‘Trailhead’ basin wildrye 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.

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 $\frac{1}{4}$- to $\frac{1}{2}$-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:
Bridger Plant Materials Center
98 South River Road
Bridger, Montana 59014
Phone 406-662-3579
Fax 406-662-3428
http://plant-materials.nrcs.usda.gov/mtpmc
http://www.mt.nrcs.usda.gov

Citation
Release Brochure for Trailhead basin wildrye (Leymus
cinereus). USDA Natural Resources Conservation
Service, Bridger Plant Materials Center. Bridger,
Montana 59014. Revised March 2012.

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please contact your local USDA Service Center, NRCS
field office, or Conservation District
<http://www.nrcs.usda.gov/>, and visit the PLANTS Web
site <http://plants.usda.gov> or the Plant Materials