

'Rivar'

Mackenzie Willow

Salix Prolixa Anderss.

A Conservation Plant Released by the USDA NRCS Pullman Plant Materials Center, Pullman, Washington



'Rivar' Mackenzie willow was released as a cultivar in 1993 by the NRCS Pullman Plant Materials Center for use in riparian revegetation projects in eastern Washington, eastern Oregon and north Idaho. Photograph courtesy of Burke Herbarium, University of Washington.

Description

'Rivar' Mackenzie willow is a deciduous shrub that grows from 6 to 30 feet tall. One to two year old stems on the dormant plant have reddish-brown bark; on older stems the bark is gray. The leaves are simple, entire, alternate and average five inches long and 5/8 inches wide. The leaves are usually lanceolate with finely toothed margins. Staminate and pistillate catkins appear in the spring after the first leaves. Mature plant height is 12 feet and canopy width is 15 feet at Pullman, Washington.

Source

Mackenzie willow originates from native plants growing along the Tucannon River, near Starbuck, Washington at an elevation of 800 feet.

Conservation Uses

'Rivar' is used in conservation plantings for streambank stabilization, riparian site restoration, landscaping, wildlife habitat, and shelterbelts. Heavy grazing in moist Mackenzie willow communities can lead to soil compaction, streambank sloughing, and damage to willow plants. Other uses are for erosion control and promotion of native plant diversity.

Area of Adaptation and Use

'Rivar' Mackenzie willow has a rapid growth rate, and will grow in moist stands and gravel, with minor inclusions of silt loam, requiring a minimum of 20 to 25 inches annually of precipitation. Mackenzie willow will establish naturally by seed, however, the more common way is by hardwood cuttings taken in late winter.

Establishment and Management for Conservation Plantings

Mackenzie willow may be propagated via seed or cuttings. Seed is used to produce containerized plants. Cuttings may be either be planted directly at the site or greenhouse planted to produce bareroot plants or containerized plants. On-site wild hardwood cutting collections may not root as well as nursery grown stock where growing conditions are maintained at a more optimum level. It should be established in the capillary zone in riparian revegetation plantings. Plantings should be protected with appropriate physical barriers such as wire cages or tree protector tubes where there is rodent or beaver activity. Grazing is particularly detrimental to the establishment of willows. Plants recover rapidly when browsing is excluded.

Ecological Considerations

Poplar/willow borers are potential problems in stands of Mackenzie willow maintained for cutting production. Borers must be controlled prior to entering the stems. Decadent stems with borer infestation should be pruned from commercial cutting production sites. Willows plantings, especially during establishment, can be damaged by rodents including beaver, muskrat, mice, voles etc. by cutting off or girdling stems.

Seed and Plant Production

Mackenzie willow is easily propagated with hardwood cuttings without use of rooting hormone. It can also be propagated with seed but seed must be collected as soon as the fruits ripen. Mature seed loses germination ability rapidly, so planting soon after collection is necessary. Moistened seed may be stored for up to a month if refrigerated in sealed containers. Seeds of willow are not known to exhibit dormancy. Some native plant propagators prefer seed propagation for added diversity of genetic material and less labor requirement for handling of materials during collection, storage and propagation.

Availability

Hardwood cuttings of 'Rivar' are available in limited quantities for increase to growers and nurseries from the Pullman Plant Materials Center.

For more information, contact:

Pullman Plant Materials Center

P.O. Box 646211

Pullman, WA 99164-6211

Phone: (509) 335-6892

Fax: (509) 335-2940

<http://www.plant-materials.nrcs.usda.gov>

Citation

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