

USDA-NATURAL RESOURCES CONSERVATION SERVICE

NOTICE OF SOURCE IDENTIFIED PLANT RELEASE

CANADA WILDRYE

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the (Iowa) County Integrated Roadside Vegetation Management Program (IIRVMP), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of source identified (Southern Iowa) germplasm of Canada wildrye, *Elymus canadensis* L.

The Canada wildrye has been assigned the NRCS accession number 9062275.

Origin:

Northern Iowa

Ecotype Description:

Canada wildrye is a cool season native perennial which is mildly rhizomatous. Of the several species of wildrye that are native to the Great Plains, it has the greatest value both for conservation and for forage production. It grows well on many kinds of soil and is especially well adapted to sandy soils. 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.

This grass begins growth about a week later in the spring than smooth brome or crested wheatgrass. At Elsberry, Missouri this will normally occur about mid-March. It usually matures in early July. But, it may continue to grow in summer if moisture conditions are favorable. And, additional growth may occur in the fall if enough moisture is available.

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 seeds do not shatter readily, harvesting may be extended over a period of several weeks. Seed yields of 300 to 400 pounds per acre from native stands are common. If the grass is grown in rows and cultivated, seed yields of up to 800 pounds per acre are not uncommon. A pound of processed seed contains about 85,000 seeds. The purity of de-awned seed is about 90 percent. The seed averages 26 pounds per bushel. Seed rates should be about 15 pounds of pure live seed (PLS) per acre broadcast. For seed production, the rate should be 30-40 (PLS) per linear foot when drilled in 30 inch rows (six to eight pounds PLS per acre).

Leaves of *Elymus canadensis* are usually moderately green. Leaves may be glaucous (bearing a white powder like substance); 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 and are generally rough to the touch. Leaf width is one to two centimeters. The seedhead is usually drooping or nodding and is 10 to 25 centimeters long. Spikelets are commonly found in threes and fours. Glumes are narrow and also rough to the touch. Awns are two to three centimeters long. *Elymus canadensis* has a chromosome count of 28 and is tetraploid- $2n=4x=28$. Plants are largely self-pollinated.

Elymus canadensis can be found along river banks in shaded areas and on open ground in prairie settings. Its range extends from Quebec to Southern Alaska, south to North Carolina, Missouri, Texas, Arizona, and Northern California.

Site Description:

Collections from the following locations are included in the composite of Canada wildrye, Northern Iowa origin (9062275).

Climate:

The average annual temperature is 45 degrees Fahrenheit. July is the warmest month with an average high of 84 degrees and low of 61 degrees. January is the coldest month with an average high of 22 degrees and low of 3 degrees. The average annual precipitation for this region is 31.4 inches with much of this coming during the growing season. The average frost free growing period runs from May 3 to October 3.

Availability of Plant Materials:

Breeders material is being produced by the Elsberry, Missouri Plant Materials Center (PMC) and UNI.

References:

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