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Evaluation of dicamba formulations for leafy spurge shoot control

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An experiment was conducted to compare liquid and granular formulations of dicamba for leafy spurge shoot control. Plots were established June 16, 1982, south of Hulett, Wyoming along the Belle Fourche River. Treatments were applied to a dense stand of leafy spurge at bud to full bloom and 12-18 inches tall. Liquid formulations were applied with a 6-nozzle knapsack spray unit delivering 40 gpa water. Granular formulations were applied with a hand operated centrifugal broadcaster. Plots were 9 by 30 feet arranged in a randomized complete block design with three replications. Soil was a loam (38% sand, 47% silt, and 15% clay) with 1.8% organic matter and a 7.8 pH.

Leafy spurge shoot control has declined since 1983 with all dicamba treatments. However, dicamba 4DMA + X-77 at 8.0 lb ai/A and dicamba 5G at 4.0 lb ai/A are maintaining 78 and 70 percent control, respectively, three years after treatment application. Picloram 2% pellets at 2.0 lb ai/A continue to maintain excellent control three years after application.

Leafy spurge shoot control.

Treatment ¹	Rate lb ai/A	Percent shoot control ²		
		1983	1984	1985
dicamba-pellets 10%	6.0	95	49	33
dicamba pellets 10%	8.0	92	70	55
dicamba 4DMA + X-77	6.0	83	67	47
dicamba 4DMA + X-77	8.0	98	82	78
dicamba 4DMA + 2,4-DLVE + X-77	4.0 + 0.5	97	73	55
dicamba pellets 10%	5.0	49	51	23
dicamba pellets 10%	8.0	96	70	37
dicamba pellets 5%	4.0	94	91	70
dicamba pellets 5%	8.0	93	78	33
dicamba pellets 20%	4.0	65	68	37
dicamba pellets 20%	8.0	95	91	40
picloram pellets 2%	2.0	100	100	99

¹Treatments applied June 16, 1982, X-77 added at 0.125% v/v

²Shoot counts May 18, 1983, May 23, 1984, and May 30, 1985