

PRAIRIE BLAZING STAR

Liatris pycnostachya Michx.

Plant Symbol = LIPY

Contributed by: USDA NRCS Elsberry Plant
Materials Center



Jim Stasz
USDA NRCS PLANTS

Alternate Names

gayfeather

Uses

Prairie blazing star can be used for prairie restoration and landscaping, roadside plantings, wildlife food and habitat, wildflower gardens (because of its attractive flowers), and as a small component in seeding mixtures.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Prairie blazing star is a hardy, native perennial herb that grows from a tuber. It is one of the most conspicuous of the prairie inhabitants, as its leafy

stems grow erect to a height of 5 feet. 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, up to 4 inches long and ½ inch wide, are larger than those further up the stems. Both the leaves and stems 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 stamens (male flower parts) and pistils (female flower parts). Flowering starts at the top of the spike and moves progressively downward. Each flower head along the spike is made up of 5 to 12 tubular florets. A dense circle of bracts (tiny, modified leaves) 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 *Liatris* produce flowers in wand-like spikes or racemes. Their flowers are produced in late summer and autumn. They multiply by offsets from their cormlike base, or may be 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. The showiest species are *Liatris elegans* and *Liatris pycnostachya*. The slender seeds of *Liatris* 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. There are 10 ribs or ridges running along the length of the seed. Prairie blazing star seeds per pound average 131,000.

Adaptation and Distribution

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

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Prepare a clean weed free seedbed by disking and harrowing or using chemical weed control. Firm the seedbed by cultipacking. Seedbed should be firm enough to allow seed to be planted ¼ inch deep. For

prairie restoration or diverse plantings for wildlife, prairie blazing star can be incorporated into seed mixes at a rate of 4 ounces pure live seed/acre. Use unstratified seed in fall and stratified seed in the spring. A seeder with a legume box works well in the seeding operation, although other types of seeders or drills maybe used. Apply no fertilizer the establishment year unless a soil test indicates a severe deficiency of phosphorus and potassium. Use no nitrogen during the establishment year as this can encourage weed competition.

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

Management

During establishment, reduce weed competition by mowing above the height of the prairie blazing star or using approved herbicides. In established stands, prescribed burning may be appropriate where plant vigor declines or where invader species threaten native mix stands.

Pests and Potential Problems

Medium to severe lodging has been documented when growing prairie blazing star in a monoculture planting.

Environmental Concerns

Prairie blazing star is not considered weedy or an invasive species and has not been noted spreading to adjoining areas. Seedlings have not been noted spreading from original plantings or if they do spread, the rate of spread is not alarming.

Cultivars, Improved, and Selected Materials (and area of origin)

Two source identified composites of prairie blazing star from northern and central Iowa were released in 1999 by the Elsberry, Missouri Plant Materials Center. The cultivar 'Eureka' (Kansas) was released in 1975 by the Manhattan, Kansas Plant Materials Center.

Prepared By & Species Coordinators:

Jimmy Henry, Manager
Steven Bruckerhoff, Assistant Manager
Elsberry Plant Materials Center
Elsberry, Missouri

Jerry Kaiser, Plant Materials Specialist
USDA NRCS, Elsberry, Missouri

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Read about [Civil Rights at the Natural Resources Conservation Service](#).