

1997 Aquatrols Phytosafety Study of New Aqueduct Formulations

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Objective: To evaluate phytotoxicity of seven Aqueduct formulations on a golf course putting green.

Cultivar: SR1020 creeping bentgrass.

Experimental Site: The putting green nursery was established in the fall of 1995 at the UCR Turfgrass Field Research Center, Riverside, CA. The root zone is a native soil which is classified as a Hanford fine sandy loam. The green was maintained to be representative, which includes mowing at a 3/16-inch mowing height three to four times per week, and fertilized at a rate of 0.3 lb N/1000 ft² once every three to four weeks.

Experimental Design: Completely randomized design with three replications. Plot size was 4 x 4 ft.

Mowing: Prior to application, the plot was mowed at 3/16 inch with a Jacobsen greens mower with clippings collected. The plots were subsequently not mowed during the course of the three-day study.

Irrigation: In the early morning prior to treatment applications the plots were irrigated. No other irrigations occurred during the three-day study.

Treatments:

- Six experimental and one non-experimental Aqueduct formulations applied at a rate of 16 oz product/1000 ft².
- An untreated check.
- Applications made with a backpack sprayer set at 20 psi, with two TeeJet 8002VS nozzles (19 inches apart), for one, 3-second pass. Spray volume set to 1 gallon/1000 ft².
- Applications were made August 27, 1997.

Measurements:

Visual phytotoxicity ratings were estimated once a day for three days beginning 24 hours after application. The scale was from 0 to 10, with 0=no phytotoxicity, 5=50% yellow-brown, and 10=100% brown).

Results: Scale: 0-10 (0 = no phytotoxicity, 5 = 50% yellow-brown, 10 = all brown).

Treatments (16 oz product/1000 ft ²)	8/28/97	8/29/97	8/30/97
Experimental 1	0	0	0
Experimental 2	0	0	0
Experimental 3	0	0	0
Experimental 4	0	0	0
Experimental 5	0	0	0
Experimental 6	0	0	0
Aqueduct	0	1	1
Check	0	0	0
LSD P=0.05	NS	NS	NS

Daily air temperatures (°F) ^z			
Temperature range	8/28	8/29	8/30
High	93	93	91
Low	61	61	61
Average	75	75	75

^zTemperature data collected from an on-site CIMIS station.

NS = treatment effect > P=0.05.

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1	2	3	4	5	6	7	8
8	4	1	5	6	1	7	5
9	10	11	12	13	14	15	16
8	4	6	5	4	3	1	3
17	18	19	20	21	22	23	24
8	2	7	3	2	2	6	7

TREATMENTS (all applied at 16 oz/1000 ft ²)	
1. Experimental 1	5. Experimental 5
2. Experimental 2	6. Experimental 6
3. Experimental 3	7. Aqueduct
4. Experimental 4	8. Check

