



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Trailhead' Basin wildrye

Leymus cinereus (Scribn. & Merr.) A. Löve

A Conservation Plant Release by USDA NRCS Bridger Plant Materials Center, Bridger, MT



'Trailhead' basin wildrye (*Leymus cinereus* [Scribn. & Merr.] A. Löve) is a cultivar released in 1991 in cooperation with the Montana and Wyoming Agricultural Experiment Stations.

Description

Trailhead basin wildrye is a large-statured, cool-season, native bunchgrass. It begins growth early in the spring, producing numerous, stiff, stout stems that elongate from growing points 10 to 12 inches above the crown. Trailhead basin wildrye grows 3 to 6 feet tall reaching 10 feet under optimum conditions and matures in late summer. Trailhead basin wildrye foliage is green to dark green (tetraploid chromosome number $2n=28$), in contrast to the much different blue-green color (octoploid chromosome number $2n=56$) of 'Magnar' basin wildrye.

Origin

Trailhead basin wildrye originates from a seed collection of many plants on a subirrigated, silty range site in Musselshell County, Montana. The area receives 10 to 14 inches of annual precipitation at an elevation of 3,600 feet. Trailhead was evaluated along with more than 170 native collections from Montana and Wyoming. It was field tested throughout the northern Great Plains and Intermountain region. Trailhead was superior in biomass production and stand longevity. The original collection of Trailhead was directly increased without selection.

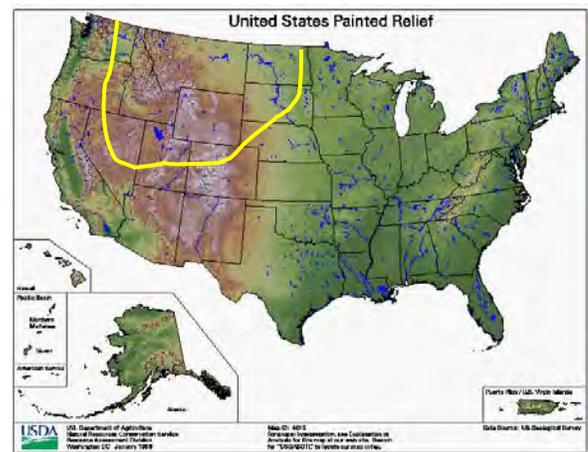
Conservation Uses

Trailhead basin wildrye has an elevated growth point which makes it intolerant of repeated grazing or mowing

during the active growing season. After seed maturity, Trailhead enters growth dormancy and can be grazed, cut for hay, or burned without causing plant stress or death. It retains good quality standing forage value during the fall and winter months. The dry leaves, stems, and seedheads are palatable to cattle, horse, elk, bighorn sheep, and deer. Basin wildrye provides excellent protection as calving pastures and cover for upland game birds and nesting waterfowl. Established stands are long-lived, winter hardy, drought tolerant, and tolerant of acid, saline, and heavy metal-contaminated soils. Trailhead basin wildrye is commonly included in native seed mixtures for conservation, wildlife, and reclamation plantings.

Area of Adaptation

Trailhead has a broad climatic adaptation in areas receiving 8 to 20 inches of annual precipitation at elevations of 1,900 to 9,000 feet. Basin wildrye is widely distributed on deep, well-drained soils of the prairies and foothills in the western United States and Canada. In the lower precipitation regions it is found on sites with a higher water table or run-in areas that receive additional moisture.



Area of adaptation for Trailhead basin wildrye

Establishment and Management for Conservation Plantings

Trailhead basin wildrye is commonly established from seed on soils with good moisture holding capacity. For best results, seed should be planted into a firm, weed-free seedbed. The recommended seeding rate per acre for a pure stand is 7 pounds pure live seed (PLS) and 2 to 5 pounds in a mixture, at a seeding depth of 1/4- to 1/2-inch. Broadcast seeding is not recommended. A minimum row spacing of 18 inches is recommended because of the large size and competitive nature of this grass. Trailhead has

131,000 seeds per pound. Planting can be done either in the spring or as a dormant seeding in late fall. Established stands of Trailhead should only be grazed after seed maturity in order to maintain optimal production and stand longevity. Do not spring graze basin wildrye at the boot stage because it will damage the rapidly elongating growth points and eventually result in stand failure.



Trailhead basin wildrye seedheads during anthesis

Ecological Considerations

Grazing of newly established plantings should be delayed until after the fall of the second growing season. Seedheads are slightly susceptible to ergot fungus *Claviceps purpurea*, leaf rusts *Puccinia* spp., and infestations of plant bugs such as *Irbisia*, *Labobs*, and *Lygus*. It does not tolerate heavy shade or waterlogged soil. Basin wildrye is not considered weedy or invasive.

Seed Production

Seed of Trailhead basin wildrye is moderately easy to produce under agronomic conditions. It has fair seedling vigor, but is relatively slow to establish. Seed fields should be established in 36- to 48-inch spaced rows (seeding rate of 3.5 and 3.0 pounds PLS per acre, respectively) and cultivated between rows in order to maintain row integrity. Seed predation by plant grass bugs may warrant treatment with an approved insecticide. Irrigation results in seed production yields of 200 to 400 pounds per acre for 5 to 7 years. This yield is obtained with 60 to 80 pounds of nitrogen per acre applied in the fall. Seed production is not recommended under non-irrigated conditions. Seed fields can be swathed or direct combined when seed is in the firm dough stage. If direct combined, the seed must be dried prior to storage. The best harvest method is to swath the crop leaving a 30- to 36-inch stubble and combine the cured windrow; although this is a slow process due to the high volume of dry material. Seed maturity and quality is more uniform with this technique. Basin wildrye is an obligate cross-

pollinator. The average harvest date at the Bridger Plant Materials Center is August 6.



A 16-year-old field of Trailhead basin wildrye at the Bridger Plant Materials Center

Availability

Trailhead basin wildrye is available on the commercial seed market. Breeder and Foundation seed of Trailhead is maintained by the USDA-NRCS Plant Materials Center in Bridger, Montana. Foundation seed is available to commercial growers through the Montana Foundation Seed Program at Montana State University-Bozeman and the University of Wyoming Foundation Seed Service in Powell, Wyoming. Foundation, Registered, and Certified seed classes are recognized.

For more information, contact:

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