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Quinclorac tankmixes for control of leafy spurge

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This research was conducted near Devil's Tower, Wyoming to evaluate leafy spurge control with early or late summer applications of quinclorac, alone or in combination with other herbicides. Plots were 10 by 27-ft. with four replications arranged in a randomized complete block. Spring treatments were applied June 10, 1991 (air temp. 70° F, soil temp. 0 inch 115° F, 1 inch 80° F, 2 inch 75° F, 4 inch 70° F, relative humidity 65%, wind south at 5 mph, sky 40 % cloudy). Fall treatments were applied September 25, 1990 (air temp. 65° F, soil temp. 0 inch 70° F, 1 inch 65° F, 2 inch 60° F, 4 inch 60° F, relative humidity 34%, wind south at 3 mph, sky clear). The soil was classified as a silt loam (22% sand, 58% silt, and 20% clay) with 1.8% organic matter and a 6.3 pH. Leafy spurge was in full bloom and 14 to 20 inches in height for the spring treatments or past seed production and 14 to 20 inches in height for the fall treatments. Infestations were heavy throughout the experimental area. Visual evaluations were made June 18, 1991 and June 10, 1992 or September 25, 1992.

Fall applications of quinclorac + picloram (1.0 + 0.5 lb/A), provided 80% control of leafy spurge nine months after treatment. However, control had dropped to 51% by June 1992. No other treatments provided effective leafy spurge control.

Leafy spurge control

Treatment	Rate	Application date/evaluation date		
		Sept. 25, 1990/ June 18, 1991	Sept. 25, 1990/ June 10, 1992	June 10, 1991 Sept. 25, 1992
	(lb ai/a)	------(control ¹)-----		
quinclorac ²	0.5	25	10	30
quinclorac + 2,4-D LVE ²	0.5+1.0	35	18	51
quinclorac + dicamba	0.5+1.0	36	15	48
quinclorac + picloram ²	0.5+0.5	46	20	60
quinclorac ²	1.0	64	33	55
quinclorac + 2,4-D LVE ²	1.0+1.0	71	33	65
quinclorac + dicamba	1.0+1.0	75	36	60
quinclorac + picloram ²	1.0+0.5	80	51	65
(LSD 0.05)		11	20	19
(CV)		16	57	27

¹Percent control by visual evaluation.

²Crop oil concentrate (Sunit) added at 1 quart/acre.