

## Upper Colorado Environmental Plant Center

5538 RBC #4, Meeker, CO 81641, Ph: 970 878-5003, FAX 970 878-5004, E-mail: Steve.Parr@co.nacdn.net

Upper Colorado Environmental Plant Center (UCEPC) is a non-profit facility owned and operated by two soil conservation districts in northwest Colorado. The 269 acre center is located at an elevation of 6500 feet with 16 inches of annual precipitation and a 90 day frost free growing season. Our service area includes mountains, deserts, and plateaus of the Rocky Mountain west.



### Our Goal

Upper Colorado Environmental Plant Center works to ensure an improved quality of life for people and those affected by human activities. We provide quality plant materials and associated technology to those engaged in natural resource management. Each of us understands the importance of plants in our lives. From a golf course fairway to a forested mountain; a houseplant to an alpine meadow. Plants and their successful management, affect our quality of life. It is our mission to conserve or improve environmental conditions through the wise use of plants.

### High Priority Areas

Presently, there are many plant species and projects at UCEPC which our Technical Advisory Committee has identified as providing substantial benefit for resource conservation. These projects fall into one of five identified High Priority Areas:

- Revegetation of high altitude and disturbed land
- Increased productivity of rangeland and pastures
- Improved water quality
- Wildlife habitat
- Use of native plants in xeriscape and horticulture



Bottlebrush squirreltail Wapiti

### Our Purpose

UCEPC is unique in that it is the highest elevation center within the Plant Materials system. A vital need was identified over 25 years ago within NRCS and among many NRCS customers for plant materials and associated technology for high elevation uses.

'Arriba'  
Western Wheatgrass



## UCEPC Gets Help from Peru, South America

Every year during the growing season, Upper Colorado Environmental Plant Center (UCEPC), hires seasonal workers to help out with the field work at the Center. In the past few years, finding reliable and responsible workers has become a challenge. The impact of new oil and gas development on the available workforce has also been detrimental for other industries not related to energy development.

For the growing season of 2007, UCEPC went international and hired two Peruvian workers to assist with the field work. This effort was possible by acquiring an H-2A visa. An H-2A visa is a **non-immigrant visa** which allows foreign agricultural workers to enter into the United States to perform labor or services of a temporary or seasonal nature, provided U.S. workers are not available.

Augusto Sosa and Santiago Damian from Peru worked at the Center from June to November of 2007. Regardless of being non-English speakers, Augusto and Santiago were able to complete well all their work assignments. Manuel Rosales, USDA-NRCS, Conservation Agronomist, stationed at the Center, provided assistance in translating and initiating the Peruvian workers to our field work.



Left-right: Santiago Damian and Augusto Sosa from Peru help Jonnie Barton with hay chores at UCEPC.



Augusto Sosa Peruvian worker hand-harvesting plots at UCEPC



Santiago Damian from Peru assisting UCEPC

## Plant Materials Training

Upper Colorado Environmental Plant Center (UCEPC) hosted a Plant Materials training on June 12-13 of 2007. This is the third consecutive year UCEPC has provided this training to Natural Resources Conservation Service (NRCS) employees.

The training is offered to all NRCS and District Conservation personnel within our service area, which includes parts of Colorado, Wyoming and Utah. The trainings have been very well attended and the training evaluations have come back with very high scores.

The two-day training provides the attendees with a variety of topics such as:

- Purpose and function of the Plant Materials Program
- Hands on plant identification
- Plant materials collection
- Importance of seed quality
- Drill calibration
- Biological control of invasive plants
- Other topics

In addition, a Plant Materials handbook is provided to all participants. We had 15 participants at the 2007 training.

A three-day training session will be offered in 2008, which will include a section on Pasture and Hay Management.



Participants learn how to monitor



Hands-on drill calibration



Participants learn about plant materials



Pat Davey, PMS, for Colorado teaching a section of the training

## Demonstration Planting off to a Good Start

Upper Colorado Environmental Plant Center (UCEPC) usually holds tours, field days, training, and other events for the general public and other guests. In the past, the Center has shown the array of production fields and experimental studies being conducted. However, guests are often times interested in other species besides the ones being studied at the center. In order to fill this need a demonstrational planting was initiated on August 2 of 2006.

A total of 60 entries; 40 grasses and 20 forbs species were included in the planting. Thirty entries are UCEPC releases and experimental species, the other 30 entries are plant releases from other Plant Materials Centers within the region. Each entry was planted in plots three by twenty feet long with two rows per plot, see picture below.



Plot of Hycrest-Crested wheatgrass

The Demonstrational planting contains a block of ten warm season grass species which are plant releases from other plant Materials Centers. The warm season grasses did not make it through the first winter, however, they were replanted on May 24, 2007.

By July 2007, all warm season grasses had germinated, an entire planting was showing excellent plant stands. We are hoping to get the warm season grasses established so that we can have a good array of cool season and warm season grasses for demonstration and educational purposes.



Bad River-Blue Grama (warm season grass)



Pueblo Germplasm - Squirreltail



Great Northern Germplasm - Yarrow

## Giving Nature a Hand

A study was conducted at Upper Colorado Environmental Plant Center (UCEPC) during the summer of 2007 with two objectives. The first, determine the percent survival of leafcutter bees and two; determine the effectiveness of leafcutter bees as pollinators. UCEPC collaborated with Bob Hammon of the Tri River Cooperative Extension Service, Colorado State University, to test the potential of leafcutter bees aiding the honeybees and native bees in the pollination of our forbs, native plants and other crops. Mr. Hammon was also interested in the survival rate of the bees in an area where the influence of industrial and commercial land practices is not so detrimental to bee survival.

The alfalfa leafcutter bee, *Megachile rotundata*, is a non-native bee that feeds on the pollen of canola and alfalfa. They are a rapid and effective pollinator, often essential for pollinating wild plants. The leafcutter bee is not aggressive and does not defend its home. Their sting is about half as painful as the sting of honeybees. The leafcutter bees are raised by Canadian farmers and sold to the United States to help aid the honeybees in the pollination of 14 billion dollars worth of crops annually in our country. Due to the accelerating decline of honeybees, caused by the irresponsible use of pesticides and the impact of tracheal and Varroa mites, growers are relying more and more on leafcutter bees.

On June 1, 2007, the bees were delivered to UCEPC. A large wooden shipping crate with two Styrofoam panels filled with holes, served as a home for the leafcutter bees. The bees were spotted ¼ mile away working on all 269 acres of the PMC. They concentrated heavily on the alfalfa field as well as the Bandera penstemon. Bob reported their return was 100%.



Leafcutter Bees

On August 30, 2007, the bees were moved back to Grand Junction for over-wintering. The results were very satisfying. While the survival rate was measured, there was really no way to verify the effectiveness of the bees in their pollination of UCEPC plants. However, it was noted that the bees were present in large numbers on many flowering plants throughout the summer. From observations, we assume they were beneficial additions to our forb production.