



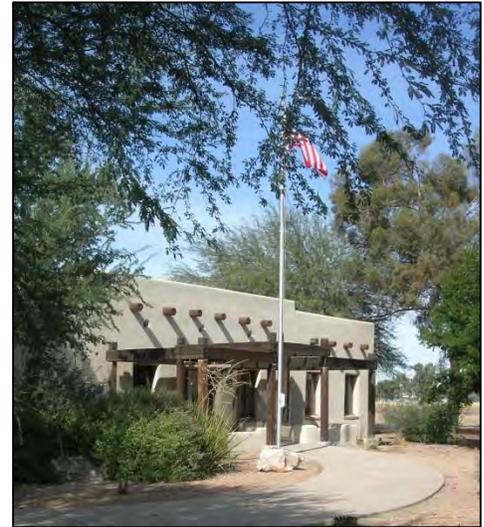
# La Semilla, The Seed, Volume 10, Issue 2

A Newsletter for the Tucson Plant Materials Center ☀ Fall 2014

## Greetings from Tucson!

Happy 80<sup>th</sup> birthday to the Tucson Plant Materials Center (PMC)! In June of 1934, the PMC was established as the Tucson Nursery in response to Depression-era New Deal legislation. Over its 80 years, the center has seen the urbanization of the land surrounding it; changes in landscaping; and changes in occupants. Through it all, two buildings, the administration and utility buildings, have retained the Pueblo Revival adobe architecture common in Arizona and New Mexico during the 1920's and 1930's. This summer, these buildings received much needed replacement vigas. Thank you to all who worked on this project and please stop by and see us, and a piece of history, 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

This summer, PMC personnel continued work on a multi-year cover crop study to determine which summer cover crops currently available will work best in common crop rotations used in the Tucson PMC service area. After last year's cover crop plantings were terminated in September 2013, the fields were planted to a cash crop of durum wheat in February 2014. The wheat seed was harvested in June. While there were no significant differences between seed yield from the different cover crop fields, there were differences in wheat stand

health and weed pressure. After the wheat harvest, the fields were again planted to cover crops. The cover crops planted this June were 'Iron and Clay' cowpeas, 'Highworth' lablab, 'OK2000' mungbeans,



*Figure 1: Wheat harvest June 2014.*

and, 'Sordan 79 headless' sorghum-sudan grass. Soil samples were taken prior to planting and will be taken again at 30-day intervals after termination.

Soil sample results will be compared to previous year's samples to gauge the changes in soil health over time. Biomass production will also be estimated for each cover crop prior to termination. Data gained from this study will be used to enhance recommendations for cover crop use in the southwest.



Figure 2: The lablab field was over 4 ft. tall in late August.

### Foundation fields

Three of the PMC's nine foundation fields were re-established this summer due to reductions in seed production and weed pressure. The fields re-established were Pima germplasm whiplash pappusgrass, Vegas germplasm alkali sacaton, and 'Stevan' plains bristlegrass.



Figure 3: The re-establishment of the 'Stevan' field was accomplished with the help of Earth Team volunteer Jennifer Evancho (l) and Tucson Field Office Range Conservationist Alisha Phipps (r).

### Germination trials: desert panicgrass

In late April, the PMC was contacted by a member of the Mojave Desert Resource Conservation District (Victorville, CA) requesting assistance with germination trials on desert panicgrass (*Panicum urvilleanum*). Desert panicgrass is a native, perennial, rhizomatous grass species found growing in unique Southwestern desert riparian environments, particularly in and around riparian and river channel sand dunes, in southern California and southwest Arizona.

Groundwater pumping and historic dam installation along the Mojave River in combination with drought and severe wind erosion events have triggered significant riparian plant mortality. Plant mortality has released sand trapped within coppice dunes. The migrating sand is quickly moving onto the land of nearby property owners. The District is attempting to successfully establish desert panicgrass on the moving sands to prevent further dune encroachment onto these properties.



Figure 4: “Dirty” desert panicgrass seed (l) versus clean (r).

Seed was collected from five sites along the Mojave River and sent to the PMC. The seed was cleaned and sent to the New Mexico State Seed Lab for germination and purity analysis. A replicated trial evaluating the effects of soil texture, seeding depth, and seed pre-conditioning on the germination of desert panicgrass has been developed. The trial will be conducted at three separate locations this winter -- the PMC; Victor Valley Community College (Victorville, CA); and the Lewis Center for Educational Research (Apple Valley, CA).

## Outreach

PMC personnel hosted members of the Native Seeds/SEARCH Seed School for a tour in April. Also in April, Tucson PMC personnel setup a booth at Tucson’s Earth Day Festival. Visitors to the booth played “plant trivia” for a chance to win an NRCS poster.

In late May, PMC personnel assisted the Tohono O’odham Nation Soil and Water Conservation District with a “Meet the Pollinators” presentation.



Figure 5: PMC booth at Tucson Earth Day 2014.

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## Personnel

In June, Byron Lambeth, Arizona’s State Range Conservationist, was selected to serve as the state Plant Materials Contact. Byron will be coordinating Plant Materials activities in our service area with field offices and all of our partners. Byron can be reached at 602-280-8818 or at [Byron.Lambeth@az.usda.gov](mailto:Byron.Lambeth@az.usda.gov).

In August, the PMC Manager, Manuel Rosales, retired from the Plant Materials Program. We wish him the best in his retirement!

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