

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
ELSBERRY, MISSOURI

And

MISSOURI DEPARTMENT OF CONSERVATION
JEFFERSON CITY, MISSOURI

**NOTICE OF RELEASE OF 'CUIVRE RIVER GERMPLASM' VIRGINIA WILDRYE
SELECTED CLASS OF NATURAL GERMPLASM**

The Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture and the Missouri Department of Conservation (MDC) announce the release of a selected ecotype of Virginia wildrye (*Elymus virginicus* L.) for midwestern states.

As a selected release, this plant will be referred to as 'Cuivre River Germplasm' Virginia wildrye to document its original collections. It has been assigned the NRCS accession number 9803169. Cuivre River Germplasm is released as a selected class of certified seed (natural track).

This alternative release procedure is justified because there are no existing commercial sources of Virginia wildrye collected from numerous native sites throughout this specific region. Propagation material of specific ecotypes is needed for vegetative buffers and filters, covercrop for woody plantings, wildlife and wetland plantings, and forage production. The potential for immediate use is height.

Collection Site Information: Collections were taken from native prairie remnants from Eastern Lincoln County Missouri on the Mississippi River floodplain. Most of the collections were made within the boundaries of Missouri Department of Conservation properties, B.K. Leach and Cuivre Island. The soils were mostly somewhat poorly drained clay loams.

Description: 'Cuivre River Germplasm' Virginia wildrye is a cool-season perennial grass that grows to a height of three feet. Rough to the touch, the leaves are generally smooth to scabrous and vary from 12 to 35cm long and are up to 1.5cm wide. The flower spikes are robust and upright and have straight awns; 0.3 to 4cm long. Each spikelet contains two to three flowers. Empty scales (glumes) are lance-shaped and up to 2.5cm long. In general, the seed head of Virginia wildrye is curved and drooping. It may require 73,000 seeds of Virginia wildrye to make a pound. The grains are edible, but their long awns must be removed before they can be used.

Method of Selection: Multiple collections of seed were made from MDC land in Eastern Lincoln County in 1997. These collections were found in Land Resource Region (LRR) M, Central Feed Grains and Livestock Region. This seed was used to establish an increase planting at the PMC and it was evaluated for survival, potential seed production, forage production and

forage quality. The composite of collections that represent Cuivre River Germplasm exhibited excellent forage production and quality, early greenup, and good seed production.

See attached testing documentation for additional information.

Ecological Considerations and Evaluation: ‘Cuivre River Germplasm’ Virginia wildrye is a selection of naturally occurring germplasm and has undergone minimal purposeful selection. Cuivre River Germplasm did not meet the assessment of a plant that could become invasive, based on guidelines adopted by the NRCS Plant Materials Program.

Anticipated Conservation Use: The potential uses of ‘Cuivre River Germplasm’ Virginia wildrye include forage production, erosion control, vegetative buffers and filters, wildlife food/cover, plant diversity in wetland and riparian plantings, and a covercrop for woody plantings.

Virginia wildrye is palatable and makes good forage and hay. Since it is a cool season species, it will furnish fall and spring pastures. Sometimes it is seeded in warm season grass mixtures to extend grazing seasons. It can be used in pure stands in early fall for winter pasture.

Potential Area of Adaptation: Virginia wildrye is a facultative wetland plant (FACW-). It is most commonly found in low woods, valley bottoms and alluvial wooded banks of streams, and other habitats, such as prairie, open fields, rocky exposures on bluffs, wooded limestone ledges, and rocky limestone glades.

‘Cuivre River Germplasm’ Virginia wildrye was collected from a shady Mississippi River Island and adjacent bottomland soils. This selection can tolerate periodic flooding and is suitable for lowland plantings and adaptable to various soil types.

Availability of Plant Materials: G1 material is being produced in limited supply by the Elsberry Plant Materials Center. For information contact USDA, NRCS, Plant Materials Center, 2803 N. Hwy 79, Elsberry, Missouri 63343. Phone: 573 898-2012.

References:

Flora of Missouri; p. 130-131; Steyermark, J. A; Iowa State University Press, Ames, IA 1968.

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Signatures for release of:

‘Cuivre River Germplasm’ Virginia wildrye (*Elymus virginicus* L.)

/s/ Roger A. Hansen

Date: 3/11/02

State Conservationist

United States Department of Agriculture

Natural Resources Conservation Service

Columbia, Missouri

/s/ Tim Smith

Date: 3/18/02

Botanist

Missouri Department of Conservation

Jefferson City, Missouri

/s/ Richard S. White for Director

Date: 3/28/02

Ecological Sciences Division

United States Department of Agriculture

Natural Resources Conservation Service

Washington, D. C.

Release documentation

The Cuivre River selection has early, vigorous growth that is earlier than tall fescue. Booting of the seed occurred at the end of May to the first week of June at Elsberry. This is approximately two weeks later than tall fescue.

Forage clippings were taken at different stages of growth and compared to tall fescue clippings from adjacent plots. Forage quality of the Cuivre River selection compared favorably to tall fescue as indicated by data below.

Clipping Date	Percent Protein		Percent ADF		Percent NDF	
	TF	VWR	TF	VWR	TF	VWR
4/24/01		27		26		47
5/30/01	9	12	40	34	61	60
10/11/01	15	15	31	34	62	55
11/15/01	20	17	22	24	37	44

TF=tall fescue, VWR=Cuivre River Selection Virginia wildrye, ADF=acid detergent fiber, NDF=neutral detergent fiber

The Cuivre River selection is a heavy seed producer with yields the second year after establishment of 600 bulk pounds per acre and the third year seed production of 1300 bulk pounds per acre when managed for seed production.