

Stop #8b: The LDS All Star Game

Jon Montgomery and Jim Baird

Introduction

In 2013, five trials were conducted on three golf courses in northern California and at the UC Riverside turfgrass research facility. Three experiments were conducted on putting greens and two on fairway turf. LDS was variable both among and within experimental areas, but several products were identified as top performers. Following the conclusion of last year's study, it was determined that more research was necessary to determine which products are truly most effective for prevention/alleviation of LDS. Therefore, the best performing products from 2013 trials were selected for inclusion in a 2014 All Star study on a bentgrass putting green at the UC Riverside turfgrass research facility.

Methods

Initial ratings were taken on July 9, 2014. TDR data from these ratings were used to select plots with similar soil moisture in an attempt to control for the high variability in occurrence of LDS. Products were applied monthly beginning July 10, 2014, and immediately watered in. All ratings were collected on a bi-weekly basis. Irrigation was reduced gradually over the course of the study.

Sprayer Information

CO₂-powered backpack hand boom

Four TeeJet 8004VS flat fan nozzles; 9.5-inch spacing

Pressure: 30 psi; Groundspeed: 2 mph; Output: 2 gal/M

Ratings:

- Turf Quality (1 to 9 scale, 9 = best)
- Localized Dry Spot (0 to 100%)
- Soil Moisture (%)
- Green Firmness (Clegg Impact Tester)

Spray Record

Timing	A	B	C
Date	10 June 2014	7 August 2014	4 September 2014
Time	6:00 to 7:30 AM	6:00 to 7:30 AM	2:00 to 3:00 PM
Temperature	65.1F	61.0F	83.7F
Wind	Calm	Calm	Calm
Conditions	Clear	Clear	Clear

Results:

- All products included in this trial were among the best out of more than 30 products tested in 2013.
- No significant differences were detected for firmness and soil moisture at all rating dates.
- A16982A from Syngenta produced the best turf quality and least LDS by the final rating date before publication.
- TriCure AD and Revolution tied for second place. The remainder of the products were not significantly different from the control with respect to %LDS.

**2014 UCR Putting Green LDS Study
Riverside, CA
(North↑)**

							3						
	7										4		
			1		3								
	5	2	6	2	7								
			4				5						
7	1	3					1		2	4	5	7	6
6													

No.	Treatment	Company	Rate (oz/M)
1	Control	--	--
2	Revolution	Aquatrols	6.0
3	TriCure AD	Mitchell Products	6.0
4	A16982A	Syngenta	12.6
5	Affinity	BASF	6.0
6	Neptune	Numerator Technologies	6.0
7	NT-0949	Numerator Technologies	6.0

Table 1. Bentgrass quality and %LDS in response to wetting agents applied June 10 and August 7, 2014. Riverside, CA.

No.	Product	Turf Quality (1-9, 9 = best)					%LDS				
		7/09	7/23	8/07	8/21	9/03	7/09	7/23	8/07	8/21	9/03
1	Control	7.0A	5.8AB	6.0A	5.3BC	4.8AB	5.0A	3.8A	10.0A	13.8A	38.8A
2	Revolution	6.8A	6.3AB	6.5A	6.5ABC	6.0A	6.3A	2.5A	3.8A	6.3A	11.3B
3	TriCure AD	7.5A	6.5AB	6.8A	7.3A	5.8AB	5.0A	1.3A	5.0A	2.5A	13.8B
4	A16982A	7.5A	7.3A	6.8A	7.0AB	6.3 A	2.5A	0.0A	3.8A	3.8A	7.5C
5	Affinity	6.8A	6.0AB	5.8A	5.5ABC	4.8AB	8.8A	2.5A	11.3A	16.3A	28.8AB
6	Neptune	6.8A	5.5B	5.5A	5.8ABC	3.8B	5.0A	2.5A	7.5A	8.8A	51.3AB
7	NT-0949	6.8A	5.0B	5.0A	5.0C	4.3AB	6.3A	11.3A	22.5A	13.8A	40.0A

Means followed by the same letter in a column are not significantly different (P = 0.05).