Reprinted with permission from: Leafy Spurge Symposium Proceedings. Bozeman, MT. June 21-22, 1982. p. 19.

Published by: Great Plains Agricultural Council.

## Histology of picloram and dicamba-treated leafy spurge

DR. T. D. WHITSON

University of Wyoming, Laramie

Leafy spurge plants grown in a growth chamber at 80° F were treated with picloram and dicamba herbicides at 2.0 and 8.0 lb ai/A, respectively. Root, shoot and leaf sections were taken at 2, 4, 6 and 8 weeks after application of herbicides. Root sections were made at points 1, 5, 10 and 20 cm below the soil surface, stem sections were made at 1 and 5 cm above the soil surface, and a single leaf section was taken 2 cm from the main stem.

Two and four weeks after plants received picloram there was moderate deterioration of xylem and phloem in the stem at 1 and 5 cm as well as in the root at 1 cm. Leaf tissue was shown to be deteriorated after 4 weeks. Sections made 6 and 8 weeks after picloram treatment exhibited approximate equivalent deterioration at the 1, 5, 10 and 20 cm points, whereas stem deterioration was greatest at the 5 cm point. Leaf cells were distorted in the 6 and 8 week samples.

Plants receiving dicamba had moderate disruption of xylem, phloem, cambium and cortex tissues at all stem and root points for all sampling times. Leaf sections taken at 4, 6 and 8 weeks showed cell distortion.