

*Reprinted with permission from: 1994 Leafy Spurge Symposium, Bozeman, MT.
July 26-29, 1994. p. 20.*

*Sponsored by: Great Plains Agricultural Council, Montana Noxious Weed Trust Fund,
and United States Department of Agriculture-Agricultural Research Service.*

Revegetation of leafy spurge-infested rangeland with native tallgrasses

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Leafy spurge is a problematic perennial weed on rangeland in the northern and central Great Plains. Leafy spurge displaces native plants and reduces forage productivity. Research was conducted to determine the feasibility of using imazapyr and sulfometuron to control leafy spurge and to facilitate seeding and establishment of native tallgrasses. Imazapyr at 0.28, 0.56, and 0.84 kg a.i./ha and sulfometuron at 0.1 kg a.i./ha were applied alone and in combination in late September 1992 to leafy spurge-infested range sites near Ainsworth and Ansley, Nebraska. Plant residue on the sites was burned in early April 1993. Big bluestem (*Andropogon gerardii* Vitman var. *gerardii* Vitman) and switchgrass (*Panicum virgatum* L.) were planted at 440 pure live seed/m² in late April 1993 into plots treated with herbicides the previous fall. Leafy spurge control and frequency and yield of the planted grasses were measured in August 1993. Imazapyr applied at 0.28, 0.56, and 0.84 kg/ha with sulfometuron and imazapyr applied alone at 0.56 and 0.84 kg/ha provided greater than 80% leafy spurge control. Excellent stands (>20 plants/m²) of big bluestem and switchgrass were established where imazapyr and sulfometuron had been applied in combination.