## A practical and profitable way of controlling leafy spurge

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I am Dean A. Peterson of Judith Gap, Montana. I farm and ranch with my father (who is semi-retired). We normally run around 300 sheep, 200 cows, and farm about 1300 acres of wheat and barley. I graduated from Montana State University in 1973 with a degree in Ag. Production and Mechanics. Since 1973, 1 have worked into a major management position in the E. L. Peterson Ranch, Inc., at Judith Gap.

My father moved to our present operation from north of Havre, Montana in 1950. Havre, at that time, had no spurge problem; therefore, he had no experience with leafy spurge prior to 1950. By 1951, he realized he had a problem. Without knowing anything about leafy spurge other than that the cattle wouldn't eat it, he bought some sheep. He started out with 50 head of old ewes. It took the sheep a couple of years to start to get a handle on the spurge. After observing the economical gain of sheep on leafy spurge compared to cattle (mainly sheep would eat it, cattle wouldn't), the sheep numbers grew to around 180 head. We maintained those numbers until about 1975 when we started to increase the numbers to around 325 head. Because of the present drought, we have reduced the number of sheep from 325 down to 250 ewes and cattle from 200 down to 125 cows.

A bit of history of the leafy spurge in our area is that it was first introduced in the area by the Milwaukee Railroad when they hauled hay in for the horses to build the railroad. Along with a lack of knowledge and concern of the problem, it was spread by the two railroads, highways, and farming in the area. Since the initial infestation, it has been spread by farming and a lack of concern.

Over the past 35 years, we have learned a lot about managing sheep on leafy spurge. We have found it important to get the sheep on the leafy spurge as soon as the spring weather permits. Occasionally, we get caught in a late spring storm and are forced to bring the sheep back to the sheds. But the reason for getting them out to pasture as early as possible is that the sheep like the leafy spurge best at a young and tender stage. If we let the leafy spurge bloom, the sheep will eat it, but they do not prefer it. The sheep prefer the leafy spurge to all other forage in our pastures as long as it is in the young, pre-bloom stage. We are controlling leafy spurge with sheep by never letting it get to a bloom or seed production stage of growth. To accomplish this goal with three different pastures, we move our sheep from pasture to pasture every 2 to 3 weeks all summer. The grasses may mature by mid-summer, but the leafy spurge grows actively from freeze to freeze. After the first autumn killing freeze, we can move the sheep to fields and meadows.

Along with learning how to graze the leafy spurge, there are some other minor management problems. Apparently, the latex-type fluid in the plant, along with the continuous lush green form of the plant, makes the sheep loose (runny bowels). With this combination of latex, lush green plant, and heat of the summer, flies often produce maggots. When this problem first arose, we had a real wreck on our hands. We have since learned to control the problem by spraying the sheep for flies and tagging every 3 to 4 weeks. It is not an unmanageable problem.

We also have found that there is a management plus to grazing sheep on leafy spurge compared to non-spurge pasture. We feel we can wean lambs 10 to 15 lbs. heavier off pasture with heavy infestion of leafy spurge compared to pasture with little leafy spurge in our area.

The first and foremost plus to controlling leafy spurge with sheep is that we have halted its spread to next to nothing over the past 30 years. This has been done with an economic return from the land. Without the sheep we would essentially have wasteland with no economic value. Also, with controlling the majority of our leafy spurge with sheep, it has allowed us to attempt controlling the other lands we have with chemical.

We have chosen to control our more productive valley hay ground and farm ground with chemical. The farm ground that got out of control (more than a few spots), we have seeded to grass and control with chemical or sheep. Farming leafy spurge infested ground is absolutely the worst thing a person can do to control leafy spurge. Farming does not kill it, it spreads it. We have controlled the leafy spurge with Tordon 22K liquid and Tordon 2K pellets on the land that we have chosen not to graze with sheep. Controlling leafy spurge with chemical is a very expensive proposition. We feel it costs us, including chemical and application, around \$250/acre over time to control it. At the present, we control every acre of leafy spurge we have with sheep or with chemical.

At the present, we control around 500 acres of leafy spurge with sheep (which has changed very little in the last 30 years) with an economic return from the land. Over the last 30 years, we have chosen to chemically control around 100 acres, which has been reduced to around 50 acres of spots at a cost of about \$250/acre with about 50% of the original 100 acres controlled.

Sheep have been the salvation to our leafy spurge problem. Without sheep to economically or profitably control leafy spurge, we would essentially have useless land. The only alternative of controlling leafy spurge with sheep was, and still is, chemical control. The extreme cost of this chemical control was and still is prohibitive. In other words, we cannot economically justify the kind of expense it would take to control leafy spurge with chemical on the number of acres we have infested by leafy spurge.