

# La Semilla, The Seed, Volume 9, Issue 1

A Newsletter for the Tucson Plant Materials Center ☀ Spring 2013

## Greetings from Tucson!

Spring has sprung in the Sonoran Desert. Also springing up near the farm is a new overpass for interstate ten. It remains to be seen what effects the new overpass will have on farm happenings. We've also welcomed a new staff member and installed several new plantings since our last newsletter. Read on 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

### **Pollinator seeding mix trials**

In December, PMC personnel installed a 0.2 acre pollinator seeding trial in collaboration with The Xerces Society for Invertebrate Conservation. The objective of the trial is to determine what commonly available species attractive to pollinators will establish and persist in our service area.

Ten species were seeded into one plot and eleven species were seeded into an adjacent plot. The species seeded include common yarrow (*Achillea millefolium*), Rocky Mountain beeplant (*Cleome serrulata*), white prairie clover (*Dalea candida*), California poppy (*Eschscholzia californica*),

blanketflower (*Gaillardia aristata*), Lewis' flax (*Linum lewisii*), wild bergamot (*Monarda fistulosa*), firecracker penstemon (*Penstemon eatonii*), Palmer's penstemon (*Penstemon palmeri*), upright coneflower (*Ratibida columnifera*) and lacy phacelia (*Phacelia tanacetifolia*).



Figure 1: *Cleome serrulata* and pollinators



The planting is being evaluated for bloom phenology, plant health and vigor. The species chosen for the planting have staggered blooming dates in order to provide habitat for pollinators year round. We have been impressed with the performance of the species up to this point and look forward to the changing landscape.



Figure 2: Pollinator seeding trials

### Big galleta crossing block

In late September, PMC personnel transplanted ten populations of big galleta (*Pleuraphis rigida*) collected from southern Nevada into a replicated crossing block on the farm. The objectives of the crossing block are to determine the genetic variability of the populations and to potentially develop a release of big galleta adapted to the Mojave Desert.



Figure 3: Establishment of the big galleta crossing block

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 big galleta grass.

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



Figure 4: Bitter Springs collection of big galleta

### BLM Seeding Trials

Blackbrush (*Coleogyne ramosissima*), creosote (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) are species that occupy large areas of the Mojave Desert. Disturbance of Mojave Desert areas where these are the primary vegetative species comes from a variety of sources including fire, off highway vehicle traffic and pipeline construction. Establishment of these species from seeding has been studied continuously with varying rates of success. Some studies advocate the use of transplants versus seeding for the most successful revegetation effects. While transplanting may be preferable in small areas, costs to revegetate large areas and limited access to remote areas requiring revegetation may be prohibitive. To that end, we

are conducting seeding trials of these three species to test dispersal, planting depths and pre-treatment seeding methodologies that may increase the successful germination and persistence of these species.

In early February PMC staff established the first blackbrush seeding trial for this project. The germination of seed coated with a commercially available seed coating is being compared with uncoated seed. Additionally, two different seeding depths are being compared.



*Figure 5: Establishment of the blackbrush seeding trial*

### Cover Crop Trials

A four year cover crop trial developed in collaboration with a local producer, the University of Arizona and the NRCS-Plant Materials Program will come to an end this year with the cotton harvest this fall. The trial was developed to measure the effects of cool season cover crops on cotton yield.

The cool season trial included six cover crop species with four replications. Our cool spring has slowed the emergence and growth of this year's cover crops.

A technical note will be developed on the performance of the cover crops as well as associated cotton yields by the end of the year.



*Figure 6: Triticale emerging slowly in April 2013*

### New Employee

The staff at the PMC welcomes our new employee, Blase Evancho. Blase started working with us on August 27<sup>th</sup>, as our Farm Manager. He is a graduate of The University of Arizona with a Bachelor's degree in Crop Production and a graduate certificate in Geographic Information Systems. Blase is an Air Force veteran, where he served as an A-10 crew chief and was previously employed at Saguaro National Park as a team member in their restoration and invasive plant management program.



*Figure 7: Blase displays his characteristic enthusiasm for plant materials work*

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