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

INTRODUCTION

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

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

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

Location & Number of Trial Sites

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

Trial Specifics

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

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

ON-SITE TESTING (continued)

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

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

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

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 March April May September October	Nature Safe 8-3-5 Nature Safe 8-3-5 Nature Safe 8-3-5 Nature Safe 8-3-5 Nature Safe 8-3-5 Nature Safe 8-3-5	0.5 lb. N 0.5 lb. N 0.5 lb. N 0.5 lb. N 0.5 lb. N 0.5 lb. N			
Date opened for play							
Date closed for play	not closed						
Type of spikes allowed	softspikes						
Uses of green	chipping						
MOWING		weekly as needed weekly as needed	Multigreen/Maxigreen Lesco Micromix & Iron	2-4 oz./M 2-4 oz./M			
Initial height	0.275"				INSECTICIDES		
Current height	0.15 -0.16" 0.14" for short periods				Date(s)	Product	Rate (oz./M)
Frequency	6 days/week						
Type of mower	walking				as needed for cutworms	Talstar	
Rollers used							
Groomers used	Toro GM800 set .005" below bedknife used daily except mid-June through mid-Sept.						
CULTIVATION			FUNGICIDES			OTHER PRODUCTS	
Aerification	10/13/98 using 1/2" coring times	every 2-3 wks, Feb. - mid-Dec.	Alternate Banol, Alliette, Heritage and Subdue with either Mancozeb or Daconil	labeled preventative rates	weekly as needed	Astron	1
Aerification	high pressure water injection				weekly as needed	Perkup	3
	every 2 wks, Feb. - Nov.				06-May-98	Primo	8 oz./Acre
Verticutting	lightly 2 times in spring 1998				10-Jun-98	Primo	8 oz./Acre
Dates of topdressing	lightly every 2 wks during growing season. Heavier after aerification.						
Other cultural practices	Rolled after coring. Rolled three times in spring 1998				NOTES/COMMENTS		

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TABLE 1B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT BIRMINGHAM, AL (COUNTRY CLUB OF BIRMINGHAM)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date Problems during	16-Sep-97 None	Date(s)	Product	Rate (lbs./M) (4 lbs N/year)	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)
FACTORS OF PLAY		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
Date opened for play	Dec. 1997	Granular application - Feb.	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
Date closed for play		Granular application - March	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
Type of spikes allowed	softspikes	Granular application - April	HHI natural organic + nutralene	0.7 lb. N			
Uses of green	chipping	Granular application - Sept.	26-0-22 (Nutralene + KNO3)	0.5 lb. N			
MOWING		Granular application - April	HHI natural organic + nutralene	0.6 lb. N			
Initial height	0.25"	FUNGICIDES			INSECTICIDES		
Current height	0.135 -0.155"	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)	Date(s)	Product	Rate (oz./M)
Frequency	6-7 days/week						
Type of mower	walking						
Rollers used	As needed (2-4x/week)	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 Constyl Terrazole	4 2 1 4 4-8 oz. 0.4 4 6	as needed for cutworms early May	Talstar Nemacur	1 lb./100 sq.ft. 2.3 lbs./1000 sq.ft.
CULTIVATION					OTHER PRODUCTS		
Aerification - dates	5/8" hollow - Mar. & Sept., 1/2 " hollow - May, 1/4" quad hollow - July & Aug				Date(s)	Product	Rate (oz./M)
Aerification - type	Hydroject - bi-weekly From Feb. to Nov.				weekly as needed	Astron	1
Verticutting	Heavy=1.25" deep w/ graden - April. Light verticut per month from Feb. to May.				weekly as needed	Perkup	3
Dates of topdressing	Heavy to fill holes after aerifications - Mar. May & Sep. Very Lightly bi-weekly Feb-Nov.				6-May	Primo	8 oz./Acre
Other cultural practices	Rolled heavy after aerifications				10-Jun	Primo	8 oz./Acre
NOTES/COMMENTS							
This green gets pounded with ballmarks.							

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

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date Problems during	16-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M) (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
Date opened for play	year round	Feb., March, April	Granular application	0.5-0.6 lb. N			
Date closed for play		May, June	26-0-22 (Nutralene+KNO ₃)	1 lb. K ₂ O			
Type of spikes allowed	softspikes	September	K ₂ SO ₄ (0-0-24)	0.6 lb. N			
Uses of green	chipping	October	26-0-22 (Nutralene+KNO ₃)	0.6 lb. N			
MOWING					INSECTICIDES		
Initial height	0.25"	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Current height	0.135 -0.150"	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)	as needed for cutworms early May	Talstar Nemacur	1 lb./100 sq.ft. 2.3 lbs./1000 sq.ft.
Frequency	6-7 days/week						
Type of mower	Toro 800 walk						
Rollers used	Rolling as needed (1/2x/week)						
Groomers used	6-7x/week Oct-June	Fungicides applications are made from Feb. to early Dec. depending on weather conditions. Big problem with pythium so Alliette, Banol, Subdue, and Heritage are rotated and sprayed on a two weeks schedule in May-Nov.	Alliette Banol Subdue Maxx Dithane Daconil Ultrex Heritage Constyl Terrazole	4 2 1 4 4-8 oz. 0.4 4 6	OTHER PRODUCTS		
CULTIVATION					Date(s)	Product	Rate (oz./M)
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.).				weekly as needed 6-May 10-Jun	Astron Perkup Primo Primo	1 3 8 oz./Acre 8 oz./Acre
Verticutting	Lightly verticut in April & June.						
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 Problems during	16-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M) (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
Date opened for play	year round	Feb., March, April	Granular application	0.5-0.6 lb. N			
Date closed for play		May, June	26-0-22 (Nutralene+KNO ₃)	1 lb. K ₂ O			
Type of spikes allowed	softspikes	September	K ₂ SO ₄ (0-0-24)	0.6 lb. N			
Uses of green	chipping	October	26-0-22 (Nutralene+KNO ₃)	0.6 lb. N			
MOWING					INSECTICIDES		
Initial height	0.25"	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Current height	0.135 -0.150"	Date(s)	Product	Rate (oz./M) (1000 sq.ft.)	as needed for cutworms early May	Talstar Nemacur	1 lb./100 sq.ft. 2.3 lbs./1000 sq.ft.
Frequency	6-7 days/week						
Type of mower	Toro 800 walk						
Rollers used	Rolling as needed (1/2x/week)						
Groomers used	6-7x/week Oct-June	Fungicides applications are made from Feb. to early Dec. depending on weather conditions. Big problem with pythium so Alliette, Banol, Subdue, and Heritage are rotated and sprayed on a two weeks schedule in May-Nov.	Alliette Banol Subdue Maxx Dithane Daconil Ultrex Heritage Constyl Terrazole	4 2 1 4 4-8 oz. 0.4 4 6	OTHER PRODUCTS		
CULTIVATION					Date(s)	Product	Rate (oz./M)
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.).				weekly as needed 6-May 10-Jun	Astron Perkup Primo Primo	1 3 8 oz./Acre 8 oz./Acre
Verticutting	Lightly verticut in April & June.						
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
Problems during	one plot washed out-replanted	Annually		3.0-3.5 lbs. N/year		Rate (oz./M)
		Annually		1.0-1.5 lbs. P/year		
		Annually		1.0-1.5 lbs. K/year		
FACTORS OF PLAY						
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
Current height	5/32"					Rate (oz./M)
Frequency	6 days/week					
Type of mower	walking				May	Dursban
Rollers used	smooth					
Groomers used	None					
CULTIVATION					OTHER PRODUCTS	
Aerification - dates	3/10, 4/16	FUNGICIDES			Date(s)	Product
Aerification - type		Date(s)	Product	Rate (oz./M)		Rate (oz./M)
Verticutting	3/7, 4/13, 5/6, 11/10					
	light verticut - one direction	July	Heritage		Eight times/year	Ferromec
Dates of topdressing	3/10, 4/16, 5/6, 11/10					3
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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	October 1997						
Problems during	one plot washed out-replanted	March April May May	16-4-8 15-15-15 21-7-14 14-0-8	0.65 lbs. N 0.5 lbs. N 1.5 lbs. 0.25 lbs.			
FACTORS OF PLAY							
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				March	Dursban	
Type of mower	22" walker						
Rollers used	Wiehle rollers						
Groomers used							
CULTIVATION					OTHER PRODUCTS		
Aerification - dates	Apr., May, Oct., Nov.	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Aerification - type	solid tines						
Verticutting	Mar., May, Jun., Nov.	Date(s)	Product	Rate (oz./M)			
Dates of topdressing	Apr., May, Oct., Nov. (following aerification), plus, light topdressing after each verticutting	March April	Heritage Heritage	1x label rate 1x label rate	6-8 times/year	Panasea	1x label rate
Other cultural practices	rolled to promote smoothness after May topdressing.				NOTES/COMMENTS		

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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							
Date opened for play	Open all year	2/22, 3/30	15-15-15	1 lbs. N	May	Bill bugs and rove beetles treated with fonofos (crusade) at label rate	
Date closed for play							
Type of spikes allowed	soft only						
Uses of green	Practice putting						
MOWING		FUNGICIDES			OTHER PRODUCTS		
Initial height	5/32"	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Current height	5/32"						
Frequency	6X/week	None					
Type of mower	walk (Mon.-Fri.), triplex - Sat.						
Rollers used	Grooved roller						
Groomers used	None						
CULTIVATION		HERBICIDES			NOTES/COMMENTS		
Aerification - dates	Quad tine - 3/30, 6/6	Date(s)	Product	Rate (oz./M)			
Aerification - type	Hollow tine - 11/24, 4/27						
Verticutting	Vert Lite - 10/6, 11/24, 1/25, 4/27, 3/30, 2/22						
Dates of topdressing	Same as lite vert dates						
Other cultural practices							

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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	October 1997						
Problems during	one plot washed out-replanted	Feb	15-15-15	0.25 lb. N			
		March	15-15-15	0.4 lb. N			
		April	20-10-6	1.25 lb. N			
		May	20-10-6	0.75 lb. N			
FACTORS OF PLAY		June	Methylene urea	0.25 lb. N			
Date opened for play	Open all year	Oct	15-5-8	0.25 lb. N			
Date closed for play		Nov	Lesco slo	0.50 lb. N			
Type of spikes allowed	soft spikes only						
Uses of green	Practice putting		Feromec applied 5 times at 3 oz./M				
MOWING							
Initial height	5/32"						
Current height	5/32"	FUNGICIDES				OTHER PRODUCTS	
Frequency	6X/week	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Type of mower	22" walker						
Rollers used	Wiehle roller						
Groomers used	None						
CULTIVATION							
Aerification - dates	solide tines - May, Oct., Nov.						
Aerification - type	Core April 1/2" 2x 4 spacing	HERBICIDES				NOTES/COMMENTS	
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 coco-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	SPRING	SUMMER	FALL				SPRING 1998-01	SUMMER 1998-01	FALL 1998 2000-01	WINTER 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 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	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	5.7	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		
	Date	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date	25-Sep-97						
Problems during	None	17-Apr-98 24-May-98 21-Jun-98 23-Jul-98	Best 15-15-15 Best 15-15-15 Best 15-15-15 Milorganite	0.5 lb. N 0.5 lb. N 0.5 lb. N 0.5 lb. N	None		
FACTORS OF PLAY		01-Apr-98	27-Aug-98 21-Sep-98	Milorganite Best 15-15-15	0.5 lb. N 0.5 lb. N		
Date opened for play			06-Nov-98	Seasource 16-4-8	0.75 lb. N		
Date closed for play			17-Nov-98	Seasource 16-4-8	0.5 lb. N		
Type of spikes allowed	Metal, softspikes		30-Dec-98	0-0-50	0.9 lb. K		
Uses of green	putting, chipping						
MOWING						INSECTICIDES	
Initial height	1/4"						
Current height	5/32"					Date(s)	Product Rate (oz./M)
Frequency	daily during season						
Type of mower	walking					None	
Rollers used							
Groomers used	always used	FUNGICIDES					
CULTIVATION		Date(s)	Product	Rate (oz./M)			
Aerification - dates	07-Aug-98	17-Mar-98	Fore		OTHER PRODUCTS		
Aerification - type	3/8" solid tines	12-May-98	Scotts Fungicide X		Date(s)	Product	Rate (oz./M)
Verticutting	None						
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						
FACTORS OF PLAY		20-Feb 12-Mar 30-Mar 10-May 28-Jun 12-Aug 6-Sep 19-Oct 9-Nov 29-Nov 23-Dec	Seasource 16-4-8 Floratine NOW 18-0-3 Floratine NOW 18-0-3 Milorganite 6-2-0 Seasource 16-4-8 Milorganite 6-2-0 Milorganite 6-2-0 Milorganite 6-2-0 Seasource 16-4-8 Milorganite 6-2-0 Floratine NOW 18-0-3	4.8 6 fl. oz. 6 fl. oz. 7.5 4.8 7.0 7.5 8.4 5.5 6.5 4 fl. oz.	23-Dec-99	Riverdale Triplet /2,4-D, MCPP, Dicamba	0.66 fl.oz./M
Date opened for play	Open all year						
Date closed for play							
Type of spikes allowed	Softspikes encouraged						
Uses of green	putting, chipping (77,700 rounds/year)						
MOWING							
Initial height	1/4"						
Current height	5/32"						
Frequency	3 times/week						
Type of mower	walking	FUNGICIDES					
Rollers used		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Groomers used							
CULTIVATION		11-Sep 18-Oct 9-Nov	Heritage/Azoxystrobin Heritage/Azoxystrobin	0.4 0.4			
Aerification - dates	Oct.15,20,25, Dec.20,30,						
Aerification - type	Toro Spiker 1/4" hollow tines-Nov.	29-Nov	Cleary's 3336G /Tiophanate Methyl	3 lbs./1000sq.ft.			
Verticutting	None						
Dates of topdressing	Nov.11 - Sand						
Other cultural practices	None						

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

ESTABLISHMENT	FERTILIZATION				HERBICIDES		
Seeding date Problems during	25-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		10-Jan 13-Jan 3/21, 4/7 01-May	Floratine NOW 12-0-12 Milorganite 6-2-0 Seasource 16-4-8 Milorganite 6-2-0	2 fl. oz. 8.0 5.5 7.5	20-Jul	Triplet /2,4-D, MCPP, Dicamba	0.66 fl.oz./M
Date opened for play Date closed for play	open all year	31-May 22-Jun	Scotts 29-2-3 Milorganite 6-2-0	3.2 fl. oz. 9.7			
Type of spikes allowed Uses of green	Softspikes encouraged putting only (80,000 rounds/year)	22-Aug 9/1, 9/15 27-Sep 25-Oct 31-Oct	Milorganite 6-2-0 Floratine NOW 6-12-3 Nutralene 40-0-0 Milorganite 6-2-0 Floratine NOW 6-12-3	9.5 1.9 fl. oz. 3.5 9.0 2.6 fl. oz.		INSECTICIDES	
MOWING		12/6, 12/27	Floratine NOW 12-0-12	2.6 fl. oz.	Date(s)	Product	Rate (oz./M)
Initial height Current height	5/32" 5/32"				OTHER PRODUCTS		
Frequency	3 times/week				Date(s)	Product	Rate (oz./M)
Type of mower Rollers used Groomers used	walking None None	FUNGICIDES					
CULTIVATION		15-Feb 11-May 5/31, 7/20 29-Aug	Cleary's 3336G /Tiophanate Methyl Cavalier 2G /Tiophanate Methyl Heritage/Azoxystrobin Scotts Systemic Fungicide /Tiophanate Methyl	3 lbs./M 3 lbs./M 0.4 2 lbs./M		NOTES/COMMENTS	
Aerification - dates Aerification - type	1/7, 3/21, 8/4 - 1/4" hollow tines. 6/14, 6/21, 6/28, 7/5, 7/27, 10/25, 12/5 - Toro Spiker	15-Sep 31-Oct	Heritage/Azoxystrobin Chipco 26019/Iprodione	0.4 3			
Verticutting Dates of topdressing Other cultural practices	None 4/20, 9/7, 10/13 - Sand None	21-Dec	Cleary's 3336G /Tiophanate Methyl	3 lbs./M			

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						
FACTORS OF PLAY							
Date opened for play	open all year	04-Jan	16-4-8 granular	0.5 lb.	16-Mar	Triplet	0.1oz./M
Date closed for play		08-Feb	Now 12-0-12 liquid	0.5 oz.		/2,4-D,	
Type of spikes allowed	Softspikes preferred	09-Feb	16-4-8 granular	0.5 lb.		MCPP,	
Uses of green	chipping and putting	15-Mar	Now 12-0-12 liquid	0.5 oz.		Dicamba	
MOWING		05-Apr	16-4-8 granular	0.5 lb.			
		24-Apr	6-2-0 Milorganite	1 lb.			
		30-May	Now 12-0-12 liquid	0.5 oz.			
		15-Jun	6-2-0 Milorganite	1.5 lbs.			
		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.			
		03-Dec	6-2-0 Milorganite	1 lb.			
Initial height	0.25"						
Current height	0.125"						
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)			
CULTIVATION							
Aerification - dates	4/42 7/25, 10/4	16-Feb	Cleary's 3336	0.5 lb./M			
Aerification - type	1/4" hollow tines.	08-Mar	Scott's Fungicide X	0.5 lb./M			
		5/30, 7/6, 8/10, 9/15	Heritage (azoxystrobin)	0.5 oz.			
Verticutting	5/16, 6/17, 8/18, 9/17	11/23, 12/7	Cleary's 3336	0.5 lb./M			
Dates of topdressing		26-Dec	Scott's Fungicide X	0.5 lb./M			
Other cultural practices	None						
NOTES/COMMENTS							

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			POA ANNUA 2000-01	STIMPMETER READINGS				
						PERCENT SPRING	LIVING SPRING	COVER SUMMER		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 DATA

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

NAME	QUALITY RATINGS												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
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
CENTURY	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 Problems during	Sept. 1997 None	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
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	Subdue	2	29-Jan-98	Deep Green chelated iron	34	
Date closed for play	not closed	Fore	7	29-Jan-98	1-0-0 (w/8% calcium)	34	
Type of spikes allowed	metal,softspikes	Heritage	0.4	26-Feb-98	Deep Green FeSO4	1.6 lbs./M	
Uses of green	putting, chipping, target from bunker	Daconil	4	06-Mar-98	Deep Green FeSO4	1.6 lbs./M	
MOWING		Alliette	4	06-Mar-98	1-0-0 (w/8% calcium)	34	
Initial height	0.25"	Fore	8	13-Mar-98	Deep Green FeSO4	1.1 lbs./M	
Current height	0.13"	Clearays 3336	8	24-Mar-98	Eco-Mag	21	
Frequency	7 days/week	Subdue	2	24-Mar-98	Deep Green FeSO4	1.4 lbs./M	
Type of mower	walking, triplex	Daconil 2787	5	02-Apr-98	Eco-Mag	34	
Rollers used	on triplex only	Subdue	2	02-Apr-98	Deep Green FeSO4	1.3 lbs./M	
Groomers used	on triplex only	Fore	8	07-Apr-98	Roots	34	
CULTIVATION		Fore	8	20-Apr-98	Eco-Mag	34	
Aerification - dates	25-Nov-98	Chipco 26 GT	6	20-Apr-98	Deep Green FeSO4	1.3 lbs./M	
Aerification - type	solid	HERBICIDES			06-May-98	Turf Partners FeSO4	1.6 lbs./M
Verticutting	first week of April,	Date(s)	Product	Rate (oz./M)	06-May-98	Turf Partners FeSO4	1.6 lbs./M
Dates of topdressing	May, June, Sept., Oct.	None			26-May-98	Turf Partners FeSO4	1.6 lbs./M
	first week of April,				01-Jun-98	Deep Green FeSO4	0.86 lbs./M
Other cultural practices	May, June, Sept., Oct.				05-Jun-98	Roots 1-2-3	34
	brushed green monthly				10-Jun-98	Turf Partners Eco-Mag	34
	rolled green monthly				10-Jun-98	Deep Green FeSO4	1.6 lb./M
	with Jacobsen rollers	INSECTICIDES			15-Jun-98	Deep Green FeSO4	1.3 lb./M
		Date(s)	Product	Rate (oz./M)	19-Jun-98	Roots 1-2-3	34
		10-Aug-98	Merit	1.6	01-Jul-98	Turf Partners Eco-Mag	34
NOTES/COMMENTS					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
					08-Oct-98	Roots	17
					06-Nov-98	Turf Partners Eco-Mag	34
					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
					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 Problems during	Sept. 1997 None	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
		26-Jan 02-Apr 21-Jun	Chipco 26 (GT Flo) Chipco 26 (GT Flo) Subdue (F) Fore (WP)	8 4 2 8	None		
FACTORS OF PLAY						INSECTICIDES	
Date opened for play Date closed for play Type of spikes allowed Uses of green	May 1998 not closed metal,softspikes putting, chipping, bunker shots	05-Aug 07-Sep	Alliette Fore (WP)	4 8	Date(s) 12-Jul	Product Merit (75 WSP)	Rate (oz./M) 0.19
MOWING		14-Sep	Alliette Fore (WP)	4 8	OTHER PRODUCTS		
Initial height Current height Frequency Type of mower Rollers used Groomers used	1/4" 3/25" 7 days/week triplex Jacobsen GreensKing V - triplex attachments for groomers and rollers				Date(s)	Product	Rate (oz./M)
CULTIVATION			NOTES/COMMENTS				
Aerification - dates Aerification - type	3/15 - 1/4" hollow tine, 9/16 - 5/8" hollow tine, followed by topdressing (USGA spec.)		Very high traffic practice green! -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.				
Verticutting	monthly on Mar., Apr., May, Jun., Sept., Oct.		tube spot applicator. -Penn A-4 is very resistant to Poa annua invasion so far.				
Dates of topdressing	light to moderate - monthly on Apr., May, Jun., Jul., Sept., Oct., Nov.		 -Green is irrigated to prevent stress -Green is flushed monthly w/ 6" of water due to high sodium levels				
Other cultural practices	rolled and brushed for tournament dates						

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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	
16-Jan	Crown Tech. (FeSO4)		12-Apr	Best 18-3-18 (Polyon)	0.50 lbs. N		Turf Partners 1-0-23	0.07 lbs. K
	Nutriculture 28-8-18	0.08 lbs. N		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
26-Jan	Crown Tech. (FeSO4)		28-Apr	Turf Partners (Gypsum)		25-Oct	Turf Partners 1-0-23	0.10 lbs. K
	Turf Partners 7-32-6	0.10 lbs. P		Nutriculture 28-8-18	0.08 lbs. N		Nutriculture 28-8-18	0.08 lbs. N
	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	
02-Feb	Turf Partners 7-0-0	0.02 lbs. N	03-May	promot			Turf Partners 1-0-23	0.07 lbs. K
	Best 10-4-16	1.02 lbs. N		Crown Tech. (FeSO4)			Crown Tech. (FeSO4)	
	True Green 12-0-1	0.04 lbs. N		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
09-Feb	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)			Nutriculture 28-8-18	0.08 lbs. N		Nutriculture 20-20-20	0.06 lbs. N
	Best 10-4-16	0.50 lbs. N		Crown Tech. (FeSO4)			Crown Tech. (FeSO4)	
	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
17-Feb	Nutriculture 28-8-18	0.08 lbs. N	21-May	Turf Partners - Eco-Mag			Turf Partners 1-0-0-8Ca	
	Turf Partners 1-0-23	0.07 lbs. K		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
22-Feb	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	
	Best 10-4-16	0.13 lbs. K		Nutriculture 28-8-18	0.08 lbs. N	08-Dec	Lebenon S.G. 20-0-20	0.63 lbs. N
	Best 10-4-16	0.06 lbs. N		Nutriculture 24-0-0	0.07 lbs. N	09-Dec	Turf Partners 1-0-0-8Ca	
01-Mar	Turf Partners 1-0-23		31-May	Nutriculture 24-0-0	0.07 lbs. N		Bio-Flora 8-0-0-8Ca	0.02 lbs. N
	Turf Partners 7-32-6			Turf Partners 1-0-23	0.14 lbs. K		Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners - Eco-Mag			Turf Partners 8% chelated Fe		14-Dec	Best 10-4-16	0.46 lbs. N
	Crown Tech. (FeSO4)			Turf Partners 1-0-23	0.07 lbs. K	20-Dec	Nutriculture 28-8-18	0.08 lbs. N
04-Mar	Nutriculture 13-0-44	0.13 lbs. K	10-Jun	Nutriculture 24-0-0	0.08 lbs. N		Turf Partners 1-0-0-8Ca	
	Nutriculture 20-20-20	0.06 lbs. N		Pursell 0-0-46	2.6 lbs. K		Turf Partners 1-0-23	0.07 lbs. K
	Turf Partners 1-0-0-8Ca			Turf Partners (Gypsum)		28-Dec	Crown Tech. (FeSO4)	
	Crown Tech. (FeSO4)			Turf Partners 1-0-23	0.07 lbs. K		Turf Partners 1-0-23	0.07 lbs. K
12-Mar	Turf Partners 1-0-23	0.07 lbs. K	21-Jun	Nutriculture 24-0-0	0.07 lbs. N		Turf Partners 1-0-0-8Ca	
	Turf Partners 7-32-6	0.10 lbs. P		Pac. Ag. & Turf 0-0-25	0.08 lbs. K		Turf Partners 1-0-23	0.07 lbs. K
	Turf Partners 7-0-0	0.02 lbs. N		Nutriculture 24-0-0	0.10 lbs. N		Crown Tech. (FeSO4)	
	Nutriculture 20-20-20	0.06 lbs. N		Pac. Ag. & Turf 0-0-25	0.08 lbs. K		Turf Partners 1-0-0-8Ca	
19-Mar	Nutriculture 13-0-44	0.13 lbs. K	25-Jun	Nutriculture 24-0-0	0.07 lbs. N		Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners - Eco-Mag			Turf Partners 1-0-23	0.07 lbs. K		Crown Tech. (FeSO4)	
	Crown Tech. (FeSO4)			Nutriculture 24-0-0	0.07 lbs. N		Turf Partners 1-0-23	0.07 lbs. K
	Nutriculture 28-8-18	0.08 lbs. N		Pac. Ag. & Turf 0-0-25	0.08 lbs. K		Turf Partners 1-0-0-8Ca	
29-Mar	Turf Partners 1-0-23	0.07 lbs. K	16-Aug	Nutriculture 24-0-0	0.07 lbs. N		Nutriculture 28-8-18	0.08 lbs. N
	Turf Partners 7-32-6	0.10 lbs. P		Pac. Ag. & Turf 0-0-25	0.08 lbs. K		Crown Tech. (FeSO4)	
	Crown Tech. (FeSO4)			Nutriculture 24-0-0	0.07 lbs. N		Turf Partners 1-0-0-8Ca	
	Nutriculture 20-20-20	0.06 lbs. N		Turf Partners 1-0-23	0.07 lbs. K		Nutriculture 28-8-18	0.08 lbs. N
02-Apr	Nutriculture 24-0-0	0.07 lbs. N	19-Aug	Nutriculture 28-8-18	0.08 lbs. N		Turf Partners 1-0-23	0.07 lbs. K
	Best 10-4-16	0.50 lbs. N		Sequestar - 13% Fe			TOTAL - 1999	8.34 lbs. N
05-Apr								2.84 lbs. P
								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 02-Jun 27-Jul 03-Aug 03-Aug 14-Aug 14-Aug 20-Nov	Daconil WS Subdue (F) Daconil WS Alliette Fore (WP) Subdue Maxx Fore (WP) 26 Chipco GT Flo.	2 2 2 4 8 1 8 5	11-Jul 14-Aug	Merit (75 WSP) Tempo 20 WP	0.19 5 grams/1000
FACTORS OF PLAY							
Date opened for play							
Date closed for play							
Type of spikes allowed	Softspikes only						
Uses of green	putting, chipping, target. Heavy use PPG.						
MOWING							
Initial height	0.125"						
Current height	0.125"						
Frequency	7 days/week						
Type of mower	Triplex - GKV						
Rollers used	Groomers used						
Groomers used	approximate 4 days/week. Rollers used 1-2 times per month.						
CULTIVATION							
Aerification - dates	3/14, 10/10						
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)						
NOTES/COMMENTS							
Control of "Poa annua" continues to be our biggest problem. Some bentgrass varieties are very resistant to "Poa annua" in comparison to other varieties.							

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

FERTILIZATION

FERTILIZATION

Date(s)	Product Name	Product Analysis	Rate (lbs./M)			Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K				N	P	K
05-Jan	Turf Partners	7-0-0	0.02			17-Mar	Crown Tech.	FeSO4			
05-Jan	Turf Partners	1-0-23			0.07	27-Mar	Nutriculture	28-8-18	0.08	0.02	0.05
05-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	27-Mar	Turf Partners	1-0-23			0.07
05-Jan	Crown Tech.	FeSO4				27-Mar	Turf Partners	7-32-6	0.02	0.1	0.02
14-Jan	Nutriculture	20-20-20	0.08	0.08	0.08	27-Mar	Crown Tech.	FeSO4			
14-Jan	Turf Partners	1-0-23			0.07	02-Apr	Turf Partners	Gypsum			
14-Jan	Turf Partners	7-0-0	0.02			03-Apr	Turf Partners	34-0-0	0.01		
14-Jan	Crown Tech.	FeSO4				03-Apr	Turf Partners	1-0-0 (8% Ca)			
14-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	03-Apr	Turf Partners	1-0-23			0.07
24-Jan	Turf Partners	1-0-23			0.07	03-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
24-Jan	Turf Partners	Eco-Mag				03-Apr	Nutriculture	24-0-0	0.07		
24-Jan	Turf Partners	7-32-6	0.02	0.1	0.02	14-Apr	Turf Partners	34-0-0	0.1		
24-Jan	Turf Partners	7-0-0	0.02			14-Apr		0-0-34			0.09
09-Feb	Best	10-4-16	0.4	0.16	1.62	18-Apr	Best	18-3-18 (Polyon)	0.5	0.08	0.5
22-Feb	True Green	34-0-0	0.04			23-Apr	Turf Partners	0-0-34			0.2
22-Feb	Turf Partners	7-0-0	0.02			23-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
22-Feb	Turf Partners	Eco-Mag				23-Apr	Turf Partners	Eco-Mag			
22-Feb	Crown Tech.	FeSO4				23-Apr	Crown Tech.	FeSO4			
01-Mar	Nutriculture	28-8-18	0.08	0.02	0.05	26-Apr	Nutriculture	28-8-18	0.08	0.02	0.05
01-Mar	Turf Partners	1-0-23			0.07	26-Apr	Turf Partners	1-0-23			0.07
01-Mar	Turf Partners	1-0-0 (8% Ca)				26-Apr	Turf Partners	Eco-Mag			
01-Mar	Turf Partners	7-32-6	0.02	0.1	0.02	26-Apr	promot	Promot			
01-Mar	Turf Partners	Eco-Mag				26-Apr	Crown Tech.	FeSO4			
01-Mar	Crown Tech.	FeSO4				01-May	Turf Partners	34-0-0	0.07		
02-Mar	Best	10-4-16	0.62	0.25	0.99	01-May	Crown Tech.	FeSO4			
08-Mar	Turf Partners	1-0-0 (8% Ca)				07-May	Best	18-3-18 (Polyon)	0.5	0.08	0.5
08-Mar	Turf Partners	1-0-23			0.07	12-May	Nutriculture	28-8-18	0.08	0.02	0.05
08-Mar	Turf Partners	7-32-6	0.02	0.1	0.02	12-May	Crown Tech.	FeSO4			
08-Mar	Turf Partners	7-0-0	0.02			12-May	Turf Partners	1-0-23			0.04
17-Mar	Nutriculture	20-20-20	0.06	0.06	0.06	12-May	Turf Partners	Eco-Mag			
17-Mar	Nutriculture	34-0-0	0.04			23-May	Nutriculture	20-20-20	0.06	0.06	0.06
17-Mar	Turf Partners	Eco-Mag				23-May	Turf Partners	1-0-23			0.04

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TABLE 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)			Date(s)	Product Name	Product Analysis	Rate (lbs./M)		
			N	P	K				N	P	K
23-May	Crown Tech.	FeSO4				01-Oct	Turf Partners	Gypsum			
31-May	Nutriculture	28-8-18	0.08	0.02	0.05	04-Oct	Best	10-4-16	0.26	0.11	0.42
31-May	Nutriculture	24-0-0	0.07			25-Oct	Turf Partners	0-0-34			0.1
14-Jun	Nutriculture	34-0-0	0.07			25-Oct	Nutriculture	28-8-18	0.08	0.02	0.05
14-Jun	Turf Partners	1-0-23			0.14	12-Nov	K-Power	34-0-0	0.1		
14-Jun	Turf Partners	8% chelated Fe				12-Nov	Turf Partners	1-0-23			0.07
19-Jun	Turf Partners	0-0-34			0.07	12-Nov	Crown Tech.	FeSO4			
19-Jun	Nutriculture	24-0-0	0.07			02-Nov	Turf Partners	Gypsum			
24-Jun	Pursell	0-0-46			1.1	15-Nov	Turf Partners	Eco-Mag			
10-Jul	Turf Partners	0-0-34			0.07	15-Nov	Turf Partners	1-0-23			0.14
10-Jul	Turf Partners	7-0-0	0.1			15-Nov	K-Power	13.75-0-46	0.04		0.13
16-Jul	Turf Partners	Gypsum				15-Nov	Nutriculture	20-20-20	0.06	0.06	0.06
27-Jul	Pac. Ag. & Turf	0-0-25			0.08	15-Nov	Crown Tech.	FeSO4			
27-Jul	Nutriculture	24-0-0	0.1			27-Nov	Turf Partners	0-0-34			0.07
08-Aug	Pac. Ag. & Turf	0-0-25			0.1	27-Nov	Nutriculture	28-8-18	0.08	0.02	0.05
08-Aug	Nutriculture	24-0-0	0.1			03-Dec	Lebenon S.G.	20-0-20	0.5		0.5
17-Aug	Turf Partners	Gypsum				07-Dec	K-Power	13.75-0-46	0.04		0.13
19-Aug	Turf Partners	0-0-34			0.07	07-Dec	Turf Partners	34-0-0			0.07
19-Aug	Nutriculture	28-8-18	0.08	0.02	0.05	07-Dec	Turf Partners	1-0-0-8Ca			
19-Aug	Sequestar	13% Fe				16-Dec	Best	10-4-16	0.4	0.16	1.62
05-Sep	Turf Partners	0-0-34			0.07	22-Dec	Nutriculture	28-8-18	0.08	0.02	0.05
05-Sep	K-Power	13.75-0-46	0.04		0.13	22-Dec	Turf Partners	34-0-0			0.07
05-Sep	Sequestar	13% Fe				22-Dec	Crown Tech.	FeSO4			
11-Sep	Turf Partners	1-0-0-8Ca				27-Dec	Turf Partners	34-0-0			0.1
11-Sep	Turf Partners	1-0-23			0.07	27-Dec	Nutriculture	20-20-20	0.1	0.1	0.1
11-Sep	Nutriculture	34-0-0	0.1					Total	6.03	1.89	11.59
19-Sep	Best	10-4-16	0.62	0.25	0.99						

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TABLE 4D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT MURRIETA, CA (SCGA MEMBERS CLUB)

ESTABLISHMENT	FUNGICIDES				INSECTICIDES			
	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)		
Seeding date	Sept. 1997							
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								
Date opened for play		18-Jun	Fore (WP)	8				
Date closed for play		18-Jul	Alliette	4				
Type of spikes allowed	Softspikes only	18-Jul	Fore (WP)	8				
Uses of green	putting, chipping, target.	30-Jul	Daconil WS	2	HERBICIDES			
	Heavy use PPG.	25-Aug	Subdue Maxx	1				
		25-Aug	Fore (WP)	8	Date(s)	Product	Rate (oz./M)	
		29-Nov	26 Chipco GT Flo.	5				
MOWING					18-Jan	Betasan 4E	4	
Initial height	0.125"							
Current height	0.125"							
Frequency	7 days/week							
Type of mower	Triplex - GKV							
Rollers used	Groomers used							
Groomers used	approximate 4 days/week. Rollers used 1-2 times per month.				Date(s)	Product	Rate (oz./M)	
CULTIVATION								
Aerification - dates	3/12, 10/9				OTHER PRODUCTS			
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)				NOTES/COMMENTS			
					Control of "Poa annua" continues to be our biggest problem. Some bentgrass varieties are very resistant to "Poa annua" in comparison to other varieties.			

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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											MEAN		
			PERCENT POA ANNUA RATING				SUMMER	FALL	WINTER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV		
			MARCH 2000-01	SEP 2001	OCT 2000	DEC 2000-01	1998 2000	1999 2001	1998-01													
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	6.3	6.7
PENN CROSS	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.

TABLE 5A. 1998 MANAGEMENT - ON-SITE BENTGRASS TEST AT LAKEWOOD, CO (FOX HOLLOW AT LAKEWOOD)

ESTABLISHMENT		FERTILIZATION			FUNGICIDES		
Seeding date	04-Sep-97	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Problems during	None	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	
FACTORS OF PLAY		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 covered periods	04-Mar-98	Nature Safe 8-3-5	0.53 lb. N	Date(s)	Product	Rate (oz./M)
Type of spikes allowed	softspikes	27-Apr-98	Scotts 20-0-17	0.33 lb. N			
		06-May-98	Nature Safe 8-3-5	0.6 lb. N	28-Aug-97	Scotts STEP (trace elements)	
		06-May-98	Nitroform 38-0-0	1.14 lb. N		Floratine Equalize & pkg.	
		06-May-98	Map 11-52-0	1 lb. P	20-Oct-97	Scotts STEP (trace elements)	
		06-May-98	Poly-K 0-0-50	1.5 lb. K	23-Mar-98	Pro-Mag 36 (Mg)	
Uses of green	putting, chipping,	15-May-98	Scotts 31-3-10	0.62 lb. N	06-May-98	Gypsum	
		09-Jun-98	Ammonium Sulfate	0.096 lb. N	06-May-98	Astron (Ca, Fe)	
		09-Jun-98	Now Tiger Turf	0.02 lb. N	09-Jun-98	Renaissance (Mg, S, Fe, Mn)	
		09-Jun-98	Equalizer	0.034 lb. N	09-Jun-98	Calphex (Ca)	
MOWING		17-Jun-98	Scotts STEP	0.9 lb. N	09-Jun-98	Phlexmag (Mg)	
		25-Jun-98	Ammonium Sulfate	0.1 lb. N	09-Jun-98	Phlexman (Mn)	
Initial height	0.290"	21-Jul-98	Potassium Nitrate 14-0-46	0.07 lb. N	09-Jun-98	Ruffin Fe	
Current height	0.190"	21-Jul-98	Ammonium Sulfate	0.08 lb. N	25-Jun-98	Calphex	
Frequency	7 days/week	19-Aug-98	Potassium Nitrate 14-0-46	0.07 lb. N	25-Jun-98	Phlexmag	
Type of mower	walking	19-Aug-98	Ammonium Sulfate	0.08 lb. N	25-Jun-98	Phlexman	
Rollers used	None	19-Aug-98	Potassium Nitrate	0.04 lb. N		Surfside (wetting agent)	
Groomers used	biweekly	19-Aug-98	Tiger Turf	0.01 lb. N	25-Jun-98	Renaissance	
		04-Sep-98	Equalizer	0.01 lb. N	21-Jul-98	Perk-Up (Ca 8%)	
CULTIVATION		04-Sep-98	Ammonium Sulfate	0.1 lb. N	21-Jul-98	Phlexmag	
		04-Sep-98	Potassium Nitrate	0.02 lb. N	21-Jul-98	Phlexman	
		04-Sep-98	Now Turf Starter	0.03 lb. P	21-Jul-98	Flexx (Fe, Mg, Mn)	
Aerification - dates	09-Sep-98	09-Sep-98	Nature Safe 8-3-5	0.6 lb. N	21-Jul-98	Renaissance	
Aerification - type	hollow tine	09-Sep-98	Nitroform 38-0-0	1.14 lb. N	19-Aug-98	Calphex	
Verticutting	None	09-Sep-98	Map 11-52-0	1 lb. P	19-Aug-98	Phlexmag	
Dates of topdressing	biweekly	09-Sep-98	Poly-K 0-0-50	1.5 lb. K	19-Aug-98	Phlexman	
	after grooming	29-Sep-98	Ammonium Sulfate	0.08 lb. N	19-Aug-98	Astron	
Other cultural practices	None	29-Sep-98	Potassium Nitrate	0.04 lb. N	19-Aug-98	Calphex	
		29-Sep-98	Tiger Turf	0.01 lb. N	04-Sep-98	Maxi-Plex (humates)	
		29-Sep-98	Equalizer	0.01 lb. N	04-Sep-98	Renaissance	
		21-Oct-98	Scotts Contec 17-3-17	0.5 lb. N	04-Sep-98	Phlexmag	
					04-Sep-98	Phlexman	
					09-Sep-98	Pro-Mag	
					09-Sep-98	Gypsum	
					29-Sep-98	Astron	
					29-Sep-98	Calphex	
					29-Sep-98	Maxi-Plex (humates)	
					29-Sep-98	Renaissance	
					29-Sep-98	Phlexmag	
					29-Sep-98	Phlexman	
HERBICIDES				NOTES/COMMENTS			
		Date(s)	Product	Rate (oz./M)	09-Sep-98		
		None			29-Sep-98		
					29-Sep-98		
					29-Sep-98		
					29-Sep-98		
INSECTICIDES							
		Date(s)	Product	Rate (oz./M)	29-Sep-98		
		None			29-Sep-98		
					29-Sep-98		
					29-Sep-98		
					29-Sep-98		

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

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

ESTABLISHMENT		FERTILIZATION				FERTILIZATION			
Seeding date Problems during	04-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)		
		16-Mar	Scotts Contec 17-3-17	0.560 lb.N	Sept. 29	Perk Up, Potassium	0.36 lb.N,		
		21-Apr	Scotts Contec 17-3-17	0.440 lb. N		Nitrate, Tiger Turf,	0.04 lb.P,		
FACTORS OF PLAY		12-May	Scotts Contec 17-3-17	0.520 lb. N		Equalize, Astron,	0.93 lb.K,		
		Aug. 26	Scotts Contec 17-3-17	0.380 lb. N		Renaissance, Calphlex,	and Ca, Mg,		
Date opened for play	01-Jul-98	Oct. 20	Scotts Contec 17-3-17	0.750 lb. N		Maxi-Plex, Ferromec,	S, Fe		
Date closed for play	not closed	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		Heritage			
Type of spikes allowed	except for snow covered periods softspikes	03-May	NH4+, Turf Starter, Ferromec, Turf Colorant	0.25 lb.N, 0.06 lb.P, 0.01 lb.K		Total: 7.329 lbs. N, 2.914 lbs. P, and 8.125 lbs. 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"								
Frequency	7 days/week	Jul. 1-2	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk	0.107 lb.N, 0.020 lb.P, 0.250 lb.K, and Ca, Mg, S, Fe, Mn		None			
Type of mower	walking								
Rollers used	None								
Groomers used	1-2X/week	Jul. 20-21	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk	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						INSECTICIDES			
Aerification - dates	5/19, 9/9								
Aerification - type	5/8" hollow tine	Aug. 9-10	Tournament Pride, Tiger Turf, Equalize, Astron, Renaissance, Perk	0.160 lb.N, 0.020 lb.P, OTHER PRODUCTS					
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					
						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								
Date opened for play		07-Mar	Scott's Contec 17-3-17	0.51 lb.N	Sept. 29	Perk Up, Potassium	0.36 lb.N,	
Date closed for play		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,	
			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			Renaissance, Calphlex, Maxi-Plex, Ferromec,	and Ca, Mg, S, Fe	
Type of spikes allowed		08-May	Primer 3oz, MaxiPlex 3oz, Roots Fe 8% 1oz.			Heritage		
		16-May	Scott's Pro-Turf 15-0-29	0.25 lb. N				
		02-Jun	Tourney Pride 7.01oz, Turf Starter 7.01oz, Astron 1oz, Renaissance 1.5oz, Calpphlex 1.18oz , Phlexman 0.13oz,					
		19-Jun	Phlexmag 0.77oz, Primer 3oz, Roots Fe 8% 1oz, Heritage 0.4oz, Dye 0.50oz.					
Uses of green	putting, chipping,	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,		29-Sep	Heritage	0.4 lbs./M	
MOWING			Phlexmag 0.77oz, Primer 1.5oz, Roots Fe 8% 1oz, Heritage 0.4oz, Roots Stand up 3.0oz, Dye 0.50oz.					
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.					
Current height	0.140"							
Frequency	7 days/week							
Type of mower	walking	28-Aug	Scott's Pro-Turf 15-0-29	0.3 lb. N				
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					
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.					
Aerification - dates	Spring and Fall		Scott's Contec 17-3-17	0.26 lb.N				
Aerification - type	5/8" hollow tine							
Verticutting	2-3x weekly							
Dates of topdressing	light topdressing biweekly	23-Oct						
Other cultural practices								

NOTES/COMMENTS

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

TABLE 5D.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF BENTGRASS CULTIVARS IN THE
 1997 USGA/GCSAA/NTEP ON-SITE BENTGRASS TEST
 AT LAKWOOD, CO (FOX HOLLOW AT LAKWOOD) 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 RATING			ESTABLISHMENT VIGOR		CULTIVATION RECOVERY		STIMPMETER READINGS		QUALITY RATINGS					
				SPRING	SUMMER	FALL	SEP	NOV	1999	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)			
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	26-Mar-98 26-Mar-98 30-Mar-98 09-Apr-98 13-Apr-98 22-Apr-98	K-Power 12-0-42 16-4-16 Nutraculture 12-31-14 Nature Safe 8-3-5 Ringer 5-10-3 K-Power 13-24-12	0.6 lb. N 1 lb. N 0.05 lb. N 0.8 lb. N 0.31 lb. N 0.31 lb. N	06-Jul-98 13-Jul-98 12-Aug-98 17-Aug-98	Conserve Conserve Conserve Mach 2	0.77 2.5 1.25 0.53
FACTORS OF PLAY						FUNGICIDES	
Date opened for play	15-May-98	22-Apr-98	K-Power 16-4-16	0.44 lb. N			
Date closed for play	15-Nov-98	29-Apr-98	Biocomposte Forte	0.26 lb. N	Date(s)	Product	Rate (oz./M)
Type of spikes allowed	softspikes	27-May-98	Ringers 5-10-3	0.29 lb. N			
Uses of green	putting, chipping, target	27-May-98 15-Jun-98 26-Jun-98	Huma Base 4-3-0 Biosol 6-3-1 Quelant Ca 5-0-0	0.04 lb. N 0.27 lb. N 0.01 lb. N	30-Mar-98 10-Apr-98 10-Apr-98	Bayleton Daconil Banol	4.6 5.5 2.5
MOWING		02-Jul-98 06-Jul-98	Quelant Ca 5-0-0 Quelant Ca 5-0-0	0.01 lb. N 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 Biosol 6-3-1	0.01 lb. N 0.27 lb. N	Date(s)	Product	Rate (oz./M)
Frequency	7 days/week	23-Jul-98					
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			
CULTIVATION		24-Aug-98	Plasma 12-5-3	0.06 lb. N		NOTES/COMMENTS	
Aerification - dates	None	28-Aug-98	Plasma 12-5-3	0.06 lb. N			
Aerification - type		04-Sep-98	Plasma 12-5-3	0.09 lb. N			
Verticutting	None	08-Sep-98	Plasma 12-5-3	0.01 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	10-Sep-98 12-Sep-98 14-Sep-98 30-Sep-98 02-Oct-98 09-Oct-98 09-Oct-98	Nature Safe 8-3-5 Biosol 6-3-1 Biosol 6-3-1 MAP 12-61-0 K-Power 12-0-42 Nutraculture 10-20-20 Plasma 12-5-3	0.36 lb. N 0.23 lb. N 0.18 lb. N 0.30 lb. N 0.33 lb. N 0.31 lb. N 0.06 lb. N			
Other cultural practices	None	23-Oct-98 27-Oct-98 16-Dec-98	0-0-38 Lesco IBDU 10-18-22 Milorganite	0.71 lb. K 0.20 lb. N 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. areofacions	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	Azospirillum	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 brasiliense	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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	28-Aug-97						
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	02-Mar 08-Apr 27-Apr 03-May 13-May 21-May	Green-Pro 12-3-8 Biocomposte Forte 7-5-0 Agriplex 0-4-4 Mycor Turf Saver 4-1-2 Agriplex 0-4-4 Refresh 1-0-0	0.75 lb. N 0.26 lb. N 1 lb. Prod./7993 sq.ft. 0.75 lb. N 0.5 lb. Prod./7993 sq.ft. 2 lb. Prod./7993 sq.ft.	29-May 04-Jun 18-Aug 23-Sep 27-Sep	Mach 2 Mach 2 Mach 2 Mavrik Mavrik	1.5 1.75 1.88 0.24 0.25
FACTORS OF PLAY							
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	11-Jun 14-Jun 27-Jun 28-Jun	Macrosorb Follar 2-0-0 Nutraculture 10-20-30 1-0-14 Dried Blood 12-0-0 0-2-30	0.88 lb. Prod./7993 sq.ft. 0.10 lb. N 0.11 lb. N 0.24 lb. N 1.00 lb. K	Date(s)	Product	Rate (oz./M)
MOWING					11-Jun 12-Jun 27-Jun	3336 Daconil Touche	2 4.5 0.25
Initial height							
Current height					12-Jul	Prostar	6
Frequency	7 days/week	30-Jun	Peters Professional 9-45-15	0.01 lb. N	12-Jul	Daconil	3.2
Type of mower	walking	11-Aug	Nature Safe 8-3-5	0.22 lb. N	12-Jul	Heritage	0.4
Rollers used	None	18-Aug	Peters Professional 9-45-15	0.08 lb. N	22-Jul	Banol	1.5
Groomers used	Shallow - 1-2X/week	30-Aug 08-Sep 17-Sep	Milorganite 6-2-0 Peters Professional 15-20-25 Nature Safe 8-3-5 White Gold 0-0-25 Milorganite 6-2-0	0.39 lb. N 0.20 lb. N 0.45 lb. N 0.67 lb. K 0.51 lb. N 1.09 lb. K			
CULTIVATION					HERBICIDES		
Aerification - dates	Aug. 8, 1999	04-Oct	White Gold 0-0-25	21 lbs. Prod./7993 sq.ft.	Date(s)	Product	Rate (oz./M)
Aerification - type	Hydroject water injection		Perk-Up (Fine) 0-0-0				
Verticutting	None	18-Nov	IBDU 10-18-22	0.34 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	06-Dec	Milorganite 6-2-0	0.99 lb. N	NOTES/COMMENTS		
Other cultural practices	Brushed only for sand topdressing			Total (lbs./M): 5.60 lbs. N, 1.38 lbs. P, 5.29 lbs. K			

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

OTHER PRODUCTS

Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
14-Apr	Turfshield	5 lbs/M	04-Jun	Nutrobac	0.31 gal./M
20-Apr	Perk-Up Micronutrient Mix	3.12 lbs./M	04-Jun	D-2b Pseudomonas	0.13 gal./M
27-Apr	Greenreleaf Bio B+	0.16 gal./M	04-Jun	Az-1b Azospirillum brasiliense	0.13 gal./M
27-Apr	Greenreleaf Bio F+	0.16 gal./M	04-Jun	Greenreleaf Bio A	0.19 gal./M
27-Apr	Greenreleaf Bio A+	0.16 gal./M	04-Jun	Greenreleaf Bio B+	0.13 gal./M
27-Apr	Organica PGA	0.13 lbs./M	14-Jun	Biotea	1.25 gal./M
01-May	Agri-energy Biotea	0.63 gal./M	27-Jun	Pana Sea	1.25
03-May	Mycor Turf Saver	18.70 lbs./M	27-Jun	Vitech Experimental Amino Acid	2
13-May	Agri-energy Biotea	0.63 gal./M	30-Jun	W/S-Envirogreen Fertility Product	0.5 lbs./M
13-May	Azospirillum	0.06 gal./M	30-Jun	CBG-Envirogreen Fertility Product	12
13-May	Bacillus	31.28 grams/M	30-Jun	BP-Envirogreen Fertility Product	1 packet/7993 sq.ft.
13-May	Back-Pac	0.13 quarts/M	30-Jun	MSE-Envirogreen Fertility Product	16
13-May	MPM (Agri-energy)	0.13 gal./M	12-Jul	Sprint Iron	0.32
13-May	Enzwell	0.88 pints/M	12-Jul	Break Thru	0.25
13-May	AgriPlex	0.88	22-Jul	Break Thru	0.25
13-May	Vigroot	0.13 lbs./M	08-Sep	Vitech Experimental Amino Acid	0.8
14-May	Agri-energy Biotea	0.63 gal./M	08-Sep	CBG-Envirogreen Fertility Product	3.25
14-May	Azospirillum	0.06 gal./M	08-Sep	W/S-Envirogreen Fertility Product	0.4 lbs./M
14-May	Back-Pac	0.13 quarts/M	08-Sep	Biotea	0.3 gal./M
14-May	MPM (Agri-energy)	0.13 gal./M	08-Sep	Plant Growth Activator	1.63
14-May	Enzwell	0.88 pints/M	08-Sep	Sprint 330 Iron	1.63
14-May	Vigroot	0.13 lbs./M	23-Sep	Dethatch	4
21-May	Enzwell	0.19 gal./M	23-Sep	Sprint 330 Iron	2
21-May	MPM (Agri-energy)	0.25 gal./M	23-Sep	Plant Growth Activator	2
21-May	Agri-energy Biotea	1.13 gal./M	23-Sep	Macro-sorb foliar	2
21-May	Refresh	3	27-Sep	Calphex	12
29-May	Back-Pac	0.06 gal./M	04-Oct	Fine Perk	2.63 lbs./M
29-May	Organica PGA	0.11 lbs./M			

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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)			
Problems during	slow to fill, overseeded at 1/2 rate in mid-Sept.	26-Apr 26-Apr 26-Apr 26-Apr 26-Apr 16-May	Plant Growth Activator Maxicrop Soluale Seaweed Powder Maxicrop Liquid Dethatch Fresh Pak Super Shot 40	0.31 lb./M 1 1.5 0.16 lb./M 24.02 4	19-Jul	Battle	1.25
FACTORS OF PLAY						FUNGICIDES	
Date opened for play		16-May	Root Grow	16.01	Date(s)	Product	Rate (oz./M)
Date closed for play		16-May	Nutribac Growth Medium	16.01			
Type of spikes allowed	softspikes	16-May	Pseudomodas sp.	16.01	16-May	Nature's Best	10
Uses of green	putting, chipping, target	16-May 18-May 23-May	Plant helper Spot-Less Turfshield TM	0.30 lb./M 32.03 4.38 lb./M	28-Jun 19-Jul 09-Aug	Daconil	1.69 lbs/M 2.5 2.92
MOWING		03-Jun 20-Jun	Spot-Less Spot-Less	32.03 36.57	18-Sep 02-Nov	Daconil	2.92
Initial height		20-Jun	Plant helper	0.40 lb./M		Nature's Best	4
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			
CULTIVATION		28-Jul	B-1b Bacillus inoculant	0.12 lb./M	Date(s)	Product	Rate (oz./M)
Aerification - dates	7/6, 7/25, 9/15	07-Aug	Root Grow	16.01			
Aerification - type	Hydroject water injection	07-Aug	Spot-Less	16.01	None		
Verticutting		21-Aug	B-1b Bacillus inoculant	0.12 lb./M			
		21-Aug	Plant helper	0.17			
Dates of topdressing	4/24, 5/23, 7/5, 7/20, 8/15, 8/28, 9/4, 9/15, 10/17	15-Sep	Super Shot 40	487.93 ml/M		NOTES/COMMENTS	
		15-Sep	Plant helper	0.75 lb./M			
Other cultural practices	Brushed only for sand topdressing	15-Sep	Plant helper	0.25 lb./M			
		15-Sep	Super Shot 40	4			
		15-Sep	Earthworks N-hance	1.25			
		15-Sep	Earthworks Base One	1.25			
		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			

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

TABLE 6C. (CONTD)

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

FERTILIZATION

FERTILIZATION

Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (lbs./M)
07-Apr	Perk (0-0-0)	19 lbs./7993 sq ft	24-Jul	Quelant Ca (5-0-0)	0.01 lb. N
07-Apr	White Gold (0-0-25)	2.08 lbs. K	24-Jul	Nutrigrow PK (0-28-26)	0.05 lb. K
12-Apr	Nature Safe (8-3-5)	0.33 lb. N	24-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
26-Apr	Fresh Pak (1-0-0)	0.01 lb. N	24-Jul	PanaSea Plus (0-0-0)	0.45 lb./3500 sq ft
26-Apr	Nature Safe (8-3-5)	0.37 lb. N	08-Aug	Plant Helper (0.6-0.9-0.2)	1.38 lbs./7993 sq ft
03-May	Nutraculture (10-20-30)	0.04 lb. K	08-Aug	Agriplex (0-4-4)	0.01 lb. K/app.
03-May	Agriplex (0-4-4)	0.01 lb. P/app.	09-Aug	Nutrigrow PK (0-28-26)	0.02 lb. K
03-May	Macrosorb Foliar (2-0-0-B,Mn,Zn)	0.01 lb. N/app.	09-Aug	Quelant Ca (5-0-0)	0.04 lb. N/app.
03-May	Quelant Ca (5-0-0)	0.03 lb. N/app.	09-Aug	Tuff Turf (1-0-14)	0.01 lb. K
03-May	Quelant K (1-0-30)	0.01 lb. K	14-Aug	Quelant K (1-0-30)	0.02 lb. K
03-May	3-D (0-0-14)	0.02 lb. K/app.	14-Aug	Sprint 330 (0-0-0)	
03-May	Biogain WSP (0-0-12)	0.02 lb. K/app.	14-Aug	Nutrigrow PK (0-28-26)	0.01 lb. K
03-May	Sprint 330 (0-0-0)	0.18 lb./7993 sq ft	14-Aug	Sea Quentia (7-0-1)	0.03 lb. N/app.
05-May	Soil Synergy (10-2-8)	0.44 lb. N	14-Aug	Iron Master (15-0-1)	
16-May	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.	14-Aug	Quelant Ca (5-0-0)	0.5 lbs./7993 sq ft
16-May	Nature's Best (0-0-0-Fe,Cu,B,Mo)	6.25 lbs./7993 sq ft	14-Aug	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.
18-May	Nutraculture (28-8-18)	0.20 lb. N	21-Aug	Vtech Protamin (5-0-0)	0.01 lb. N
18-May	Biogain WSP (0-0-3)	0.02 lb. K	21-Aug	Nutrigrow PK (0-28-26)	0.06 lb. K
03-Jun	Nutrigrow PK (0-28-26)	0.04 lb. K	21-Aug	Nature Best (0-0-0)	6.25 lbs./7993 sq ft
20-Jun	PanaSea Plus (0-3-2)	0.01 lb. K	21-Aug	Biogain WSP (0-0-12)	0.01 lb. K/app.
20-Jun	Nutrigrow PK (0-28-26)	0.06 lb. K	21-Aug	Microbial Stimulant (1-0-0)	0.01 lb. N
20-Jun	Plant Helper (0.6-0.9-0.2)	1.41 lb./3500 sq ft	21-Aug	Plant Helper (0.6-0.9-0.2)	0.04 lb. N/app.
20-Jun	Microbial Stimulant (1-0-0)	0.03 lb. N	15-Sep	Biogain WSP (0-0-12)	0.01 lb. K
27-Jun	Nutrigrow PK (0-28-26)	0.21 lb. K	15-Sep	Biogain WSP (Fe) (0-0-3)	0.02 lb. K/app.
27-Jun	Lesco Chelated Fe+ (12-0-0)	0.04 lb. N	15-Sep	Plant Helper (0.6-0.9-0.2)	0.01 lb. N/app.
27-Jun	Quelant Ca (5-0-0)	0.03 lb. N	15-Sep	Vtech Protamin (5-0-0)	0.01 lb. N
07-Jul	Nature Safe (8-3-5)	0.29 lb. N	15-Sep	Earthworks Base 1 (1-10-10-Cu,Zn,Mn)	0.01 lb. K
13-Jul	Soil Synergy (10-2-8)	0.44 lb. N	29-Sep	Lesco Greens Grade (18-4-18)	0.56 lb. N
19-Jul	Vtech Protamin (5-0-0)	0.03 lb. N/app.	20-Oct	Clesen's Professional (18-8-18)	0.68 lb. N
19-Jul	Macrosorb Foliar (2-0-0)	0.01 lb. N/app.	14-Nov	Soil Synergy (10-2-8)	0.63 lb. N
19-Jul	Tuff Turf (1-0-14-Ca,Mg,Fe,Mn)	0.01 lb. K			

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

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

TABLE 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 31-Mar 18-Apr 18-Apr 18-Apr 18-Apr 18-Apr	Milorganite (8-3-6) Macrosorb Foliar (2-0-0) Tuff Turf (1-0-14) Sprint 330 PanaSea Plus (0-3-2) Lesco Chelated Fe+ (12-0-0) Nutraculture (10-20-30)	0.8 lb. N 0.001 lb. N 0.01 lb. K 0.03lb. Product/M 0.03lb. Product/M 0.01 lb. N 0.03 lb. K	01-Mar 31-Mar 18-Apr 20-Jun 13-Jul 13-Jul 24-Jul	Daconil Ultrex Chipco alliete signature 4oz; Chipco 26019 1.5oz; Cleary's 3336 2oz; Banol 0.38oz. Daconil Ultrex 0.11 lb./M; Banol 0.5oz. Daconil Ultrex 0.11 lb./M Daconil Ultrex 0.13 lb./M Cleary's 3336 0.13lb/M Daconil Ultrex 0.13 lb./M	5 1.5oz; Cleary's 3336 2oz; Banol 0.38oz. Daconil Ultrex 0.11 lb./M; Banol 0.5oz. Daconil Ultrex 0.11 lb./M Daconil Ultrex 0.13 lb./M Cleary's 3336 0.13lb/M Daconil Ultrex 0.13 lb./M
FACTORS OF PLAY							
Date opened for play		18-Apr					
Date closed for play		18-Apr	Nutraculture (10-20-30)	0.03 lb. K			
Type of spikes allowed		18-Apr	Macrosorb Foliar (2-0-0)	0.001 lb. N			
Uses of green		30-Apr	Macrosorb Foliar (2-0-0)	0.001 lb. N			
MOWING		30-Apr	Quelant K (1-0-30)	0.01 lb. K			
		01-May	Nutraculture (10-20-30)	0.13 lb. K			
		02-May	14-0-28 Plus Turf Enhancer	0.37 lb. K			
		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
CULTIVATION		15-Jun	Sprint 330	0.06lb. Product/M			
Aerification - dates	5/29, 6/26, 8/13	20-Jun	Nutragreen (5-10-5)	0.02 lb. N	HERBICIDES		
Aerification - type	Hydrojet	20-Jun	Tuff Turf (1-0-14)	0.01 lb. K			
Verticutting		20-Jun	Perk up	0.03lb. Product/M			
Dates of topdressing	4/5, 5/14, 5/29, 6/26, 7/2, 7/17, 8/7, 8/13, 9/5, 11/7	20-Jun	Lex (1-0-0)	0.03lb. Product/M	Date(s)	Product	Rate (oz./M)
Other cultural practices		20-Jun	Agriplex Micromix (0-3-5)	0.03lb. Product/M			
		27-Jun	Turf Vigor (9-3-6)	0.06 lb. N			
		27-Jun	PK Plus (3-21-18)	0.02 lb. K	OTHER PRODUCTS		
		06-Jul	Turf Vigor (9-3-6)	0.07 lb. N			
		06-Jul	PK Plus (3-21-18)	0.02 lb. K			
		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	NOTES/COMMENTS		
		16-Nov	PK Plus (3-21-18)	0.15 lb. K			

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 STIMPETER READINGS MEASURED IN INCHES

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	SEEDLING VIGOR	DENSITY FALL 1998	STIMPETER READINGS			QUALITY RATINGS						
						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
PENNXCROSS	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		
		Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date	03-Oct-97						
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			
		18-May-98	18-4-10 + micros	1.0 lb. N	INSECTICIDES		
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	Date(s)	Product	Rate (oz./M)
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	Date(s)	Product	Rate (oz./M)
Dates of topdressing	24-May-98 15-Jun-98 20-Jul-98 07-Sep-98 21-Sep-98 12-Oct-98 19-Oct-98 26-Oct-98 02-Nov-98 16-Nov-98 22-Nov-98 30-Nov-98						
		FUNGICIDES			None		
		Date(s)	Product	Rate (oz./M)			
Other cultural practices	None						

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

TABLE 7B.

1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT WEST LAFAYETTE, IN (PURDUE UNIVERSITY - KAMPEN GOLF COURSE)

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date Problems during	03-Oct-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		05-Apr 28-May 01-Jun 10-Aug	16-28-10 18-4-10 11-22-14 18-4-10	1.0 lb. N 1.0 lb. N 0.5 lb. N 0.5 lb. N	None		
Date opened for play	End of March	10-Sep	9-18-18	0.5 lb. N			
Date closed for play	End of Nov.	08-Oct	18-9-18	1.0 lbs. N			
Type of spikes allowed	softspikes only	18-Oct	18-9-18	0.5 lb. N	INSECTICIDES		
Uses of green	putting, chipping	03-Dec	11-22-14	0.5 lb. N	Date(s)	Product	Rate (oz./M)
MOWING		FUNGICIDES			13-May 08-Jul	Mach 2 Mach 2	1.5 1.5
Initial height	1/4"				20-Aug	Dylox 80	2
Current height	5/32"	Date(s)	Product	Rate (oz./M)			
Frequency	7 days/week						
Type of mower	Triplex/Walking	06-May	Chipco GT	3.2			
Rollers used		02-Jun	Chipco GT	4			
Groomers used	Spring and Fall	21-Jun	Daconil Ultrex	4	OTHER PRODUCTS		
CULTIVATION		21-Jun	Alliette Signature	4			
Aerification - dates	None	07-Jul	Chipco GT	4	Date(s)	Product	Rate (oz./M)
Aerification - type	None	23-Jul	Heritage	0.4			
Verticutting	Spiked weekly (June-Sept.)	13-Dec	Chipco GT	4	06-May	Gary's Green	2
		13-Dec	Chipco GT	4	Tuff Turf	Tuff Turf	2
Dates of topdressing	4/5, 4/12, 4/26, 5/3, 5/17, 5/24, 6/13, 9/13, 9/20, 9/27, 10/18		Daconil Weatherstick	6	14-Sep	Gary's Green	2
Other cultural practices	None				14-Sep	Tuff Turf	2
					23-Sep	Gary's Green	4
					23-Sep	Tuff Turf	2
NOTES/COMMENTS							

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 19-Apr 30-Jun 30-Jun	Scott's (9-18-18) Scott's (17-3-17) 18-3-4 + Micro Gary's Green 1-0-14 + Micro Tuff Turf	1.0 lb. K 1.0 lb. N 0.1 lb. N 0.1 lb. K	None			
FACTORS OF PLAY		05-Jul 05-Jul	18-3-4 + Micro Gary's Green 1-0-14 + Micro Tuff Turf	0.1 lb. N 0.1 lb. K		INSECTICIDES		
Date opened for play	Open all year around	07-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N		Date(s)	Product	Rate (oz./M)
Date closed for play	unless snow covered	07-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K				
Type of spikes allowed	softspikes	13-Jul	18-3-4 + Micro Gary's Green	0.1 lb. N	13-May	Mach 2	1.5	
Uses of green	putting	13-Jul	1-0-14 + Micro Tuff Turf	0.1 lb. K	07-Jun	Mach 2	1.5	
MOWING		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				
CULTIVATION					OTHER PRODUCTS			
Aerification - dates					Date(s)	Product	Rate (oz./M)	
Aerification - type								
Verticutting	None							
Dates of topdressing	Every other week, starting in May. Used sand only. Same as what the green was built with.	23-May 23-May 12-Jun 12-Jun 30-Jun 30-Jun 12-Jul 12-Jul	Chipco GT Alliette Signature Daconil Ultrex Alliette Signature Heritage Chipco GT Daconil Ultrex Alliette Signature	4 4 4 4 0.2 2 4 4		NOTES/COMMENTS		
Other cultural practices	Drag in sand with Metal mat or a brush.	16-Aug 16-Aug 26-Oct	Daconil Ultrex Alliette Signature Daconil Weatherstick	4 4 4		Located just east of the driving range and is used extensively.		

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

TABLE 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	Date(s)	Product	Rate (oz./M)
Uses of green	putting						
MOWING					01-Aug	Merit	0.15
Initial height	FUNGICIDES						
Current height	1/8"	Date(s)	Product	Rate (oz./M)			
Frequency	7 days/week						
Type of mower	Triplex/Walking						
Rollers used	No	08-May	Daconil Ultrex	4			
Groomers used	No	19-May	Chipco GT	4	OTHER PRODUCTS		
CULTIVATION		07-Jun	Daconil Ultrex	4			
		22-Jun	Alliette Signature	4	Date(s)	Product	Rate (oz./M)
Aerification - dates		22-Jun	Chipco GT	4			
Aerification - type		05-Jul	Alliette Signature	4			
Verticutting	once every 2-3 weeks,	05-Jul	Heritage	0.4			
	Grooming - once a week	22-Jul	Chipco GT	2			
Dates of topdressing	once every 2-3 weeks	03-Aug	03-Aug	03-Aug			
		22-Jul	Alliette Signature	4			
		03-Aug	Chipco GT	4			
		17-Aug	Alliette GT	4			
		17-Aug	Daconil Ultrex	4			
		30-Aug	Alliette	2	NOTES/COMMENTS		
		30-Aug	Daconil Ultrex	4			
Other cultural practices	No	28-Sep	Chipco Alliette	4			
		16-Nov	Banner	1	Located just east of the driving range and is used		
			Heritage	0.4			extensively.

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

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 IARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

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

TABLE 7E.
(CONT'D)

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	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS								MEAN
				APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	
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
VIFER	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		
		Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date	15-Sep-98						
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
Initial height	3/16"	FUNGICIDES			12-Aug-98	Tempo	0.25 lb./Acre
Current height	5/32"				15-Sep-98	Tempo	0.25 lb./Acre
Frequency	7 days/week	Date(s)	Product	Rate (oz./M)	20-Oct-98	Tempo	0.25 lb./Acre
Type of mower	triplex						
Rollers used	Wheilie	14-Jan-98	Scotts FF11		OTHER PRODUCTS		
Groomers used	None	20-Feb-98	PMAS	1	Date(s)	Product	Rate (oz./M)
CULTIVATION		06-Apr-98	Daconil Ultrex	6.5 lb./Acre			
		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
Aerification - 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, 10/1, 10/26, 11/16	10-Jul-98	Daconil Ultrex	6.5 lb./Acre	30-Jun-98	Cascade (wetting agent)	8
Other cultural practices	rolled with Toro triplex rollers on 6/1 and 6/25	21-Jul-98	Daconil Ultrex	6.5 lb./Acre	12-Aug-98	Primo	3 oz./Acre
		03-Aug-98	Chipco 26019 GT	3	30-Aug-98	Primo	3 oz./Acre
		03-Aug-98	Fore	12 lb./Acre	15-Sep-98	Primo	3 oz./Acre
		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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date Problems during	15-Sep-98	05-Jan 02-Apr 30-Apr 19-May	2 lbs. 0-0-45 and 2lbs. Magnesium 3/4 lb. 19-25-5 Scotts starter/STEP micros 19-3-19 Milorganite	10-Jun 25-Jun 19-Jul 29-Jul	Acclaim Acclaim Acclaim Acclaim	3 3 3 3	
FACTORS OF PLAY		24-May	18-9-18 Fe Mn	3/4 lb.	16-Oct	Bent Trimec	44
Date opened for play	early Spring		Milorganite				
Date closed for play	late Fall	11-Jun					
Type of spikes allowed	softspikes	30-Sep	19-3-19	3/4 lb.			
Uses of green	putting	18-Oct	Milorganite				
Others	40,000 rounds	21-Nov 10-Dec	19-25-5 Scotts STEP micros package	1 lb.	Date(s)	Product	Rate (oz./M)
MOWING		FUNGICIDES			5/12, 7/7, 8/24, 9/23,	Tempo	110 g./Acre
Initial height	3/16"	Date(s)	Product	Rate (oz./Acre)	OTHER PRODUCTS		
Current height	5/32"						
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
CULTIVATION		25-Jun	Daconil Ultrex	10 lb./Acre	6/10, 7/19, 23-Jul-00	Primo	3 oz./Acre
		07-Jul	Fore	8 lb./Acre		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 triplex rollers on 5/4 and 5/12	8/24, 9/23, 16-Oct 18-Oct 18-Oct	Banner Maxx Daconil PMAS Daconil/Zn	22 2.5 gal./Acre 22 2.5 ?/Acre		NOTES/COMMENTS	
						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		
		Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date	15-Sep-98						
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				
Others	40,000 rounds	24-Sep	18-9-18				
		12-Nov	19-25-5				
		02-Dec	STEP/Milorganite		03-May	Tempo	110 g./Acre
MOWING					5/31, 7/6, 7/24, 8/22, 9/1, 10/30	Delta Guard	22 oz./Acre
Initial height		08-Mar	Milorganite	45 lbs./green			
Current height	5/32"	03-May	Mn/Mz	2.5 gal. (ea)			
Frequency	7 days/week	03-May	18-3-6 Scotts	2.5 gal. (ea)			
Type of mower	Toro Greens Master 3100	5/15, 5/31	Liquid Fert.	2.5 gal./3 Acre			
Rollers used	rolled - 5/12, 6/5, 6/9-13,	19-Jun	Liquid Fert.	2.5 gal./6 Acre			
Groomers used	10/29	06-Jul	Mn	2.5 gal./6 Acre	OTHER PRODUCTS		
CULTIVATION		24-Jul	Scotts Liquid Fert.	2.5 gal./6 Acre			
		24-Jul	Scotts Mn/Mg	2.5 gal./6 Acre			
Aerification - dates	5/28, 10/23	22-Aug	Scotts Liquid Fert.	5 gal./Acre			
Aerification - type		02-Oct	Scotts Liquid Fert.	5 gal./6 Acre	03-May	Primo	5.5 oz./Acre
Verticutting	5/3, 5/31, 10/3, 11/8	30-Oct	Scotts Liquid Fert.	10 gal./6 Acre	5/15, 5/31, 6/19, 7/24, 9/1	Primo	3 oz./Acre
Dates of topdressing	2/29, 6/24, 10/26, 11/16				22-Aug	Primo	3.5 oz./Acre
Other cultural practices	rolled with Toro triplex rollers on 5/12, 6/5, 6/9-13, 10/29				6/6, 6/20	Cascade (wetting agent)	2.75 gal./Acre
		Date(s)	Product	Rate (oz./Acre)	6/19, 7/6, 7/27	Sea Quencial	2.5 gal./Acre
FUNGICIDES		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			
		6/19, 7/6,	Heritage	1 lbs./Acre	NOTES/COMMENTS		
		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
FACTORS OF PLAY		17-Jan	Magnesium Sulfate	4/12, 5/22, 6/1		Daconil	12lb per acre
		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
MOWING		1-Oct	Sand Aid		23-Jul	Alliette	11 lb per acre
		29-Oct	0-0-50		31-Jul	Chipco Signature	1 gal per acre
Initial height		12-Dec	18-9-18	7/31, 8/27		Chipco 26 GT	1 gal per acre
Current height	5/32"	20-Dec	0-0-50	27-Aug		Pro Star	4 lb per acre
Frequency	7 days/week	20-Dec	Magnesium Sulfate	3-Sep		Banner Maxx	22 oz per acre
Type of mower	Toro Greens Master 3100		STEP				
Rollers used	rolled - 5/21, 8/27, 11/12	20-Dec	Sand Aid				
Groomers used	A cleanup pass was mowed every other day						
CULTIVATION	OTHER PRODUCTS				Date(s)	Product	Rate (oz./M)
Aerification - dates	5/4, 10/2	Date(s)	Product		6/1, 6/13, 6/25, 7/9	Acclaim	3oz per acre
Aerification - type					31-Jul	Acclaim	3 oz per acre
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			
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,	Delta Guard	22oz per acre
					27-Aug	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 SNOW MOLD		PERCENT BROWN PATCH		% POA ANNUA		PERCENT NOVEMBER ESTABLISHMENT		UNIFORMITY RATING		STIMPMETER READINGS		
	JUNE 2000-01	JULY 2000	1998	1998-99	2001	FALL	APRIL 1998	MAY 1998	2000	1999-2001	1999-2001		SPRING	SUMMER	FALL
													2000	1999-2001	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 STRING	PERCENT LIVING GROUND COVER		QUALITY RATINGS								
					SPRING 1998, 2001	SUMMER 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							
FACTORS OF PLAY							
		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
		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			
MOWING		07-Aug-98	18-3-16 Isotek 31	0.3 lb. N			
		22-Sep-98	18-4-10 Country Club	0.5 lb. N			
		06-Nov-98	18-4-10 Country Club	1.0 lb. N			
Initial height	0.145"	30-Nov-98	0-0-25 White Gold	1.0 lb. K			
Current height					Date(s)	Product	Rate (oz./M)
Frequency							
Type of mower					15-May-98	Dursban 50 WSP	3
Rollers used					18-Jun-98	Dursban 50 WSP	3
Groomers used	every 5 days				23-Aug-98	Dursban 50 WSP	3
CULTIVATION	6/3 - 9/4	07-May-98	Fore	6			
		07-May-98	Banner Maxx	1			
		26-May-98	Heritage	0.5			
Aerification - dates	20-Jul-98	26-May-98	Daconil Ultrex	2.5			
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 from 4/13 - 9/28	22-Jun-98	Aliette	3.3			
		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			
		28-Aug-98	Banner Maxx	0.5			
		28-Aug-98	Fore	4			
		11-Sep-98	Daconil Ultrex	5			
						NOTES/COMMENTS	

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

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	
FACTORS OF PLAY		23-Jun	11-52-0	4.1 lbs. prod.		Heritage	0.4	
					27-May	Daconil Ultrex	4	
						Heritage	0.4	
Date opened for play	09-Jul	Gary's Green (18-3-4 +Fe)	2 oz.			Subdue Maxx	1.4	
Date closed for play	13-Jul	Gary's Green (18-3-4 +Fe)	12 oz.	25-Jun		Daconil Ultrex	2.7	
Type of spikes allowed	20-Jul	Gary's Green (18-3-4 +Fe)	3 oz.			Prostar 50WP	6	
Uses of green	10-Aug	Gary's Green (18-3-4 +Fe)	4 oz.	06-Jul		Heritage	0.4	
MOWING		07-Sep	Kmag 0-0-22	5 lbs. prod.		Fore	12.8	
	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	0.145" (0.171"-Winter)	20-Sep	Step high Mag.(trace elem.)	0.9 lb. prod.		Alliette	7	
Current height	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 from April to June		Bio Basics Cal.	3 oz.		Constyl	4	
CULTIVATION		13-Dec	Bio Flora Root Builder	3 oz.	30-Jul	Daconil Ultrex	9	
			Bio Basics Pro Gro	2.5 oz.	04-Aug	Subdue Maxx	1	
			Sol-u-bor	1.9 oz.	06-Aug	Fore	12.8	
Aerification - 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 from 4/13 - 11/15	Date(s)	Product	Rate (oz./M)	08-Sep	Constyl	6	
		25-Jun	Delta Guard	0.7	06-Oct	Constyl	5	
Other cultural practices	None	13-Jul	Tempo	0.2	13-Dec	Daconil Ultrex	5	
		8/6, 9/17, 10/6	Dursban 50 WSP	2 lbs./Acre		Chipco GT	3.5	

OTHER PRODUCTS

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 Problems during	15-Sep-97	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		10-Mar	Chipco GT	4	None		
		10-Mar	Daconil Ultrex	10 lbs./A			
		22-Mar	Daconil Ultrex	2			
		25-Apr	Heritage	0.2	FERTILIZATION		
		25-Apr	Daconil Ultrex	2			
Date opened for play	open year round	19-May	Daconil Ultrex	1.5	Date(s)	Product	Rate (lbs. oz./M)
Date closed for play		02-Jun	Heritage	0.2			
Type of spikes allowed	Softspikes	02-Jun	Daconil Ultrex	1.5	10-Feb	Milorganite (6-2-0)	1/3 lb. N
Uses of green	Putting, Chipping	02-Jun	Daconil Ultrex	1.5	10-Mar	Bio Basics Pro Gro	20 oz.
MOWING		12-Jun	Daconil Ultrex	1.5	10-Mar	Bio Basics N 24-0-0	1 oz.
		28-Jun	Prostar	2.2	10-Mar	Bio Basics P 2-20-0	0.5 oz.
		28-Jun	Subdue Maxx	1	10-Mar	Bio Basics K 1-0-24	2 oz.
Initial height	0.156"	7/3, 7/10, 7/18	Daconil Ultrex	1.5	10-Mar	Bio Basics N 24-0-0	1 oz.
Current height	0.145" (0.156" Winter)	18-Jul	Heritage	0.2	22-Mar	Bio Basics P 2-20-0	1 oz.
Frequency	Daily	27-Jul	Daconil Ultrex	1.5	22-Mar	Bio Basics K 1-0-24	2 oz.
Type of mower	Triplex	07-Aug	Heritage	0.2	22-Mar	Micro Mix Plus (FE) 2-0-0-4	1 oz.
Rollers used	None	8/7, 8/15	Echo 720	7 pints/A	22-Mar	Bio Basics Pro Gro	2 oz.
Groomers used	None	02-Sep	Subdue Maxx	1	22-Mar	Macrosorb foliar	1 oz.
CULTIVATION		9/2, 9/23, 10/1	Daconil Ultrex	1.5	22-Mar	Macrosorb Radicular	1 oz.
		13-Oct	Daconil Ultrex	4	27-Mar	Bio Basics Cal 2.5-0-0-8	1 oz.
		27-Nov	Echo 720	1.5	27-Mar	Bio Basics Carb. 2-0-0	2 oz.
Aerification - dates	July	27-Nov	Chipco GT	3.8	27-Mar	Humega	1 gal./A
Aerification - type	Hydroject				27-Mar	Bio Basics N 24-0-0	5 oz.
Verticutting	Mar., Apr., June, Sept.				31-Mar	Bio Basics P 2-20-0	1 oz.
Dates of topdressing	every 2 weeks during season				31-Mar	Bio Basics K 1-0-24	2 oz.
Other cultural practices	None	Date(s)	Product	Rate (oz./M)	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.
(Cont'd)

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

FERTILIZATION

FERTILIZATION

FERTILIZATION

Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)
31-Mar	Bio Basics Mag.	1 oz.	12-Jun	Bio Basics Minors	1 oz.	15-Aug	Bio Basics P 2-20-0	1.5 oz.
31-Mar	Macrosorb foliar	1 oz.	12-Jun	Macrosorb foliar	2 oz.	15-Aug	Bio Basics K 1-0-24	1.5 oz.
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 Problems during	15-Sep-97	Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		30-Mar 16-Apr 30-Apr 04-May	Manicure Ultrex Manicure Ultrex Prostar Manicure Ultrex	2 2 2.2 2	None		
Date opened for play		24-May	Manicure Ultrex	2	OTHER PRODUCTS		
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 25-Jun	Concorde Concorde	4 lbs./A 3.5 lbs./A	14-Apr 30-Apr	Scotts TGR Lesco Flo.	8 oz./A 8
MOWING		06-Jul 07-Jul	Prostar Manicure Ultrex	1.2 6	14-May 24-May	Aqueduct Scotts TGR	8 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
CULTIVATION		13-Aug 28-Aug 05-Sep	Manicure Ultrex Manicure Ultrex Touche	2 2 2.75 lbs./A			
Aerification - dates	September	11-Dec	Manicure Ultrex	2			
Aerification - type	1/4" quadtines	11-Dec	Chipco GT	3.5			
Verticutting	3 times				NOTES/COMMENTS		
Dates of topdressing	every 2 weeks in Spring and Fall, less frequently in Summer. Topdressing from March to December.	INSECTICIDES	Date(s)	Product	Rate (oz./M)		
Other cultural practices	None		14-Apr 07-Jun 06-Jul 30-Jul	Math 2 Dursban 50WP Scimitar Scimitar	3 qt/A 2 lbs./A 10oz./A 10oz./A		

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TABLE 9D.
(Cont'd)

2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT ST. CHARLES, MO (THE MISSOURI BLUFFS GOLF COURSE)

FERTILIZATION			FERTILIZATION			FERTILIZATION		
Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)	Date(s)	Product	Rate (lbs. oz./M)
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 SPOT	PERCENT ESTABLISHMENT	STIMPMETER READINGS			QUALITY RATINGS										
				1999	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			
		Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date		09-Apr-98	Nature Safe 8-3-5	0.5 lb. N	None		
Problems during		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							
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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date						
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						
Type of spikes allowed						
Uses of green						
INSECTICIDES						
MOWING	FUNGICIDES			Date(s)	Product	Rate (oz./M)
Initial height	Date(s)	Product	Rate (oz./M)			
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			
Aerification - dates	6/1, 7/12, 8/1,	Banner Maxx	4	Date(s)	Product	Rate (oz./M)
Aerification - type	13-Jul	Chipco Aliette	4			
Verticutting	27-Jul	Primo liquid	2	None		
Dates of topdressing	7/27, 8/10	Daconil weather stik	2			
Other cultural practices	7/27, 8/10	Banner Maxx	0.5			
	8/10, 8/23, 10/25	Primo WSB	4			
	23-Aug	Clearys 3336	4	NOTES/COMMENTS		
	06-Oct	Banner Maxx	1			
		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	PERCENT LIVING COVER			DOLLAR SPOT 1998	QUALITY RATINGS										
					SPRING	SUMMER	FALL		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								
Date opened for play	not closed	monthly April-June	Turf Plex VI		INSECTICIDES			
Date closed for play	softspikes				Date(s)	Product	Rate (oz./M)	
Type of spikes allowed	putting, chipping		Scotts 22-0-12 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		
Uses of green					OTHER PRODUCTS			
MOWING					TOTAL N: 6.95 lbs. TOTAL P: 1.73 lbs. TOTAL K: 12.17 lbs.	Date(s)	Product	Rate (oz./M)
Initial height	3/8"					every two weeks from July- December	Astron FG-20 Knife	
Current height	1/8"						Now 12-0-12 Now 6-12-3 Now 4-4-16 Phlex-Man Phlex-Mag Renaissance	
Frequency	6 days/week						Perk-Up Maxiplex Prevacle	
Type of mower	walking						Pro-Mag 36 Mini-Mag Gypsum	
Rollers used	June-Sept. (solid)							
Groomers used	Oct.-May depends on weather							
CULTIVATION								
Aerification - dates	Hydroject monthly-June-Sept.	Date(s)	Product	Rate (oz./M)				
Aerification - type	Deep drill - September 23	weekly May-Sept.	Banol or Subdue WSP					
Verticutting	bimonthly-March-May & Oct.		Daconil Ultrex or Chipco 26019 WP or		monthly from July-Dec.			
Dates of topdressing	monthly-June, July, Sept.		Banner Maxx or Cleary 3336 WP or					
	bimonthly-Feb-June, Oct.-Dec.		ProStar 70WP					
Other cultural practices	monthly-July, Aug., Sept.		Aliette or Fore					
	None		Heritage	0.4				
		August and Sept.	Heritage	0.4				
		Spring: 2 applications	Koban 30	6 oz. as spring drench application at 4 gal./M	NOTES/COMMENTS			
		Fall: 2 applications			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.			
		Spring						

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

TABLE 11B. 1999 MANAGEMENT - ON-SITE BENTGRASS TEST AT DALLAS, TX (BENT TREE COUNTRY CLUB)

ESTABLISHMENT	FERTILIZATION			FUNGICIDES						
Seeding date Problems during	10-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)			
Granular Fertilizer Applications										
FACTORS OF PLAY		26-Feb	Par Ex 16-0-24	0.5 lb. N						
		20-Mar	Par Ex 16-0-24	0.5 lb. N						
Date opened for play		01-May	Polyon 0-0-46	1 lb. K	HERBICIDES					
Date closed for play		21-Jun	Polyon 0-0-46	1 lb. K						
Type of spikes allowed		14-Jul	Polyon 0-0-46	1 lb. K	Date(s)					
Uses of green		02-Sep	Polyon 0-0-46	1 lb. K	Product					
		20-Sep	Scotts 13-2-26	0.5 lb. N	Rate (oz./M)					
		25-Oct	Polyon 0-0-46	1 lb. K						
		15-Nov	Scotts 15-0-29	0.5 lb. N						
MOWING		18-Nov	Polyon 0-0-46	0.5 lb. K	INSECTICIDES					
Initial height		10-Dec	Scotts 15-0-29	0.5 lb. N	Date(s)					
Current height		21-Dec	Polyon 0-0-32	0.5 lb. K	Product					
Frequency		Total - Granular app.	2.5 lbs. N, 0.10 lbs. P, 10.4 lbs. K		Rate (oz./M)					
Type of mower		Liquid (Foliar) Fertilizer Applications								
Rollers used		Every two weeks throughout year (28 Apps)								
Groomers used		Each Floratine app. consisted of:								
CULTIVATION				0.15 lb. N	OTHER PRODUCTS					
Aerfication - dates				0.08 lb. P	Date(s)					
Aerfication - type				0.15 lb. K	Product					
Verticutting					Rate (oz./M)					
Dates of topdressing		Total - Foliar app.	3.6 lbs. N, 1.9 lbs. P, 3.6 lbs. K							
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 Problems during	10-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Granular Fertilizer Applications							
FACTORS OF PLAY		February	Par Ex 16-0-24	0.5 lb. N			Take-all Prevention
		March	Par Ex 16-0-24	0.5 lb. N			
Date opened for play	open every day except	May	Polyon 0-0-46	1 lb. K			HERBICIDES
Date closed for play	Monday when club closed	June	Polyon 0-0-46	1 lb. K			
Type of spikes allowed	Softspikes	July	Polyon 0-0-46	1 lb. K			
Uses of green	Chipping and Putting	September	Polyon 0-0-46	1 lb. K			
		September	Scotts 13-2-26	0.5 lb. N			
		October	Polyon 0-0-46	1 lb. K			
MOWING		November	Scotts 15-0-29	0.5 lb. N			
Initial height	0.125"	November	Polyon 0-0-46	0.5 lb. K			
Current height	6 days/week	December	Scotts 15-0-29	0.5 lb. N			INSECTICIDES
Frequency	Toro 1000 walking unit	December	Polyon 0-0-32	0.5 lb. K			
Type of mower							
Rollers used	Brush attachments used in	Foliar Fertilizer Applications					
Groomers used	growing season	Every two weeks throughout year (24 Apps)					
CULTIVATION		Each Floratine app. consisted of:			OTHER PRODUCTS		
Aerification - dates	Solid tine (1/4") in May, Sept.	Total - Foliar app.	1.3 lbs. N, 0.7 lbs. P, 2.1 lbs. K				
Aerification - type	Hydroject monthly in June,						
Verticutting	Verticut biweekly April-June.						
	Verticut monthly July-Sept..						
	Verticut biweekly Oct.-Nov.						
Dates of topdressing	Topdressed biweekly during growing season - March through November at light rates with Turfco spinner unit. Heavy application following solid tine aerification.	Total Fertilizer app.	3.8 lbs. N, 0.8 lbs. P, 12.5 lbs. K				
Other cultural practices	Rolled before special events. 6 times in April-June. Rolled 7 times/week in Winter when not necessary to mow.				NOTES/COMMENTS		

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TABLE 11D. 2001 MANAGEMENT - ON-SITE BENTGRASS TEST AT DALLAS, TX (BENT TREE COUNTRY CLUB)

ESTABLISHMENT	FERTILIZATION				FUNGICIDES			
Seeding date Problems during	10-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Granular Fertilizer Applications								
FACTORS OF PLAY		February	Par Ex 16-0-24	0.5 lb. N		Applied Heritage 2apps spring (April and May) & 2apps fall (Sept and Oct)		
Date opened for play	open year round	March	Par Ex 16-0-24	0.5 lb. N		Application Aliette 4oz and Fore 8oz in August		
Date closed for play	5 days in Winter weather related plus ever Mon.	May	Polyon 0-0-46	1 lb. K		Applications of Banol @1.3oz in April/June/August and Subdue Maxx @1oz in May/July/Sept		
Type of spikes allowed	Softspikes	June	Polyon 0-0-46	1 lb. K		Koban drench @ 8oz in April following Star Tine		
Uses of green	Chipping and Putting	July	Polyon 0-0-46	1 lb. K		ProStar drench @6oz in May following Star Tine		
MOWING		September	Polyon 0-0-46	1 lb. K		HERBICIDES		
Initial height		September	Scotts 13-2-26	0.5 lb. N		Date(s)	Product	
Current height	0.125"	October	Polyon 0-0-46	1 lb. K			Rate (oz./M)	
Frequency	6 days/week	November	Scotts 15-0-29	0.5 lb. N		Applied Conserve GC week prior to each star tine cultivation		
Type of mower	Toro walkers	December	Polyon 0-0-46	0.5 lb. K				
Rollers used	Brush 2-4X/week with solid rollers all year	December	Scotts 15-0-29	0.5 lb. N				
Groomers used			Polyon 0-0-32	0.5 lb. K				
CULTIVATION		Foliar Fertilizer Applications				INSECTICIDES		
Aerification - dates	April, June, Aug, Sept.	Total - Granular app.	2.5 lbs. N, 0.10 lbs. P, 10.4 lbs. K			Date(s)	Product	
Aerification - type	Star tine						Rate (oz./M)	
Verticutting	Verticut 1X/week - Mar-May, Oct; 1X/month - June-Sept.					Applied Conserve GC week prior to each star tine cultivation		
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					
Other cultural practices	Triplex mount for special events (10X/year) and after Star Tine Cultivation.							
NOTES/COMMENTS								

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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	SPRING	LEAF	DENSITY	DENSITY	DENSITY	QUALITY RATINGS												
	COLOR	GREENUP	TEXTURE	SPRING	SUMMER	FALL	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	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
FACTORS OF PLAY		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			
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			
Uses of green	putting, chipping	05-Nov-97	Newsom 16-4-8	0.5 lb. N			
		24-Nov-97	Newsom 14-1-11	0.5 lb. N	28-May-98	Tempo	6 oz./Acre
MOWING		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
Initial height	3/8"	22-Apr-98	Newsom 14-1-11	0.5 lb. N	21-Sep-98	Tempo	6 oz./Acre
Current height	1/8"	29-Apr-98	Newsom 16-4-8	0.5 lb. N	19-Oct-98	Tempo	6 oz./Acre
Frequency	7 days/week	01-Jun-98	Newsom 14-1-11	0.45 lb. N			
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			
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
Aerification - dates	Spring once, Fall once	18-Nov-98	Par Ex IBDU 21-3-16	0.6 lb. N	12-Nov-97	Roots 1-2-3	6
Aerification - type	Spring - solid tine 1/2"				15-Dec-97	Roots 1-2-3	6
	Fall - hollow tine 1/2"				14-May-98	Ferromec	3
Verticutting	None				28-May-98	Ferromec	6
Dates of topdressing	Spring once, Fall once	Date(s)	Product	Rate (oz./M)	28-May-98	Primer (wetting agent)	3
once during growing season					17-Jun-98	Primo	6 oz./Acre
Other cultural practices	None	12-Nov-97	Chipco 26019	5			
		12-Nov-97	PMAS	1	06-Jul-98	Ferromec	4
		15-Dec-97	Daconil	4	06-Jul-98	Primer	5
		15-Dec-97	PMAS	1	21-Jul-98	Ferromec	4
		21-Apr-98	Banner Maxx	1.25	21-Jul-98	Primer	6
		21-Apr-98	Heritage	0.4	29-Jul-98	Ferromec	4
		14-May-98	Daconil	4	29-Jul-98	Primo	6 oz./Acre
		14-May-98	Fore	3	21-Sep-98	Ferromec	5
		28-May-98	Bayleton	1	21-Sep-98	Primo	10 oz./Acre
		28-May-98	Heritage	0.4	19-Oct-98	Ferromec	8
		17-Jun-98	Daconil	4			
		17-Jun-98	Fore	4			
		26-Jun-98	Daconil	4			
		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
NOTES/COMMENTS							
FUNGICIDES							

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

TABLE 12B.

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

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

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

TABLE 12C.

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

ESTABLISHMENT		FERTILIZATION			HERBICIDES		
Seeding date Problems during	05-Sep-97 None	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
FACTORS OF PLAY		4/3, 4/11, 5/1 5/31, 8/14 28-Aug 10-Sep	18-3-12 14-1-11 18-3-12 14-1-11	0.5 N 0.5 N 0.5 N 0.5 N	5/8, 6/5, 7/27, 8/20	Acclaim	3 oz./Acre
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					5/8, 5/26 27-Jul 25-Aug	Delta Guard Delta Guard Sevin	0.2 0.15 1
Initial height		FUNGICIDES					
Current height	0.125"	Date(s)	Product	Rate (oz./M)			
Frequency		27-Mar	Chipco GT 4oz./M., Embark 4oz./A.				
Type of mower		26-Apr	Embark 3oz./A, Ferromec 4oz./M, Echo 4oz./M				
Rollers used			Heritage 0.4oz./M, Curalan 1oz./M, Ferromec 4oz./M		OTHER PRODUCTS		
Groomers used		08-May	Echo 6	Date(s)	Product	Rate (oz./M)	
CULTIVATION			Banner Maxx 4 oz., Heritage 0.4oz., Fore 4oz., Foliar 1.5oz., Radicular 1.5oz., Ferromec 4oz.				
Aerification - dates	April, September	26-May	Echo 4 oz., Ferromec 4oz. Foliar 2oz., Radicular 2oz.	6/28, 8/8, 10/11	Primo	0.15	
Aerification - type	Aerated - Egypt Farms 80/20 sterilized	05-Jun	Echo 4				
Verticutting	None		Banner Maxx 4oz., Subdue 1oz. Fore 4oz., Compass 0.15oz.		Growth Regulators		
Dates of topdressing	Topdressed - Egypt Farms 80/20 sterilized (April, Sept.)	14-Jun	Echo 6				
		19-Jun	Echo 4oz, Fore 4oz., Subdue 1oz.				
		28-Jun	Echo 4				
Other cultural practices	None	06-Jul	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 6		NOTES/COMMENTS		
		16-Jul	Echo 4				
		27-Jul	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 4				
		02-Aug	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 4				
		08-Aug	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 4oz., Ferromec 4oz., Heritage 0.25oz., Foliar 2oz., Radicular 2oz.				
		20-Aug	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 4				
		01-Sep	Echo 4oz, Fore 4oz., Subdue 1oz. Echo 4				
		11-Oct	Echo 4oz, Fore 4oz., Subdue 1oz. Banner Maxx 1oz., Foliar 2oz., Radicular 2oz., Ferromec 4oz.				
		30-Nov	Echo 4oz, PMAS 0.6oz.				

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

TABLE 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
Initial height			Total	4.15 lbs N/M	30-Jul	Scimilar	7.5oz./A
Current height					26-Sep	Scimilar	10oz./A
Frequency							
Type of mower							
Rollers used							
Groomers used							
FUNGICIDES	OTHER PRODUCTS						
CULTIVATION		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Aerification - dates		11-Apr	Daconil	2	11-Apr	Embark .1oz; Ferromec 5oz; Powder Blue 2.5oz; Direction Green .75oz	
Aerification - type		10-May	Rubigan	1	10-May	Ferromec 6oz; Direction Green .5oz	
		21-May	Cleary's 3336	1	20-May	Echo 5	
		22-May	Chipco 6.5oz; Banner 1oz; Heritage 0.4oz; Fore 4 oz.		21-May	Echo 2	
Verticutting			Chipco	4	22-May	Ferromec 4	
Dates of topdressing		31-May	Banner 1oz; Subdue 1oz; Fore 4oz.		31-May	CC 10-5-4 6	
		01-Jun	Chipco 4oz; Rubigan 1oz; Fore 4oz.		11-Jun	Echo 4oz; Ferromec 6oz; Delta Force .4oz; Stand Up 4oz; Direction Green .75oz	
		25-Jun	Heritage 0.4oz; Chipco 3oz; Rubigan 1oz; Subdue 1oz; Fore 4oz.		25-Jun	Ferromec 4oz; Foliar 1.5oz; Radicular 1.5oz.	
		09-Jul	Subdue 1oz; Fore 4oz; Banner 0.5oz.		09-Jul	Ferromec 4oz; Direction Green .75oz	
Other cultural practices	None		Heritage 0.4oz; Fore 4oz; Chipco 3oz; Rubigan 1oz.		30-Jul	Ferromec 5oz; Primer 4oz; Direction Green .75oz	
		30-Jul	Chipco 4oz; Rubigan 1oz.		07-Aug	Ferromec 4	
		07-Aug	Curalan 1.5oz; Fore 4oz.		29-Aug	Ferromec 4oz; Direction Green .75oz	
			Curalan 1.5oz; Fore 4oz; Heritage 4oz.		26-Sep	Direction Green 0.75	
		18-Aug	Daconil 3oz; Fore 4oz; Banner 1oz.		03-Dec	Ferromec 4oz; Primo .25oz; Nutri Rational .75oz; Agro Plex .2oz.	
		29-Aug					
		26-Sep					
		03-Dec					

NOTES/COMMENTS

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

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
PENN CROSS	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 DATA

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

NAME	GENETIC COLOR	SPRING GREENUP	LEAF TEXTURE	QUALITY RATINGS									
				MAR	APR	MAY	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
PENN CROSS	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		
	Date	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)
Seeding date	08-Jun-98						
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			
		25-Sep-98	19-3-19	0.5 lb. N	INSECTICIDES		
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							
Aerification - dates		FUNGICIDES				OTHER PRODUCTS	
Aerification - type		Date(s)	Product	Rate (oz./M)	Date(s)	Product	Rate (oz./M)
Verticutting							
Dates of topdressing	6/30, 7/8, 7/16, 7/30, 8/19, 8/27, 9/23, 10/21 1/4" each date	08-Sep-98 14-Jul-98 24-Jul-98 09-Sep-98 05-Oct-98 17-Nov-98 14-Dec-98	Pythium control Pythium control Subdue Heritage Heritage Scotts Flowable Fungicide II Scotts Fungicide IX		12-Nov-98 17-Dec-98	Gypril Gypril	10 lb./M 10 lb./M
Other cultural practices			Recommended		NOTES/COMMENTS		
				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			
	Date	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	08-Jun-98							
Problems during		23-Feb	12.5% PCNB (14-2-14)	6	26-Jan	Scotts Fungicide X	4.8 lbs.	
FACTORS OF PLAY		15-Mar	Himag Step	1.5	23-Feb	12.5%PCNB-Granular	6 lbs.	
		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				
Uses of green	Metal Spikes / Softspikes				HERBICIDES			
MOWING		5/25, 6/14, 7/7, 8/2, 8/20, 9/24, 10/8,	N-Sure (28-0-0)	13.25oz.	Date(s)	Product	Rate (oz./M)	
			N-Sure (28-0-0) -6/23	15.88oz.				
Initial height	0.145"	5/25 and 6/23	KTS (0-0-25)	9.14 & 13.25oz.	None			
Current height	0.187"	7/7, 8/2, 8/20, 9/24	KTS (0-0-25)	10.6oz.				
Frequency	1-7X/week	6/23, 7/7, 8/2, 8/20, 9/24, 10/8	DP	3 oz.				
Type of mower					INSECTICIDES			
Rollers used	Grooved type wiehle roller				Date(s)	Product	Rate (oz./M)	
Groomers used	1X/Week	16-Jul	Turf Blend (0-0-50)	2				
CULTIVATION		7/23, 8/12, 9/2	MAP (12-61-0)	1.78				
		7/30, 9/14	Gypril Lime	5				
Aerification - dates	5/10, 9/13	25-Aug	Dolopril-MAG Lime	8	None			
Aerification - type	Hollow Tines	31-Aug	Gypril Lime	8				
Verticutting or other	5/13, 6/3, 6/15, 6/28, 7/21, 8/9, 8/23, 10/12	01-Oct	Aguum (21-0-0)	1.9				
cultivation		05-Oct	Wilgro (19-4-19)	0.5	OTHER PRODUCTS			
Dates of topdressing or		08-Oct	Dolopril-Lime	7	Date(s)	Product	Rate (oz./M)	
other type products	5/13, 6/3, 6/15, 6/28, 7/21, 8/9, 8/23, 10/12 (1/8")	18-Oct	MAP (10-34-0)	0.4 oz.				
		22-Oct	K-Power(13-75-0-46)	2.94				
		26-Oct	Calpril	5				
Other cultural practices	Rolling - 6/30, 7/1, 8/13, 8/14	05-Nov	Turf Blend (0-0-50)	2.32	None			
		05-Nov	K-Power(13-75-0-46)	3				
		05-Nov	MAP (12-61-0)	1				
		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		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	08-Jun-98						
Problems during							
FACTORS OF PLAY							
Date opened for play							
Date closed for play							
Type of spikes allowed							
Uses of green	Putting						
MOWING							
Initial height	0.145"						
Current height	0.187"						
Frequency	1-7x/week						
Type of mower	Walking Toro 1000						
Rollers used	Grooved type wiehle roller						
Groomers used	1x/week - 5/15/9/1						
CULTIVATION							
Aerification - dates	5/30, 8/29	Total/year	4.50 lbs. N, 2.12 lbs. P, 5.36 lbs. K, 0.65 lb. Fe, 2.03 lbs. S				
Aerification - type	Hollow Tines						
Verticutting or other cultivation	Verticut - 4/18, 5/15, 6/26, 7/17, 8/18		Lime				
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)
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		03-Jul 01-Aug	Primer Primer	4 6

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

ESTABLISHMENT	FERTILIZATION				FUNGICIDES		
	Date(s)	Product	Rate (lbs./M)	Date(s)	Product	Rate (oz./M)	
Seeding date	08-Jun-98						
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, 0.026Fe, 0.10S				HERBICIDES
Date opened for play							
Date closed for play	07-Jun	MAP, KTS, DP	0.48N, 1.10P, 0.20K, 0.026Fe, 0.13S	Date(s)	Product	Rate (oz./M)	
Type of spikes allowed							
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, 0.026Fe, 0.13S	Date(s)	Product	Rate (oz./M)
Initial height							
Current height	0.133-0.187"	19-Aug	MAP	0.16N, 0.80P			
Frequency		23-Aug	N-Sure, KTS	0.75N, 0.20K, 0.026Fe, 0.13S	None		
Type of mower							
Rollers used	6/2,5,30; 7/4,7,18,28; 8/20,25	14-Sep	N-Sure, KTS	0.34N, 0.20K, 0.026Fe, 0.13S			OTHER PRODUCTS
Groomers used							
CULTIVATION		20-Sep	MAP	0.20N, 1.01P			
		04-Oct	N-Sure, KTS	0.36N, 0.20K, 0.026Fe, 0.13S	Date(s)	Product	Rate (oz./M)
Aerification - 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			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	Total/year		6.48N, 4.11P, 7.45K, 0.208Fe, 1.11S			
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	AERIFICATION 2000	FILLING AFTER				STIMPMETER READINGS			
							SPRING 2000-01	SUMMER 1999-2001	FALL 2000-01	WINTER 1999	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 DATA

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

NAME	QUALITY RATINGS												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
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.