USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Knox City Knowledge

July 2011 Newsletter Volume 2 Issue 3

Native Seed Harvester Increases Harvesting Options

The PMC recently acquired a new Native Seedster to improve harvest efficiency. The machine has new technology that combines a brush with a combing drum to create a pinch point that plucks seed from the seedhead, leaving the rest of the plant intact. The machine has a hydraulic door that makes dumping seed and clean up fast and easy. There is also the opportunity to harvest a wider variety of grasses, forbs, and legumes. The machine has an attachment which enables it to handle smooth seed such as switchgrass. Another advantage is that the new machine leaves immature seed on the plant, which can be harvested at a later date. This is an advantage over direct combining which only allows for one harvest. With native species having such a wide window of maturity, harvest decisions have to be made when the most seed is mature, before it has shattered. Being able to make multiple trips will allow more mature seed to be harvested throughout the year. It should also increase the amount of seed per acre and improve the overall quality of the seed harvested.

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Above Average Temperatures and Below Average Rainfall Causing Challenges

Coming off a near record year for rainfall in 2010, 2011 has been the complete opposite in both rainfall and temperature. Through July 2010, the PMC recorded 27.33 inches of precipitation and only 10 days of temperatures above 100 degrees. So far in 2011, rainfall has been 2.22 inches and over 45 days of above 100 degree temperatures. On top of the heat and dryness, the PMC has also experienced higher than normal wind conditions. The maximum daily wind speed has averaged over 30 mph for the months of April, May, and June.

Knox City 2nd Graders Tour USDA-NRCS Plant Materials Center

On April 1st, twenty-seven students and four staff members from the Knox City 2nd grade class took a field trip to the James E. "Bud" Smith Plant Materials Center. Students learned about the history and purpose of plant materials centers to provide products and information to meet the conservation needs of farmers and ranchers. The group was able to get their hands dirty, exploring plant samples from the root system all the way up to the seed head. They learned many different ways plants are used from conservation to food to alternate energy. The students had the opportunity to tour some of the equipment that is used for seed production including the seed cleaner and production combine. The group also explored the greenhouse which had over 10,000 plants growing to be transplanted and evaluated.

FFA Plant ID Team from Follett, TX uses PMC to Train for Competition

The Follett FFA Plant Id Team made a stop at the PMC in May on their way to the state contest in Breckenridge, TX. The team took advantage of the many plants growing at the PMC and used their time learning to identify plants at different stages of growth. They were also given the opportunity to find plants that were not found in their home area. The group took time to tour the facility and learn the role and responsibilities of the plant materials center.

Plant Collection List Changes

We have received many plant collections from field offices and individuals and are extremely thankful to each one that has taken the time to collect and send seed to us. We have added several new species to our list. Plants we are still collecting are:

- Prairie bundleflower, *Desmanthus leptolobus*
- Showy menodora, *Menodora longiflora*
- Smartweed, *Polygonum pensylvanicum*
- Texas cupgrass, *Eriochloa sericea*
- Threeflower melic, *Melica nitens*
- Roundhead lespedeza, *Lespedeza capitata*
- Hall's Panicum, *Panicum hallii*

- Plains lovegrass, *Eragrostis intermedia*
- Scurfpea, *Psoralea tenuiflora*
- Switchgrass, *Panicum virgatum*
- Narrow Leaf Globemallow, *Sphaeralcea angustifolia*

Program Emphasis

The mission of the James E. "Bud" Smith PMC is to develop and transfer effective state-of-the-art plant science technology to meet customer and resource needs. The PMC conducts plantings and studies at the Center and off center with cooperating partners.

Plant and Technology Objectives of the PMC	
1	Wind and Water Erosion Control
2	Range and Pasture Improvement
3	Wildlife Habitat Improvement
4	Water Quality Improvement on Agricultural Land
5	Biofuels
6	Saline Site Restoration

James E. "Bud" Smith Plant Materials Center

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) James E. "Bud" Smith Plant Materials Center (PMC) located near Knox City, Texas, was establish in 1965. It is one of the 27 Centers located throughout the United States. The Center is responsible for developing conservation plants and cultural techniques for use within targeted Major Land Resource Areas (MLRA) in Texas, Oklahoma, Kansas, Colorado, and New Mexico. The Center is also responsible for producing Breeder and Foundation seed of plant releases and assisting in commercial development and promoting their use in natural resource conservation. The PMC serves all or portions of 136 counties in Texas that comprises parts of 25 MLRAs, and the areas served in all or portions of 39 counties in southwestern Oklahoma comprising parts of thirteen MLRAs. The PMC also serves a portion of seven counties in southwestern Kansas including parts of four MLRAs, a portion of one county in the southeastern corner of Colorado comprising parts of three MLRAs, and a portion of seven counties in eastern New Mexico comprising parts of seven MLRAs.
The PMC is located approximately four and a half miles northwest of Knox City, Texas, in the Rolling Red Plains MLRA.

James E. "Bud" Smith PMC Personnel

- Dr. Gary Rea- Manager
- Brandon Carr- Soil Conservationist
- Randy Kuehler- Biological Science Technician (Plants)

Visit the PMC website for more information and publications:
http://Plant-Materials.nrcs.usda.gov/txpmc/