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Searls' prairie clover (*Dalea searlsiae*) tolerance to postemergence herbicide applications. Kyle C. Roerig and Corey V. Ransom. (Plants, Soils, and Climate Department, Utah State University, Logan, UT 84322-4820) Searls' prairie clover (*Dalea searlsiae*) is a forb native to Utah and the Great Basin. Recent rangeland restoration efforts have lead to an interest in commercial *Dalea* seed production. This trial was designed to evaluate prairie clover tolerance to herbicides that have potential for use in prairie clover seed production. Treatments were applied May 12, 2009 on an established stand at a site in North Logan, Utah. Herbicide treatments were applied using a CO_2-pressurized shielded bicycle-wheeled sprayer calibrated to deliver 20 gallons per acre at 30 psi. Research plots measured 3 by 18 feet and were arranged in a randomized block design with four replications. Plants were spaced at 1.64 ft. Each plot contained a maximum of 22 plants. Injury was visually rated 14 and 44 days after treatments were applied. Biomass was harvested August 6, 2009 dried and weighed. At 14 DAT oxyfluorfen and flumioxazin injury was significantly greater than all other treatments. Pendimethalin, bromoxynil and 2,4-DB were among the least injurious. At 44 DAT, clopyralid injury was greater than all other treatments. Due to plant variability, no differences in foliage, seedhead or total plant biomass were observed.

Table. Prairie clover injury and biomass in response to postemergence herbicides.

		Injury		Biomass		
Treatment[1]	Rate[2]	14 DAT	44 DAT	Foliage	Seedhead	Total
	lb ai or ae/A	----------%----------		----------oz/plant----------		
Untreated		0	0	0.79	0.18	0.97
Pendimethalin	0.71	9	8	0.80	0.20	1.01
Oxyfluorfen	0.25	65	16	0.82	0.25	1.07
Flumioxazin	0.064	58	21	0.77	0.19	0.96
Metribuzin	0.5	28	19	0.86	0.22	1.07
Bromoxynil	0.25	13	6	0.96	0.21	1.17
2,4-DB	0.25	16	5	0.99	0.20	1.20
Clopyralid	0.124	33	44	1.01	0.08	1.09
Quinclorac	0.248	25	16	0.94	0.16	1.10
Imazamox	0.078	36	15	1.05	0.17	1.22
LSD (0.05)		17	19[3]	NS	NS	NS

[1]Quinclorac and imazamox included MSO at 1.0% v/v and flumioxazin and metribuzin included NIS at 0.25% v/v.
[2]All herbicide rates are lb ai/a except 2,4-DB, clopyralid and quinclorac which are listed as lb ae/A.
[3]LSD at P=0.10.