

A Conservation Plant Released by the Natural Resources Conservation Service
Big Flats Plant Materials Center, Big Flats, New York

'Streamco'

Purpleosier willow

Salix purpurea L.



'Streamco' purpleosier willow branch and leaves. Photo taken at the USDA NRCS Big Flats Plant Materials Center.

'Streamco' purpleosier willow (*Salix purpurea L.*) is a cultivar released in 1976, in cooperation with the New York State Department of Environmental Conservation. It was selected because of its resilience and superior performance in streambank stabilization practices.

Description

'Streamco' purpleosier willow is an introduced shrub from Europe. The young, purplish branches are smooth, slender, and tough enabling the shrub to withstand floods and heavy ice floes. Its leaves are 4 inches long, smooth, tongue-shaped, finely-toothed near the tip, bluish green above and pale below. The catkins are small and mature before the leaves bud out in the spring. It grows rapidly, reaching 2 to 5 feet in two years, and mature heights of up to 25 feet in about 5 years.

'Streamco' purpleosier willow sprouts profusely from the base of the plant. It can spread by layering from the branches if they come in contact with moist soil, but the upright growth prevents significant spread. **'Streamco' is a male clone and does not produce root suckers.** It does not pose a danger of spreading.

Source

'Streamco' purpleosier willow was selected from a naturalized stand in Schuyler County near Montour Falls, New York and was given the accession number NY-2178. A total of 8 purpleosier willow accessions were evaluated at Big Flats, and NY-2178 rated equal or superior on characteristics important for streambank plantings, such

as stem density near its base, shrub density, stem resiliency, suckering, and growth during the first three years.

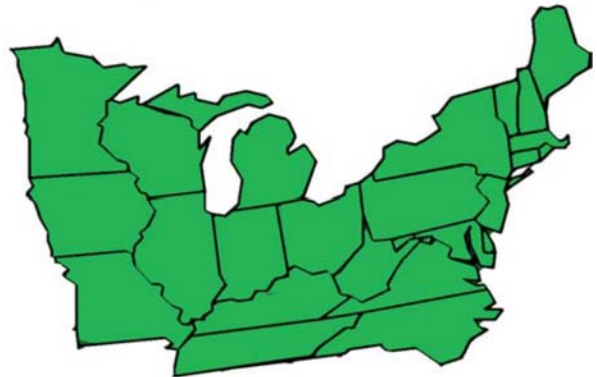
Conservation Uses

'Streamco' purpleosier willow is used primarily for stabilizing streambanks. It may be used with structures, such as riprap, planted alone, or planted in combination with other shrubs or ground cover plants. It is highly effective in soil bioengineering treatments.

Streamco' purpleosier willow is also valuable for wildlife. Many planting have enhanced trout habitat by providing shade to cool streams during the summer. The twigs and buds of 'Streamco' are eaten by ruffed grouse, rabbits, beaver and muskrat.

'Streamco' is very useful in windbreaks or living snow fences, as noise barriers, visual screens and odor abatement in front of exhaust fans. The combination of fast growth and good stem density help it to perform these functions. 'Streamco' can be grown as a hedge where a formal appearance is required. When grown in combination with good stands of grass, it is equal in resistance to riprap of seven inch medium stone size.

Area of Adaptation and Use



Area of adaptation and use of 'Streamco' purpleosier willow.

Establishment and Management for Conservation Plantings

'Streamco' purpleosier willow planted early demonstrated the ease of establishment compared to other species. Eroded or steep streambanks should be graded before planting. 'Streamco' purpleosier willow performs best when planted in the early spring with dormant planting stock. A planting after May will severely reduce chances for success.

'Streamco' purpleosier willow rooted or un-rooted cuttings are stuck vertically into the bank on 2' x 2' spacing. Survival is generally better with rooted cuttings, but un-rooted cuttings are also used successfully. After

planting, it is desirable to seed a grass-legume mixture and mulch to provide soil protection until the willows are large enough to protect the bank. On slopes subject to strong currents, it is necessary to combine structural measures with the willow planting for adequate erosion control. Most planting failure occurs where this was not done.

On large scale engineering practices, if rip-rapped, 'Streamco' purpleosier should be planted immediately above to the top of the bank. Brush matting or other coarse plant material mulch, tacked down after planting, is effective for temporary erosion control.

Management:

'Streamco' purpleosier willow used on streambanks is subject to mechanical damage. The site should be inspected annually for needed repairs in the spring after heavy runoff or ice floes. Gaps need to be filled in by replanting or laying down and covering branches of nearby plants. Small plants of 'Streamco' purpleosier willow can be washed away if not protected on the outside of the stream curve.

Ecological Considerations

'Streamco' is susceptible to willow blight, and can be killed by the fungi which cause it. 'Streamco' is also attacked by gypsy moths, though the damage is not severe on well-established plants. Livestock will severely damage plantings of 'Streamco' with grazing and trampling. Streambanks must be protected from grazing for plantings to be successful.

Seed and Plant Production

Plant 'Streamco' purpleosier willow in the early spring, using dormant stock. Do not plant after May. Either fresh, un-rooted hardwood cuttings or 1 year old rooted cuttings can be used. Un-rooted hardwood cuttings are easier to handle but growth is less reliable. They should be fresh, 3/8 to 1/2 inch in diameter at the thick end, and nine inches long. If cold storage is available, fresh cuttings may be held until mid-spring. Plant cuttings deep enough to leave one to two inches of wood showing above ground. For rooted cuttings, use a dibble or a planting bar to make a hole wide and deep enough to accommodate the root system when well spread. For rooted and un-rooted hardwood cuttings, plant both types vertically. Tamp the soil firmly around the roots or the cuttings to eliminate air pockets.

Availability

For conservation use: For conservation use: 'Streamco' purpleosier willow cutting material for streambank stabilization is routinely available from commercial nurseries.

For seed or plant increase: Foundation material of 'Streamco' purpleosier willow is maintained by the

USDA NRCS Big Flats Plant Materials Center, near Corning, New York.

For more information, contact:
USDA NRCS Big Flats Plant Materials
Center
3266 State Route 352
Corning, New York 14830
607-562-8404 (phone)

Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>