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Imazapic activity on leafy spurge

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This research was conducted near Devil's Tower, Wyoming to evaluate the activity of imazapic on leafy spurge. Plots were 10 by 27 feet. with four replications arranged in a randomized complete block. Herbicide treatments were applied broadcast with a CO₂ pressurized hand-held sprayer delivering 26 gpa at 40 psi on September 3, 1997 (air temp. 90° F, soil temp. 0 inch 87° F, relative humidity 32%, wind south at 5 mph, 60% cloud cover). The soil was a silt loam (27% sand, 55% silt, and 18% clay) with 2.6% organic matter and 6.2 pH. Leafy spurge was post seed and 14 to 20 inches in height. Infestations were heavy throughout the experimental area. Visual estimations of percent leafy spurge control were made June 27, 1998; 297 days after treatment and July 4, 1999; 669 days after treatment.

All treatments provided good to excellent control of leafy spurge 297 days after treatment. The addition of a methylated seed oil significantly increased leafy spurge control with imazapic at 0.125 lb/A. The addition of methylated seed oil did not increase leafy spurge control for the other rates of imazapic. No treatment gave adequate control 669 days after treatment. Grass damage was moderate to severe for all imazapic rates. The addition of methylated seed oil appeared to increase grass damage. There was no grass damage 669 days after treatment.

Table. Leafy spurge percent control.

Treatment ¹	Rate lb/A	Leafy spurge control ^{2o}		Grass damage	
		June 27,1998	July 4,1999	June 27,1998	July 4,1999
		%			
Imazapic	0.125	84	0	13	0
Imazapic ³	0.125	95	0	35	0
Imazapic	0.1875	95	0	23	0
Imazapic ³	0.1875	99	0	31	0
Imazapic	0.25	100	0	43	0
Imazapic ³	0.25	100	0	53	0
Picloram	0.5	98	0	0	0
(LSD 0.05)		7	-	19	-
(CV)		5		44	

¹Treatments applied September 3, 1997.

²Visual estimates.

³Methylated seed oil added at 1 qt/A.