

Reprinted with permission from: 2001 Spurgefest II Symposium Proceedings, Medora, ND. June 19-21, 2001. p. 20.

Published by: North Dakota State University, Fargo, ND.

Investigations on potential ways to improve leafy spurge control by livestock

SCOTT L. KRONBERG¹

¹Scott L. Kronberg, USDA-ARS, Northern Great Plains Research Lab, Mandan, ND 58554.

Abstract:

In 1998, we applied high amounts of nitrogen fertilizer to spurge-infested sites in ND, SD and WY with the hope that we could decrease the toxicity of leafy spurge and consequently improve its palatability to cattle and sheep and their control of it. Unfortunately, this did not occur. In 1999 and 2000, we compared leafy spurge ingestion by four breeds of sheep (Columbia, Polypay, Ramboulett and Suffolk) on spurge-infested pastures in western ND to see if one or more breeds are superior for spurge control. In 1999, all sheep were young ewes with no previous exposure to leafy spurge, and in 2000 these same sheep were used again on the same pastures. In the beginning of the trial in the first summer when there was plenty of grass and spurge available, Rambouletts ate more spurge (as a % of their diet) than did the other breeds, but by the end of the first summer's trial Polypays had the largest % of spurge in their diets. In the second year with the sheep having considerable previous experience on spurge, none of the four breeds showed a consistently greater preference for leafy spurge. Further, the small differences observed among the breeds did not indicate that significantly greater leafy spurge control could be realized by simply grazing only one of these breeds. These findings indicate that it will likely prove difficult to improve leafy spurge control with livestock unless special efforts are made to select individuals with greater tolerance for the toxins in the weed or to increase detoxification of spurge toxins in the rumen before they can elicit their aversive effects.