

Cattle Behavior Used to Control Noxious Weeds

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A Richland County rancher thinks his cattle might be more cost effective than chemicals when it comes to controlling leafy spurge. Gene Foss, who ranches 10 miles south of Culbertson, Mont., estimates that he has invested \$32 per acre per year in chemical control with little additional forage being produced. He is now using his cows to control leafy spurge without spending money for chemicals.

Foss's trial with cattle started with his observation that leafy spurge could not tolerate physical damage. After noticing that grass was growing where he drove through a spurge infestation, Foss concluded, "You can control spurge with a rubber tire." He also observed that cattle concentrations eliminated leafy spurge infestations. For example, in his cattle trap where cattle were concentrated for 2 or 3 days in a year, grasses were abundant while across the fence spurge dominated the plant community.

Foss is capitalizing on these observations with his newly implemented time control grazing program. To increase his cattle concentrations, he divided 8,400 acres into 21 pastures, grouped his cattle into 1 herd and moved them through the pastures in a planned manner. There are plans to further divide these 21 pastures into 40 by 1987. Gene also added cattle to his herd to further increase the physical impact on the spurge. He estimates that stock density in the spurge pastures was increased to a minimum of 2 cows per acre in early spring of 1985.

"In my first grazing periods, I didn't get the physical damage to the leafy spurge I wanted," Foss said. Increased stock density had little effect on the plant populations. Grazing cows were very careful where they placed their feet and caused little damage.

To further increase physical impact, Gene stimulated a herding behavior with mineral supplements. In getting to the supplement, the cattle trampled the spurge plants, breaking off stems and stepping on seedlings. Foss believes that repeated animal impact will eliminate spurge's dominance and allow desirable forage plants to increase in these areas. The preliminary results are encouraging. Grass seedlings are establishing in areas of leafy spurge and a more diverse community may be established. Arnold Norman, area resource conservationist for the Soil Conservation Service, is also optimistic. "Many ranchers have successfully controlled

brush species with this technique. Gene appears to have a good start at controlling his leafy spurge."

Weed control is one of the goals of the Holistic Resource Management plan Foss adopted in March 1985. HRM is a planning tool that allows a rancher to make sound economic and ecological decisions that help achieve the goals of his ranch. Gene bases the length of grazing in a pasture on the plant growth rate, the quality of forage in the pasture, and the number of total pastures. His pastures are rested for 30 to 90 days depending on the growth rate of the plants. Plants are not regrazed until they have recovered from the initial graz-



Gene Foss, Richland County rancher, holds a trampled leafy spurge plant in one of his pastures. Foss thinks his cattle are more cost effective than chemicals in controlling leafy spurge on his ranch.

ing. This grazing pattern allows for animal impact on the land and reduces the stress of grazing on plants.

Foss thinks that by using HRM he may be able to control leafy spurge without the high cost of chemical application. The physical animal impact structured into HRM will advance the successional level of his plant community to a point where leafy spurge will no longer pose a significant problem.