

Reprinted with permission from: Leafy Spurge Symposium Proceedings. Bozeman, MT. June 21-22, 1982. p. 9.

Published by: Great Plains Agricultural Council.

Update on leafy spurge control in North Dakota

DR. ROD LYM

North Dakota State University, Fargo, N.D.

Experiments were conducted to evaluate various designs of wick applicators for leafy spurge control. All wicks consisted of 3/4 in. PVC pipe with 1/8 in. holes drilled every two inches which were covered by polyfoam and canvas. Two wicks were rectangular with two or three horizontal bars 1 foot apart and a third had diagonal bars between the two horizontal bars. Two passes with the diagonal wick gave 100% leafy spurge control. Control ranged from 80 to 90% regardless if two or three bars were used or one or two passes made.

Picloram, applied with a wick or roller applicator required 50 to 70% less herbicide but gave similar soil residues compared to broadcast applied at 2 lb/A. Research with ¹⁴C-picloram has shown a two-fold increase in translocation to the roots when picloram was applied to the bottom of a leafy spurge leaf, rather than the top or stem. Also, of the ¹⁴C-picloram entering leafy spurge over half was exuded by the roots and only 2 to 15% translocated from parent to daughter plants connected by a 10 to 15 cm root. The wick and roller apply most of the picloram to the bottom of the leafy spurge leaves which probably accounts for the similar soil residues with broadcast or wick application.

An experiment to evaluate synergism with 2,4-D and picloram on leafy spurge was begun at two sites in August 1981. Spring evaluations indicated a 20 to 30% increase in leafy spurge control when 2,4-D at 1.0 lb/A was tank mixed with picloram at 0.25 or 0.375 lb/A compared to picloram applied alone. Previous research has indicated that annual treatment of low rates of picloram or picloram plus 2,4-D give 80 to 90% leafy spurge control after 3 to 5 years.

Three field days were held around North Dakota in June 1982 with attendance ranging from 85 to 150 people. There has been extensive press coverage of the importance of leafy spurge control in 1982 and the public appears to have become more aware of the leafy spurge problem.