

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

**NOTICE OF THE TESTED CLASS RELEASE OF RENO GERmplasm ILLINOIS
BUNDLEFLOWER**

The Natural Resources Conservation Service, United States Department of Agriculture announces the naming and tested class release of Reno Germplasm Illinois bundleflower [*Desmanthus illinoensis* (Michx.) MacM.].

Reno Germplasm Illinois bundleflower has been assigned the **NRCS** accession number **PMK -1885** and the Plant Introduction (**PI**) number **421302**. Reno Germplasm Illinois bundleflower has been developed for use in rangeland, critical area, and recreational area plantings in the Central Plains Region.

Origin: Reno Germplasm Illinois bundleflower originated from seed collected in 1974 by the Kansas Game and Parks Commission from a native stand near Lake Cheney in Reno County, Kansas.

Method of Selection: Reno Germplasm Illinois bundleflower was compared to 'Sabine' Illinois bundleflower at the Manhattan Plant Materials Center. It was evaluated and selected on the basis of winter hardiness, plant persistence, and clipping response.

Ecotype Description: Reno Germplasm Illinois bundleflower is a **native**, warm-season, perennial legume that reproduces from seed. It is deep-rooted and grows to a mature height of 2 to 4 feet. Growth initiates in late spring with flowering occurring from June through September. Leaves are compound, approximately 4 in long with 6 to 14 pairs of **pinnae**, each with 20 to 30 pairs of small linear leaflets. Leaves are sensitive to stimuli, infolding in bright sunlight and when touched. Flowers are five-parted, borne in white globose heads producing clustered flat scythe-shaped pods.

Site Description: The collection site is within Major Land Resource Area (MLRA) **80A**, Central Rolling Red Prairie. Elevation averages **1570** feet. The average daily maximum temperature is 68.2 degrees F., the average daily minimum temperature is 43.7 degrees F. The average frost free period is **181** days from **4/2** to **11/1**. Average annual precipitation is **29.1** inches. The **USDA** Plant Hardiness Zone is **6a**.

Anticipated Conservation Use: The potential use for Reno Germplasm Illinois bundleflower includes rangeland, critical area, and recreational plantings in the Central Plains Region. It provides food and cover for wildlife and is readily eaten by all classes of livestock. It is rated by some authorities as the most important native legume in the Great Plains.

Potential Area of Adaptation: Kansas, Nebraska, and Oklahoma,

Potential Soil Adaptation: It is adapted to most soil types, but does not tolerate coarse sands or dense clays. It has good drought tolerance, but performs best in areas with at least 16 inches of annual precipitation. It is most commonly found in moist depressions and tolerates moderate flooding. It can tolerate moderate salinity and alkalinity levels.

Management: Establishment is from seed. The recommended seeding rate is 2 1/2 pound PLS per acre for a pure stand. For rangeland and critical area treatment, 1 pound PLS per acre is recommended for inclusion within seeding mixtures. Seed should be planted at a depth of 1/2 to 1 in. The seed should be inoculated with Desmanthus Spec. 1 type inoculum. Plantings may be made in early spring. Late fall or winter plantings may prechill and stimulate better emergence of "hard" seed. Nonhard seed normally germinates in 7 to 14 days. Seedling vigor is very good and may take two full growing seasons for full establishment and seed production. Seed fields may be harvested by direct combining.

Plantings should be well established before livestock grazing is permitted. The species responds to grazing as a decreaser, rapidly declining under intense defoliation. The species is compatible with climax dominants of tallgrass prairie,

Plant Performance: Evaluation and field trial results are shown in the attachments.

Release Justification: Currently there are no cultivars of Illinois bundleflower for use in the Central Plains Region. Reno Germplasm Illinois bundleflower has been developed to meet this need.

Source Material Maintenance: Generation 1 seed, equivalent to foundation seed, is available from the Manhattan Plant Materials Center, Manhattan, Kansas, to commercial producers.

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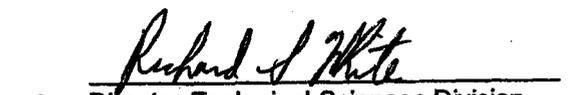
Approvals:



State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Salina, Kansas

ACTING FOR

4-2-99
Date


#01-Director Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

9/15/99
Date

Attachment No 1. Tested Class Release Notice of Reno Germplasm Illinois Bundleflower Environmental Impact Assessment Statement.

Reno Germplasm Illinois bundleflower is native to the Northern, Central, and Southern Great Plains Region. It is considered a component within pristine or climax plant communities. It is somewhat competitive, but will never replace associated climax dominants. Reviewing the Guidelines for Assessing Environmental Conditions for Plant Releases, Exhibit 540-22, revised National Plant Materials Manual, it was determined that this species has no invasive qualities which would warrant further evaluation for potential invasiveness or preclude it's release entirely.