Evaluation of Bentgrass Cultivars for Putting Greens in Southern California

Jim Baird, Brent Barnes and Steve Ries

Department of Botany and Plant Sciences

University of California, Riverside

Objectives: Evaluate performance of 19 creeping bentgrass cultivars and one velvet cultivar on a sand-based putting green under simulated championship conditions.

Location: UCR Turf Facility

Soil: Sand-based root zone

Mowing Height: Lowered to 0.135" by Field Day using Baroness walk-behind mower

Experimental Design: Split-plot with 4 replications per cultivar; bentgrass cultivars represent main plots; half of each plot received Primo Maxx at a rate of 0.125 oz./1000 ft^2/wk beginning on August 18, 2008.

Plot Size: 5' by 11'

Establishment: Cultivars were seeded at a rate of 1 lb/1000 ft^2 on July 11, 2008

Fertility: 1 lb N/1000 ft^2 at planting; 0.5 lb N/1000 ft^2/wk until established; ≤ 0.5 lb N/1000 ft^2/month thereafter

Simulated Championship Conditions: Two weeks prior to Field Day, mowing, rolling, and trafficking using a traffic simulator equipped with metal golf spikes was increased to four times daily and irrigation was minimal using a hand-held hose.

Data Collection: Rate of establishment, turf quality, color, density, and rooting evaluated periodically throughout the study. Ball roll and firmness measured prior to Field Day.

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North

	Primo	Primo		Primo		Primo			Primo
Tyee		Penn A-4		Penn G-6		Declaration		T-1	
Shark		007		MacKenzie		SR 1150		Brighton	
L-93		LS-44		Alpha		Independence		Mariner	
Seaside II		Dominant Plus		Dominant Xtreme7		Penncross		Lengendary Velvet	
Alpha		Tyee		Shark		Independence		SR 1150	
Legendary Velvet		T-1		Seaside II		Brighton		Penn G-6	
Penncross		Dominant Xtreme7		L-93		007		Penn A-4	
Declaration		Mariner		MacKenzie		LS-44		Dominant Plus	
SR 1150		Declaration		T-1		LS-44		Alpha	
Mariner		Brighton		Penn A-4		L-93		Dominant Plus	
Tyee		Penn G-6		Penncross		Dominant Xtreme7		007	
Seaside II		MacKenzie		Legendary Velvet		Independence		Shark	
Mariner		SR 1150		Seaside II		Declaration		MacKenzie	
007		Dominant Plus		Alpha		Penn G-6		Dominant Xtreme7	
Penn A-4		T-1		Tyee		Legendary Velvet		L-93	
LS-44		Shark		Independence		Penncross		Brighton	
	Primo	Primo		Primo		Primo			Primo

Table 1. Evaluation of bentgrass cultivars for putting greens in southern California with increasing stress imposed by mowing height, frequency of cut, rolling, and simulated traffic.

	# of Fairy Rings	Turf Quality	Wilt	Turf Quality	Turf Quality	Ball Roll Feet.Inches	Turf Quality
	6-16-09	8-15-09	8-19-09	8-29-09	9-14-09	9-11-09	9-15-09
Cultivar							
Tyee	4	6	7	7	5	9.6	2
Penn A-4	3	6	7	8	7	10.8	4.5
Penn G-6	2	6.5	7.5	7	7.5	10.9	7
Declaration	2	6	7	7	5.5	10.2	3
T-1	1	7	8	8	7	10.3	4.5
Shark	3	7	7	7	5.5	10.3	3.5
007	3	6	7.5	8	6	10.3	3
MacKenzie	2	7	8	7.5	7	10.2	5
SR 1150	0	6	7	7	4	10.2	2.5
Brighton	2	7	8	7	7.5	10.8	7.5
L-93	3	7	8	8	8	10.8	8
LS-44	1	7	8	7.5	7.5	10.7	6
Alpha	3	7	8	8	7	10.8	6.5
Independence	0	7	7	7	6.5	10.3	4
Mariner	0	6.5	8	7	7	11.0	7.5
Seaside II	2	7	8	8	7.5	10.8	7
Dominant Plus	3	7	8	7.5	8	10.9	7.5
Dominant Xtreme7	1	7	8	8	7.5	10.5	5
Penncross	0	6	7	6.5	6	10.9	7
Legendary Velvet	1	3.5	7	5	4	10.9	3
LSD (P=.05)	3.2	0.9	1.2	0.9	1.5	5 inches	1.5
CV	139.2	10.6	11.2	9.3	16.4	2.9	21.1

Preliminary Results:

- Highest ranked cultivars for turfgrass quality on 15 September 2009 were L-93, Brighton, Mariner, Dominate Plus, Penn G-6, Seaside II, and Penncross.
- Cultivars that ranked lowest in turfgrass quality were puffy or spongy in appearance and scalped as mowing height was lowered and mowing frequency increased.