	7.7	7.6	95.2	86.3	6.5	6.3	6.0	7.1	6.5	7.5	6.8	7.6	6.8
CRENSHAW	7.2	6.7	6.8	6.2	96.2	78.3	6.5	5.8	6.0	7.3	6.7	7.5	6.7	7.0	6.7
IMPERIAL	6.8	6.0	7.8	7.6	97.5	96.0	6.9	6.1	6.5	7.1	6.7	7.1	6.6	7.0	6.7
CATO	6.8	7.0	6.8	6.3	96.2	91.3	6.6	5.8	6.8	7.3	6.0	6.8	6.6	6.7	6.6
GRAND PRIX (LCB-103)	7.1	6.0	7.3	7.2	97.2	79.7	6.5	6.0	6.4	6.7	6.3	7.2	6.5	7.0	6.6
L-93	7.0	6.7	6.8	6.7	94.2	86.3	6.5	6.5	6.3	7.1	6.3	6.8	6.7	6.6	6.6
SR 1020	6.9	6.7	7.1	6.6	96.5	92.7	6.6	5.8	6.2	6.6	6.4	6.8	6.8	6.3	6.4
VIPER	7.2	7.7	6.8	6.0	95.5	76.7	6.1	5.8	6.3	6.7	6.1	6.5	6.8	6.5	6.3
PUTTER	6.2	5.7	6.4	6.1	96.0	84.7	6.3	5.4	5.9	6.4	5.9	6.3	6.5	6.7	6.2
TRUELINE	6.8	6.3	6.2	6.2	95.3	66.7	6.5	5.7	6.4	6.6	5.8	6.3	6.5	6.1	6.2
PROVIDENCE	6.8	6.7	6.7	6.2	97.7	78.0	6.4	5.7	6.7	6.6	5.4	6.1	5.8	6.6	6.1
PENNCROSS	6.9	7.0	5.9	6.2	92.7	76.3	6.2	5.4	6.0	5.6	5.3	5.5	5.7	6.0	5.7
LSD VALUE	1.8	1.9	0.7	1.2	13.4	49.8	0.7	2.4	1.8	0.8	1.0	0.7	1.0	0.8	0.4
C.V. (%)	16.6	11.4	12.2	16.7	5.4	18.2	11.4	25.2	18.1	14.2	17.4	13.3	15.0	13.4	7.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 9A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	15-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		21-Jan-98	0-0-50	1.0 lb. K	11-May-98	Scotts Weedgrass (Betasan)	2.5 lbs./M
		02-Mar-98	Milorganite	1.0 lb. N	30-Jun-98	Scotts Weedgrass (Betasan)	1.5 lbs./M
FACTORS OF PLAY		08-Apr-98	18-3-16 Isotek 31	1.5 lbs. N			
		14-Apr-98	18-3-16 Isotek 31	1.0 lb. N			
Date opened for play	mid-July, 1998	11-Jun-98	Eco N (organic)	0.1 lb. N			
Date closed for play		18-Jun-98	18-5-9 Country Club	0.25 lb. N			
Type of spikes allowed		29-Jun-98	0-0-25 White Gold	1.0 lb. K			
Uses of green	putting	12-Jul-98	LESCO 12-0-0 + Fe	0.1 lb. N			
		07-Aug-98	18-3-16 Isotek 31	0.3 lb. N			
MOWING		22-Sep-98	18-4-10 Country Club	0.5 lb. N			
		06-Nov-98	18-4-10 Country Club	1.0 lb. N	INSECTICIDES		
Initial height		30-Nov-98	0-0-25 White Gold	1.0 lb. K			
Current height	0.145"				Date(s)	Product	Rate (oz./M)
Frequency		FUNGICIDES					
Type of mower					15-May-98	Dursban 50 WSP	3
Rollers used		Date(s)	Product	Rate (oz./M)	18-Jun-98	Dursban 50 WSP	3
Groomers used	every 5 days				23-Aug-98	Dursban 50 WSP	3
	6/3 - 9/4	07-May-98	Fore	6			
CULTIVATION		07-May-98	Banner Maxx	1			
		26-May-98	Heritage	0.5			
Aerfication - dates	20-Jul-98	26-May-98	Daconil Ultrex	2.5	OTHER PRODUCTS		
Aerification - type	Hydroject	12-Jun-98	Heritage	0.5			
Verticutting	None	12-Jun-98	Fore	6	Date(s)	Product	Rate (oz./M)
Dates of topdressing	every 10-14 days	22-Jun-98	Aliette	3.3			
	from 4/13 - 9/28	22-Jun-98	Daconil Ultrex	5	June	Wetting agent	
		05-Jul-98	Subdue Maxx	1	July	Wetting agent	
Other cultural practices	None	05-Jul-98	Fore	6	August	Wetting agent	
		06-Aug-98	Aliette	3.3			
		06-Aug-98	Daconil Ultrex	5	NOTES/COMMENTS		
		28-Aug-98	Banner Maxx	0.5			
		28-Aug-98	Fore	4			
		11-Sep-98	Daconil Ultrex	5			

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TABLE 9B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	15-Sep-97	Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (oz./M)
Problems during		3/22, 10/8, 10/28	Isotek 18-3-16	1.0 lb. N	30-Apr	Daconil Ultrex	3
		23-Jun	11-52-0	4.1 lbs. prod.		Heritage	0.4
FACTORS OF PLAY					27-May	Daconil Ultrex	4
		09-Jul	Gary's Green (18-3-4 +Fe)	2 oz.		Heritage	0.4
Date opened for play		13-Jul	Gary's Green (18-3-4 +Fe)	12 oz.	25-Jun	Subdue Maxx	1.4
Date closed for play		20-Jul	Gary's Green (18-3-4 +Fe)	3 oz.		Daconil Ultrex	2.7
Type of spikes allowed		10-Aug	Gary's Green (18-3-4 +Fe)	4 oz.	06-Jul	Prostar 50WP	6
Uses of green					09-Jul	Heritage	0.4
		07-Sep	Kmag 0-0-22	5 lbs. prod.		Fore	12.8
MOWING		9/7, 9/20	Country Club 18-4-10	0.5 lb. N	13-Jul	Daconil Ultrex	12
		17-Sep	Growth Prod.18-4-10	0.1 oz./M		Compass	4g.
Initial height		20-Sep	Step high Mag.(trace elem.)	0.9 lb. prod.		Alliette	7
Current height	0.145" (0.171"-Winter)	04-Oct	White Gold 0-0-25	1.0 lb. K	20-Jul	Chipco 26019	2.9
Frequency		09-Nov	Ultra Cal	5 lbs. prod.		Banol	2
Type of mower		15-Nov	Bio Basics Minors	3 oz.	26-Jul	Prostar	4.5
Rollers used			Bio Basics K	6 oz.		Alliette	4
Groomers used	every 6 days		Bio Basics Cal.	3 oz.		Consyst	4
	from April to June		Bio Flora Root Builder	3 oz.	30-Jul	Daconil Ultrex	9
CULTIVATION		13-Dec	Bio Basics Pro Gro	2.5 oz.	04-Aug	Subdue Maxx	1
			Sol-u-bor	1.9 oz.	06-Aug	Fore	12.8
Aerfication - dates	July					Banner Maxx	3
Aerification - type	Toro Hydroject	INSECTICIDES			Aug. 13, 20, 25	Fore	9.6
Verticutting					01-Sep	Daconil Ultrex	7.5
Dates of topdressing	every 7-10 days	Date(s)	Product	Rate (oz./M)	08-Sep	Consyst	6
	from 4/13 - 11/15				06-Oct	Consyst	5
		25-Jun	Delta Guard	0.7	13-Dec	Daconil Ultrex	5
Other cultural practices	None	13-Jul	Tempo	0.2		Chipco GT	3.5
		8/6, 9/17, 10/6	Dursban 50 WSP	2 lbs./Acre			
OTHER PRODUCTS					HERBICIDES		
		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
					None		
		30-Apr	Cascade wetting agent	10			
		05-Jul	Aquifer wetting agent	4.5			
		08-Jul	Aquifer wetting agent	2.2	NOTES/COMMENTS		
		30-Jul	Aquifer wetting agent	4			

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TABLE 9C. 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		10-Mar	Chipco GT	4	None		
		10-Mar	Daconil Ultrex	10 lbs./A			
FACTORS OF PLAY		22-Mar	Daconil Ultrex	2			
		25-Apr	Heritage	0.2	FERTILIZATION		
Date opened for play	open year round	25-Apr	Daconil Ultrex	2			
Date closed for play		19-May	Daconil Ultrex	1.5	Date(s)	Product	Rate (lbs. oz./M)
Type of spikes allowed	Softspikes	02-Jun	Heritage	0.2			
Uses of green	Putting, Chipping	02-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.
MOWING		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	0.145" (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	07-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	02-Sep	Subdue Maxx	1	22-Mar	Bio Basics Pro Gro	2 oz.
		9/2, 9/23, 10/1	Daconil Ultrex	1.5	22-Mar	Macrosorb foliar	1 oz.
CULTIVATION		13-Oct	Daconil Ultrex	4	27-Mar	Macrosorb Radicular	1 oz.
		27-Nov	Echo 720	1.5	27-Mar	Bio Basics Cal 2.5-0-0-8	1 oz.
Aerification - dates	July	27-Nov	Chipco GT	3.8	27-Mar	Bio Basics Carb. 2-0-0	2 oz.
Aerification - type	Hydroject				27-Mar	Humega	1 gal./A
Verticutting	Mar., Apr., June, Sept.				31-Mar	Bio Basics N 24-0-0	5 oz.
Dates of topdressing	every 2 weeks during season	INSECTICIDES			31-Mar	Bio Basics P 2-20-0	1 oz.
		Date(s)	Product	Rate (oz./M)	31-Mar	Bio Basics K 1-0-24	2 oz.
Other cultural practices	None				31-Mar	Micro 2-0-0-4	1 oz.
		10-Mar	Scimitar	10oz./A	31-Mar	Bio Basics Pro Gro	2 oz.
		13-Jun	Conserve SC	32oz./A			
		10-Jul	Dursban	2 lbs./Acre	NOTES/COMMENTS		
		15-Aug	Scimitar	9oz./A			
		06-Sep	Dylox	3			
					on the green.		
		OTHER PRODUCTS					
		Date(s)	Product	Rate (oz./M)			
		None			original green mix.		

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TABLE 9C. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)
(Cont'd)

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.
09-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.	02-Sep	Eco N 24-0-0	0.5 oz.
10-Apr	Bio Basics Minors	2 oz.	20-Jun	Macrosorb foliar	1 oz.	02-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.	02-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.	02-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	02-Sep	Macrosorb foliar	1 oz.
10-Apr	Macrosorb foliar	1 oz.	27-Jun	White Gold 0-0-24	1lb. K	02-Sep	Bio Basics Mag	1 oz.
17-Apr	Eco Carbo's	2 oz.	28-Jun	Macrosorb Radicular	1 oz.	04-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	04-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	04-Sep	Gypsum	3/4 lbs.
25-Apr	Eco P 2-20-0	2 oz.	03-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.	03-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.	03-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.	03-Jul	Bio Basics Minors	2 oz.	23-Sep	Bio Basics Pro Gro	3 oz.
25-Apr	Macrosorb foliar	1 oz.	03-Jul	Bio Flora iron	2 oz.	23-Sep	Bio Basics Cal	3 oz.
02-May	White Gold 0-0-24	1lb. K	03-Jul	Macrosorb foliar	1 oz.	01-Oct	Bio Basics N 24-0-0	1.5 oz.
15-May	Bio Basics Carb	1 gal./A	03-Jul	Roots Stand Up	3 oz.	01-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.	01-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.	01-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.	01-Oct	Bio Basics Cal	1.5 oz.
15-May	Magnesium	3 lbs./A	10-Jul	Bio Basics Minors	1 oz.	06-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.
01-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
02-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
02-Jun	Bio Basics N 24-0-0	1 oz.	18-Jul	Gypsum	4 lbs.	13-Nov	Par Ex 21-3-16	1 lb. N
02-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
02-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.
02-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.
02-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

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TABLE 9D. 2001 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							
		30-Mar	Manicure Ultrex	2	None		
		16-Apr	Manicure Ultrex	2			
FACTORS OF PLAY		30-Apr	Prostar	2.2			
		04-May	Manicure Ultrex	2	OTHER PRODUCTS		
Date opened for play		24-May	Manicure Ultrex	2			
Date closed for play		07-Jun	Manicure Ultrex	2	Date(s)	Product	Rate (oz./M)
Type of spikes allowed		14-Jun	Heritage	0.25			
Uses of green		14-Jun	Concorde	4 lbs../A	14-Apr	Scotts TGR	8 oz./A
		25-Jun	Concorde	3.5 lbs../A	30-Apr	Lesco Flo.	8
MOWING		06-Jul	Prostar	1.2	14-May	Aqueduct	8
		07-Jul	Manicure Ultrex	6	24-May	Scotts TGR	6 oz./A
Initial height		07-Jul	Prodigy	7	25-Jun	Scotts TGR	6 oz./A
Current height	0.135" (0.145" Winter)	12-Jul	Touche	2.75 lbs../A	06-Jul	Aqueduct	7
Frequency		23-Jul	Manicure Ultrex	2	17-Jul	Scotts TGR	4 oz./A
Type of mower		30-Jul	Chipco Aliette	2	07-Aug	Aqueduct	6
Rollers used		07-Aug	Banol	1.3	05-Sep	Trimmit	6 oz./A
Groomers used		07-Aug	Cavalier	2	23-Oct	Trimmit	6 oz./A
		13-Aug	Manicure Ultrex	2			
CULTIVATION		28-Aug	Manicure Ultrex	2			
		05-Sep	Touche	2.75 lbs../A			
Aerfication - dates	September	11-Dec	Manicure Ultrex	2			
Aerfication - type	1/4" quadlines	11-Dec	Chipco GT	3.5			
Verticutting	3 times						
Dates of topdressing	every 2 weeks in Spring and Fall, less frequently in Summer.Topdressing from March to December.	INSECTICIDES			NOTES/COMMENTS		
		Date(s)	Product	Rate (oz./M)			
		14-Apr	Math 2	3 qt/A			
		07-Jun	Dursban 50WP	2 lbs./A			
		06-Jul	Scimitar	10oz./A			
		30-Jul	Scimitar	10oz./A			
Other cultural practices	None						

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TABLE 9D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)
(Cont'd)

FERTILIZATION			FERTILIZATION			FERTILIZATION		
Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)
15-Mar	Soil Synergy 10-2-8	.1 lb N/1000	7-Jun	Proganics 10-5-10	3 oz/1000	23-Jul	Macrosorb Foliar	.5 oz/1000
15-Mar	White Gold 0-0-24	.5 lb K/1000	7-Jun	Fish emulsion	2 oz/1000	23-Jul	Proganics 10-5-10	2 oz/1000
30-Mar	Proganics 10-5-10	4 oz/1000	7-Jun	Bio Basics 24-0-0	.5 oz/1000	23-Jul	Eco P 2-20-0	2 oz/1000
30-Mar	Fish emulsion	2 oz/1000	7-Jun	Bio Basics P	.5 oz/1000	23-Jul	Eco N 24-0-0	2 oz/1000
30-Mar	Seaweed	2 oz/1000	7-Jun	Manganese sulfate	3 lb/A	23-Jul	Eco K 1-0-24	1 oz/1000
11-Apr	sulfate of potash	1 lb K/1000	7-Jun	Macrosorb Foliar	.25 oz/1000	30-Jul	Macrosorb Radicular	.5 oz/1000
11-Apr	MAP	.25 lb P/1000	14-Jun	Fish emulsion	1 oz/1000	30-Jul	Proganics 10-5-10	3 oz/1000
16-Apr	Proganics 10-5-10	4 oz/1000	14-Jun	Seaweed	1 oz/1000	30-Jul	Bio Basics P 2-20-0	.5 oz/1000
16-Apr	Fish emulsion	2 oz/1000	14-Jun	Macrosorb Radicular	.25 oz/1000	7-Aug	Proganics 10-5-10	3 oz/1000
16-Apr	Seaweed	2 oz/1000	14-Jun	Magnesium	64 oz/A	13-Aug	Proganics 10-5-10	3 oz/1000
16-Apr	Macrosorb Foliar	1 oz/1000	14-Jun	Manganese sulfate	3 lb/A	13-Aug	Macrosorb Foliar	.5 oz/1000
16-Apr	Bio Basics 24-0-0	1 oz/1000	14-Jun	Dextrose	3 lb/A	28-Aug	Bio Flora Iron	1 gal/A
19-Apr	Macrosorb Foliar	.75 oz/1000	25-Jun	Fish emulsion	1 oz/1000	28-Aug	Macrosorb Foliar	.5 oz/1000
30-Apr	manganese	2.75 oz/1000	25-Jun	Seaweed	1 oz/1000	28-Aug	Manganese	3 lb/A
4-May	Proganics 10-5-10	3 oz/1000	25-Jun	Macrosorb Foliar	.25 oz/1000	28-Aug	Bio basics N 24-0-0	2 oz/1000
4-May	Fish emulsion	2 oz/1000	25-Jun	Proganics 10-5-10	1 oz/1000	5-Sep	Bio Flora Iron	64 oz/A
4-May	Seaweed	2 oz/1000	7-Jul	Proganics 10-5-10	2 oz/1000	5-Sep	humic acid	1 gal/A
6-May	KMAG	5 lb/1000	7-Jul	Macrosorb Foliar	.25 oz/1000	5-Sep	Dextrose	10 lb/A
6-May	MAP	.25 lb P/1000	13-Jul	Sanctuary 10-2-8	.2 lb N/1000	15-Oct	Daniels 21-3-8	2 gal/A
24-May	Proganics 10-5-10	2 oz/1000	13-Jul	gypsum	5 lb/1000	15-Oct	White Gold 0-0-24	10 lb/A
24-May	Fish emulsion	2 oz/1000	13-Jul	White Gold 0-0-24	.65 lb K/1000	15-Oct	Macrosorb Foliar	.25 oz/1000
24-May	Seaweed	2 oz/1000	17-Jul	Macrosorb Radicular	.15 oz/1000	23-Oct	Daniels 21-3-8	1.5 gal/A
1-Jun	KMAG	5 lb/1000	17-Jul	Bio Basics 24-0-0	1 oz/1000	13-Nov	Daniels 21-3-8	3 gal/A
1-Jun	Soil Synergy 10-2-8	.15 N lb/1000	17-Jul	Bio Basics P	1 oz/1000	27-Nov	IBDU 21-3-16	1 lb N/1000
			17-Jul	Bio Basics K	1 oz/1000	11-Dec	Proganics 10-5-10	3 oz/1000

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TABLE 9E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	DOLLAR	PERCENT	STIMPMETER READINGS			QUALITY RATINGS											
				SPOT 1999	ESTABLISHMENT FALL	SPRING 1999	SUMMER 1998-99	FALL 1998-99	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN	
PENN A-4	7.6	3.0	8.0	9.0	91.7	115.7	110.3	121.2	7.0	6.1	7.3	7.7	7.7	7.4	7.7	7.2	7.1	6.7	7.2	
CENTURY	6.7	3.3	7.0	7.7	90.0	105.3	105.5	112.8	7.0	6.2	6.8	7.4	7.5	7.3	7.5	7.1	6.6	6.7	7.0	
PENN A-1	7.8	3.0	8.0	9.0	78.3	117.3	112.2	117.2	6.7	5.8	7.0	6.9	7.5	7.3	7.8	7.3	6.9	6.0	7.0	
PENN G-1	7.4	3.3	8.0	8.7	94.3	110.0	106.7	113.7	7.0	6.2	6.8	7.2	7.5	7.1	7.8	7.3	6.7	6.7	7.0	
BACKSPIN	6.1	3.3	7.3	8.3	91.7	110.7	104.3	107.3	7.0	6.3	7.2	7.6	7.5	7.0	7.3	6.9	6.0	6.0	6.9	
IMPERIAL	7.2	3.0	7.3	8.0	92.7	110.0	106.8	123.5	7.0	6.2	7.3	7.4	7.7	7.0	7.4	7.0	6.2	5.7	6.9	
PENN G-6	7.6	4.7	8.0	8.3	90.0	114.0	113.8	128.2	6.3	6.1	6.9	6.8	7.3	7.0	7.5	7.1	6.8	6.0	6.9	
GRAND PRIX (LCB-103)	6.9	3.3	7.0	9.0	88.3	110.0	108.5	122.7	6.3	5.6	6.8	6.8	7.1	7.0	7.0	6.9	6.7	6.0	6.7	
L-93	7.3	4.7	6.7	9.0	83.3	111.7	111.8	115.2	6.3	5.8	6.7	6.6	6.9	7.1	7.2	6.8	6.3	6.7	6.6	
SR 1119	7.2	4.0	7.0	9.0	91.7	120.0	117.3	123.2	6.7	5.8	6.7	6.9	7.2	6.8	6.8	6.3	5.8	6.0	6.5	
CATO	7.0	4.0	6.7	9.0	85.0	112.0	114.2	125.8	6.7	5.8	6.7	6.2	6.8	6.8	6.6	6.6	5.8	6.0	6.4	
SR 1020	7.3	3.7	7.0	8.7	91.0	112.0	113.0	121.3	6.0	5.8	6.5	6.7	6.7	6.5	6.8	6.5	6.2	6.0	6.4	
CRENSHAW	7.2	2.7	7.0	8.3	90.0	102.7	119.8	124.5	6.3	5.6	6.2	6.2	7.0	6.6	6.8	6.4	5.8	5.7	6.3	
PROVIDENCE	7.0	4.0	6.7	8.7	88.3	114.0	109.3	122.5	6.3	5.8	6.6	6.1	6.7	6.5	6.5	6.4	5.8	6.0	6.3	
TRUELINE	7.0	4.0	5.7	8.3	86.7	118.3	109.8	119.8	6.0	5.7	6.7	6.1	6.7	6.5	6.3	6.1	5.6	5.7	6.2	
VIPER	7.2	3.7	6.3	9.0	92.7	116.0	116.7	122.3	6.0	5.9	6.7	6.3	6.6	6.3	6.4	5.9	5.5	5.7	6.2	
PUTTER	6.7	4.0	6.0	9.0	93.3	116.3	110.0	119.0	6.3	5.4	6.3	6.2	6.6	6.4	6.2	6.0	5.8	5.0	6.1	
PENNCROSS	5.8	3.3	4.0	9.0	94.7	110.0	101.0	108.7	5.3	5.1	5.6	5.4	5.8	5.8	5.4	5.3	4.8	4.3	5.3	
LSD VALUE	0.6	1.6	0.7	1.1	16.2	22.2	80.6	35.7	0.7	3.2	0.8	0.8	0.5	0.4	0.6	0.6	1.1	1.5	0.4	
C.V. (%)	9.5	19.7	7.0	5.7	7.0	6.8	24.0	13.0	6.5	27.3	12.9	12.4	8.5	8.5	11.5	11.1	19.4	11.9	8.5	

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 10A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT RYE, NY (WESTCHESTER COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date		Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during							
		09-Apr-98	Nature Safe 8-3-5	0.5 lb. N	None		
		30-Apr-98	Scotts Contec 19-2-15	0.5 lb. N			
FACTORS OF PLAY		29-Jun-98	Scotts Contec 19-2-15	0.5 lb. N			
		09-Jul-98	Lesco 18-3-18	0.5 lb. N			
Date opened for play		12-Sep-98	Lesco elite 13-3-13	1 lb. N			
Date closed for play							
Type of spikes allowed							
Uses of green					INSECTICIDES		
MOWING					Date(s)	Product	Rate (oz./M)
Initial height					18-May-98	Merit 75 WSP	6.4 oz./Acre
Current height							
Frequency		FUNGICIDES					
Type of mower							
Rollers used		Date(s)	Product	Rate (oz./M)			
Groomers used							
		27-Jan-98	Engage 10G	6 lbs./M			
CULTIVATION		17-Feb-98	Engage 10G	6 lbs./M			
		07-May-98	Chipco 26 GT	8			
Aerification - dates	07-Sep-98	25-May-98	Banner Maxx	4	OTHER PRODUCTS		
Aerification - type	Quadra-tine	25-Jun-98	Echo 720	4			
Verticutting	None	23-Jul-98	Bayleton 50	2.5	Date(s)	Product	Rate (oz./M)
Dates of topdressing	5/18, 7/13, ?	29-Jul-98	Echo 720	3			
Other cultural practices	None	29-Jul-98	Heritage	4	25-May-98	Primer (wetting agent)	4
		26-Sep-98	Manicure 6 Flowable	4	26-Jun-98	Primer	4
		26-Sep-98	Banner Maxx	5	20-Jul-98	Primer	4
		26-Oct-98	Manicure 6 Flowable	3	29-Jul-98	Primo	2.25
		26-Oct-98	Bayleton 50	1	31-Aug-98	Primer	4
		17-Dec-98	PCNB	6 lbs./M			

NOTES/COMMENTS

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

TABLE 10B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT RYE, NY (WESTCHESTER COUNTRY CLUB)

ESTABLISHMENT	FERTILIZATION			HERBICIDES		
Seeding date	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during						
	16-Apr	19-26-5	0.5 lb. N	None		
	26-Jul	19-2-15	0.5 lb. N			
FACTORS OF PLAY	7/27,8/10, 8/23, 10/25	12-3-12	7.14 gal./Acre			
	7/27,8/10, 8/23, 10/25	Sugar Cal.	0.68 gal./Acre			
Date opened for play	7/27,8/10, 8/23, 10/25	Magnesium	1 gal./Acre			
Date closed for play	12-Oct	19-25-5	1 lb. N			
Type of spikes allowed						
Uses of green				INSECTICIDES		
MOWING	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Initial height	Date(s)	Product	Rate (oz./M)	13-Jun	Nemacur	2.5 lbs.
Current height						
Frequency	07-May	Terraclor	7			
Type of mower	5/7, 8/23	Echo 720	4			
Rollers used	5/24, 7/19	Primer	4			
Groomers used	17-Jun	Primer				
	5/28, 7/13	Chipco 26019 Flo	4	OTHER PRODUCTS		
CULTIVATION	28-May	Daconil weather stik	4			
	6/1, 7/12, 8/1,	Banner Maxx	4	Date(s)	Product	Rate (oz./M)
Aerfication - dates	13-Jul	Chipco Aliette	4			
Aerification - type	27-Jul	Primo liquid	2	None		
Verticutting	7/27, 8/10	Daconil weather stik	2			
Dates of topdressing	7/27, 8/10	Banner Maxx	0.5			
Other cultural practices	8/10, 8/23,10/25	Primo WSB	4			
	23-Aug	Clearys 3336	4			
	06-Oct	Banner Maxx	1	NOTES/COMMENTS		
		Echo 720	2			
	20-Oct	Turficide (PCNB)	6 lbs.			

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TABLE 10C.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SEEDLING VIGOR	DENSITY SPRING	DENSITY SUMMER	DENSITY FALL	PERCENT LIVING COVER		DOLLAR SPOT 1998	QUALITY RATINGS									
								SUMMER 2000	FALL 2000		APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN	
PENN A-4	5.6	6.6	8.9	7.3	8.4	8.4	7.8	94.3	97.0	7.3	7.3	8.6	8.8	7.6	8.0	7.3	8.1	8.3	8.0	
CENTURY	3.8	6.4	8.8	7.0	7.8	8.0	7.6	91.7	85.0	5.7	7.1	8.3	8.5	7.3	7.8	7.3	7.0	6.7	7.6	
PENN A-1	5.7	5.9	8.2	4.0	7.8	7.8	7.3	80.7	90.0	8.0	6.8	8.3	8.2	7.3	7.5	6.8	8.3	6.7	7.6	
PENN G-1	5.8	6.7	8.2	7.0	7.8	7.5	7.2	89.0	81.7	8.0	7.5	8.0	8.3	7.9	7.3	6.9	7.7	6.7	7.6	
GRAND PRIX (LCB-103)	3.5	6.2	7.8	8.0	6.9	7.2	7.0	91.7	91.7	7.7	6.6	7.3	7.5	7.7	7.0	6.6	7.2	5.7	7.0	
L-93	7.2	5.3	6.8	5.0	6.4	6.4	6.3	88.3	73.3	8.7	6.0	7.3	7.5	6.9	7.3	6.3	6.8	7.0	6.9	
PENN G-6	5.8	6.1	7.3	6.7	7.6	7.2	6.7	93.3	85.0	8.0	6.5	7.4	7.4	6.7	7.2	6.5	6.7	5.3	6.9	
SR 1119	7.8	5.2	6.7	5.0	6.7	6.4	5.8	81.7	73.3	8.3	6.2	7.5	7.3	7.0	6.8	6.2	6.3	5.7	6.7	
IMPERIAL	4.2	4.6	8.1	7.7	7.1	6.9	5.4	86.7	68.3	6.3	5.6	7.1	6.9	6.6	6.8	5.5	6.1	4.7	6.3	
BACKSPIN	3.6	5.0	7.6	5.3	6.5	7.0	5.8	85.0	71.7	6.3	5.7	7.1	7.1	6.9	6.3	5.5	5.4	4.7	6.2	
CRENSHAW	6.0	3.9	6.0	6.3	5.6	5.8	5.2	76.7	70.0	7.0	5.5	6.6	6.1	6.4	6.3	5.6	5.8	5.3	6.0	
SR 1020	4.8	4.5	6.1	4.3	5.8	6.4	6.2	80.0	73.3	7.7	5.3	6.3	6.0	6.2	6.1	5.7	6.3	5.7	5.9	
PROVIDENCE	5.4	5.7	5.9	6.7	5.4	5.3	5.1	70.0	70.0	8.7	5.7	6.3	5.4	6.1	5.2	4.6	5.4	5.0	5.5	
CATO	6.0	4.1	6.3	4.7	5.3	5.2	5.0	70.0	68.3	7.7	4.6	6.3	5.8	6.1	5.0	4.4	5.3	5.3	5.3	
TRUELINE	5.5	4.7	5.1	8.0	4.7	4.8	4.2	58.3	55.0	7.7	5.0	5.2	4.8	5.0	4.7	4.1	4.6	4.0	4.7	
VIPER	6.8	3.3	5.7	6.7	5.3	4.6	4.2	48.3	55.0	8.0	4.3	5.4	4.8	5.0	4.3	3.8	4.9	4.3	4.6	
PUTTER	4.0	3.2	4.2	7.3	3.4	3.8	3.3	50.0	45.0	8.3	3.8	4.3	3.8	4.8	3.8	3.3	3.7	4.0	3.9	
PENNCROSS	2.8	4.6	2.7	6.3	2.8	3.2	2.0	55.0	40.0	8.7	3.3	3.8	2.8	3.4	2.9	2.8	3.0	2.0	3.1	
LSD VALUE	0.7	1.0	0.6	1.7	0.8	0.9	1.1	9.7	10.1	0.9	0.9	0.7	0.6	0.7	0.7	1.0	0.7	0.9	0.4	
C.V. (%)	18.2	25.3	10.7	15.9	16.9	20.3	21.8	8.3	9.3	7.0	22.1	15.1	12.7	13.5	15.5	23.5	13.7	10.9	9.1	

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 11A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT DALLAS, TX (BENT TREE COUNTRY CLUB)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	10-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None	March -June every two weeks	14-4-10 6-0-0 0-0-13		October, Dec.	Scotts Weedgrass Preventer	3.4 lbs./M
FACTORS OF PLAY					INSECTICIDES		
Date opened for play		monthly April-June	Turf Plex VI		Date(s)	Product	Rate (oz./M)
Date closed for play	not closed						
Type of spikes allowed	softspikes		Scotts 22-0-12				
Uses of green	putting, chipping		Scotts 18-9-18 ISK 18-3-16 SulPoMag 0-0-22 Polyon 0-0-46 Polyon 0-0-50		June July August	Battle GC Orthene WSP Battle GC	
MOWING					OTHER PRODUCTS		
Initial height	3/8"			TOTAL N: 6.95 lbs.	Date(s)	Product	Rate (oz./M)
Current height	1/8"			TOTAL P: 1.73 lbs.			
Frequency	6 days/week			TOTAL K: 12.17 lbs.	every two weeks from July- December	Astron FG-20 Knife	
Type of mower	walking					Now 12-0-12 Now 6-12-3 Now 4-4-16 Phlex-Man Phlex-Mag Renaissance	
Rollers used	June-Sept. (solid)						
Groomers used	Oct.-May depends on weather						
CULTIVATION		FUNGICIDES					
		Date(s)	Product	Rate (oz./M)			
Aerfication - dates	Hydroject monthly-June-Sept.						
Aerfication - type	Deep drill - September 23	weekly May-Sept.	Banol or Subdue WSP				
Verticutting	bimonthly-March-May & Oct. monthly-June, July, Sept.		Daconil Ultrex or Chipco 26019 WP or Banner Maxx or Cleary 3336 WP or ProStar 70WP		monthly from July-Dec.	Perk-Up Maxiplex Prevacle	
Dates of topdressing	bimonthly-Feb-June, Oct.-Dec. monthly-July, Aug., Sept.		Aliette or Fore			Pro-Mag 36 Mini-Mag Gypsum	
Other cultural practices	None	August and Sept. Spring: 2 applications Fall: 2 applications Spring	Heritage Heritage Koban 30	0.4 0.4 6 oz. as spring drench application at 4 gal./M	NOTES/COMMENTS		
					Kept green as dry as possible. It was necessary to hand cool greens during excessive heat in June-Sept. Had more than 50 days over 100 degrees F with 40 in a row. Record highs over 110 degrees F in July and Sept.		

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TABLE 11B. 1999 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							
FACTORS OF PLAY		26-Feb	Par Ex 16-0-24	0.5 lb. N	HERBICIDES		
		20-Mar	Par Ex 16-0-24	0.5 lb. N			
Date opened for play		01-May	Polygon 0-0-46	1 lb. K			
Date closed for play		21-Jun	Polygon 0-0-46	1 lb. K			
Type of spikes allowed		14-Jul	Polygon 0-0-46	1 lb. K			
Uses of green		02-Sep	Polygon 0-0-46	1 lb. K	Date(s)	Product	Rate (oz./M)
		20-Sep	Scotts 13-2-26	0.5 lb. N			
		25-Oct	Polygon 0-0-46	1 lb. K			
		15-Nov	Scotts 15-0-29	0.5 lb. N			
		18-Nov	Polygon 0-0-46	0.5 lb. K			
MOWING		10-Dec	Scotts 15-0-29	0.5 lb. N	INSECTICIDES		
Initial height		21-Dec	Polygon 0-0-32	0.5 lb. K			
Current height					Date(s)	Product	Rate (oz./M)
Frequency		Total - Granular app.	2.5 lbs. N,	0.10 lbs. P,	10.4 lbs. K		
Type of mower							
Rollers used							
Groomers used		Liquid (Foliar) Fertilizer Applications					
Every two weeks throughout year (28 Apps)							
CULTIVATION					OTHER PRODUCTS		
		Each Floratine app. consisted of:		0.15 lb. N	Date(s)ProductRate (oz./M)		
Aerfication - dates				0.08 lb. P			
Aerification - type				0.15 lb. K			
Verticutting							
		Total - Foliar app.	3.6 lbs. N,	1.9 lbs. P,	3.6 lbs. K		
Dates of topdressing							
Other cultural practices		Total Fertilizer app.	6.1 lbs. N,	2.0 lbs. P,	14.0 lbs. K	NOTES/COMMENTS	

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TABLE 11C. 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					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	Date(s)	Product	Rate (oz./M)
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	INSECTICIDES		
		December	Scotts 15-0-29	0.5 lb. N			
Initial height		December	Polyon 0-0-32	0.5 lb. K			
Current height	0.125"				Date(s)	Product	Rate (oz./M)
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					
Every two weeks throughout year (24 Apps)					OTHER PRODUCTS		
CULTIVATION		Each Floratine app. consisted of:					
Aerfication - dates	Solid tine (1/4") in May, Sept.				Date(s)	Product	Rate (oz./M)
Aerfication - 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	Total Fertilizer app.	3.8 lbs. N, 0.8 lbs. P, 12.5 lbs. K		NOTES/COMMENTS		
	growing season - March						
	through November at light						
	rates with Turfco spinner						
	unit.Heavy application						
	following solid tine						
	aerification.						
Other cultural practices	Rolled before special events.						
	6 times in April-June. Rolled						
	7 times/week in Winter when						
	nor necessary to mow.						

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TABLE 11D. 2001 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			Applied Heritage 2apps spring (April and May) & 2apps fall (Sept and Oct)		
FACTORS OF PLAY		February	Par Ex 16-0-24	0.5 lb. N	Application Aliette 4oz and Fore 8oz in August		
		March	Par Ex 16-0-24	0.5 lb. N	Applications of Banol @1.3oz in April/June/August and Subdue		
Date opened for play	open year round	May	Polygon 0-0-46	1 lb. K	Maxx @1oz in May/July/Sept		
Date closed for play	5 days in Winter weather	June	Polygon 0-0-46	1 lb. K	Koban drench @ 8oz in April following Star Tine		
	related plus ever Mon.	July	Polygon 0-0-46	1 lb. K	ProStar drench @6oz in May following Star Tine		
Type of spikes allowed	Softspikes	September	Polygon 0-0-46	1 lb. K			
Uses of green	Chipping and Putting	September	Scotts 13-2-26	0.5 lb. N			
		October	Polygon 0-0-46	1 lb. K	HERBICIDES		
		November	Scotts 15-0-29	0.5 lb. N			
MOWING		November	Polygon 0-0-46	0.5 lb. K	Date(s)	Product	Rate (oz./M)
		December	Scotts 15-0-29	0.5 lb. N			
Initial height		December	Polygon 0-0-32	0.5 lb. K	Applied Conserve GC week prior to each star tine cultivation		
Current height	0.125"						
Frequency	6 days/week	Total - Granular app.	2.5 lbs. N,	0.10 lbs. P,	10.4 lbs. K		
Type of mower	Toro walkers						
Rollers used	Brush 2-4X/week with solid						
Groomers used	rollers all year	Foliar Fertilizer Applications			INSECTICIDES		
		Every two weeks throughout year (24 Apps)			Date(s)	Product	Rate (oz./M)
CULTIVATION		Each Floratine app. consisted of:			Applied Conserve GC week prior to each star tine cultivation		
Aerfication - dates	April, June, Aug, Sept.						
Aerification - type	Star tine	Total - Foliar app.	1.3 lbs. N,	0.7 lbs. P,	2.1 lbs. K		
Verticutting	Verticut 1X/week - Mar-May, Oct; 1X/month - June-Sept.				OTHER PRODUCTS		
					Date(s)	Product	Rate (oz./M)
Dates of topdressing	Topdressed with sand 1X/week lightly - March-June and Sept.-Oct; sand 1X/month lightly July and August; sand medium after solid tine cultivation.	Total Fertilizer app.	3.8 lbs. N,	0.8 lbs. P,	12.5 lbs. K	None	
					NOTES/COMMENTS		
Other cultural practices	Triplex mount for special events (10X/year) and after Star Tine Cultivation.						

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

TABLE 11E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	DENSITY SPRING	DENSITY SUMMER	DENSITY FALL	QUALITY RATINGS													
							JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN	
PENN A-1	6.8	7.0	5.8	7.9	7.6	8.7	7.3	7.3	7.3	6.9	7.2	7.3	6.8	7.4	6.7	6.9	7.9	7.3	7.2	
PENN A-4	7.5	7.3	5.9	7.8	7.0	8.3	7.4	7.3	7.5	7.3	7.5	7.8	6.7	7.2	6.1	7.0	7.6	7.2	7.2	
PENN G-1	6.9	6.0	5.3	7.8	7.3	8.3	7.3	7.7	7.6	6.6	7.2	7.1	6.8	7.6	6.7	7.0	7.5	7.6	7.2	
CENTURY	6.3	5.3	6.2	7.4	7.3	8.3	7.0	7.0	7.6	6.6	7.0	7.4	6.6	7.4	5.8	7.3	7.3	7.0	7.0	
GRAND PRIX (LCB-103)	6.2	5.3	5.4	7.2	6.8	8.3	7.3	7.6	7.3	6.1	7.0	7.6	6.1	7.3	7.0	6.8	7.0	7.3	7.0	
IMPERIAL	6.2	5.7	5.4	7.8	7.1	8.3	7.0	7.5	7.4	6.8	7.2	7.2	6.6	7.3	6.4	6.7	6.7	7.2	7.0	
SR 1119	7.1	8.0	5.3	7.7	6.9	7.8	7.0	7.0	6.8	7.3	7.2	7.5	6.7	7.3	6.3	6.4	7.3	7.1	7.0	
L-93	7.2	7.0	5.3	7.3	6.9	8.3	7.1	7.1	7.1	6.8	6.9	7.3	6.8	7.6	5.9	6.6	6.9	6.8	6.9	
PENN G-6	6.8	6.7	5.3	7.7	6.8	8.0	6.8	7.1	7.4	6.3	7.0	7.4	6.1	7.3	6.4	6.9	7.7	7.0	6.9	
SR 1020	6.6	7.0	5.5	7.6	6.4	8.0	7.3	7.3	7.2	6.8	6.3	6.9	6.3	7.6	6.4	6.6	7.5	7.3	6.9	
CRENSHAW	7.0	7.7	5.8	7.9	6.4	7.7	7.1	6.9	6.9	6.4	6.6	7.3	6.1	7.6	6.6	6.7	7.4	6.9	6.8	
BACKSPIN	6.5	6.0	5.8	7.3	7.1	8.2	7.0	6.8	7.3	6.3	6.9	7.0	6.2	7.2	6.0	6.3	6.8	7.0	6.7	
CATO	6.7	7.0	5.5	7.1	6.2	8.0	7.1	7.1	6.7	6.6	6.6	6.9	6.3	7.2	5.8	6.6	7.0	6.6	6.7	
PUTTER	6.0	7.3	5.3	7.2	6.2	7.8	7.2	6.9	6.6	6.3	6.2	6.7	5.8	7.3	5.7	6.5	6.9	6.4	6.5	
TRUELINE	6.4	7.3	5.2	7.1	7.0	7.7	6.8	6.2	6.6	6.3	6.6	6.8	6.2	7.0	5.9	6.2	7.1	6.7	6.5	
VIPER	6.6	8.0	5.4	7.0	6.1	7.5	7.0	6.8	6.7	6.7	6.3	6.6	6.2	7.6	5.4	5.9	6.9	6.4	6.5	
PROVIDENCE	6.9	6.7	5.3	6.9	5.9	7.7	6.8	6.7	6.7	6.0	6.7	6.4	5.7	7.2	6.1	6.1	6.7	6.4	6.4	
PENNCROSS	5.7	5.3	4.7	7.2	5.0	6.5	6.4	6.3	6.0	5.9	6.2	5.6	4.7	7.0	5.4	5.8	5.7	6.3	5.9	
LSD VALUE	1.2	1.1	4.6	1.8	1.7	2.3	1.6	1.8	0.8	2.3	1.4	1.4	1.0	1.9	2.1	0.9	0.9	1.4	0.4	
C.V. (%)	17.5	9.9	39.7	13.4	20.7	14.1	13.3	18.1	13.0	22.0	16.9	18.5	17.3	11.2	20.7	14.4	14.2	14.0	7.0	

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 12A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT VIENNA, VA (WESTWOOD GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	05-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
FACTORS OF PLAY		05-Sep-97	19-19-19	2 lbs. N	28-May-98	Acclaim	4 oz./Acre
		05-Sep-97	Milorganite	1/2" on top	15-Jul-98	Acclaim	3 oz./Acre
		11-Sep-97	Newsom 16-4-8	0.5 lb. N	24-Aug-98	Acclaim	3 oz./Acre
		18-Sep-97	Newsom 16-4-8	0.5 lb. N			
Date opened for play	20-Apr-98	02-Oct-97	Newsom 16-4-8	0.5 lb. N	INSECTICIDES		
Date closed for play	not closed	13-Oct-97	Newsom 16-4-8	0.5 lb. N			
Type of spikes allowed	softspikes	29-Oct-97	Newsom 14-1-11	0.5 lb. N	Date(s)	Product	Rate (oz./M)
Uses of green	putting, chipping	05-Nov-97	Newsom 16-4-8	0.5 lb. N			
MOWING		24-Nov-97	Newsom 14-1-11	0.5 lb. N	28-May-98	Tempo	6 oz./Acre
		03-Apr-98	Newsom 14-1-11	0.5 lb. N	29-Jul-98	Tempo	6 oz./Acre
		10-Apr-98	Newsom 14-1-11	0.5 lb. N	24-Aug-98	Tempo	6 oz./Acre
		22-Apr-98	Newsom 14-1-11	0.5 lb. N	21-Sep-98	Tempo	6 oz./Acre
Initial height	3/8"	29-Apr-98	Newsom 16-4-8	0.5 lb. N	19-Oct-98	Tempo	6 oz./Acre
Current height	1/8"						
Frequency	7 days/week	01-Jun-98	Newsom 14-1-11	0.45 lb. N	OTHER PRODUCTS		
Type of mower	walking	06-Jul-98	Country Club 10-5-40	0.08 lb. N			
Rollers used	2 times/month	31-Aug-98	Country Club 10-18-18	0.5 lb. N			
Groomers used	None	11-Sep-98	Newsom 14-1-11	0.5 lb. N	Date(s)	Product	Rate (oz./M)
CULTIVATION		29-Sep-98	Nature Safe 5-6-6	0.25 lb. N			
		08-Oct-98	Newsom 14-1-11	0.45 lb. N	12-Nov-97	Ferromec	6
		26-Oct-98	Nature Safe 5-6-6	0.25 lb. N	12-Nov-97	Roots 1-2-3	6
		18-Nov-98	Par Ex IBDU 21-3-16	0.6 lb. N	15-Dec-97	Ferromec	6
Aerification - dates	Spring once, Fall once				15-Dec-97	Roots 1-2-3	6
Aerification - type	Spring - solid tine 1/2"	FUNGICIDES			14-May-98	Ferromec	3
	Fall - hollow tine 1/2"				28-May-98	Ferromec	6
Verticutting	None				28-May-98	Primer (wetting agent)	3
Dates of topdressing	Spring once, Fall once	Date(s)	Product	Rate (oz./M)	17-Jun-98	Primo	6 oz./Acre
	once during growing season				06-Jul-98	Ferromec	4
Other cultural practices	None	12-Nov-97	Chipco 26019	5	06-Jul-98	Primer	5
		12-Nov-97	PMAS	1	21-Jul-98	Ferromec	4
		15-Dec-97	Daconil	4	21-Jul-98	Primer	6
		15-Dec-97	PMAS	1	29-Jul-98	Ferromec	4
		21-Apr-98	Banner Maxx	1.25	29-Jul-98	Primo	6 oz./Acre
		21-Apr-98	Heritage	0.4	21-Sep-98	Ferromec	5
		14-May-98	Daconil	4	21-Sep-98	Primo	10 oz./Acre
		14-May-98	Fore	3	19-Oct-98	Ferromec	8
		28-May-98	Bayleton	1			
		28-May-98	Heritage	0.4			
		17-Jun-98	Daconil	4	NOTES/COMMENTS		
		17-Jun-98	Fore	4			
		26-Jun-98	Daconil	4	FUNGICIDES		
		06-Jul-98	Daconil	4			
		15-Jul-98	Daconil	4			
		15-Jul-98	Fore	4	Date(s)	Product	Rate (oz./M)
		15-Jul-98	Subdue Maxx	1			
		21-Jul-98	Fore	4	21-Sep-98	Daconil	5
		29-Jul-98	Daconil	4	21-Sep-98	Cleary's 3336	1
		29-Jul-98	Heritage	0.4	19-Oct-98	Bayleton	1.5
		24-Aug-98	Daconil	4	10-Dec-98	Daconil	4
		02-Sep-98	Daconil	4	10-Dec-98	PMAS	1

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TABLE 12B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT VIENNA, VA (WESTWOOD GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	05-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		15-Apr	5-4-5	0.25 N	05-Apr	Embark	4 oz./Acre
		17-May	5-4-5	0.25 N	21-Jun	Acclaim	3 oz./Acre
FACTORS OF PLAY		09-Aug	14-1-11	0.50 N	7/29, 8/12	Acclaim	8 oz./Tank
		02-Sep	Powder Blur, 50 lbs./tank (38-0-0)				
Date opened for play	20-Apr-98	15-Sep	14-1-11	0.50 N			
Date closed for play		29-Sep	24-3-12	0.50 N	INSECTICIDES		
Type of spikes allowed	softspikes	19-Oct	14-1-11	0.50 N			
Uses of green	putting, chipping	01-Nov	14-1-11	0.50 N	Date(s)	Product	Rate (oz./M)
		14-Nov	14-1-11	0.50 N			
MOWING		06-Dec	14-1-11	0.50 N	07-Jul	Talstar	0.4
			Total	4.0 lbs N/M	7/29, 8/19, 9/20	Sevin	3
Initial height	3/8"						
Current height	0.125"						
Frequency	7 days/week	FUNGICIDES			OTHER PRODUCTS		
Type of mower	walking						
Rollers used	Triplex - 12 times/season	Date(s)	Product	Rate (oz./M)			
Groomers used	None				Date(s)	Product	Rate (oz./M)
		05-Apr	Banner Maxx	1.25			
CULTIVATION		27-Apr	Banner 1oz. and Primo 0.25oz.		4/5, 4/27	Feromec	6
		12-May	Heritage 0.4oz., Daconil Weatherstik		12-May	Feromec	5
Aerification - dates	Twice per year (April-Sept.)	25-May	Banner 1.5oz. and Primo 0.5oz.		6/8, 7/7	Feromec	4
Aerification - type	Core tine 3/8"	08-Jun	Daconil 4oz., Primer 8oz.		07-Jul	Enhance	4
	Hydroject 2-3 times/season				7/19, 7/20	Feromec	6
Verticutting	None	21-Jun	Heritage 0.4oz., Banner 1.5oz., Fore		29-Jul	Feromec	6
Dates of topdressing	3 times/year, 2 times		4oz., Primo 0.25oz.			Enhance	6
	aerification - Egypt Farms 80-				12-Aug	Enhance	4
	20 sterilized Mix	07-Jul	Chipco GT 3oz., Primer 4oz.		19-Aug	Feromec	4
					Total	Feromec	47
Other cultural practices	None	19-Jul	Echo 8lbs., Fore 8oz., Subdue 1oz.,		Total	Enhance	14
			Tuffgreen (BioPro) 6oz.				
		29-Jul	Heritage 0.4oz., Fore 8oz., Echo 4oz.,				
			BioPro 3oz.				
		12-Aug	Heritage 0.4oz., Fore6oz., Echo 3oz.,		NOTES/COMMENTS		
			Primo 0.25oz.				
		02-Sep	Echo 3oz., Primer 4oz.				
		9/20, 10/8	Echo	3			
		27-Oct	Curalan EG	1.25			
		08-Dec	PMAS 0.75oz., Echo 5oz.				

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TABLE 12C. 2000 MANAGEMENT - ON-SITE BENTGRASS TEST AT VIENNA, VA (WESTWOOD GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	05-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		4/3, 4/11, 5/1	18-3-12	0.5 N	5/8, 6/5, 7/27, 8/20	Acclaim	3 oz./Acre
		5/31, 8/14	14-1-11	0.5 N			
FACTORS OF PLAY		28-Aug	18-3-12	0.5 N			
		10-Sep	14-1-11	0.5 N			
Date opened for play	20-Apr-98	22-Sep	18-3-12	0.5 N			
Date closed for play		03-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							
Initial height					5/8, 5/26	Delta Guard	0.2
Current height	0.125"	FUNGICIDES			27-Jul	Delta Guard	0.15
Frequency		Date(s)	Product	Rate (oz./M)	25-Aug	Sevin	1
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		08-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	05-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	06-Jul	Cleary's 8oz., Ferromec 6oz.			NOTES/COMMENTS	
		16-Jul	Echo	6			
		27-Jul	Echo 4oz, Fore 4oz., Subdue 1oz.				
		02-Aug	Echo	4			
		08-Aug	Echo 4oz, Fore 4oz., Subdue 1oz.				
		20-Aug	Echo 4oz., Ferromec 4oz., Heritage 0.25oz., Foliar 2oz., Radicular 2oz.				
		01-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.				

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TABLE 12D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT VIENNA, VA (WESTWOOD GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	05-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None						
		30-Apr	17-3-17	0.25 N	11-Jun	Acclaim	3 oz./Acre
		12-May	18-3-12	0.5 N	7/9, 7/30, 8/29	Acclaim	4 oz./Acre
FACTORS OF PLAY		27-May	18-3-12	0.5 N			
		03-Aug	14-1-11	0.5 N			
Date opened for play		20-Aug	17-3-17	0.5 N	INSECTICIDES		
Date closed for play		06-Sep	14-1-11	0.5 N			
Type of spikes allowed		24-Sep	14-1-11	0.65 N	Date(s)	Product	Rate (oz./M)
Uses of green		11-Oct	16-4-8	0.5 N			
		23-Oct	16-4-8	0.25 N	5/10, 5/31, 7/9, 8/29	Delta Guard	0.4
MOWING					25-Jun	Sevin	3
			Total	4.15 lbs N/M	30-Jul	Scimilair	7.5oz./A
Initial height					26-Sep	Scimilair	10oz./A
Current height							
Frequency							
Type of mower					OTHER PRODUCTS		
Rollers used		FUNGICIDES					
Groomers used		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
CULTIVATION					11-Apr	Embark .1oz; Ferromec 5oz; Powder Blue	
		11-Apr	Daconil	2		2.5oz; Direction Green .75oz	
Aerification - dates		10-May	Rubigan	1	10-May	Ferromec 6oz; Direction Green .5oz	
Aerification - type		21-May	Cleary's 3336	1	20-May	Echo	5
		22-May	Chipco 6.5oz; Banner 1oz; Heritage		21-May	Echo	2
Verticutting			0.4oz; Fore 4 oz.		22-May	Ferromec	4
Dates of topdressing		31-May	Chipco	4	31-May	CC 10-5-4	6
		01-Jun	Banner 1oz; Subdue 1oz; Fore 4oz.		11-Jun	Echo 4oz; Ferromec 6oz; Delta Force .4oz;	
		25-Jun	Chipco 4oz; Rubigan 1oz; Fore 4oz.			Stand Up 4oz; Direction Green .75oz	
		09-Jul	Heritage 0.4oz; Chipco 3oz; Rubigan		25-Jun	Ferromec 4oz; Foliar 1.5oz; Radicular 1.5oz.	
Other cultural practices	None		1oz; Subdue 1oz; Fore 4oz.		09-Jul	Ferromec 4oz; Direction Green .75oz	
		30-Jul	Subdue 1oz; Fore 4oz; Banner 0.5oz.		30-Jul	Ferromec 5oz; Primer 4oz; Direction Green	
		07-Aug	Heritage 0.4oz; Fore 4oz; Chipco 3oz;			.75oz	
			Rubigan 1oz.		07-Aug	Ferromec	4
		18-Aug	Chipco 4oz; Rubigan 1oz.		29-Aug	Ferromec 4oz; Direction Green .75oz	
		29-Aug	Curalan 1.5oz; Fore 4oz.		26-Sep	Direction Green	0.75
		26-Sep	Curalan 1.5oz; Fore 4oz; Heritage 4oz.		03-Dec	Ferromec 4oz; Primo .25oz; Nutri Rational	
		03-Dec	Daconil 3oz; Fore 4oz; Banner 1oz.			.75oz; Agro Plex .2oz.	

NOTES/COMMENTS

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TABLE 12E.

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/
1998-2001 DATA

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

NAME	DENSITY	DENSITY	DROUGHT	PERCENT	PERCENT	STIMPMETER READINGS			
	SUMMER 2001	FALL 2001	TOLERANCE WILTING 1999	POA ANNUA APRIL 2001	POA ANNUA MAY 2001	SPRING 1998	SUMMER 1998-99 2001	FALL 1998-99 2001	WINTER 1998
PENN A-4	8.0	7.3	7.0	6.0	3.7	85.7	122.1	132.8	108.7
PENN A-1	7.3	6.7	8.0	3.0	3.0	89.0	121.5	130.9	111.5
CENTURY	7.7	6.7	8.7	11.7	5.0	88.0	119.8	130.3	114.3
PENN G-1	7.7	6.3	7.7	4.3	3.0	87.7	117.4	131.3	109.0
PENN G-6	7.3	7.0	8.7	5.7	5.0	88.7	117.1	124.6	111.7
CRENSHAW	7.7	6.3	7.0	8.3	5.0	86.3	118.3	128.0	113.0
GRAND PRIX (LCB-103)	7.3	6.3	7.3	3.3	3.3	90.0	115.7	123.8	111.3
L-93	7.0	6.7	7.7	13.3	6.7	85.7	114.1	124.8	115.0
CATO	7.3	6.0	8.3	15.0	6.7	88.3	117.7	130.1	113.7
IMPERIAL	7.3	6.3	8.7	8.3	6.7	85.3	115.7	127.1	113.3
BACKSPIN	7.0	6.3	7.7	11.7	6.7	90.0	122.0	129.4	113.0
SR 1020	7.3	6.3	7.7	8.3	5.0	88.0	119.7	131.2	113.0
PROVIDENCE	7.0	6.0	7.3	13.3	6.0	84.7	117.4	131.4	112.3
SR 1119	6.7	6.0	6.7	11.7	5.0	88.3	119.3	130.1	107.5
VIPER	7.0	6.0	6.0	11.7	6.7	88.7	119.7	131.9	113.0
PUTTER	6.3	5.3	7.0	13.3	6.7	88.7	111.9	121.9	115.3
TRUELINE	6.3	5.7	6.7	21.7	11.7	89.3	118.4	128.7	112.3
PENNCROSS	5.7	5.3	7.0	18.3	15.0	88.0	112.8	127.8	115.3
LSD VALUE	1.1	1.4	2.0	11.4	7.6	16.1	37.2	38.2	13.9
C.V. (%)	8.1	10.2	12.3	53.8	58.0	5.0	13.1	12.4	3.7

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 12E.
(CONT'D)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/
1998-2001 DATATURFGRASS 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	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
PENN A-4	6.7	6.0	7.8	6.2	6.8	7.2	7.6	7.7	7.8	6.5	7.5	7.3	7.1
PENN A-1	6.7	6.0	7.3	6.3	6.4	6.8	7.4	7.3	7.3	6.9	7.2	7.0	7.0
CENTURY	6.0	5.7	7.3	6.5	6.4	7.1	7.6	7.1	7.3	6.3	7.2	6.3	6.9
PENN G-1	6.6	5.7	7.6	6.2	6.3	6.7	7.2	7.3	7.4	6.4	7.2	6.7	6.8
PENN G-6	6.1	6.0	7.2	6.3	6.2	6.7	7.1	6.9	7.2	6.5	7.2	7.0	6.7
CRENSHAW	6.4	5.7	7.1	6.0	6.3	6.5	7.1	7.2	7.2	6.3	6.8	6.0	6.6
GRAND PRIX (LCB-103)	6.4	5.8	7.2	6.5	6.2	6.7	7.0	6.8	7.1	6.3	7.0	6.7	6.6
L-93	6.6	6.0	7.0	6.2	6.1	6.6	7.1	6.8	6.8	6.4	6.8	6.3	6.6
CATO	5.8	6.0	6.8	6.2	6.3	6.6	6.8	6.4	6.6	6.2	6.7	7.0	6.5
IMPERIAL	5.7	6.0	7.4	6.0	6.3	6.7	7.2	6.7	6.9	6.0	6.5	6.3	6.5
BACKSPIN	6.1	5.5	6.9	6.0	5.8	6.4	6.6	6.3	6.8	6.8	6.2	6.3	6.4
SR 1020	5.9	5.3	7.1	6.0	5.9	6.3	6.9	7.0	6.8	6.2	6.5	6.7	6.4
PROVIDENCE	6.4	6.0	6.6	6.0	6.2	6.6	6.8	6.3	6.1	6.3	6.7	6.7	6.3
SR 1119	6.0	5.5	7.0	5.5	6.3	6.3	6.7	6.7	6.5	5.7	6.4	6.0	6.3
VIPER	6.1	5.2	6.3	5.3	5.8	6.2	6.4	6.2	6.2	6.2	6.3	6.7	6.1
PUTTER	6.2	5.8	6.6	5.8	5.6	5.9	6.3	6.0	5.9	6.1	6.3	7.0	6.0
TRUELINE	5.7	5.0	6.3	5.5	5.5	5.8	6.0	5.9	6.0	5.6	6.2	6.3	5.8
PENNCROSS	5.2	4.7	5.6	5.0	5.4	4.9	5.2	5.2	4.9	5.2	5.0	5.7	5.1
LSD VALUE	0.7	0.7	0.9	0.7	0.8	0.6	0.5	0.5	0.6	0.8	0.9	2.0	0.2
C.V. (%)	11.6	10.3	12.5	9.1	13.1	12.3	8.8	9.1	11.7	14.3	10.8	10.5	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 13A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT SNOQUALMIE, WA (TPC AT SNOQUALMIE RIDGE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date	08-Jun-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		08-Jun-98	19-26-5	1 lb. N	None		
		19-Jun-98	19-26-5	1 lb. N			
FACTORS OF PLAY		23-Jun-98	21-0-0	0.5 lb. N			
		26-Jun-98	19-26-5	1 lb. N			
Date opened for play		08-Jul-98	19-26-5	1 lb. P			
Date closed for play		18-Jul-98	19-26-5	1 lb. P			
Type of spikes allowed		31-Jul-98	19-26-5	1 lb. P			
Uses of green		05-Aug-98	29-2-3	1 lb. N			
		25-Aug-98	19-3-19	1 lb. N			
MOWING		08-Sep-98	21-0-0	0.75 lb. N	INSECTICIDES		
		25-Sep-98	19-3-19	0.5 lb. N			
Initial height	1/4"	02-Oct-98	15-0-30	1 lb. K			
Current height	3/16"	24-Oct-98	19-3-19	0.5 lb. N	Date(s)	Product	Rate (oz./M)
Frequency		05-Nov-98	0-0-50	0.5 lb. K			
Type of mower		11-Dec-98	15-0-28	0.5 lb. K	None		
Rollers used							
Groomers used							
CULTIVATION							
Aerfication - dates		FUNGICIDES			OTHER PRODUCTS		
Aerfication - type							
Verticutting		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Dates of topdressing	6/30, 7/8,						
	7/16, 7/30,	08-Sep-98	Pythium		12-Nov-98	Gypril	10 lb./M
	8/19, 8/27,		control		17-Dec-98	Gypril	10 lb./M
	9/23, 10/21	14-Jul-98	Pythium				
	1/4" each		control				
	date	24-Jul-98	Subdue				
		09-Sep-98	Heritage	Recommended			
Other cultural practices		05-Oct-98	Heritage		NOTES/COMMENTS		
		17-Nov-98	Scotts Flowable	Normal			
			Fungicide II				
		14-Dec-98	Scotts Fungicide IX	Normal			

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

TABLE 13B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT SNOQUALMIE, WA (TPC AT SNOQUALMIE RIDGE)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	08-Jun-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during							
		23-Feb	12.5% PCNB (14-2-14)	6	26-Jan	Scotts Fungicide X	4.8 lbs.
		15-Mar	Himag Step	1.5	23-Feb	12.5%PCNB-Granular	6 lbs.
FACTORS OF PLAY		23-Mar	Scotts (19-25-19)	2.5	5/25,6/23,8/20,10/8	Heritage	0.4
		05-Apr	Turf Blend (0-0-50)	1.5	13-Dec	Pen-Star	12
Date opened for play		05-Apr	Scotts (18-9-18)	0.5			
Date closed for play		07-May	Agrium (21-0-0)	1.6			
Type of spikes allowed		18-May	Turf Blend (0-0-50)	2.14			
	Metal Spikes / Softspikes				HERBICIDES		
Uses of green		5/25, 6/14, 7/7, 8/2, 8/20, 9/24, 10/8,	N-Sure (28-0-0)	13.25oz.			
			N-Sure (28-0-0) -6/23	15.88oz.	Date(s)	Product	Rate (oz./M)
MOWING							
		5/25 and 6/23	KTS (0-0-25)	9.14 & 13.25oz.	None		
Initial height	0.145"	7/7, 8/2, 8/20, 9/24	KTS (0-0-25)	10.6oz.			
Current height	0.187"						
Frequency	1-7X/week	6/23, 7/7, 8/2, 8/20, 9/24, 10/8	DP	3 oz.			
Type of mower							
Rollers used	Grooved type wiehle roller				INSECTICIDES		
Groomers used	1X/Week						
		16-Jul	Turf Blend (0-0-50)	2			
		7/23, 8/12, 9/2	MAP (12-61-0)	1.78	Date(s)	Product	Rate (oz./M)
CULTIVATION		7/30, 9/14	Gypril Lime	5			
		25-Aug	Dolopril-MAG Lime	8	None		
Aerfication - dates	5/10, 9/13	31-Aug	Gypril Lime	8			
Aerification - type	Hollow Tines	10-Sep	Agrium (21-0-0)	1.9			
Verticutting or other	5/13, 6/3, 6/15, 6/28, 7/21, 8/9, 8/23, 10/12	01-Oct	Wilgro (19-4-19)	0.5			
cultivation		05-Oct	Dolopril-Lime	7	OTHER PRODUCTS		
		08-Oct	MAP (10-34-0)	0.4 oz.			
		18-Oct	K-Power(13-75-0-46)	2.94	Date(s)	Product	Rate (oz./M)
Dates of topdressing or	5/13, 6/3, 6/15, 6/28, 7/21, 8/9, 8/23, 10/12 (1/8")	22-Oct	Calpril	5			
other type products		26-Oct	Turf Blend (0-0-50)	2.32	None		
		05-Nov	K-Power(13-75-0-46)	3			
		05-Nov	MAP (12-61-0)	1			
Other cultural practices	Rolling - 6/30, 7/1, 8/13, 8/14	05-Nov	MAP (10-34-0)	1			
		Total/year	6.69 lbs. N, 7.3 lbs. P, 6.55lbs. K				

NOTES/COMMENTS

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

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

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	08-Jun-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		31-Jan	Kpower (13.75-0-46)	0.4	21-Jan	PenStar	4.5
		03-Apr	Kpower (13.75-0-46)	0.28	13-Apr	Dursban	1.5 lbs./M
FACTORS OF PLAY		24-Apr	N-Sure (28-0-0), KTS (0-0-25), DPE (Iron & Sulfur), Molasses	0.33N, 0.20K, 0.02Fe, 0.14S	24-Apr	Heritage	0.4
Date opened for play					5/25, 9/7	Heritage	0.35
Date closed for play		25-May	N-Sure (28-0-0), Molasses (5 gal./300 gal. Water	0.50N, 0.30K, 0.02Fe, 0.14S	05-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		
					Date(s)	Product	Rate (oz./M)
MOWING		29-Jun	N-Sure (28-0-0), Molasses	0.33N, 0.15K, 0.03Fe, 0.10S	None		
Initial height	0.145"	7/18, 8/14	N-Sure (28-0-0), Molasses	0.33N, 0.20K, 0.14Fe, 0.36S			
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 wiehle 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	Rate (oz./M)
CULTIVATION		27-Nov	Kpower (13.75-0-46)	0.4	None		
Aerfication - 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				
Aerfication - 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	03-Aug 08-Nov	Gypril Lime Dolopril-Lime	15 15	Date(s)	Product	Rate (oz./M)
						Wetting Agents	
					03-Jul	Primer	4
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		01-Aug	Primer	6

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

TABLE 13D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT SNOQUALMIE, WA (TPC AT SNOQUALMIE RIDGE)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	08-Jun-98	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during		06-Feb	Kpower	0.40N, 1.33K	None		
		27-Mar	Kpower	0.48N, 1.61K			
FACTORS OF PLAY		20-Apr	N-Sure, KTS	0.47N, 0.26K, 0.10S			
		10-May	N-Sure, KTS	0.75N, 0.26K,	HERBICIDES		
Date opened for play				0.026Fe, 0.10S			
Date closed for play		07-Jun	MAP, KTS, DP	0.48N, 1.10P, 0.20K,		Date(s)	Product
Type of spikes allowed				0.026Fe, 0.13S			
Uses of green	Putting	28-Jun	N-Sure, KTS	0.41N, 0.20K,	None		
		09-Jul	N-Sure, KTS	0.33N, 0.20K,			
				0.026Fe, 0.13S			
MOWING		19-Jul	MAP	0.16N, 0.80P	INSECTICIDES		
		31-Jul	N-Sure, KTS	0.33N, 0.20K,			
Initial height				0.026Fe, 0.13S		Date(s)	Product
Current height	0.133-0.187"	19-Aug	MAP	0.16N, 0.80P			
Frequency		23-Aug	N-Sure, KTS	0.75N, 0.20K,	None		
Type of mower				0.026Fe, 0.13S			
Rollers used	6/2,5,30; 7/4,7,18,28; 8/20,25	14-Sep	N-Sure, KTS	0.34N, 0.20K,			
Groomers used				0.026Fe, 0.13S	OTHER PRODUCTS		
		20-Sep	MAP	0.20N, 1.01P			
CULTIVATION		04-Oct	N-Sure, KTS	0.36N, 0.20K,		Date(s)	Product
				0.026Fe, 0.13S			
Aerfication - dates	5/15-16, 8/27-28	25-Oct	Micro-Greenm	0.26N, 0.12P, 0.79P	None		
Aerification - type	one time over with 5/8 tines	17-Nov	Micro-Greenm	0.30N, 0.14P, 0.93P			
Verticutting or other cultivation	3/21, 4/25, 6/19, 7/10 - 1-16" layer double screen sand	03-Dec	Micro-Greenm	0.30N, 0.14P, 0.93P			
		Total/year	6.48N, 4.11P, 7.45K, 0.208Fe, 1.11S				NOTES/COMMENTS
Dates of topdressing or other type products applied	3/21, 4/25, 6/19, 7/10: 3/16"below grade, and over twice in 2 directions						
Other cultural practices							

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TABLE 13E.

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/
1998-2001 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	WINTER COLOR	SUMMER COLOR 2001	FILLING AFTER 2000	STIMPMETER READINGS			
							SPRING 2000-01	SUMMER 1999-2001	FALL 2000-01	WINTER 1999
PENN A-4	6.8	6.9	7.8	6.0	6.3	6.3	108.7	147.4	134.2	115.3
CENTURY	5.8	5.2	7.9	5.7	5.0	6.7	98.7	138.2	127.8	123.0
PENN G-1	6.8	6.4	7.6	5.2	7.3	6.0	97.3	137.2	116.8	125.7
GRAND PRIX (LCB-103)	5.8	5.2	7.4	5.7	6.0	5.7	105.5	152.3	135.5	123.0
PENN A-1	6.6	6.2	7.8	4.8	7.0	5.7	103.5	145.0	126.8	121.3
IMPERIAL	5.6	5.9	7.3	4.7	6.0	6.3	101.5	140.0	127.0	121.7
L-93	6.9	6.7	7.2	4.0	7.0	6.3	101.8	142.1	131.3	125.3
SR 1020	6.5	6.0	7.3	5.3	7.0	5.3	108.8	148.0	129.5	116.3
CATO	6.8	5.9	7.3	4.1	7.0	5.3	102.0	140.3	132.3	119.3
PROVIDENCE	6.6	5.7	6.8	4.3	6.7	6.3	109.0	143.6	136.0	124.7
SR 1119	6.8	6.7	7.3	4.1	7.0	5.3	103.0	140.3	128.5	119.0
BACKSPIN	5.8	5.8	7.2	4.3	5.0	6.0	104.7	142.4	128.0	124.7
PENN G-6	6.5	6.6	7.3	3.9	6.3	6.0	101.2	140.8	126.3	131.7
VIPER	6.7	6.9	7.2	4.1	7.3	5.7	104.0	140.1	136.0	133.0
TRUELINE	6.5	6.2	7.1	4.4	7.0	6.3	106.5	144.8	131.7	116.0
PUTTER	5.8	5.7	6.4	5.0	6.0	5.7	102.5	146.2	129.0	123.0
CRENSHAW	7.0	6.1	7.2	3.1	7.7	6.0	110.7	150.7	141.8	121.0
PENNCROSS	5.8	4.7	6.5	3.9	6.0	6.0	99.7	147.2	142.2	119.0
LSD VALUE	0.4	0.4	0.5	0.4	0.5	1.5	17.8	23.9	13.4	18.1
C.V. (%)	7.6	8.3	8.5	9.7	4.6	9.9	8.4	9.2	7.4	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 13E.
(CONT'D)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/
1998-2001 DATATURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
TURFGRASS STIMPMETER READINGS MEASURED IN INCHES

NAME	QUALITY RATINGS												MEAN
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
PENN A-4	5.8	5.9	6.1	6.4	6.2	6.7	7.0	7.3	6.5	7.3	7.0	5.9	6.5
CENTURY	5.3	6.2	6.3	6.2	6.6	6.2	6.8	7.3	6.7	6.6	6.1	5.8	6.3
PENN G-1	4.9	5.4	5.9	5.9	6.7	6.4	7.2	7.3	6.5	7.2	6.8	5.8	6.3
GRAND PRIX (LCB-103)	5.4	5.7	5.9	6.0	6.1	6.2	6.7	7.1	6.1	6.9	6.9	6.0	6.2
PENN A-1	4.9	5.2	6.0	6.1	6.1	6.3	6.9	7.1	6.7	6.9	6.7	5.8	6.2
IMPERIAL	4.9	5.2	6.0	5.8	6.2	6.3	6.8	7.2	6.4	6.8	6.2	5.6	6.1
L-93	4.7	5.2	6.1	5.9	6.0	6.2	7.2	7.2	6.9	6.9	6.0	5.5	6.1
SR 1020	5.2	4.9	5.4	5.8	5.8	6.0	6.6	6.7	6.7	7.0	6.5	6.2	6.1
CATO	4.8	5.3	5.4	5.7	5.7	6.0	7.0	6.8	6.2	6.5	5.5	5.3	5.9
PROVIDENCE	4.6	5.1	5.8	5.2	6.0	6.0	6.6	6.8	6.6	6.3	6.1	5.3	5.9
SR 1119	4.6	4.9	5.4	5.1	6.4	6.3	7.0	7.1	6.4	6.4	5.6	5.0	5.9
BACKSPIN	4.8	5.1	5.6	5.1	6.0	5.9	6.6	6.9	6.2	6.3	5.8	5.3	5.8
PENN G-6	4.4	4.4	5.8	5.9	6.1	5.9	6.6	6.5	6.5	6.3	6.2	5.3	5.8
VIPER	4.6	5.0	5.3	5.7	5.7	6.0	6.5	6.6	6.5	6.4	5.9	4.9	5.8
TRUELINE	4.7	4.7	5.1	5.3	5.7	6.1	6.7	6.5	6.3	6.4	5.6	5.4	5.7
PUTTER	4.8	5.1	5.6	5.2	5.2	5.6	5.8	5.9	6.0	5.8	5.8	5.3	5.5
CRENSHAW	3.8	3.8	4.8	4.8	5.9	5.8	6.6	6.8	6.4	6.3	5.0	4.5	5.4
PENNCROSS	4.0	4.3	4.4	4.2	4.4	5.1	5.4	5.4	5.4	5.2	4.8	4.2	4.8
LSD VALUE	0.5	0.6	0.5	0.6	0.8	2.3	0.6	0.6	1.0	0.9	0.8	0.5	0.3
C.V. (%)	12.3	13.2	10.5	12.1	13.3	22.4	11.2	11.7	13.7	16.0	17.2	12.2	6.8

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.