

# IMPACT



Butte County Extension, 326 W. Grand Ave., Box 832, Arco, ID 83213; 208-527-8587

## Extension Helps Landowners Control Grasshopper Infestation in Lost River Valley

### *The Situation*

A mild winter followed by an early hot dry spring set the stage for grasshopper populations to explode in Butte and Custer Counties. Federal grasshopper surveys made in the fall of 2002 indicated potential problems for the 2003 summer. In early June the first call came into the Extension Office about a grasshopper hatch in northern Butte County and southern Custer County. This launched an investigation that found hatches in a number of areas of the two counties. Advancing like a swather across the fields the grasshoppers were eating crops to the bare ground. It was quickly becoming evident that the loss of crops was going to be severe without immediate action.

### *Our Response*

Local producers requested assistance from the Butte County Extension Office. After consulting with other Extension Educators who were organizing grasshopper control programs in Cassia, Lincoln, and Oneida counties, we were able to obtain grasshopper bait for the short term from an Idaho State Department of Agriculture (ISDA) sponsored baiting program. In total, 6,000 pounds of bait was delivered to Butte County, and given out free of charge to the county residents in both Butte and Custer Counties. It soon became evident that a spraying program would be the best way to control the vast areas affected by the grasshoppers. Of the total Lost River Valley area, it was determined that about 26,000 acres were infested.

With a number of small grain fields being eaten at a rate of 20 to 30 foot per day it was becoming evident that potential crop damage could meet past years estimations of 50% or greater, and economic damage could well exceed \$2 million dollars. It also became apparent that the usual non-selective insecticides used for grasshopper control on rangeland would possibly be environmentally damaging to crops. It was then determined that Dimilin, a very selective insecticide, a growth hormone that affects the formation of the exoskeleton in immature grasshoppers would be the best solution. Dimilin was only registered for use on pasture and rangeland, and the timing of application is crucial in order to kill immature grasshoppers. Butte County joined with Cassia, Lincoln and Oneida counties to solicit the help of the Idaho Hay Growers (IHG) to gain industry support for the registration of Dimilin on hay in Idaho. Butte County Extension helped gather the needed data to help support the IHG and the Idaho State Department of Agriculture (ISDA) to submit to the EPA an application for a Section 18 exemption. A Section 18 exemption allows the use of products such as Dimilin registered for crops not covered in the original label to be used on additional crops if conditions of safety, effectiveness, and residue are acceptable.

The Butte County Extension Educator contacted the local newspaper, church groups, and civic organizations, and encouraged each landowner to get the word out to their neighbors to come to a meeting to form a Lost Rivers' Pest Management Control District. By working as a group we could gain ISDA

support and a 50/50 cost sharing for spraying, and lower the cost of chemical application.

A meeting was held with 23 landowners present, and a president and treasurer were elected from the group. They then took the lead on getting as many landowners involved as possible and to collect funds for the spraying. Within a week of the meeting and getting the landowners committed, the Butte County Extension Educator and the Butte County Weed Supervisor did GIS/GPS mapping of the infected areas. These maps were sent to several companies for chemical application bids. Spraying was done the same week that the bids came in. This enabled us to stay within the window of opportunity to kill the immature grasshoppers before they had formed a mature exoskeleton.

## ***Program Outcomes***

In total 48 residents sprayed a little more than half of the 26,000 acres. We used a method called stripping, developed by research in Wyoming, where only one-half of the land area is treated with lower doses of chemical. This helped area landowners spray fields that they could not have afforded to spray otherwise.

The actual acres sprayed was 13,256 at a cost of \$33,802.80, of which one-half was paid by the Idaho State Department of Agriculture cost share program. Surveys were sent to each participant to find out their success, and to determine if it was equally successful across the area. Of the 48 participants, 26 returned their surveys. From the surveys, 21 indicated that they would participate in the program again, one person indicated they would not participate in the program again, two were not sure if they would participate in the program again. It is estimated that \$2,000,000 may have been saved by local producers because of this program.

## ***The Future***

Starting early in the spring next year we will scout out areas to determine if hatches are beginning to emerge. Hopefully the five to seven year grasshopper cycle will have passed, but with the Lost Rivers' Pest Management Control District already in place it will be much easier to resume a spraying program if it is needed. State funding for another year will depend in part on the severity of the problem next spring.

## ***For More Information***

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