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Initial control of leafy spurge with various formulations of 2,4-D

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Leafy spurge is a major broadleaf, perennial weed problem in rangeland. This research was conducted in Crook County, WY, to compare the efficacy of various formulations of 2,4-D on leafy spurge.

Plots were established May 28, 1987 on a dense stand of leafy spurge in a rangeland setting. The leafy spurge was in full bloom. Perennial grasses 6 to 8 inches tall were present as an understory. Herbicides were applied with a 6-nozzle knapsack spray unit with a carrier volume of 30 gpa delivered at 45 psi pressure through 8004 flat fan nozzles. Weather conditions were as follows: air temp. 63º F, relative humidity 74%, wind W at 5 mph, sky cloudy, soil temp. 0 inch 75º F, 1 inch 70º F, 2 inch 70º F, 4 inch 65º F. Soil was a silt loam (22% sand, 58% silt and 20% clay) with 1.8% organic matter and 6.3 pH. Plots were 10 by 27 feet and arranged in a randomized complete block design with four replications.

Visual evaluations were made July 7, 1987, 40 days after treatment application. The 2,4-D butoxyethyl ester + 2,4-D amine formulation provided better initial control especially at the 1.0 lb ai/A rate than did the other 2,4-D formulations. As rates increased, however, there was less difference between the 2,4-D formulations. (Wyoming Agric. Exp. Sta., Laramie, WY 82071, SR 1520.)

Leafy spurge control.

Treatment[1]	Rate lb ai/A	Percent initial control[2] 1987
2,4-D alkanolamine	1.0	54
2,4-D isoctyl ester	1.0	74
2,4-D amine + 2,4-D butoxyethyl ester	1.0	80
2,4-D alkanolamine	1.5	69
2,4-D isooctyl ester	1.5	78
2,4-D amine + 2,4-D butoxyethyl ester	1.5	81
2,4-D alkanolamine	2.0	80
2,4-D isooctyl ester	2.0	81
2,4-D amine + 2,4-D butoxyethyl ester	2.0	85
picloram	2.0	73
LSD (0.05)		17
CV		14

[1]Treatments applied May 28, 1987.
[2]Visual evaluations July 7, 1987.