



Cover Crop Demonstration

The plant materials center is working with the Texas state agronomist to establish cover crop demonstrations which will provide valuable information and training opportunities for field office staff and the general public. The demonstration plots compare plantings of cover crop mixes to wheat and bare land in order to demonstrate the advantages of using cover crop systems. Some of these advantages include:

- Added Organic Matter
- Reduce soil erosion
- Provide nitrogen
- Improve soil structure (Aggregation, Infiltration, Available Water Capacity)
- Provide weed control
- Manage nutrients
- Furnish moisture conserving mulch (lower surface temperatures)
- Provide habitat for beneficial organisms (soil food web)

The Drought of 2011, One for the Record Books

Coming off a near record year for rainfall in 2010, 2011 was 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. In 2011, recorded rainfall was 8.13 inches, with 5.6 inches received in the final quarter of the year. A total of 106 days of above 100 degree temperatures was also recorded in the year. The year closed out with above normal temperatures with December 31st reaching 80 degrees. On top of the heat and dryness, the PMC also experienced higher than normal wind conditions. The maximum daily wind speed averaged over 30 mph for the months of April, May, and June.

Prescribed Burn Training



Once again, the plant materials center was able to host prescribed burn training, allowing employees to gain valuable experience conducting prescribed burns. The PMC provided small acre areas that could be burned as practice before attendees conducted large scale burns in the field. The small blocks gave participants the opportunity to conduct burns under different situations such as fuel load, avoiding obstacles, and monocultures compared to range or pastures.

New Infrastructure at the PMC



Many new infrastructure projects have been completed at the plant materials center the past few months. New buildings have been added to provide adequate work space and provide protection for new equipment. The new research equipment will allow the staff at the PMC to deliver new and updated technology to the field offices and seed industry as well as improve efficiency at the 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. 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 established 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/>

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