

## PLANTING GUIDE

*Liatris pycnostachya* Michx.

**Common Name:**  
prairie blazing star

### Accession Numbers/Releases:

9068626 - Zone 1, Northern Iowa Germplasm

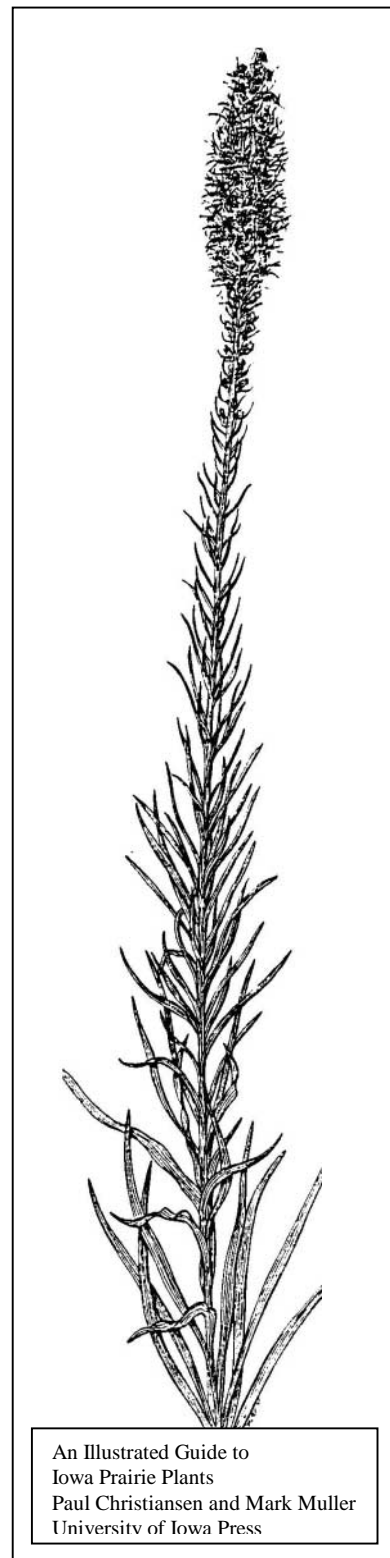
9068627 - Zone 2, Central Iowa Germplasm

### Description:

Prairie blazing 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 further up the stem. Both the stem and leaves usually display short, stiff hairs. The top two-thirds of prairie 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 cornlike 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 showiest 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.

### Purpose:

Prairie blazing star can be used in the following situations: roadside plantings, wildlife food and habitat, wildflower gardens because of its attractive flowers, and as a small component in a seeding mixture for prairie restoration.



An Illustrated Guide to  
Iowa Prairie Plants  
Paul Christiansen and Mark Muller  
University of Iowa Press

**Habitat/Range:**

Prairie blazing star is found throughout the tall grass prairie biome, often in thick stands on damp prairies and open bottomlands.

**Source:**

Seed of these accessions 9068626 and 9068627 were collected from native stands located in the northern (Zone 1) and central (Zone 2) counties in the state of Iowa.

**Establishment (For Seed Production):**

Prairie blazing star is easily propagated from seed. Seed sown in spring will produce transplants in one season. For permanent plantings, sow unstratified seed in fall; stratified seed in the spring. Plants are largely cross-pollinated. Prepare a clean weed free seedbed by disking and harrowing or chemical weed control. Firm the seedbed by cultipacking. Seedbed should be firm enough to allow the seed to be planted 1/4 inch deep. A seeder with a legume box works well in the seeding operation, although other types of seeders or drills maybe used. Seed yields are good and can be harvested with a combine. Yields of 150 to 200 bulk pounds per acre have been harvested on managed stands. Seed harvest lasts from September to November.

**Fertilizer:**

Apply no fertilizer the establishment year unless soil test indicates a low deficiency of less than 15 PPM of phosphorus and or less than 90 PPM of Potassium. Use no nitrogen during the establishment year as this can encourage weed competition.

**Seeding Rates (For Seed Production):**

Purple 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) is sufficient. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled.

For prairie restoration or diverse plantings for wildlife refer to NRCS Iowa - 327 Conservation Cover Standard that pertains to this species.

**Seeding Dates:**

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.

**Management:**

Reduce weed competition by mowing above the height of the prairie blazing star and cultivating between the rows have been used to reduce early competition when weeds begin to encroach into the planting. For grassy weed control usage of a post grass herbicide can provide weed control and will encourage a good stand.

**Note:** Herbicide product may not be registered for this forb species in your state. NRCS does not endorse the use of any product. Use label recommendations for application.

See NRCS Iowa Prescribed Burning Practice Code 338 on burning criteria. Burning may be appropriate where plant vigor declines in native plant species or where invader species threaten a native mix stands.

**Availability of Plant Materials:**

Breeders' material is being produced by the Plant Materials Center, Elsberry, Missouri.

Source identified seed will be released to interested commercial seed growers.

A list of commercial growers can be obtained from the Elsberry Plant Materials Center or Iowa Crop Improvement Association - The Iowa Seed Directory.

4/27/00

**References:**

Flora of Missouri; p. 1471; Steyermark, J. A.; Iowa State University Press, Ames, Iowa 1968.

Wildflowers of the Tallgrass Prairie, The Upper Midwest; p. 199; Runkel, Sylvan T. and Roosa, Dean M.; Iowa State University Press, Ames, Iowa 1989.

The Tallgrass Restoration Handbook; For Prairies, Savannas, and Woodlands; pp. 24, 102 & 309; Packard, Stephen and Mutel, Cornelia F.; Island Press, Washington, D. C. 1997.

The Standard Cyclopedia of Horticulture; p. 1852; Bailey, L. H., The Macillan Company, New York, New York, 1935.

Tallgrass Prairie Wildflowers; p. 66; Ladd, Doug; The Nature Conservancy, Helena, Montana 1995.

The Prairie Garden; pp. 120, 121; Smith, Robert J., Smith, Beatrice S.; The University of Wisconsin Press, Madison, Wisconsin 1980.

Roadside Plants and Flowers; p. 72; Edsall, Marian S.; The University of Wisconsin Press, Madison, Wisconsin 1985.

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