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Published by: Department of Agronomy, North Dakota State University, Fargo, ND.

Sweetclover competition with leafy spurge

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When leafy spurge is controlled by herbicides in pasture and rangeland, large areas often are left with very little other vegetation. Leafy spurge can become reestablished easily because there is very little competition from other plants. A plant that would provide both competition for leafy spurge and forage for livestock would be an ideal choice for introduction into areas previously treated for leafy spurge control. Sweetclover variety 'Yukon' was evaluated for its ability to compete with leafy spurge.

Leafy spurge plants were grown in greenhouse soil in 6-inch pots for 4 months so an extensive root system was established. Leafy spurge topgrowth was cut back twice during the 4 month period to increase the number of stems per pot. Then, sweetclover was planted in pots with the leafy spurge which was approximately 14 inches tall. The plants in 1/2 of the pots were cut back to the soil level to simulate mowing before planting. The experiment was a randomized complete block with eight replications.

The sweetclover was grown with the leafy spurge for 3 months during which the leafy spurge stems were cut back twice to the soil level to allow the sweetclover to become better established. After 3 months all topgrowth was removed and the plants were allowed to regrow for 5 weeks. At the end of the experiment there was no difference in the number of leafy spurge stems per pot, leafy spurge height or general vigor between plants grown with or without sweetclover. The sweetclover grew well but did not provide competition for leafy spurge regrowth. Perhaps a better candidate for competition would be a grass species since it would be less affected by previous herbicide treatments applied for leafy spurge control.