

PLANTING GUIDE

Elymus canadensis L.

Common Name:
Canada wildrye

Accession Numbers/Releases:

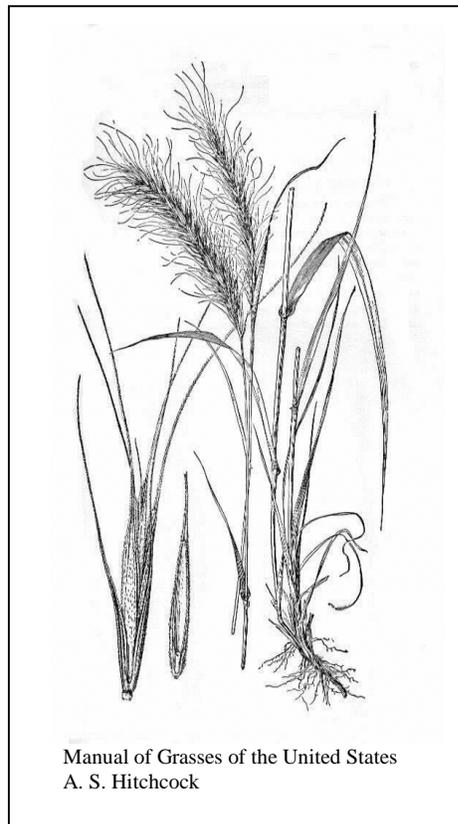
9062275 – Zone 1, Northern Iowa Germplasm

9062276 – Zone 2, Central Iowa Germplasm

9062277 – Zone 3, Southern Iowa Germplasm

Description:

A cool-season native perennial bunchgrass, which is mildly rhizomatous. Leaves may be glaucous (greenish color which appears to be somewhat powdered with a whitish bloom), stems are erect, tufted, and generally one to 1.5 meters tall. Sheaths may be glabrous and the amount of hair found on them is variable. Leaf blades are flattened or curled inwards near the tips and are generally rough to the touch. Leaf width is one to two centimeters. Where the leaf blade joins the sheath, an earlike lobe extends from the leaf margins to clasp the stem. The seedhead is usually drooping or nodding and is 10 to 25 centimeters long. Spikelets are commonly found in threes and fours; they spread away from the stem at the base of the seedhead. Glumes are narrow and also rough to the touch. Awns are two to three centimeters long and must be removed before it will flow satisfactorily through a drill. *Elymus canadensis* has a chromosome count of 23 and is a tetraploid $2n=4x=28$.



Purpose: Revegetate roadsides in the state of Iowa along with providing hay and forage production as this species is palatable and nutritious to all classes of livestock. Canada wildrye was an important part of prairie pastures. Its stout creeping habit has potential for stabilizing sand or critical areas, it may prove useful for wildlife food and cover and prairie restoration.

Source: Seed of these three accessions 9062275, 9062276, and 9062277 were collected from native stands located in the northern (Zone 1), central (Zone 2), and southern (Zone 3) counties in the state of Iowa.

Establishment: (For Seed Production): Stratify seed in cold moist condition for 60 days if planting in spring or summer. Prepare a clean weed-free seedbed by disking and harrowing or chemical weed control. Firm the seedbed by cultipacking. Seedbed should be firm enough to allow the seed to be planted 1/4 - 1/2 inch deep. Use a no-till grass drill with double disc openers, depth bands, packer wheels, seed agitators and a positive feed mechanism capable of handling and applying the seed in a uniform manner. Plants are largely self-pollinated. Canada wildrye grows well on many kinds of soil and is especially well adapted to sandy soils. Growth

starts early and often continues through the summer if moisture and temperature are favorable. Growth may resume in the fall after a period of summer dormancy. Grass maturity may be reached in July.

The seedlings are very vigorous; therefore, new plantings can be established quickly. This makes Canada wildrye especially useful in mixtures with other grasses, many of which do not produce ground cover rapidly. The seed of wildrye is usually high in quality. It is ordinarily ready for harvest from July in the South to August in the northern part of the region. Since the seed do not shatter readily, harvesting may be extended over a period of several weeks.

Fertilizer: Apply no fertilizer the establishment year unless soil test indicates severe deficiency of less than 15 PPM of phosphorus and or less than 90 PPM of potassium. Use no nitrogen during the establishment year as this can encourage weed competition. On established stands apply nitrogen at 40 to 60 pounds per acre.

Seeding Rates: (For Seed Production): Seeding rates for Canada wildrye should be about 30 to 40 pure live seeds (PLS) per linear foot or row in 30 inch rows. There are approximately 115,000 clean debarbed seeds in one pound of Canada wildrye.

For solid stand production, drill 15 pounds of PLS per acre.

Seeding Dates: Spring (April to May), late summer (August to September) or dormant seeding (November to March). The seed of Canada wildrye needs cold stratification for maximum germination if seeded in spring and summer.

Management: Reduce weed competition by mowing or cultivating between the rows of Canada wildrye. For broadleaf weed control usage of a post broadleaf herbicide can provide control and will encourage a good stand. Use label recommendations for application. Remove dead plant material in spring for faster green-up by shredding. Burning of straw will weaken the plants unless done before it has broken dormancy.

Note: Herbicide products may not be registered on this grass species in your state. NRCS does not endorse the use of any product.

See NRCS Iowa prescribed Burning Practice Code 338 on burning criteria. Burning may be appropriate where plant vigor declines in native plant species or where invader species threaten a native stand.

Availability of Plant Materials: Breeders' material is being produced in limited supply by the Plant Materials Center, located at Elsberry, Missouri.

Source identified seed will be released to interested commercial seed growers. A list of commercial growers can be obtained from the Elsberry Plant materials Center of the Iowa Crop Improvement Association – The Iowa Seed Directory.

References

Flora of Missouri; p. 130; Julian A. Styermark, Iowa State University Press, Ames, Iowa, sixth edition, 1981.

Genomic System of Classification as a Guide to Intergeneric Hybridization with Perennial Triticaceae; pp. 209-279; J. P. Gustafson, Editor, University of Missouri; Gene Manipulation in Plant Improvement, Plenum Publ. Co., 1984.

Grassland Farm series; pp. 519-520; W. A. Wheeler and D. D. Hill; D. Van Nostrand Co., Inc., Princeton, N. J., 1957.

Prairie Plants of Illinois; p. 106; John W. Voight, Dept. of Botany, S. Illinois Univ. and Robert H. Mohlenbrock, Chairman, Depts. Of Botany, S. Illinois Univ.; printed by authority of the State of Illinois in cooperation with the Ill. Dept. of Conservation.

Standard Encyclopedia of Horticulture; p. 1111; L. H. Bailey; Macmillian Publ. Co., 1935.

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