



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

'Magnar' Basin Wildrye

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

A Conservation Plant Release by USDA NRCS Aberdeen Plant Materials Center, Aberdeen, Idaho



'Magnar' basin wildrye (*Leymus cinereus*)

'Magnar' basin wildrye (*Leymus cinereus*) is a cultivar released by the Aberdeen Plant Materials Center (PMC) and the Idaho Agricultural Experiment Station in 1979.

Description

Magnar is a hardy, robust, long-lived native perennial bunch grass. Culms are numerous, erect and stout, ranging from 3 to 8 feet tall depending on the site. Short, thick rhizomes are present in some plants. Blades are generally blue-green in color, firm, flat, cauline, up to 1 inch wide, and up to 30 inches in length. Large, erect seed heads range from 4 to 12 inches in length.

Source

Parent material of Magnar was originally received from the University of Saskatchewan, Saskatoon, Saskatchewan, Canada in 1939. Detailed collection site information is not available.

Magnar was first selected as having potential use at the Pullman, Washington PMC and was further evaluated at the Aberdeen PMC by selection of vigorous types during several generations. It was also recognized for being consistently superior to many other accessions in the production of viable seed.

Conservation Uses

Magnar basin wildrye can be used as a component of a seed mix for rangeland, erosion control, forage and cover seedings in 12 to 20 inch rainfall zones; mine spoil reclamation; and critical area stabilization. Because of its stature and ability to remain standing during dormancy it can be used as herbaceous wind barriers or crosswind trap strips to control soil erosion on cropland.

Basin wildrye is palatable to all classes of livestock and wildlife; however, it is generally not recommended for spring or summer forage production, because it has an elevated growing point and is easily damaged by overgrazing. It is ideal for providing wind protection in winter calving pastures.

Because basin wildrye is a tall upright bunchgrass, it is considered excellent cover habitat for small animals and birds, excellent nesting cover for upland birds, and provides excellent standing winter feed and cover for big game animals.

Area of Adaptation and Use

Magnar is adapted to the western Great Plains and Intermountain regions of the United States and Canada at elevations from 2000 to 9000 feet. It grows best in areas with annual precipitation of 8 to above 16 inches.

Magnar has a broad soil texture adaptation. It is not recommended for use on shallow soils or coarse textured, deep sands. It has some tolerance to saline and sodic soil conditions and will withstand a relatively high water table but will not tolerate extended periods of inundation.

Establishment and Management for Conservation Plantings

This species should be drill at a depth of ¼ to ¾ inch on medium to fine textured soils and 1 inch or less on coarse textured soils. Single species seeding rate recommended for basin wildrye is 8 pounds Pure Live Seed (PLS) per acre. If used as a component of a mix, adjust to percent of mix desired. For rangeland mixtures, approximately 10 to 20 percent of mix or 1 to 2 pounds PLS should be considered. For mined lands and other harsh critical areas, the seeding rate should be doubled. When seeding is for a vegetative windbreak, vegetative terrace, or wildlife cover, it is recommended that 3.0 to 3.5 pounds PLS/ac be seeded in 36 to 48 inch rows.

The best seeding results are obtained from seeding in very early spring on heavy to medium textured soils and in late fall on medium to light textured soils. Summer and late

summer (July to mid September) seedings are not recommended. Seedling vigor is fair, and stands may take 2 to 5 years to fully establish.

Stands may require weed control measures during establishment. Bromoxynil may be applied at the 3-4-leaf stage of grass for early suppression of young broadleaf weeds. Application of 2,4-D should not be made until plants have reached the 4-6-leaf stage. Mowing the stand when weeds are beginning to bloom will reduce weed seed development. Grasshoppers and other insects may also damage new stands. Use of pesticides may be required. All herbicides and pesticides should be applied according to the label.

Management

Basin wildrye establishes slowly and new seedings should not be grazed or hayed until at least late summer or fall of the second growing season. Basin wildrye makes its initial growth in early spring and matures seed by late summer. It reproduces primarily by seed and tillers.

Basin wildrye is palatable to all classes of livestock and wildlife. It holds approximately twice the nutrient value (7-8% protein) of wheatgrasses (3-4% protein) at maturity and can withstand heavy grazing and trampling in its dormant state. New stands should not be grazed until plants are at least 10 inches tall. Overgrazing, especially in spring, easily damages basin wildrye, and stubble of at least 10 inches should remain following grazing.

Established stands can be grazed in late spring or fall (leave about 10 inches of stubble to protect plant health). Following grazing, little re-growth can be expected, even when the stand is irrigated. Basin wildrye is a low maintenance plant requiring little additional treatment or care. However, it may benefit from low levels of fertilization. Apply nitrogen at 30 pounds per acre on dryland plantings and 60 to 80 pounds per acre on irrigated plantings for optimum production.

No detrimental disease symptoms or insect problems have been observed in plantings of Magnar. Ergot has been occasionally observed on basin wildrye and it is susceptible to leaf and stem rust in wetter climatic areas.

Ecological Considerations

Basin wildrye is native to the Intermountain West and has no known negative impacts on wild or domestic animals. Magnar is not considered a weedy or invasive species but can spread to adjoining vegetative communities under ideal environmental conditions.

Seed and Plant Production

Seed production of Magnar has been very successful under cultivated conditions. Row spacing of 36 inches (3.5 pounds PLS per acre) to 48 inches (3.0 pounds PLS per acre) is recommended. Between row cultivation is recommended for maintaining row culture.

Seed fields are productive for five to seven years. Average production of 150 to 200 pounds per acre can be expected under dryland conditions in 14 inch plus rainfall areas. Average production of 300 to 400 pounds per acre can be expected under irrigated conditions. Direct combining best completes harvesting with the platform set high to get most of the seed and as little vegetative growth as possible. The seed heads have moderate rates of shatter and require close scrutiny of maturing stands. Seed is generally harvested in mid-August to September. Seed must be dried immediately after combining (12 percent bins/15 percent sacks moisture content).

Availability

For conservation use: Seed is widely available from commercial seed vendors.

For seed or plant increase: Breeder and Foundation seed is maintained by the Aberdeen PMC. Foundation seed is available through the University of Idaho Foundation Seed Program and Utah Crop Improvement Association. Certification of seed shall be limited to not more than two generations from Foundation seed (Registered and Certified).

For more information, contact:
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Citation

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For additional information about this and other plants, 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 Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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