

Guide to Conservation Plants

Released by the Tucson Plant Materials Center

Plants offer a natural solution for addressing many conservation challenges. From wildfire restoration and invasive species control to forage production, wildlife habitat, erosion prevention, nutrient filtering, stream bank protection, and sources of biofuels, plants are a sustainable resource that help protect and heal our landscapes. The Tucson Plant Materials Center (PMC) cooperates with a variety of public and private conservation partners to collect, evaluate, select and release plants which are intended for commercial production to solve resource conservation problems. This process helps insure that the plants grow under a variety of climates and soil types and will perform as needed. During testing, all United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) plant collections are evaluated to insure that they are not weedy, invasive, or harmful to the environment. Listed below are the current plant releases maintained by the Tucson PMC. Additional information regarding planting, management, ecological considerations, sources, and availability of these plants can be found in the related [Plant Release Brochures](#), [Release Notices](#), or [Plant Guides](#) (if available).

Batamote Germplasm desert zinnia (*Zinnia acerosa*)



Description: Desert zinnia is a small, shrub-like, native, perennial forb. It typically grows 4 to 10 inches tall with numerous branches and scores of narrow leaves. The flowers consist of off-white ray flowers and yellow disc flowers. The ray flowers may be somewhat toothed at the ends. Desert zinnia may flower from spring to fall when moisture is available. It generally occurs on rocky open slopes and flats, often on calcareous soils. It occurs at elevations of 2,300 to 6,200 feet. Desert zinnia is found in Arizona, New Mexico, Texas, and Utah.

Conservation Uses: The potential uses of Batamote Germplasm desert zinnia include restoration of disturbed areas, wildlife and pollinator habitat improvement, and increasing plant community diversity.

Area of Adaptation: Batamote Germplasm desert zinnia was developed for use in Major Land Resource Area (MLRA) 41.

Bonita Germplasm plains lovegrass (*Eragrostis intermedia*)



Description: Plains lovegrass is a native, warm season, perennial bunchgrass. It typically grows 2 to 3.5 feet tall. The leaf blades are usually narrow and grow 12 to 35 inches long. The inflorescence is an erect, open, pyramid-shaped panicle 8 to 16 inches long and 6 to 12 inches wide, with numerous branches that branch again. The fresh inflorescence is pinkish in color. The spikelets have 3 to 9 flowers. Plains lovegrass occurs on clay, sandy and rocky soils, and often on disturbed sites. In Arizona, it can be found at elevations ranging from 3,800 to 6,000 feet.

Conservation Uses: The potential uses of Bonita Germplasm plains lovegrass include restoration of disturbed areas, wildlife habitat improvement, and increasing plant community diversity. Plains lovegrass is at risk of overgrazing and should be carefully managed where grazing occurs.

Area of Adaptation: Bonita Germplasm plains lovegrass was developed for use in MLRA 41.

Cochise Germplasm spike dropseed (*Sporobolus contractus*)



Description: Spike dropseed is a native, perennial, warm-season bunchgrass 1.5 to 4 feet tall with a spike-like inflorescence. It is found in dry to moist sandy soils between 200 and 7,000 feet in elevation. Spike dropseed appears to prefer open sandy or rocky slopes and washes. Flowering occurs from August to October, occasionally as early as June. Spike dropseed is found from Colorado to southeastern California, Texas, and Sonora, Mexico.

Conservation Uses: The potential uses of Cochise Germplasm spike dropseed include erosion control, wildlife food/cover, restoration of disturbed areas, rehabilitation of rangeland, and increasing plant diversity in arid rangeland communities. This species was selected for germplasm development based on biological characteristics that may allow it to compete with introduced exotic species such as Lehmann lovegrass (*Eragrostis lehmanniana*).

Area of Adaptation: Cochise Germplasm spike dropseed was developed for use in southern Arizona.

'Loetta' Arizona cottontop (*Digitaria californica*)



Description: Arizona cottontop is a native, warm season, perennial bunchgrass. It typically grows from 1 to 4 feet tall with bluish-green leaves that vary from 3 to 5 inches long. The inflorescence is a contracted panicle, 4 to 6 inches long, with few branches. The paired spikelets are covered in white silky hairs that give the seedhead its characteristic "cottony" appearance. Arizona cottontop is found in oak woodlands, chaparral, and semi-desert grasslands in Arizona, Colorado, New Mexico and Texas. It grows on a variety of soils but is more abundant and productive on clay, sand, or sandy-loam subsoils rather than on shallow, stony or cobbly soils. In Arizona, it can be found at elevations ranging from 1,000 to 5,900 feet.

Conservation Uses: The potential uses of Loetta Arizona cottontop include forage, rangeland seeding, erosion control, increasing plant community diversity, and wildlife food and/or cover. This species has beneficial qualities in terms of diet for wildlife species including pronghorn antelope, mule deer, desert cottontail, whitethroat woodrat, javalina, and scaled quail.

Area of Adaptation: The identified range of adaptation of Loetta is Major Land Resource Areas 40 and 41 at elevations between 1,000 and 5,000 feet.

Moapa Germplasm scratchgrass (*Muhlenbergia asperifolia*)



Description: Scratchgrass, also known as alkali muhly, is a warm season, perennial, rhizomatous, stoloniferous grass. It can grow up to 2 feet tall. The yellow-green leaves are generally rough to the touch and are narrow, flat and approximately 1/8 inch in width. The open panicle grows up to 9 inches long and bears several spikelets. When the plant is in flower (June-October), the panicle takes on a purple hue. At maturity, the panicle breaks away from the plant. Scratchgrass can be found in moist meadows, sandy washes, grassy slopes, and around seeps and hot springs at elevations of 180-9840 feet. It often occurs in pure, dense stands. Scratchgrass is well adapted to alkaline or neutral, fine to medium textured soils.

Conservation Uses: The potential uses of Moapa Germplasm scratchgrass include restoration and rehabilitation of riparian systems, wildlife habitat improvement, restoration of disturbed areas and increasing plant community diversity along the Virgin River and other lands in southern Nevada. Moapa Germplasm scratchgrass reproduces through rhizomes, stolons and seed. These reproductive qualities allow it to be competitive with species that may be invasive

in arid riparian zones. This release has the potential to be especially useful in rehabilitation of areas following salt cedar (*Tamarix ramossissima*) removal.

Area of Adaptation: Moapa Germplasm scratchgrass was developed for use in Major Land Resource Area 30 in southern Nevada.

Pima Germplasm Pima pappusgrass (*Pappophorum vaginatum*)



Description: Pima pappusgrass is a native, perennial, warm-season bunchgrass. It has erect stems that grow from 2 to 3 feet tall. The gray-green to light green leaf blades are 0.08 to 0.20 inches wide with edges that may roll inward. The panicle is spike-like, 4 to 8 inches long, tawny or whitish and tapering at the top. Awns on the lemmas give the panicle a tufted, hairy appearance. Pima pappusgrass is found along roadsides, in valleys and on plains, between elevations of 2,500 to 4,000 feet. It occurs in the southwestern United States, Mexico, Argentina, and Uruguay. Whiplash pappusgrass is commonly known as Pima pappusgrass in southern Arizona.

Conservation Uses: The potential uses of Pima Germplasm Pima pappusgrass include erosion control; establishment of wildlife food and/or cover; the restoration of disturbed areas; the rehabilitation of rangeland; and increasing plant diversity in arid rangeland communities.

Area of Adaptation: Pima Germplasm Pima pappusgrass was developed for use in MLRA 40 and 41.

Salttilo Origin Germplasm cane bluestem (*Bothriochloa barbinodis*)



Description: Cane bluestem is a native, perennial, warm season bunchgrass. It typically grows 2-4 feet tall. The leaves are bluish green and cure to a dull red or yellow. The fan shaped panicles appear silvery white due to the long tufts of hair and awns on the paired spikelets. Cane bluestem can be found growing on open, sandy or gravelly ground and rocky slopes at elevations between 1,000 to 5,800 feet. It is particularly abundant along graded roadsides, banks of washes, railroad rights of way, or other places where the soil has been exposed.

Conservation Uses: Salttilo Origin Germplasm cane bluestem may be used as an erosion control plant on rangelands and critical areas such as abandoned cropland and road cuts. It also has beneficial qualities in terms of diet and cover for wildlife species including pronghorn antelope, mule deer, desert cottontail, white-throated woodrat, javalina, and scaled quail.

Area of Adaptation: Salttilo Origin Germplasm cane bluestem was developed for use in MLRA 30, 38, 39, 40 and 41.

'Seco' barley (*Hordeum vulgare*)



Description: Seco barley is a drought tolerant, annual, six-rowed, rough-awned, spring barley. The plants are erect and 30 to 48 inches tall. The leaves are flat and narrow with closed collars. The spike is lax and non-waxy. The mature lemmas are semi-wrinkled and have purple veins. Kernels are predominantly white but occasionally blue. The root crown is 1 to 2 inches below the soil surface. Seco is well adapted to a wide range of soil textures from sandy loams to clay loams. Seco has a salt tolerance equivalent to that of other highly salt-tolerant barley strains with a threshold electrical conductivity rating of 8.0 decisiemens/meter.

Conservation Uses: Seco barley is recommended for the control of weeds and wind erosion on abandoned farmland and disturbed lands. It is also recommended to provide feed and cover for wildlife, to stabilize soils, as a winter cover crop, and/or green manure, especially in areas where water is limited. Seco is considered a one-irrigation barley. One-irrigation barleys have less yield potential than commercial cultivars when grown under optimum conditions.

However, they are more productive than commercial cultivars when irrigation applications are limited. Root development of Seco can extend beyond 6 feet under favorable conditions. This type of deep rooting potential results in Seco's drought tolerance. It provides good erosion control and can also be used to alleviate compacted soil layers.

Area of Adaptation: Seco barley is adapted as a winter barley to southern portions of Arizona, New Mexico, California, and western Texas at elevations from sea level to 3,000 feet.

'Stevan' plains bristlegrass (*Setaria leucopila*)



Description: Plains bristlegrass is a native, perennial, apomictic, warm-season bunchgrass. It has smooth stems that sometimes bend at the nodes and range from 2 to 3 foot tall. The leaves are bright green and 6 to 12 inches long. The contracted panicles are densely flowered and bristly. It is most often found on dry plains, rocky slopes, and along washes, often in the partial shade of shrubs and trees at elevations of 3,500 to 5,500 feet.

Conservation Uses: Stevan was released primarily for use in revegetation of eroded rangelands, retired croplands, critical areas, and to provide forage for wildlife and livestock use. In arid climates, soil surface moisture is a limiting factor in germination and seedling establishment. Stevan plains bristlegrass is an excellent candidate for revegetation use because of its ability to emerge and establish from greater seeding depths than many other grass species.

Area of Adaptation: Stevan is recommended for use in Major Land Resource Areas 41, 42, 77, 78, and 81.

Vegas Germplasm alkali sacaton (*Sporobolus airoides*)



Description: Alkali sacaton is a native, warm-season, perennial bunchgrass. It reaches heights of 1.5 to 3.5 feet. The open panicles are pyramidal, variable in size, and often purple. Spikelets diverge from the panicles and have one flower. The leaves are flat and pointed with prominent ridges on their top surfaces. Alkali sacaton can reproduce from seeds and/or tillers and is found on dry, sandy to gravelly flats or slopes at elevations from 165 to 7,700 feet. It often occurs in pure, dense stands. The species is a facultative halophyte, having a broad tolerance to salinity. It is common in moist alkaline flats due to its adaptation to soils containing high concentrations of sodium as well as high concentrations of bicarbonate and sulfate compounds. On saline soils it is commonly found as a primary or secondary invader.

Conservation Uses: The potential uses of Vegas Germplasm alkali sacaton include restoration and rehabilitation of riparian systems; wildlife habitat improvement; restoration of disturbed areas; and increasing plant diversity in areas along the Virgin River and other lands in southern Nevada.

Area of Adaptation & Use: Vegas Germplasm alkali sacaton was developed for use in Major Land Resource Area 30 in southern Nevada.

For more information contact:

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