

Title: Preemergence Control of Summer Annual Weeds in Bermudagrass Turf

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Objectives: Evaluate new and existing herbicides and formulations for preemergence control of summer annual weeds in bermudagrass turf.

Location: UCR Turfgrass Research Facility, Riverside CA

Soil: Hanford fine sandy loam

Experimental Design: Randomized complete block; three replications

Plot Size: 6 ft x 10 ft

Species/Cultivars: Tifgreen 328 Bermudagrass

Mowing Height: 1.25 inches; 2 days/wk

Irrigation: 60% ETo (historical from previous week)/DU

Cultivation: Verticutting twice annually

Sprayer: Bicycle
8003VS nozzles
19-inch spacing
45 psi
1.6 mph
60 GPA

Application Dates: A = February 25, 2010
B = April 23, 2010
C = September 2010

Data Collected: Weed cover by species (0-100%) based on initial cover in each plot (if present); Bermudagrass quality (1-9, 1 = dead; 6 = minimally acceptable).

Table 1. Weed cover (0-100%) on August 24, 2010 following spring application of herbicides. Riverside, CA.

Trt	Product(s)	Rate(s)	Timing	Crab grass	Wild Parsley	Spurge	Cudweed
1	Barricade 65WG	1 lb/A	A	1	1	7	1
2	Barricade 65WG	1 lb/A	AB	0	2	2	4
3	Barricade 65 WG + Tenacity	0.77 lb/A 5 oz/A	AB AB	0	1	2	0
4	Pendulum Aqua Cap	64 oz/A	A	1	1	7	2
5	Pendulum Aqua Cap	64 oz/A	AB	0	4	6	1
6	Tower	32 oz/A	A	6	3	17	1
7	Tower	32 oz/A	AB	2	1	7	0
8	Pendulum Aqua Cap + Tower	64 oz/A 32 oz/A	AB AB	0	1	5	3
9	Ronstar G	4.5lb/1000ft ²	A	5	2	7	1
10	Ronstar G	2.5lb/1000ft ² 2.0lb/1000ft ²	A B	6	6	8	3
11	Specticle 20WP	2.5 oz/A	AC	2	3	7	1
12	Specticle 20WP	3.75 oz/A 2.5 oz/A	A C	1	8	2	1
13	Specticle 20WP	3.75 oz/A 1.2 oz/A	A C	1	6	2	1
14	Specticle 20WP	5 oz/A	A	0	22	3	3
15	Barricade 65WG Specticle 20 WP	1.15 lb/A 2.5 oz/A	A C	0	17	3	4
16	Dimension 2EW	0.38 lb/A	A	0	0	8	1
17	Dimension 2EW	0.25 lb/A	AB	0	3	7	1
18	Gallery 75DF	0.66 lb/A	A	5	3	1	0
19	Dimension 2EW + Gallery 75DF Dimension 2EW	0.25 lb/A 0.66 lb/A 0.25 lb/A	A A B	0	5	5	1
20	Dimension 2EW + Gallery 75DF Dimension 2EW + Gallery 75DF	0.18 lb/A 0.22 lb/A 0.25 lb/A 0.44 lb/A	A A B B	1	2	6	0
21	Dimension 2EW + Gallery 75DF Dimension 2EW + Gallery 75DF	0.18 lb/A 0.33 lb/A 0.25 lb/A 0.33 lb/A	A A B B	1	6	7	1
22	Dimension 2EW + Gallery 75DF Dimension 2EW + Gallery 75DF	0.18 lb/A 0.44 lb/A 0.25 lb/A 0.22 lb/A	A A B B	0	2	10	1

Table 1. (cont.)

Trt	Product(s)	Rate(s)	Timing	Crab grass	Wild Parsley	Spurge	Cudweed
23	Dimension 2EW +	0.25 lb/A	A	0	1	6	1
	Gallery 75DF	0.22 lb/A	A				
	Dimension 2EW +	0.18 lb/A	B				
	Gallery 75DF	0.44 lb/A	B				
24	Dimension 2EW +	0.25 lb/A	A	1	0	4	2
	Gallery 75DF	0.33 lb/A	A				
	Dimension 2EW +	0.18 lb/A	B				
	Gallery 75DF	0.33 lb/A	B				
25	Dimension 2EW +	0.25 lb/A	A	1	1	7	1
	Gallery 75DF	0.44 lb/A	A				
	Dimension 2EW +	0.18 lb/A	B				
	Gallery 75DF	0.22 lb/A	B				
26	Gallery 75DF	0.44 lb/A	A	6	5	3	1
		0.22 lb/A	B				
27	Bensumec 4LF	12.5 lb/A	A	1	1	7	1
28	Bensumec 4LF	10 lb/A	AB	0	6	7	1
29	Dimension 270G	4.2lb/1000ft ²	A	1	7	4	1
30	Untreated Control	--	--	10	7	5	1
	LSD (0.05)			5	11	NS	2

Results:

- ✓ There was no phytotoxicity observed following application of herbicide treatments.
- ✓ Summer annual weed pressure was lighter and more variable than desired; subsequently it was difficult to substantive conclusions about herbicide efficacy.
- ✓ In general, better control was achieved with tank-mixes and sequential applications using higher rate(s) first.
- ✓ Specticle provided postemergence *Poa annua* control that persisted from winter and good control of summer annuals with a single application. However, it appeared to be weaker on control of wild parsley.
- ✓ Barricade and Tenacity, Pendulum and Tower, and Dimension and Gallery all appeared to provide effective broad-spectrum control of most all summer annual weeds.

PLOT PLAN - Preemergence Summer Annual Weed Control Study

NORTH

1	16	26	16	5	19
2	17	3	9	12	23
3	18	30	8	18	25
4	19	1	25	22	30
5	20	10	29	13	27
6	21	21	20	4	8
7	22	17	24	20	10
8	23	4	5	2	24
9	24	27	23	14	16
10	25	2	13	29	6
11	26	11	15	28	7
12	27	19	6	3	1
13	28	7	12	15	9
14	29	28	22	17	11
15	30	18	14	26	21