

La Semilla, The Seed, Volume 7, Issue 2

A Newsletter for the Tucson Plant Materials Center ☀ Fall 2011

Greetings from Tucson!

As summer winds down and fall temperatures approach in our service area, our attention turns toward seed collections. We are in need of seed for several species; a listing can be found in the newsletter contents. Special thanks go out to those field office employees who have already provided collections to us this season including Art Meen, Wilma Renken, and Katie Cline. Please don't hesitate to contact the center if your office is in need of seed collection envelopes or training.

Sincerely, The Tucson PMC Staff



PMC Releases

'Loetta' Arizona cottontop
(*Digitaria californica*)

Saltillo germplasm
Cane beardgrass
(*Bothriochloa barbinodis*)

'Stevan' Plains bristlegrass
(*Setaria leucopila*)

Cochise germplasm Spike dropseed
(*Sporobolus contractus*)

Pima germplasm Whiplash pappusgrass
(*Pappaphorum vaginatum*)

Vegas germplasm Alkali sacaton
(*Sporobolus airoides*)

Moapa germplasm Scratchgrass
(*Muhlenbergia asperifolia*)

Batamote germplasm Desert zinnia
(*Zinnia acerosa*)

NEW in 2010!!
Bonita germplasm Plains lovegrass
(*Eragrostis intermedia*)

Farm Developments

Plant Materials Center personnel have worked this summer to propagate hundreds of native forbs/shrubs for the revegetation of areas in Tonto National Forest treated to remove invasive species.

Species currently in production include *Vitis arizonica*, *Mirabilis multiflora*, *Mirabilis albida*, *Clematis drummondii*, *Penstemon pseudospectabilis*, *Janusia gracilis*, *Oenothera caespitosa*, and *Phaseolus angustissimus*.

Within the fields, a half acre planting of 'Tropic Sun' Sunn hemp, *Crotalaria juncea*, was installed for the purpose of determining the seed production potential of Sunn

hemp within the Tucson climate. Energy costs have brought leguminous cover crops back to the forefront for sustainable agriculture production and have led to efforts to increase production of sunn hemp seed.

Previous studies concluded that Sunn hemp does not produce seed above 28 degrees N latitude (southern tip of Florida or Texas). However, plantings of Sunn hemp at the Tucson Plant Materials Center have produced viable seed. Data from this trial will aid in determining the potential for commercial seed production of Sunn hemp in areas with climatic conditions similar to Tucson.



Figure 1: David Forestieri, PMC Farm Manager, stands within the field of ~ 8 ft. tall Sunn hemp in early August.

Wildfires

Wildfires were a common occurrence throughout the service area this summer. The Horseshoe 2, Monument, Wallow and Murphy Complex fires burned more than 850,000 acres in Arizona alone. Plant Materials personnel assisted in developing hand-outs for homeowners listing potential species for revegetation and seed vendors. The handouts can be found on the Arizona NRCS website at:

www.az.nrcs.usda.gov/news/releases/Arizona-Wildfire-Recovery-Tips.html

In addition, Plant Materials personnel can provide assistance to Field Office personnel working with landowners on fire recovery. For example, following the Vaca Fire in 2006, Plant Materials personnel established a field trial in cooperation with Tucson Field Office staff. A native species mix was seeded into the burned area and has been compared to an unseeded burned area to determine the persistence of native species in an invasive species dominated area.

To install a field planting, field office staff, with assistance from the PMC, and the land owner will first develop a detailed plan. PMC staff provides seed and on-site advice or installs the planting as required. Annual or semi-annual evaluations are

conducted on the planting by plant materials and NRCS field office personnel for up to five years. Please contact the state Plant Materials Specialist or PMC staff if you're interested in field trials.

PMC Wildlife

The Tucson PMC has a wealth of wildlife on the premises. Some of our more common visitors are seen in the images below. Many of the releases maintained by the PMC are ideal candidates for enhancing or establishing wildlife friendly habitats. Please contact the PMC staff for more information on our releases and their potential uses.



L-R: Cooper's Hawk, Desert Spiny Lizard



L-R: Great Horned Owl, Harris's Hawk



L-R: American Kestrel, Coyote, King snake

Arizona Plant Materials Needs Assessment

In an effort to better serve the plant materials needs of field offices in Arizona, plant materials personnel sent a Plant Materials Needs Assessment to all Arizona Field Offices in May 2011. The purpose of the assessment was to gather input and information on field office needs relating to the Plant Materials Program.

The assessment was divided into five sections: Technology Development, Plant Development, Technology Transfer, Training, and Demonstration. The information collected, along with other needs from the TPMC service area Field Offices (CA & NV), will be used to direct the work of the center and develop our Long Range Plan for the next five years. A summary of the reported needs is found in table 1. Thank you to all Field Offices that took the time to respond to the Plant Materials Needs Assessment.

SPECIES TARGETED FOR COLLECTION IN 2011:

Tanglehead (*Heteropogon contortus*)
 Big galleta (*Plueraphis rigida*)
 Desert marigold (*Baileya multiradiata*)
 Vine mesquite (*Panicum obtusum*)
 Curly mesquite (*Hilaria belangeri*)
 Rothrock grama (*Bouteloua rothrockii*)
 Desert panicgrass (*Panicum urvilleanum*)

Table 1: The table below is a summary of the Field Offices that responded with specific needs relating to the Plant Materials Program.

Technology Development		
Field Office	Need/ Resource Concern	Suggestion/Recommendation
Douglas	Rangeland-uneven distribution of broadcast seeding mix	Conduct trials to develop an appropriate field technique to broadcast an even mixture of species that includes large, small, fluffy and/or awned seed
San Carlos	Seed Collection	Techniques for collecting, extracting, and storage of ponderosa pine seeds
	Invasive species	Establishment of a native species trial to control invasive species
Willcox	Cover crops	Evaluation of cover crops to solve various cropland issues
White River	Establishment of forbs and cool season grasses	Develop establishment techniques for forbs and cool season grasses in and along waterways
	Critical area planting in higher elevations	Develop seed mixes and rates for critical areas at high elevations
Dilkon	Wind Erosion	Develop herbaceous wind barrier trials using big sacaton
Plant Development		
Field Office	Need/ Resource Concern	Suggestion/Recommendation
San Carlos	Field borders	Develop native species releases to use for field borders
	Native Legumes	Develop native legume releases to use for wildlife plantings
White River	Native Legumes	Develop native legume releases to use for wildlife plantings
Technology Transfer		
Field Office	Need/ Resource Concern	Suggestion/Recommendation
White River	Windbreaks	Develop shrub/tree list for windbreaks in MLRA 38
	Range Grasses	Develop/update illustrated guide of Arizona Range Grasses
	Invasive species	Develop/update guide for the identification of invasive species in Arizona
Willcox	Abandoned cropland and other disturbed areas	Develop plant materials recommendations for re-vegetation of abandoned cropland and other disturbed areas
Keams Canyon	Rangeland	Develop range planting guide specific for area (species & application rate)
	Windbreaks	Develop windbreak establishment guide for the Hopi area
	Critical area	Develop range planting guide for critical areas
Dilkon	Woody species	Develop list of adapted native trees for the Navajo Reservation
Training		
Field Office	Need/ Resource Concern	Suggestion/Recommendation
Casa Grande	Invasive & Noxious weeds	Provide training in invasive weed identification and management
Dilkon	Seed Collection	Provide training in seed collection
Whiteriver	Rangeland	Provide training in range plant identification
Demonstration		
Field Office	Need/ Resource Concern	Suggestion/Recommendation
Dilkon	Wildlife	Establish demonstrational wildlife habitat areas to showcase plant species that will provide food and shelter for a variety of wildlife