

Oregon/Idaho - Jordan Valley

Project Title: Assessment/Demonstration of EBIPM medusahead/cheatgrass



Location: Malheur County, Oregon/Owyhee County, Idaho

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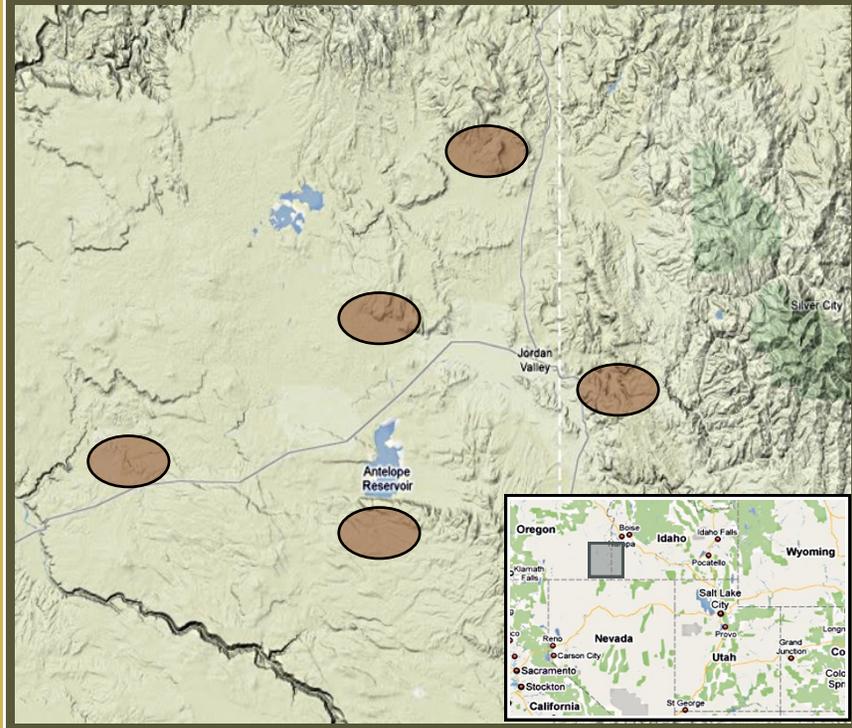
Ranchers:

Robert Fretwell	
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Brief Area History:

The city of Jordan Valley lies in a wide lush valley along Jordan Creek in the heart of Owyhee country. A place initially settled by miners and cattlemen in the early 1860's, it is now dotted with cattle ranches. Located in the Southeast corner of Oregon, in Malheur County, the community of Jordan Valley has an average altitude of 4,389 feet and the main product is beef, with grain, hay and sheep taking a lesser importance. Most of the surrounding country is federal land (BLM) and some state land. It is a small City of approximately 450 people, which includes local ranchers and families. Game is plentiful, with antelope, deer, pheasant, geese, quail, duck, chukars and sage grouse offering a variety of hunting opportunities for the sportsman. Medusahead was first noticed in the Jordan Valley area about 25—30 years ago and has expanded significantly within the last 10-20 years.

Jordan Valley Watershed Locator Map



The Jordan Valley Watershed on the border of Oregon and Idaho, lies in the heart of the Great Basin area of the West.

Geographical Information:

Elevation: 4000 - 5000 feet

Annual Precipitation: 12 - 16 inches

Common Native Vegetation: Wyoming big sagebrush, bluebunch wheatgrass, squirrel tail, sandberg bluegrass

Common Soil Types: Owyhee High Plateau Major Land Resource Area (MLRA #25)

Fire Regime: Condition Class: III

Objectives: The overall objective is to demonstrate and assess EBIPM of annual grasses in Jordan Valley. Specific objectives are to (1) demonstrate the potential of using the single-entry (one-pass seed/herbicide application) strategy to rehabilitate annual-grass-infested rangelands across large heterogeneous landscapes; and (2) determine those abiotic and biotic factors that are most important in influencing the success and/or failure of the rehabilitation effort.

Accomplishments: A successional management single-entry (one-pass) rehabilitation strategy to enhance the success of establishing desired species and reduce the costs associated with multi-entry strategies was implemented at five sites within the Jordan Valley watershed in the fall of 2008. Treatments were (1) one-pass Plateau and seeding, (2) Plateau only, (3) seeding only, and (4) non-seeded/no-Plateau control. Plateau was applied at 3.5 oz product per acre. An appropriate combination of crested wheatgrass and sandberg bluegrass was seeded at 20 lbs/acre. An herbicide application was applied to approximately 135 acres via ATV (2008) to control satellite populations of medusahead in the surrounding Jordan Valley area.

Progress: Because the seedling establishment was unsuccessful in 2008, these treatments were repeated in the fall of 2009. Seeding was increased to 25 lbs/acre in 2009. In addition, herbicide application was applied to approximately 160 acres via helicopter (2009) to control satellite populations of medusahead on areas not accessible to ATV's.

Outcomes: The state-and-transition models developed for the Jordan Valley watershed describes four general states, which are (a) shrub overstory with perennial herbaceous understory state, (b) annual grass fire cycle state, (c) seeded non-native perennial herbaceous state, and (d) seeded native perennial herbaceous state. Our goal is to demonstrate the use of the one-pass system to stimulate the transition from state "b" to state "c". Successional management models can be incorporated into the state-and transition models to address treatment options which will shift the successional trajectory toward a desired state. The single pass strategy can be viewed to address three primary causes of succession. Site availability for desired species will be enhanced by the furrow made by the no-till drill. Seed availability will be enhanced by physically seeding desired plant seeds at a high rate per acre. Species performance of medusahead will be diminished by the herbicide application while the species performance of native species will be improved because of reduced site-specific competition.



The Jordan Valley area relies heavily on healthy rangeland systems to sustain its economy, which is centered around agriculture and livestock grazing.