



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Sodar' Streambank wheatgrass

Elymus lanceolatus ssp. *lanceolatus* (Scribn. & J.G. Sm.) Gould

A Conservation Plant Release by USDA NRCS Aberdeen Plant Materials Center, Aberdeen, Idaho



'Sodar' streambank wheatgrass seed production field

'Sodar' streambank wheatgrass was released in 1954 by the Aberdeen Plant Materials Center (PMC) in cooperation with Pullman, Washington PMC, University of Idaho and Washington State University Agricultural Experiment Stations. It is used primarily for erosion control because of its ability to establish a vigorous sod.

Description

Sodar is a native, long-lived, cool season, rhizomatous perennial grass. It grows 12-18 inches tall (up to 30 inches irrigated) and under ideal conditions seed spikes may be up to 10 inches long. The auricles are pointed and semi-clasping. Leaves are short, narrow and pale green to bluish color. The leaves, stems and seedheads have no pubescence. The inflorescence is a spike with spikelets distant towards the base and becoming more crowded toward the tip.

Source

Sodar streambank wheatgrass was collected near Canyon City, Grant County, Oregon in a 12 inch annual precipitation zone at approximately 3,000 feet elevation. Specific collection site information is not available.

Sodar was compared with 10 other streambank wheatgrass accessions and was improved by mass selection and elimination of off-types during several generations at the NRCS Aberdeen PMC.

Conservation Uses

Sodar streambank wheatgrass can be used as a component of a seed mix for erosion control and cover seedings in 8 to 16 inch rainfall zones. It is well suited for use in mine spoil reclamation, critical area stabilization where a sod-forming perennial grass is needed, filter strips to trap sediment, and competition with aggressive annuals such as cheatgrass and medusahead because of its ability to establish a vigorous sod. It has even been used as a grassed runway for airplane traffic. It is not recommended or well suited for forage production.

Area of Adaptation and Use

Sodar is adapted to the Northwest and Intermountain regions of the United States where annual precipitation averages above 8 inches. Sodar has been successfully established on some sites that receive as little as 6 inches of annual precipitation. Sodar prefers moderately deep, loamy to silt loam soils, but can grow on sandy and clayey soils.

Establishment and Management for Conservation Plantings

Sodar should be seeded with a drill at a depth of ½ inch or less on medium to fine textured soils and 1 inch or less on coarse textured soils. The seeding rate is 8 pounds Pure Live Seed (PLS) per acre. If used as a component of a mix, adjust to percent of mix desired. For mined lands and other harsh critical areas, double the seeding rate. For a turf application, Sodar should be planted at 24 pounds PLS/ac. Mulching and light irrigation are beneficial for stand establishment.

The best seeding results are obtained from seeding in very early spring on heavy to medium textured soils and in late fall on medium to light textured soils. Late summer (August - mid September) seedings are not recommended unless irrigation is available. Seedling vigor is good to excellent, exceeding that of western wheatgrass, but less than crested wheatgrass.

Sodar establishes fairly quickly, more quickly than western wheatgrass. Thickspike wheatgrass is the most rapidly establishing native species next to slender wheatgrass. Sodar is compatible with other species and

can be used in seeding mixtures. It should not be seeded with strongly competitive introduced species.

Stands may require weed control measures during establishment, but application of broadleaf herbicides should not be made until plants have reached the four to six leaf stage. Mow when weeds are beginning to bloom to reduce seed development. Grasshoppers and other insects may also damage new stands and the use of pesticides may be required.

This grass begins growth in the spring about 2 weeks after bluegrass species and about 3 weeks earlier than western wheatgrass. It makes good spring growth, fair summer growth, and good fall growth if moisture is available.

Although streambank wheatgrass is not recommended for forage production, livestock and wildlife will graze streambank wheatgrass throughout the growing season until it becomes too coarse. Established stands can withstand heavy grazing.

Sodar should not be grazed until it is firmly established and has headed out. Six inches of new growth should be attained in spring before grazing is allowed in established stands.

Sodar is a low maintenance grass, requiring little additional treatment or care. However, on better sites, stands can become sodbound. Stands may benefit from ripping if sod-bound conditions occur. Care should be taken to avoid excessive tillage because stands may be damaged.

Ecological Considerations

This cultivar release is from a species native to the Intermountain West and has no known negative impacts on wild or domestic animals. Sodar is not considered a weedy or invasive species but can spread to adjoining vegetative communities under ideal environmental conditions.

Seed and Plant Production

Seed production of Sodar streambank wheatgrass has been very successful under cultivated conditions. Row spacing of 28 to 36 inches are recommended (although rhizomatous, it should be maintained in rows). Cultivation will be needed to maintain rows.

Seed fields are productive for two years because of the aggressive nature of rhizome production. Average production of 100 to 250 pounds per acre can be expected

under dryland conditions in 14 inch plus rainfall areas. Average production of 200 to 400 pounds per acre can be expected under irrigated conditions. Seed yields drop significantly after two years of production. Harvesting is best completed by swathing, followed by combining of the cured windrows. The seed heads readily shatter and require close scrutiny of maturing stands. Seed is generally harvested in mid July to mid August. Harvested seed must be dried to 12 percent moisture before storing in bins and to 15 percent before storing in sacks.

Availability

For conservation use: Certified seed is available from commercial seed vendors.

For seed or plant increase: Breeder and Foundation seed is maintained by the Aberdeen PMC. Foundation seed is available through the University of Idaho Foundation Seed Program and the Utah Crop Improvement Association. Certification of seed is limited to not more than two generations from Foundation seed.

For more information, contact:
Aberdeen Plant Materials Center
P.O. Box 296, Aberdeen, ID 83210
Ph. 208-397-4133
Fax 208-397-3104
<http://plant-materials.nrcs.usda.gov/idpmc/>

Citation Release Brochure for 'Sodar' streambank wheatgrass (*Elymus lanceolatus* ssp. *lanceolatus*). USDA-Natural Resources Conservation Service, Aberdeen Plant Materials Center, Aberdeen, Idaho 83210. Published December, 2012

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>>

Helping People Help The Land

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER