UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
KNOX CITY, TEXAS

NOTICE OF RELEASE OF HONDO GERMPLASM VELVET BUNDLEFLOWER SELECTED CLASS OF NATURAL GERMPLASM

The U.S. Department of Agriculture, Natural Resources Conservation Service, Knox City Plant Materials Center announces the release of a selected ecotype of velvet bundleflower, *Desmanthus velutinus* Scheele. As a selected release this plant will be referred to as Hondo Germplasm velvet bundleflower. It has been assigned the PI number 477961. Hondo Germplasm is released as a selected class of certified seed (natural track).

This alternative release procedure is justified because there are no commercial varieties of velvet bundleflower available for use in Texas.

Collection Site Information: Hondo Germplasm was originally collected in 1969 from native plants located in the eastern part of Medina County approximately 8 miles from the town of Hondo (N. Lat. 29°20', W Long 98° 90'). The collection site is located southeast of the town of Dunley along a county road that runs alongside the Southern Pacific railroad. Elevation at the collection site is approximately 600 feet; the soil at the collection site is classified as Victoria clay, 0 to 1 percent slope. Average precipitation for the area is around 28 inches. Other plants growing in association included mesquite, little bluestem, silver bluestem, sideoats grama and bristlegrass. The collection site is located in MLRA 83A - Northern Rio Grande Plains.

Description: Hondo Germplasm velvet bundleflower, *Desmanthus velutinus*, is a native, perennial, warm-season, legume. The plant is described as several widely spreading, somewhat decumbent smooth stems up to 2 ft. long growing from a perennial root. Leaves are bluish-green 3-4 inches long, twice pinnate with 3 to 6 pairs of divisions; leaflets are numerous, about 1/6 inch in length. The flowers are white "powder-puff" clusters about 1 inch in diameter. Velvet bundleflower blooms from April through June. Seeds are bore in straight pods 2-3 inches in length. Seed generally matures from mid July to late August.

Method of Breeding and/or Selection: Hondo Germplasm was initially evaluation against 3 other accessions in the 70's and was selected as the most superior accession. In 1980, it was decided to recollect velvet bundleflower since three samples were not representative of the state. In 1981 ten new collections were evaluated along with the Hondo Germplasm. Only five accessions survived into 1982 and 1983. In 1983 Hondo Germplasm was again selected as the top accession based on survivability, vigor and overall plant performance. Hondo Germplasm met the selection criteria of finding a native legume suitable for range reseeding and wildlife use. In 1982 clipping studies show Hondo Germplasm to have similar crude protein and digestibility levels as the other native legumes. Seed production at the Plant Materials Center averages about 500 pounds/acre with two harvests (spring, fall) possible each year. An average PLS of 90% can be expected. See attachment 1 (pages 4-5) for Initial Evaluation Summary and Summary of Forage Quality Study.

Environmental Impact Assessment: Hondo Germplasm velvet bundleflower is a selection of naturally occurring germplasm and has been unaltered from its original collection. Hondo Germplasm did not meet the assessment of a plant that would become invasive based on literature review and the attached "Invasive Species Worksheet" (see attachment 2, pages 6-13).

Conservation Use: Hondo Germplasm may be used as a component in seed mixtures for range seeding and pasture plantings. Goats, sheep and deer favor Hondo Germplasm as well as other bundleflowers. Its forage value is good while young and tender. After seed heads mature, forage is fair for livestock. As with all native legumes it must be managed accordingly to avoid overgrazing. Wildlife can utilize the plants and seed for food. The plants provide a good seed food crop for quail. Hondo Germplasm may be utilized in filterstrips, field borders, contour buffer strips, in riparian forest buffers, and for erosion control plantings.

Anticipated Area of Adaptation: Hondo Germplasm velvet bundleflower is adapted in MLRAs 42, 78A, B, C, D, 80A, B, 81A, B, C, 82, 83A, B, C, D, 84B, C, 85, 86A, B, and 87A, B in Texas and southern Oklahoma. Velvet bundleflower is widely distributed throughout central, south, and west Texas. Velvet bundleflower occurs mostly on calcareous and limestone soils. Velvet bundleflower is not adapted to wet areas or areas with heavy woody cover.

Availability of Plant Materials: Generation 0 seed (equivalent to Breeder seed) will be maintained by the USDA-NRCS Plant Materials Center at Knox City, Texas. Field production (G1) seed is available through the Texas Foundation Seed Service to interested parties for increase purposes.

References:

Correll,S.D., and M.C. Johnson. 1970. Manual of the vascular plants of Texas. Texas Research Foundation.

Hatch,S.L., Checklist of the Vascular Plants of Texas, 1990

USDA-SCS Plant Collection Guide, Velvet bundleflower, 1982

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Signatures for release of:

Hondo Germplasm velvet bundleflower (*Desmanthus velutinus*)

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