



An Update from the PMC....

While 2012 was not as hot as the record heat of 2011, and we did almost double the amount of rainfall we received, the drought is continuing to take its toll on the area. Many tanks, streams, and lakes are critically low resulting in water having to be hauled for livestock and small communities. Water restrictions have been put in place to conserve what water doesn't evaporate from the heat. While the area did receive about 18 inches of precipitation, it is still well below the average of 25 inches. But still, the geese are moving through; the wheat is green; and the deer, turkey, and even coyotes look healthy. And just like nature adapts to survive, the PMC is adapting to meet the challenges in an ever changing world. We have begun soil health and cover crop demonstrations in an attempt to conserve water and improve soil health. We continue to strive to provide field offices with current, practical technological information to meet the conservation needs throughout our service area. We welcome anyone interested in any of our projects to plan a visit to the center or contact us with any questions.

Cover Crop Species Evaluated for Adaptability



Due to the increased emphasis in soil health, plant diversity and adaptability of cover crops need to be investigated before making recommendations on the best adapted cover crops for the service area. Species used in cover crop mixes can have different areas of adaptation based on where the plants originated. This study compares fifty individual cool and warm season species to determine which ones are adapted to the service area. The study includes grasses and legumes commonly used in mixes. Data collected will include: emergence, height, vigor, winter kill, and cover. The study gives field offices and the general public the opportunity to see what these species look like growing in the field under normal growing conditions. It also provides NRCS with data on the production potential of various cover crops in the PMC service area.

Soil Health Demonstration Plots Compare Various Farming Practices



Soil health is a major resource concern. Farmers and ranchers are learning the importance of building a healthy soil. To help educate farmers in our service area, the PMC has established three new soil health demonstration plots. The demonstration plots will compare different farming techniques used throughout our service area. Two demonstration blocks will use cotton as a summer cash crop, and then compare the soil health between a winter cover mix, a monoculture cover, and conventional tillage. One block will be irrigated and the other will be dryland. The third demonstration will use wheat as a cash crop, and then compare a summer cover mix, monoculture cover and conventional tillage. The goal is to provide technical methods to improve soil health using the main crops grown in the service area. We also hope to conduct trainings to show the advantages of 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)



Plant Collection List

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, *Lepedeza 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	Soil Health
2	Wind and Water Erosion Control
3	Range and Pasture Improvement
4	Wildlife Habitat Improvement
5	Water Quality Improvement on Agricultural Land
6	Biofuels
7	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/>

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual’s income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA’s TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Assistant Secretary for Civil Rights, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, S.W., Stop 9410, Washington, DC 20250-9410, or call toll-free at (866) 632-9992 (English) or (800) 877-8339 (TDD) or (866) 377-8642 (English Federal-relay) or (800) 845-6136 (Spanish Federal-relay). USDA is an equal opportunity provider and employer.