



# La Semilla, The Seed, Volume 10, Issue 1

A Newsletter for the Tucson Plant Materials Center ☀ Spring 2014

Greetings from Tucson!

In contrast to the severe cold weather at some PMCs, Tucson’s 2013-2014 winter season was the warmest on record. This winter also yielded below average precipitation amounts with 44 consecutive days with no measurable rainfall. Nevertheless, spring is here and we have several new projects in the works. Construction on interstate I-10 Prince exit is completed so getting to the center is much easier. Read about our new projects and stop by and see us sometime!

*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)*

Bonita germplasm Plains lovegrass  
*(Eragrostis intermedia)*

## Farm Developments

### **Cover Crop Trials**

Last July, PMC personnel installed a warm season cover crop study to determine which cover crops currently available will work best in common crop rotations used in the Tucson PMC service area. The cover crops planted include ‘Iron and Clay’ cowpeas, ‘Stonewall’ soybeans, ‘OK2000’ mungbeans and ‘Sordan 79 headless’ sorghum-sudan grass. Prior to termination with a roller crimper last fall, biomass production was estimated from each cover crop. Cowpea produced the most biomass by far, followed by sorghum-sudan grass, mungbean and soybean.

Each cover crop field was planted to ‘Orita’ durum wheat this spring. Wheat seed yields will be compared this year to determine the effect each of the cover crops have on harvests.



*Figure 1: Durum wheat emerging in cowpea litter*

In November, PMC personnel continued cover crop work by installing a cool season cover crop trial to compare the soil

health benefits of single species cover crop plantings against multi-species cover crop plantings. Three mixes were planted and will be compared to a single species planting of 'Monida' oats. The mixes consisted of a two species mix of a grass and legume; a three species mix of a grass, legume and a brassica; and a six species mix of two grasses, two legumes, and two brassicas. Preliminary results indicate that the two species mix resulted in faster ground coverage, better weed suppression and more biomass than the other mixes. Please contact the PMC for more information about the warm season or cool season cover crop trials.



Figure 2: Two species cover crop termination with roller crimper in March

### Indian ricegrass plot

In January, thirteen populations of Indian ricegrass (*Achnatherum hymenoides*) collected from southern Nevada were transplanted into a field on the PMC. The objectives of the planting are to determine the genetic variability of the populations and to potentially develop a release of Indian ricegrass adapted to the Mojave Desert.

Tissue from plants established in the field will be sampled and sent to the staff of the USDA-Agriculture Research Service, Forage and Range Research Laboratory located in Logan, Utah to determine genetic variation within and between the populations of Indian ricegrass.

Data on growth parameters such as flowering date, plant height, seed yield and seed maturity date will be collected from individual populations within the crossing block.



Figure 3: Team PMC transplanting Indian ricegrass

### Palmer's Agaves

PMC personnel began propagating 1300 Palmer's agave (*Agave palmeri*) late last year in order to revegetate areas in the Coronado National Memorial damaged by border fence construction. Palmer's agave is a favorite food of the lesser-long nosed bat, a federally listed endangered species. The agaves will be ready for planting by late summer.



Figure 4: Palmer's agave

## Outreach

PMC personnel hosted University of Arizona students in the Management and Restoration of Wildland Vegetation class and students in the College of Architecture and Landscape Architecture in February. Students were provided presentations about the PMC mission, history and activities prior to a tour highlighting harvesting and seed collection/cleaning equipment.



*Figure 5: Tour for University students*

In March, PMC personnel collaborated with Tucson Field Office Range Conservationist, Alisha Phipps, during the annual Tohono O’odham Youth Range Day. Approximately 50 Range Day



*Figure 6: One group of Youth Range Day attendees*

attendees were presented information on how to transplant native plants and some of their [ethnobotanical](#) uses. Attendees were also shown how to press plants and given an opportunity to press their own.

Also in March, PMC personnel presented at a Tohono O’odham Nation Soil and Water Conservation District sponsored workshop titled “Meet the Pollinators.” PMC personnel also presented to the Pima Natural Resource Conservation District regarding the current activities of the PMC.

## Employees

On February 28th, Leslie Glass, Secretary of the PMC and Plant Materials Program Webmaster, was named the 2013 Young Cage Volunteer of the Year by the Friends of the Ironwood Forest for her outstanding and selfless contribution to preserving the precious resources of the Ironwood Forest National Monument. We congratulate her!



*Figure 7: Leslie with her volunteer of the year award*

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