

THE
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

AND

WASHINGTON STATE UNIVERSITY AGRICULTURAL RESEARCH CENTER

AND

UNIVERSITY OF IDAHO AGRICULTURAL EXPERIMENT STATION

AND

OREGON STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION

NOTICE OF NAMING AND RELEASE OF 'RIVAR'
Mackenzie willow,
Salix rigida var. mackenzieana (Hook.) Cronq.

'Rivar' Mackenzie willow, Salix rigida var. mackenzieana (Hook.) Cronq. is a vegetatively propagated cultivar recommended for use in conservation plantings for riparian zone vegetation, erosion control, water quality and wildlife habitat enhancement. Other potential uses include native plant community restoration and landscaping.

Mackenzie willow is a deciduous native shrub. One-two year old stems on dormant plants have reddish-brown bark, the bark on older stems is gray.

This cultivar is named 'Rivar' because the ecotype occurs along small rivers, streams and watercourses in the interior Pacific Northwest.

ORIGIN: 'Rivar' Mackenzie willow was collected in the winter of 1980 from indigenous plants growing along the Tucannon River near Starbuck, Washington. The riparian collection site is at an elevation of 800 feet (244m). The soil is moist sands and gravels with inclusions of sandy loam.

DESCRIPTION: 'Rivar' produces numerous stems and abundant leaves. It is fairly easy to propagate by dormant hardwood cuttings. Mature plant height is 12.5 feet (3.8m) and canopy width is 15.1 feet (4.6m) at Pullman, Washington.

Leaves are simple, entire, alternate and average 13.5cm long and 1.5cm wide. Leaves are usually lanceolate with finely

toothed margins. Staminate and pistillate catkins appear after the first leaves.

'Rivar' Mackenzie willow is tolerant to the cold and heat in eastern Washington. No disease of this willow or toxicity problems to animals have been noted. The pollen is an important food source in the spring for bees.

ADAPTATION: Mackenzie willow is a native species, ranging from eastern Washington and Oregon, British Columbia, Yukon, east into north and central Idaho to western Montana and Wyoming. It occurs along streambanks in foothills and lowlands to the lower inter-montane valleys. It occupies riparian sites from rocky river banks to moist benches with deep sandy or silty soil. It requires a minimum of 20 to 25 inches (500-650mm) annual precipitation.

'Rivar' is adapted to moist, coarse to medium textured soils in eastern Washington, eastern Oregon and Idaho. It has grown well at the Pullman Plant Materials Center (PMC) with an average growing season of 160 days and 21 inches (533mm) annual precipitation at 2550 feet (778m) elevation.

PERFORMANCE: The Soil Conservation Service has evaluated the performance of 'Rivar' Mackenzie willow at the Pullman PMC and other locations in Washington, Oregon, Idaho and Utah. The original initial evaluation planting at Pullman comparatively tested 155 willow accessions. 'Rivar' was selected for its excellent vigor and growth including abundant, small low-growing branches and dense foliage. It is considered resistant to adverse factors such as cold and heat in its area of adaptation. Disease and pests have not been problems in these evaluations.

Average spring recovery at the Pullman PMC begins about April 22, bloom date is May 11, plants are dormant usually November 1, and leaf fall occurs about November 3.

PROPAGATION: 'Rivar' is vegetatively propagated with dormant hardwood cuttings. Cuttings should be six inches (15cm) long and 3/8 inch (1cm) in diameter. Hormone treatment for rooting is not considered necessary. Cuttings are placed in cone-tainers in artificial media of 40% peat, 30% perlite and 30% vermiculite, watered and grown under greenhouse conditions. Adequately rooted transplants should be ready in about 90 days.

MATERIALS DISTRIBUTION: The USDA Soil Conservation Service, Plant Materials Center, Pullman, WA will maintain the original genetic plant material and provide limited stock of hardwood cuttings to be used for further increase.

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