

## Plant Material Releases

Today, the Los Lunas Plant Materials Center continues to release and promote plant materials for conservation use. We continue to develop production and management technology by collecting superior adapted plants for testing, selecting, and releasing these conservation species to commercial growers for sale to the public.

The Los Lunas Plant Materials Center has released 34 plant material varieties of native species, and some of their major releases include:

### Native Grasses

'Arriba'	Western wheatgrass
'Vaughn' & 'Niner'	Sideoats grama
'Nogal'	Black grama
'Lovington', 'Hachita' & 'Alma'	Blue grama
'Viva'	Galleta
'Paloma'	Indian ricegrass
'Pastura'	Little bluestem
'Salado'	Alkali sacaton
'Elida'	Sand bluestem
'Redondo'	Arizona fescue
'El Vado'	Spike muhly
'Llano'	Indiangrass
'Grant Germplasm'	Cane bluestem
'Tusas Germplasm'	Bottlebrush squirreltail
'Westwater Germplasm'	Alkali muhly
'Grenville'	Switchgrass

### Introduced Pasture Grasses

'Jose' & 'Largo'	Tall wheatgrass
'Amur'	Intermediate wheatgrass
'Luna'	Pubescent wheatgrass
'Sandia'	Orchardgrass

### Forbs

'Bandera'	Rocky Mtn. penstemon
'Cedar'	Palmer penstemon
'San Juan Germplasm'	Narrowleaf penstemon

### Trees & Shrubs

'Jemez'	New Mexico olive
'Bighorn' & 'Autumn Amber'	Skunkbush sumac
'Montane'	Mountain mahogany
'Barranco', 'Hope', & 'Regal'	Desert willow
'Pink Lady' (Introduced)	Winterberry euonymus
'Bonita'	Soaptree yucca
'Hatch'	Winterfat

### Species in seed increase for future release

Vine mesquite  
Giant sacaton

### Species currently being evaluated

Little bluestem  
Mesa dropseed  
Needleandthread  
Tobosagrass

## History of the Los Lunas Plant Materials Center



Winter harvesting of dormant, woody, production stock in the late 1930's at the Albuquerque Plant Nursery.

In the early 1930's, the United States Department of Agriculture Bureau of Plant Industry built numerous Plant Material Centers across the country as a response to the devastating Dust Bowl era.

On April 27, 1935, Congress passed the Soil Conservation Act, creating the Soil Conservation Service. The Albuquerque Plant Nursery was one of four Soil Conservation Service nurseries that served the Southwest.

The land for the Albuquerque Plant Nursery was leased from the Sandia Pueblo. It consisted of 1,400 acres of Rio Grande bottomland soil with irrigation, and it employed 12 full-time personnel and 20 to 40 temporary Civilian Conservation Corps (CCC) workers. Albuquerque Plant Nursery's purpose was to:

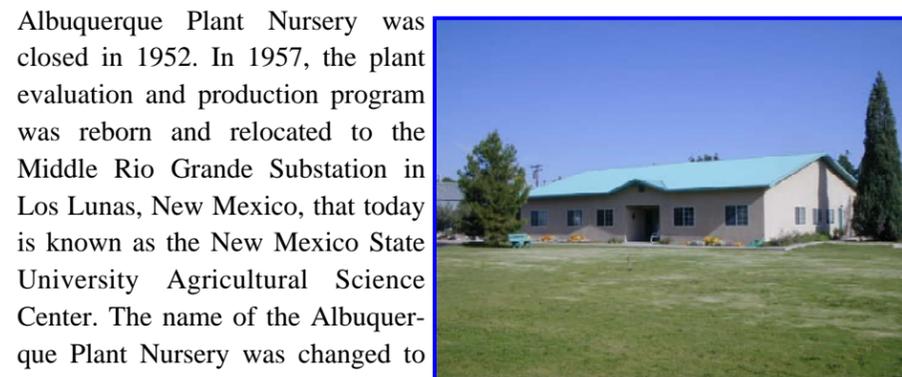
• Propagate and observe promising but unproven plants for use in reducing soil erosion.

• Produce large quantities of plants for direct use in the demonstration projects in the Southwest.

• Determine techniques to improve plant production.

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After closing the large demonstration projects and phasing out the CCC, the Albuquerque Plant Nursery was closed in 1952. In 1957, the plant evaluation and production program was reborn and relocated to the Middle Rio Grande Substation in Los Lunas, New Mexico, that today is known as the New Mexico State University Agricultural Science Center. The name of the Albuquerque Plant Nursery was changed to the Los Lunas Plant Materials Center, and in addition, it was assigned an expanded mission: addressing conservation issues by developing and transferring effective plant technology.



Los Lunas Plant Materials Center as it appears today.

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## Los Lunas Plant Materials Center



Narrowleaf penstemon (San Juan Germplasm) at the Los Lunas Plant Materials Center

## Conservation Revegetation Restoration

Introducing superior plant selections and developing improved planting techniques to solve conservation issues is the primary focus of the 27 plant materials centers located in the United States. The Los Lunas Plant Materials Center is part of a nationally coordinated plant materials program operated by the USDA Natural Resource Conservation Service. In the Southwest, many types of plants including grasses, forbs, shrubs and trees are needed to solve



Los Lunas Plant Materials Center's Service Area (shown in tan)

these conservation issues. The Los Lunas Plant Materials Center provides plant technology and plant materials for major land resource areas in northeast Arizona, southeast Colorado, New Mexico, southeast Utah, and southwest Texas. The environmental conditions in these areas include low precipitation, high intensity rainfall, wind, extreme topography, and varied land uses that combine to produce a variety of problems including erosion and sedimentation from wind and water, poor producing rangeland pasture, reclamation of mined lands, maintaining water quality, rehabilitation and management of riparian

## Partnerships

Partnerships increase the depth and reach of planning and implementing conservation on the land.



NRC staff and NRC Earth Team volunteers drilling holes in preparation for a restoration planting.

Individually, the federal, state, municipal and nonprofit groups that comprise our conservation partnerships have a diversity of expertise in discipline, location, ecoregion, and land management focus. As partners in conservation,

these groups share their unique areas of expertise and management to enhance natural resource protection on the land. Over the years, the Los Lunas Plant Materials Center has formed partnerships with various agriculture and conservation agencies. These partnerships afford the Los Lunas Plant Materials Center the opportunity to develop new and innovative technologies that benefit all partners.

## Partnership Members

Since its establishment, the Los Lunas Plant Materials Center has formed close partnerships with the following agencies and organizations/entities:

- Natural Resource Conservation Service Field Offices
- Soil and Water Conservation Districts
- Commercial Seed Growers and Nurseries
- State, municipal, and federal agencies, including the Bureau of Reclamation, Army Corps of Engineers, Bureau of Land Management, US Fish & Wildlife Service, US Forest Service, City of Albuquerque, and the New Mexico Department of Transportation
- NRC Earth Team Volunteers
- Agricultural and Environmental Groups
- Resource Conservation and Development Councils
- Universities

The Los Lunas Plant Materials Center propagates, grows and maintains numerous species of native plants and grass seed for the Southwest region. Some of the seed from these species are collected from the Southwest's National Parks, such as the Grand Canyon National Park, Zion National Park, and Carlsbad Caverns National Park just to name a few. These plants and seed are reserved strictly for the Parks' use for revegetation and restoration purposes.

In addition, the National Forests in the Southwest (for example the Cibola National Forest, Apache-Sitgreaves National Forest, and the Gila National Forest) also depend on the Los Lunas Plant Materials Center to propagate and grow species indigenous to their ecosystems for restoration purposes, and also test some new species for adaptation and revegetation characteristics.



Golden currant grown in 30-inch deep tallpots.



Sand bluestem seed production field for Zion National Park.

## Developing Planting Technologies

The Los Lunas Plant Materials Center develops local ecotypes of many different species of grasses, forbs, shrubs, and trees for its partners to restore disturbed areas ranging from desert grasslands to subalpine forests including their riparian zones. Since 1983 the Los Lunas Plant Materials Center has specialized in developing planting technologies (both plant materials and new planting methods) for riparian restoration projects in the Southwest. The hot and dry desert climate of the Southwest requires that riparian plantings connect to groundwater as quickly as possible. Stem or pole cuttings of cottonwoods and willows are planted into the water table and quickly establish root systems in the capillary moisture zone above the water table. Other tree and shrub species that cannot produce a root system from stem cuttings are grown as long stem transplants in containers up to 30" long and with stems up to 8-feet long. These plants are "deep-planted" into the capillary zone of the shallow water table to minimize or eliminate follow up irrigation. These new planting techniques are now commonly used by land managers for riparian restoration projects throughout the Southwest.



Planting longstems on the Rio Grande in a desert region of New Mexico.



A plant is dropped down a 7-foot hole and backfilled.

Upland planting technologies for upland areas that require minimal or no irrigation in the arid southwest are continually being developed or refined. One planting technique includes establishing native shrubs grown in 30-inch tallpots that receive only a single, annual application of a hydrated starch-based polymer (hydrogel) for supplemental water.



Same location after the second growing season. No supplemental water was provided.



Irrigation tubes are embedded with each plant to allow for irrigation of the deep system.



Applying the starch-based hydrogel into the irrigation tubes.

For detailed information about plant propagation and planting technologies, the Los Lunas Plant Materials Center has several publications that can be downloaded from the following websites:

<http://www.plant-materials.nrcs.usda.gov/nmpmc>

<http://www.nm.nrcs.usda.gov/programs/pmc/publications.html>

For additional information, contact the Los Lunas Plant Materials Center at 505-865-4684.