

USDA-Natural Resources Conservation Service

Notice of Source Identified Plant Release

Prairie Blazing Star

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa Integrated Roadside Vegetation Management Program (IRVM), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of a source identified Northern Germplasm blazing star, *Liatris pycnostachya*, Michx.

The prairie blazing star has been assigned the NRCS accession number 9068626.

Origin: Northern Iowa Counties.

Ecotype Description:

Prairie blazing star is a hardy perennial, erect often resinous herb, simple or branched, and arising from a tuber. The narrow leaves on the lower two-thirds of the plant are so crowded that to the casual observer they may appear spiraled rather than closely alternate. Lower leaves are larger up to 4 inches long and 1/2 inch wide than those farther up the stem. Both the stem and leaves usually display short, stiff hairs. The top two-thirds of blazing star is a spike of rose-purple, thistle-like flowers that are given a somewhat fuzzy appearance by extended white stamen (male flower parts) and pistils (female flower parts). Flowering starts at the top of the spike and moves progressively downward. The oblong flower head has a mass of 5 to 12 tubular florets that somewhat resemble those of horsemint. A dense circle of bracts surrounds the base of each flower head. The tips of these long, pointed bracts tend to spread and curve back toward their bases. Bracts of this species may have a purplish tinge. All produce flowers in wandlike spikes or racemes. Their flowers are produced in late summer and autumn. They multiply by offsets from their cormlike base, or maybe grown from seed, which should be sown in autumn. They will grow and produce flowers in poorer soil than most garden plants, but thrive best in good, rich garden soil, and require no special care. *Pycnostachya* is one of the most conspicuous of the prairie inhabitants. Its leafy stem grows erect to a height of 5 feet. The most showy are *Liatris elegans* and *Liatris pycnostachya*. The slender seeds are usually less than 1/4 inch long. The seed narrows toward the base and is tipped with a set of soft bristles about as long as the seed itself. Close examination of the seed shows 10 ribs or ridges.

Prairie blazing star occurs throughout the tallgrass prairie biome, often in thick stands on damp prairies and open bottomlands. Flowering begins in July and may continue until frost.

Prairie blazing star seeds per pound average 131,000. A seeding rate of 40 pure live seeds (PLS) per linear foot in 36 to 40 inch rows (4.4 pounds PLS per acre) for seed production is sufficient. Seed should be planted 1/4 inch deep in a firm relatively weed free seedbed. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Mowing above the height and cultivating between the rows of the prairie blazing star have been used to reduce early competition when weeds begin to encroach into the planting.

The seed of prairie blazing star should be planted in the fall (mid-October to mid-November or frost seeding during late October to late March in the Midwest). Seeds can also be stratified to obtain germination, by mixing seeds in damp sterile media and store in refrigerator (33-38 degrees F) for 60 days. Two months of this cold storage before planting is normally required to break the dormancy of this species.

The grass herbicide Poast can be used to help control grassy weed which may encroach the planting.

Seed yields are good and can be harvested with a combine. Seed production may yield 150 - 200 pounds per acre.

Collections of prairie blazing star from east to west across Iowa guarantee adaptation of releases to this zone. Plants are cross-pollinated and should be spaced a minimum of 1000 feet from any other different prairie blazing star.

Site Description:

Eleven collections from seven counties were made and included in the composite prairie blazing star, Northern Iowa origin (9068626).

Climate: The average annual temperature is 48 degrees Fahrenheit. July is the warmest month with an average high of 85 degrees and low of 64 degrees. January is the coldest month with an average high of 27 degrees and low of 8 degrees. The average annual precipitation for this region is 30 inches with much of this coming during the growing season. The average frost-free growing period runs from April 30 to October 6.

Availability of Plant Materials:

Breeders material is being produced in limited supply by the Elsberry Plant Materials Center and the University of Northern Iowa at Cedar Falls, Iowa.

Release Approved By:

/s/ Roger A. Hansen, NRCS
Missouri State Conservationist

Date: __6/16/99

/s/ Robert D. Koob
President, UNI

Date: _6/28/99

/s/ Leroy Brown, NRCS
Iowa State Conservationist

Date: 6/18/99

/s/ Daryl D. Smith
Program Director, IRVM

Date: 6/17/99

/s/ Robert E. Lawson
Secretary/Treasurer, ICIA

Date: 6/29/99

/s/ Rick S. White
for Diane Gelburd
Director, Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, DC

Date: 8/10/99

References

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