IMPACT

University of Idaho Extension

Valley County Extension, 108 W Pine St., Box 510, Cascade, ID 83611; 208-382-7190; Fax: 208-382-7189

No-Till Drill Shows Promise for Pasture Rejuvenation in Valley County

The Situation

It is estimated that pastures in Idaho produce only about 50% of their potential forage yields. Pastures are generally thought of as waste areas or low maintenance feed areas for livestock grazing. This leads to abuses of the grass crop such as grazing on wet soils (leading to compaction), and overgrazing (which leads to reduced pasture production and increased invasion of weed species). Much of the abuse of pastureland has been driven by the economics of the cattle and sheep markets over the last few years. Rising productions costs and, until recently, weak market prices have caused producers to stretch their resources as far as possible. Reseeding pastures has not been a priority. Also, rising fuel and equipment prices have made it difficult to pencil out the costs of using traditional tillage methods to re-establish pastures. Many producers do not have access to the equipment without purchasing it, and the cost to till and plant several hundred acres a year has not made reseeding a likely prospect.

Our Response

Noting an increase in the weediness of pastures in the county, and the need to reestablish some pastures that have been in production for decades, Cooperative Extension partnered with the Natural Resources Conservation Service, the local Soil Conservation District, and Valley County Department of Weed Control to establish a study to look at interseeding new grass into established stands. The Valley Soil and Water Conservation

District, which is the umbrella organization for NRCS and the SCD, wrote a grant to obtain 319 funds for the purchase of ½ of a no-till drill. The Valley County Weed Department wrote a Cooperative Weed Management Area grant for the other ½ of the drill purchase. Both grants were approved and the drill was purchased. Cooperative Extension designed and established four sets of test plots on cooperator land to look at various herbicide controls and management techniques. One of the test plots was established to determine if alfalfa could be established using no-till methods. In the late spring of 2004 the test plots were laid out and planted.

Program Outcomes

With the plots only being established in late June 2004, it will take the first growing season to see much outcome for the grass plots. The grass is not germinating as well as expected. This is likely due to

a dry June and hot July. Grasshoppers have also been found in all plots and some grazing of new growth by them is suspected. One piece of information that has been determined is that the use of glyphosate herbicide is far more effective in controlling established weeds than is 2, 4-D. In the plots where we wanted to control only broadleaf weeds and leave the established grasses, the broadleaf control was not particularly successful. The alfalfa seems to be establishing well. The no-till drill did an excellent job of seed placement in heavy residue and the seed planted in the heaviest residue has done the best. This is probably because of retained soil moisture and reduced evaporation due to protection by the heavy residues. By September of 2004 the alfalfa plot was approximately 90% germinated and the plants were averaging around 10 inches in height. The landowner in Donnelly plans to seed several acres to no-till alfalfa in the spring of 2005.

The Future

The year of 2004 was intended for establishment, and the plots will be allowed to grow without harvest (other than to collect baseline yield data in the control plots) until the 2005 growing season. In 2005, two different harvest methods, continuous graze and managed graze will be applied to the test plots to determine if grass production can be increased with grazing management, and to determine if the managed graze plots will regrow quicker the following spring. The alfalfa plot will be monitored for percent of establishment in 2004 and the cooperator will make a decision in 2005 whether or not he will plant more acreage using no-till, or revert back to traditional tillage methods.

For More Information

Steven L. Hines, Extension Educator
University of Idaho Extension—Valley County
108 W. Pine St., Box 510
Cascade, ID 83611
208-382-7190
Fax: 208-382-7189
Email: shines@uidaho.edu

17-05shines-notill.doc
6/05