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## **Leafy Spurge News: April 1982. Vol. 3(2)**

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The newsletter continues to grow and change editors as it goes into its third year. A new editor will compile the July issue; I have finished my program at Montana State University and will be moving eastward. In June I will be getting married and moving to North Dakota to work for Control, a private consulting firm. A new research assistant will be hired in May to continue the leafy spurge work at MSU.

I would like to thank all the county agents, cooperators, ranchers and chemical company representatives who participated in and supported my program. Without you I would not have enjoyed it as much nor would it have been as successful as it was. I hope all of you will continue your support in the future.

I will miss Montana and the leafy spurge program; good luck to all of you working against the weed. If you're ever in Rugby, North Dakota, stop by and say hello.

### **Montana**

#### **Ewes and lambs**

A joint experiment between the Plant and Soil Science Department and the Animal Science Department will observe weight gains of lambs feeding on leafy spurge. The study will take place in Whitehall, MT during the summer of 1982.

### **North Dakota**

#### **Liquid vs. granular**

Granular and liquid formulations of dicamba (Banvel) and picloram (Tordon) were compared for leafy spurge control in North Dakota. Generally, picloram liquid and granular formulations gave similar leafy spurge control regardless of time of year of application. Fifteen months after application the 1 lb/A treatment averaged 75-80% control and the 2 lb/A treatment averaged 90-95% control. The liquid formulation of dicamba averaged slightly better long term leafy spurge control than the granular when applied in the spring. The formulations gave similar leafy spurge control when fall applied. Dicamba at 8 lb/A gave 60-75% leafy spurge control after 15 months.

## **Small area treatments**

Researchers encourage farmers and ranchers to carry granular herbicides with them so they can treat small areas of leafy spurge before the patch gets out of hand. One cup of dicamba (8 lb/A) or ½ cup of picloram (2 lb/A) will treat a 10 x 10 foot square area of spurge. It is important to treat several feet around the perimeter of the infestation in order to control unseen underground roots and emerging stems.

## **South Dakota**

### **Control and costs**

Small, new infestations of leafy spurge can be eliminated with high rates of Tordon 22K or Tordon 2K but large infestations in grassland or roadsides often require alternatives. Lower initial cost per acre and one application per season, even if it requires repeated annual applications, may be suited to tight, short-term cash budgets.

Data from a 3-year study by South Dakota Experiment Station suggest some treatments for this purpose. Herbicides were applied each spring. Costs include suggested retail price and \$3/A per application.

A 3 lb/A 2,4-D ester application reduced the stand 67% after 3 years (cost \$42), which is about the same control as two applications of 1½ lb/A 2,4-D ester applied twice each year (cost \$48). Tordon 22K at 1 pint/A each year reduced the stand 62% after 3 years (cost \$39). Tordon 22K at 1 pint + 1 lb/A 2,4-D ester each spring gave 78% control (cost \$51). Tordon 22K at 1 gal/A the first year and 1½ lb/A 2,4-D the second and third year showed 94% control but cost \$97 for the 3-year period.

The total cost for eradication may be about the same but the high initial cost of the last treatment may be prohibitive for some producers.

## **Wyoming**

### **Old and the new**

We regret the loss of Ron Vore, formerly of the University of Wyoming. Ron is now ranching in Wyoming. We wish him the best of luck.

Tom Whitson is now working as the Weed Control Coordinator. Tom is completing his Ph.D. in Plant Science at the University of Wyoming. He has worked with Ron Vore on leafy spurge during the last two years. He was with the Wyoming Extension Service for two years, the Kansas Extension Service for seven years and American Cyanamid for three years. We welcome Tom to his new position.

### **Translocation studies**

Wyoming researchers are using growth regulators on leafy spurge in an effort to give better movement of herbicides into the root system.

Another study is underway to compare translocation of Banvel and Tordon in leafy spurge. Root sections are being made at two week intervals after treatment and damage is being evaluated.

## **Summer work**

Research conducted this summer will include root studies, and comparison of forage yields between treatments. Retreatments of previously treated areas will continue.

## **Biological control**

### **Albany, California**

Testing is being continued with *Oncochila simplex*, a small lace bug, on plants related to leafy spurge and economic plants.

Other insects are being studied at the Rome, Italy lab for possible leafy spurge control.

### **News from Maryland**

Sherry Turner is continuing her work on pathogens of leafy spurge in Frederick, Maryland. Additional pathogens will be coming from Europe as soon as they can begin collecting this spring.

### **Montana**

Norman Rees, USDA, Bozeman, will be receiving four species of insects that have been tested on leafy spurge. The insects will be released in cages in the field so they can reproduce and increase in numbers. The insects include *Oberea erythrocephala*, two flea beetles (*Aphthona* spp.), and a leaf tier, *Lobesia euphorbiana*. If all goes well, insects will be available in 1983 and 1984.

### **Spurge hawkmoth**

Tom Valente, a student at Montana State University, found a spurge hawkmoth near the original release site in Gallatin County. The insects were released in Gallatin County in 1966 and 1973. Sharon Rose of the Biology Department at MSU identified the insect and will conduct a study this summer to examine population levels in the area.

If anyone would like extra copies of the newsletter, to be added to the mailing list or more information on leafy spurge, please contact:

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