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# Upper Colorado Environmental Plant Center

Progress Report of Activities for 2000



## A Little About Us

The Upper Colorado Environmental Plant Center works to provide quality plant materials and associated technology to those linked with the management of natural resources. It is owned and operated by two soil conservation districts and is recognized as a non-profit corporation within the National Plant Materials Program. The Upper Colorado Environmental Plant Center (UCEPC) serves the central Rocky Mountain Region including parts of Utah, Wyoming, New Mexico and Colorado. The Center is located approximately five miles southeast of Meeker, Colorado at an elevation of 6,500 feet. Products from the Center include improved plant varieties of native grasses, forbs, and shrubs and related production technology.

We cooperate with federal, state, and local land managers to ensure the availability of materials with the highest qualities. People representing these cooperators constitute our Advisory Committee, which assists in the development of the Center's Long Range Plan and priority areas. They include:

- ◆ Revegetation of High Altitude and Disturbed Lands
- ◆ Increased Productivity of Rangeland and Pastures
- ◆ Improved Water Quality
- ◆ Wildlife Habitat Enhancement
- ◆ Use of Native Plants in Xeriscape and Horticulture





### **Release of *Garnet* Mountain Brome Improved Water Quality**

Forested land in the inter-mountain west has been home to numerous large scale fires in recent years. Potential erosion from burned over landscapes poses a serious threat to water quality of mountain streams, which are often at or near the headwaters of many watersheds. Range and woodland resources, as well as wildlife habitat, may too, be adversely affected as a result of fire if suitable plant materials are not used in revegetation efforts. *Garnet* mountain brome, a product released this year, should help alleviate many of the negative consequences of forest fires. Besides providing good forage for wildlife and livestock, it establishes quite readily from seedlings, it is relatively long lived and it is resistant to head smut. These characteristics make *Garnet* an excellent choice for revegetation after fires or other surface

### **Wyoming Big Sagebrush Project Wildlife Habitat Enhancement**

The Bureau of Land Management contacted the Upper Colorado Environmental Plant Center in the fall of 2000 about a sagebrush that was heavily used in an important mule deer winter range, and this shrub's potential for use in revegetation. The area in Northwest Colorado has had several disturbances related to energy development. The Plant Center invited an expert on sagebrush identification to visit the site and confirm the identity of the shrub, and discuss the merits of the project. The shrub was identified as Wyoming big sagebrush, an important shrub for mule deer winter range. Seed of this shrub is not available, and as a result, the Plant Center is working cooperatively with the Bureau of Land Management (BLM) to make this important plant available. Seed was collected from the site and seedlings are growing in the Plant Center's greenhouse for use in 2001. In addition, the Plant Center has worked with the BLM to identify an area suitable for the construction of an enclosure, so that seed can be collected for future use. Additional information on this project is available at the Upper Colorado Environmental Plant Center.



## **Native Plant Mat Experiment**

### **Revegetation of High Altitude and Disturbed Lands**

Mesa Verde National Park has had problems revegetating certain slopes where access roads have been constructed. Several revegetation attempts have been made on some sites with only limited success. A revegetation slope stabilization meeting was held at the park in 1999, and a plan was suggested to develop a method of preparing Native Plant Mats that could be attached to these slopes. A native plant mat experiment was initiated in the greenhouse at the Meeker Plant Center. Native grass and forb seeds were collected in the park and cleaned at the Plant Center. Four mat treatments on two soil types using these native grass and forb seeds were conducted. Notes were taken on species of grass and forbs present, cover, rooting and the ability to roll and unroll the native plant mats. The two best mat treatments that could be rolled and unrolled for both soil types were excelsior and coir mats under one inch of soil material. Additional information on this experiment is available at the Upper Colorado Environmental Plant Center.

## **Maybell Bitterbrush Study**

### **Wildlife Habitat Enhancement**

Bitterbrush is a very important shrub for big game near Maybell, Colorado, and at one time occupied approximately 40,000 acres. This area is an important winter range for large herds of elk, mule deer and antelope. Fires over a period of years have reduced this stand by over 85 percent. The Colorado Division of Wildlife and Bureau of Land Management have put a high priority on finding methods for re-establishing bitterbrush in this important region. The Upper Colorado Environmental Plant Center entered into a cooperative agreement with the Colorado Division of Wildlife in 1998, in an attempt to find a feasible method for re-establishing bitterbrush. Tubling plants could provide an important seed source for rodents to help re-establish bitterbrush through a natural method. The Plant Center has had a 24 to 34 percent success rate of establishing tubling bitterbrush plants on the site. Direct seeding has not been a successful re-establishment method to the present time. However, a cooperative project has been approved for the Plant Center and Colorado State University to examine seeding as a method of bitterbrush establishment.



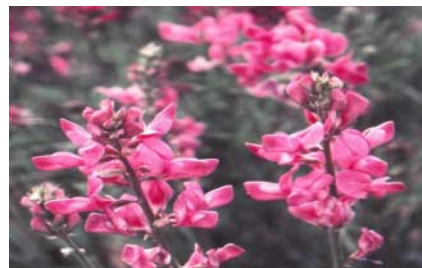
Forage plots located at the Plant Center.

## **Forage Production Trials for Irrigated Pastures Increased Productivity of Rangelands and Pastures**

A cooperative study between Colorado State University, Fruita, Agricultural Experiment Station and UCEPC is being conducted. Fifty single and mixed grass and forage legume species are being evaluated, along with planting methods, for forage yield at the Center. Grasses and forage legumes are the most significant crops produced in eastern Utah, southern Wyoming and western Colorado. These crops support the region's livestock industry, and provide critical pasture for one of the nation's largest concentrations of elk and mule deer. New products and varieties of forage materials included in this study have been the focus of many tours and inquiries at the center. Recognized benefits to livestock and wildlife from the selection of suitable plant materials has resulted in many vegetative treatments on irrigated and dryland pastures, meadows and rangeland. These treatments improve production, attract and sustain wildlife and provide other plant material options. To date, six of the top seven producing entries consist of an alfalfa - grass mix. Specific information about this study is available upon request.

### **Upper Colorado Environmental Plant Center**

P O Box 448  
5538 RBC #4  
Meeker, CO 81641  
(970) 878-5003  
E-mail: [plant@cmn.net](mailto:plant@cmn.net)  
Visit our web site at:  
[Plant-Materials.nrcs.usda.gov](http://Plant-Materials.nrcs.usda.gov)



**'Timp' Utah Sweetvetch Released by the UCEPC**

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