



bottlebrush sedge

Carex hystericina Muhl. ex Willd.

Alternate Common Name

porcupine sedge

Scientific Synonym

Carex hystericina Muhl. Rydberg.

Functional Group

sedges and rushes

Family

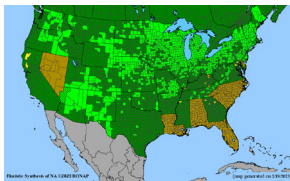
sedge family (Cyperaceae)

Description

- » **Life cycle/growth form:** Perennial with fibrous roots, forms clumps.
- » **Height:** 3/4-3 ft
- » **Leaves and stem:** Leaves in alternate, 3-ranked arrangement, hairless; basal sheaths are reddish purple and fibrous; culms are stiff and 3-sided, hairless, unbranched.
- » **Fruit/seed head:** Seed head consists of a terminal male spike and one to four prickly, cylindrical pistillate spikes, each containing 40-100 perigynia (seed containing structures).
- » **Pollination:** wind



Habitat and Range



Moist to wet soil; partial to full sun; prairies, meadows, seeps, fens, marshes, swamps, ditches; Wetland Indicator Status is Obligate Wetland (OBL) for the Midwest.

Conservation Status

Global- G5, secure; District of Columbia and Kentucky- SH, possibly extirpated; Maryland- S1, critically imperiled; California and Georgia- S2, imperiled; Arizona, Kansas, Washington, West Virginia, Illinois, and Wyoming- S3, vulnerable (NatureServe)

General Comments

Sedges are a large, diverse group of grass-like plants that are important components of prairies, wetlands, and woodlands across our region. In Iowa alone, there are about 120 species of sedges. Grasshoppers and the larvae of skippers and other butterflies and moths feed on wetland sedge foliage, and their seeds are eaten by waterfowl and other birds. Sedges are notoriously difficult to identify to species. The prickly, cylindrical spikes of bottlebrush sedge are somewhat distinctive,

but this species can be confused with longhair or bristly sedge (*Carex comosa*) which also occurs in our region and sallow sedge (*Carex lurida*) which is a state listed species in Iowa but is more common in neighboring states to the south and east. The development of stock seed by the Tallgrass Prairie Center in the early 2000s enabled broader access to reliably identified sedge species by native seed growers. As an obligate wetland species, bottlebrush sedge benefits from irrigation in production settings.

Establishment for Seed Production (Appendix A)

Direct seeding:

We do not have experience with direct seeding this species for seed production.

Greenhouse:

- » **Seed pre-treatment:** Benefits from cold-moist stratification for 30 days.
- » **Sowing:** Sow in germination flats or directly into plugs (2-3 seeds per cell), covering seed lightly (light improves germination of many sedge species); maintain even moisture until germination. Daytime temperatures should be around 70-80°F (22-27°C) and allowed to drop at night to 50-60°F (10-15°C). We have had good success planting into 2.5 in deep, 73-cell plug flats that are ridged to direct root development downward and have 3/4 in bottom openings to encourage root pruning and the formation of firmly rooted plugs for transplanting.
- » **Transplanting:** Seedlings are ready to transplant to the field about 10 weeks after sowing. Pop out a few plugs to check for adequate root development that will provide sturdy plugs for planting. A week or two before transplanting, move flats outside to 'harden off.'

Stand Management

- » **Weeds:** Plastic mulch reduces weed pressure in the first year or more. Holes in the plastic should be widened somewhat in subsequent years to allow the bunches to expand. Bunching plants are robust and leafy, competing well with many weeds; we have interplanted bottlebrush sedge with wetland forbs to provide support and reduce weed pressure. In large-scale production systems or those where the use of weed barriers and/or hand weeding is not practical, herbicides (e.g., broad-leaf herbicides and/or pre-emergents) may be useful to prevent weeds from competing with the sedge plants and/or complicating the seed cleaning process. Significant weed problems may be caused by winter annuals (e.g., members of the mustard family), other small-seeded broad-leaf annuals, and annual grasses (e.g., downy brome). Herbicide applications should be timed to most effectively control specific weeds and minimize damage to the sedge plants. Care must be taken to read affected "weed" lists, as sedges are considered weeds in crop systems. Always read and follow label instructions.
- » **Pests:** None noted.
- » **Diseases:** None noted.
- » **Soil moisture:** Irrigation is recommended. Drip tape can be applied under plastic mulch as planting beds are formed.

