

Following are highlights of some of the activities of the PMC for 2010. Please contact the PMC for more detailed information.

## New Seed Releases with STN

In 2010, South Texas Natives, Texas AgriLife Research Station-Beeville, and the USDA-NRCS E. “Kika” de la Garza Plant Materials Center completed two cooperative releases.



**Maverick Germplasm Pink Pappusgrass (c) Forrest Smith, STN**

Maverick Germplasm pink pappusgrass (*Pappophorum bicolor* E. Fourn.) is a blend of 7 populations from the South Texas Plains. Pink pappusgrass is a bunchgrass found on a variety of soils in the region. This grass grows 2-5' tall and produces seed and foliage from March through November. Maverick Germplasm is recommended for use in rangeland seed mixes, highway right of way plantings, retired cropland restoration plantings, and for use in efforts to diversify invasive grass monocultures. Maverick Germplasm provides good forage for livestock, and is an excellent bunchgrass that provides good cover for wildlife. It may also be useful in urban wildscaping and ornamental plantings.

The foliage provides deep green color and seedheads are an attractive pink coloration.

Maverick Germplasm is adapted to a variety of soils. Components originate from gravelly loam, clay loam, and sandy loam soils. Maverick Germplasm is also adapted to saline soils common throughout South Texas. This release will perform best in the South Texas Plains, Coastal Sand Plains, and Gulf Coast Prairies and Marshes eco-regions of Texas. Good performance is expected in the southern Edwards Plateau, eastern Trans Pecos, and throughout northern Mexico, however it has not been tested in these areas.



**Webb Germplasm Whiplash Pappusgrass (c) Forrest Smith, STN**

Webb Germplasm whiplash pappusgrass (*Pappophorum vaginatum* Buckley) is blend of 3 populations from the South Texas Plains. Whiplash pappusgrass grows on coastal, saline, and alkaline sites in low areas, and on calcareous soils. Whiplash pappusgrass is also found in upland range sites in mixed stands with pink pappusgrass (*Pappophorum bicolor* E. Fourn.). This grass grows 3-5' tall, and produces seed and foliage from March through November. Webb Germplasm is recommended for use in rangeland seed mixes, for saline and alkaline site restoration, highway right of way plantings, retired cropland restoration plantings, and for use in efforts to diversify invasive grass monocultures. Webb Germplasm provides good forage for livestock,

and is an excellent bunchgrass that provides good cover for wildlife.

Webb Germplasm has performed well in a variety of soils. Components of the release originated from clay and sandy loam soils. Webb Germplasm is also adapted to saline and alkaline soils common throughout South Texas. Webb Germplasm will perform best in the South Texas Plains, Coastal Sand Plains, and Gulf Coast Prairies and Marshes eco-regions of Texas. Good performance can be expected in the southern Edwards Plateau, eastern Trans Pecos, and throughout northern Mexico, however use in these areas has not been tested.

### Small Plot Seeder



Seed-Drill Fluffy Seed Box

In 2007 we developed an ATV seed-drill that would be economical and capable of being used to plant small food plots and effectively seed into established pastures. Many pasture seeders are available, but these are ineffective on rocky and uneven land, unable to seed at a row spacing of less than 44 cm, are too expensive for the typical renovation system, and require a tractor for operation. Our seeder was designed specifically to increase the uniformity of seeding in rocky soil and uneven pastures. An individual unit suspension system was used. This seeder had a 22.5 cm row spacing with 4 units mounted to the chassis.

Results of seeding trials with our ATV seed-drill indicated the need for developing a fluffy seed-box attachment. In 2010, we developed the fluffy seed box attachment. Future seeding trials with this new attachment should provide us with information on the ultimate performance and utility of this revised seed drill. We feel the cost and simplicity of this unit will appeal to farmers and ranchers that wish to seed small



ATV Seed-Drill

areas. Unlike most commercially available seeders, ours is towed with an ATV. This will conserve energy and allow use by those who do not have a tractor available.

### Revegetation Efforts by NRCS and Houston Audubon at Fort Travis Seashore Park, Texas



Line Transects Were Conducted to Determine Cover

The Bolivar Peninsula of Texas was under sea water for at least 24-48 hours following Hurricane Ike (September 13, 2008). This resulted in massive die-off of the existing vegetative cover of the island. Houston Audubon manages approximately 4 acres of land adjacent to the historic Fort Travis on the Bolivar peninsula. In order to quickly reestablish native vegetation that would maintain native plant diversity and provide suitable bird nesting habitat, Houston Audubon contacted the USDA NRCS for assistance.

The NRCS developed a plan and provided the plants for evaluating tree planting, vegetative transplanting and reseeding methods. Planting was done in October of 2009 by both NRCS employees and Audubon volunteers. Evaluations conducted in the Fall of 2010 provided information on the effectiveness of these three methods. Mulberry, hackberry, live oak and

yaupon all had greater than a 65% survival rate. The marshhay cordgrass, seashore paspalum and seashore dropseed all had greater than a 35% survival rate. Only the Canada wildrye seeding was successful providing 23% cover with minor success coming from Illinois bundleflower and partridge pea at less than 10% coverage.

Conclusions: These are ecological communities that are dominated by species that vegetatively spread. Therefore these sites rely on transplants not seeding for restoration and for long-term project success! Thus, there is a need for coastal plants for the restoration of Texas coastal communities. There is not enough consistent demand for commercial nurseries to fill this role. Therefore, this will only come to pass if we develop several coastal plant nurseries on government owned land along the Texas coast. This will provide the state of Texas a consistent supply of Texas native plants without destroying existing habitat for future Texas State contractual coastal restoration projects.

### Seed Collections Needed

The PMC will be seeking new collections of several species in 2011 including: big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), Virginia wildrye (*Elymus virginicus*), white prairie clover (*Dalea candida*), roundheaded prairie clover (*Dalea multiflora*), partridge pea (*Chaemaecrista fasciculata*), Maximilian sunflower (*Helianthus maximiliani*), and Engelmann's daisy (*Engelmannia peristenia*). Species description sheets as well as seed collecting protocols can be found on the Texas Plant Materials Program website (<http://www.tx.nrcs.usda.gov/technical/pmc/>) or contact the PMC for more information.



Yellow Indiangrass Seedhead in Bloom

### Four New PMC Technical Notes

The PMC wrote four new technical notes in 2010: Why Natives?, What are Plant Ecotypes?, Seedbed Preparation, and Calibrating a Seed Drill for Conservation Planting. These are available as pdf files on the Texas NRCS website ([http://www.tx.nrcs.usda.gov/technical/pmc/pm\\_tech\\_notes.html](http://www.tx.nrcs.usda.gov/technical/pmc/pm_tech_notes.html)).

### The Pollinator Game

The PMC designed a game in 2010 to provide an introduction to pollinator information. The game is based in Power Point and can be played alone or in a group. The game is available to download on the Plant Materials Program website (<http://www.plant-materials.nrcs.usda.gov/technical/pollinators.html>). The PMC is also willing to give training on pollinators to groups within our service area. Please contact the PMC for more information.

| NRCS<br>How'd You Score? |       | The Pollinator Game |                      |         |  |
|--------------------------|-------|---------------------|----------------------|---------|--|
| Pollinator Basics        | Bees  | Pollinator Habitat  | Name That Pollinator | Flowers |  |
| \$100                    | \$100 | \$100               | \$100                | \$100   |  |
| \$200                    | \$200 | \$200               | \$200                | \$200   |  |
| \$300                    | \$300 | \$300               | \$300                | \$300   |  |
| \$400                    | \$400 | \$400               | \$400                | \$400   |  |
| \$500                    | \$500 | \$500               | \$500                | \$500   |  |

### About the PMC



The Kika de la Garza Plant Materials Center (PMC) is a 91-acre facility established to provide cost-effective vegetative solutions for soil and water conservation problems. This means identifying plants and developing techniques for successful conservation

use. It also means assisting in the commercial development of these plants and promoting their use in natural resource conservation and other environmental programs.

The PMC was established in 1981. It is one of 27 centers located throughout the United States. The PMC is operated by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), in cooperation with an Advisory Board from Texas A&M University-Kingsville, the Caesar Kleberg Wildlife Research Institute (CKWRI), South Texas Association of Soil & Water Conservation Districts, and the Gulf Coast Association of Soil & Water Conservation Districts.

The Kika de la Garza PMC serves approximately 27 million acres of the southern portion of Texas.

**Program Emphasis**

The mission of the Kika de la Garza PMC is to develop and transfer plant science technology to solve

natural resource problems in the South Texas area. Plant testing and plant selection as well as the development of new plant science technologies are the primary products of our program. The PMC conducts plantings and studies at the Center and off-Center with cooperating partners. The PMC works with NRCS Field Offices and Resource Conservation and Development (RC&D) groups, Conservation Districts, federal and state agencies, and private landowners.

Our current program emphasis at the PMC is in the following areas:

- Rangeland Habitat Restoration and Enhancement
- Coastal Shoreline Stabilization
- Coastal Habitat Restoration and Enhancement
- Erosion Control/Water Quality Improvement on Agricultural Land
- Biofuels

| <b>Current Availability of South Texas Ecotype Releases</b> |   |   |                         |
|---|---|---|-------------------------|
| <b>Common Name</b>  | <b>Scientific Name</b>                                | <b>Available From</b>   | <b>Date Available</b>   |
| Lavaca Germplasm Canada Wildrye                             | <i>Elymus canadensis</i>                              | Turner Seed Company   | Now                     |
| Falfurrias Germplasm Big Sacaton                            | <i>Sporobolus wrightii</i>                            | Douglass W. King Co.  | Now                     |
| Catarina Blend Bristlegrass                                 | <i>Setaria leucopila &amp; Setaria vulpisetata</i>    | Pogue Agri Partners, Douglass W. King Co. Bamert Seed Co. Turner Seed Company | Now                     |
| Mariah Germplasm Hooded Windmillgrass                       | <i>Chloris cucullata</i>                              | Douglass W. King Co.  | Now                     |
| Welder Germplasm Shortspike Windmillgrass                   | <i>Chloris subdolichostachya</i>                      | Turner Seed Company   | Now                     |
| Dilley Germplasm Slender Grama                              | <i>Bouteloua repens</i>                               | Douglass W. King Co.  | Now                     |
| Chaparral Germplasm Hairy Grama                             | <i>Bouteloua hirsuta</i>                              | Douglass W. King Co.  | Now                     |
| Atascosa Germplasm Texas Grama                              | <i>Bouteloua rigidiseta</i>                           | Douglass W. King Co.  | Now                     |
| La Salle Germplasm Arizona Cottontop                        | <i>Digitaria californica</i>                          | Pogue Agri Partners Douglas King Seed Co.                                     | Now                     |
| Zapata Germplasm Rio Grande Clammyweed                      | <i>Polanisia dodecandra ssp. riograndensis</i>        | Douglas King Seed Co.   | expected in Fall 2011   |
| Divot Talloweed Blend                                       | <i>Plantago hookeriana &amp; Plantago rhodosperma</i> | Pogue Agri Partners   | expected in Fall 2011   |
| Maverick Germplasm Pink Pappusgrass                         | <i>Pappophorum bicolor</i>                            | Pogue Agri Partners   | Now                     |
| Webb Germplasm Whiplash Pappusgrass                         | <i>Pappophorum vaginatum</i>                          | Douglass W. King Co.  | expected in Summer 2011 |

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