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Leafy spurge control with imazapic in Wyoming

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Abstract:

Leafy spurge continues to be a major problem in Wyoming. Leafy spurge spread has been limited but has not decreased, and there are infestations in every county. However, major infestations occur in the northeast corner of the state. The objective of this research was to compare the efficacy of imazapic for leafy spurge control at two locations. One study was located in Crook County, Wyoming five miles south of Devils Tower. The other in Cheyenne, Wyoming on Warren Air Force Base. The studies were a randomized complete block design with four replications. Crook County leafy spurge was 16 to 24 inches tall and Cheyenne leafy spurge was approximately 20 inches tall.

In Crook County imazapic regardless of rate provided excellent leafy spurge control 297 days after treatment (DAT). Picloram at 0.5 lb/A also provided excellent control. Grass damage was severe especially at the higher rates of imazapic. The addition of methylated seed oil seemed to increase grass damage.

In Cheyenne imazapic provided little or no leafy spurge control 288 DAT; however there was considerable shoot suppression at the 0.25 lb/A applied rate. No other treatment was effective. Leafy spurge control 590 DAT found imazapic providing little or no control, or shoot suppression. Grass damage 288 DAT was severe where 0.25 lb/A of imazapic was applied. Grass damage 590 DAT was not as evident but was still very noticeable where 0.25 lb/A of imazapic had been applied. The addition of BAS-662 did not increase control. It appears that more research is needed in order to make more accurate predications for control of leafy spurge with imazapic as well as timing of application to reduce grass damage.