

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
KINGSVILLE, TEXAS**

**NOTICE OF RELEASE OF
Lavaca Canada Wildrye**

SELECTED/TESTED CLASS OF NATURAL GERMPLASM

The Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA) announces the release of selected/tested ecotype of Canada Wildrye, Elymus canadensis L. var. canadensis .

As a selected/tested release, this plant will be referred to as Lavaca Germplasm Canada Wildrye to document its original collection location. It has been assigned the NRCS accession number 9043285 and the PI number of 613134. Lavaca germplasm is released as a selected/tested class of certified seed (natural track).

This alternative release procedure is justified because existing commercial sources of Canada Wildrye are inadequate. The commercial sources that do exist are not adapted to south Texas. The potential for immediate use is high.

COLLECTION SITE INFORMATION:

Lavaca Germplasm was originally collected in 1984 from native plants located near Hallettsville, Lavaca County, Texas. The soil type was an Elmendorf-Denhawken with a sandy clay loam surface and a clay loam subsoil.

ECOTYPE DESCRIPTION:

Root and Stem: Tufted perennial with culms 80-150 cm tall. Slender, fragile auricles usually developed on either side of sheath-blade junction Ligule a truncate membrane 0.5-1 mm long.

Leaves: Mostly 4-12 mm broad glabrous or variously pubescent.

Inflorescence: Spikes nodding 8-20 cm long, spikelets paired or in threes at each node. Spikelets mostly 3-5 flowered. Glumes about equal, flat, slightly broadened above the base. Tapering to an awn longer than the body. Lemmas glabrous, hispid, or scabrous, mostly 0.8-1 cm or more long with flexuous awns 1.5-5 cm long, usually outward curving at maturity.

Seed: The seed unit is approximately 7 mm long when debarbed. There are about 87,560 seeds per pound. Seed maturity occurs in May and seed quality has averaged a 96 percent germination at the Kika de la Garza Plant Materials Center. Canada wildrye is a self-fertilizing species but is known to hybridize and introgress with Virginia wildrye (*Elymus virginicus*).

METHOD OF BREEDING AND/OR SELECTION:

Sixty-two accessions were subjectively evaluated in a non-competitive, spaced plant nursery over a period of five years (1986-1990) on Victoria clay and Raymondville clay loam soils at the Kika de la Garza PMC. Lavaca Canada wildrye had good survival and produced an abundance of seed with good germination. Furthermore, it has shown significantly earlier green-up with more cool-season forage production in replicated wildrye studies at the PMC and other field evaluation sites over a four year period. Lavaca Canada wildrye generally begins to green-up the first week of October at the Kika de la Garza PMC in Kingsville, Texas. Plant height at the PMC averaged 107 cm and plant width was 94 cm. at maturity.

See attached advanced testing documentation for additional information.

ENVIRONMENTAL IMPACT ASSESSMENT:

Lavaca Germplasm Canada wildrye is a selection of naturally occurring germplasm and has been unaltered from its original collection. Lavaca germplasm did not meet the assessment of a plant which could become invasive based on guidelines adopted by the NRCS Plant Materials Program.

CONSERVATION USE:

Lavaca Canada wildrye can be used as a cool-season component in native seed mixtures for range restoration. It also can be used as a cool-season pasture planting, especially for shaded, wooded, riparian areas.

ANTICIPATED AREA OF ADAPTATION:

Canada wildrye is found throughout the State of Texas. It can be found scattered on shaded stream banks, along fencerows and in open woodlands. Canada wildrye has performed well on both coarse and fine textured soils. The original collection came from a sandy clay loam soil type.

AVAILABILITY OF PLANT MATERIALS:

The Natural Resources Conservation Service will maintain the Breeder block (Go seed) and produce Foundation seed (G₁ seed) at the Kika de la Garza Plant Materials Center in Kingsville under the supervision of the Foundation Seed Service and the Texas Department of Agriculture.

REFERENCES:

Brown, W.V., and Pratt, G.A. (1957). "Hybridization and introgression in the grass genus *Elymus*. *American Journal of Botany*, v.47 p. 669-676.

Dewey, D.R. (1979). "Genomic and phylogenetic relationships among North American perennial Triticaceae, p 51-88. *In Grasses and Grasslands*, proceedings of the America Society of Taxonomy symposium, August 1979.

Gould, F.W. (1975). *The Grasses of Texas*. College Station, Texas: Texas A&M University Press.

Hitchcock, A.S. (1971). *Manual of the Grasses of the United States*, Volumes 1&2, 2nd Edition. Revised by Agnes Chase. New York: Dover Publications.

Phillips Petroleum (1963). *Pasture and Range Plants*. Bartlesville, OK: Phillips Petroleum Company.

Stubbendiek, Hatch, and Kjar (1980). *North American Range Plants*. Lincoln, NE: Natural Resources Enterprise, INC.

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Signatures for release of:

Lavaca Germplasm Canada Wildrye (*Elymus canadensis*)

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