Plants for Solving Resource Problems

'VAVILOV II' SIBERIAN WHEATGRASS

Species: ***Agropyron fragile***

Common Name: **Siberian Wheatgrass**
Plant Symbol: AGFR
Accession Number: 9076515

Source: 'Vavilov II' is a broad based 50 clone synthetic developed from clones of Siberian wheatgrass from Kazakhstan and genotypes from the original 'Vavilov' release. It was developed by the Agricultural Research Service (ARS), Forage and Range Laboratory in cooperation with the United States Army, Utah State University and NRCS Plant Materials Center, Aberdeen, ID.

Native Site Information: Siberian wheatgrass was introduced from Asia and is naturalized from the Pacific coast to New York and is widely used in dryland pasture and rangeland seedings throughout the western United States.

Method of Selection: The parent material for Vavilov II was selected from evaluation trials at Yakima, WA, Lakeside, UT and Curlew Valley, ID and genotypes from Vavilov and from collections from Kazakhstan to form a synthetic which can withstand heavy traffic from livestock and vehicular traffic such as found on military training sites. Vavilov II was released by the ARS, United States Army, Utah State University and NRCS Aberdeen PMC in 2008.

Description: Siberian wheatgrass is a long-lived, cool season, drought tolerant, introduced, winter hardy bunch grass with an extensive root system. Siberian wheatgrass is very similar to fairway and standard crested wheatgrass, but has finer leaves and stems, narrower and awnless glumes and lemmas, and the spikelets are more ascending, which gives the spike a narrow, oblong, sub-cylindrical shape.

'Vavilov II' Siberian Wheatgrass

Siberian wheatgrass is more drought tolerant and retains its greenness and palatability later into the summer than either standard or fairway crested wheatgrass.

Use: Siberian wheatgrass is commonly seeded in the arid regions of the western United States. Siberian wheatgrass is usually recommended for livestock forage production. It is palatable to all classes of livestock and wildlife. It is a preferred feed for cattle, sheep, horses, and elk in spring, early summer and also in the fall, if additional growth occurs from late growing season rainfall. Siberian wheatgrass is well adapted for stabilization of disturbed soils. It competes well with aggressive introduced plants such as cheatgrass during the establishment period. Its drought tolerance,

fibrous root system, and excellent seedling vigor make Vavilov II ideal for reclamation in areas receiving 8 inches or more annual precipitation. This grass can be used in urban areas where irrigation water is limited to provide ground cover, weed control and to stabilize ditch banks, dikes, pipelines, power lines, and roadsides.

Insect and Disease Problems: When in pure stands, Vavilov II is susceptible to the black grass bug, *Labops hesperius*.

Environmental Considerations: Since Vavilov II is an introduced plant from Asia, it is not an appropriate component in native plant community restoration. This release is from a species that was introduced to the United States in the early 1900's. Vavilov II represents an incremental improvement in performance within a well documented species. Vavilov II spreads very little via natural seed distribution. It is not considered a weedy or invasive species but can spread into adjoining vegetative communities under ideal environmental conditions. There are no known negative impacts on wild or domestic animals.

Area of Adaptation: Vavilov II Siberian wheatgrass is adapted for non-irrigated seedings where annual precipitation averages 8-14 inches and where the frost-free period is generally less than 160 days. It is known to surpass fairway and standard crested wheatgrass in rate of establishment, stand persistence, and total forage yield on more arid sites (8 to 10 inches annual precipitation). It is very tolerant of fire.

Soil Adaptation: Vavilov II is well adapted to sandy to fine sandy loam to silt loam, droughty soils. It has been seeded in areas with as little as 5 inches of annual precipitation with some success. Siberian wheatgrass is cold tolerant and can withstand moderate periodic flooding, not exceeding 7-10 days in the spring. It will not tolerate long periods of inundation-standing water, poorly drained soils, or excessive irrigation.

Planting and Harvesting: Vavilov II should be seeded with a drill to a depth of ¼ to ½ inch into a firm, weed-free seedbed. The full seeding rate is 6 pounds Pure Live Seed (PLS) per acre. When used as a component of a seed mixture, adjust to the percent of mix desired.

For seed production Vavilov II should be seeded in 36 inch rows at a rate of 2.7 pounds PLS per acre to allow mechanical weed control and to maintain rows. Harvesting seed is best accomplished by swathing, followed by combining of the windrows. Direct combining is also acceptable. Seed is generally harvested in late July. Seed yields range from 150 pounds per acre (dryland) to 500 pounds per acre (irrigated).

Seed Maintenance: Breeder seed is maintained by ARS and Foundation seed is maintained at:

USDA-NRCS, Aberdeen PMC
P.O. Box 296
1691A S. 2700 W.
Aberdeen, ID 83210
Phone: (208) 397-4133

Foundation seed is available through the University of Idaho Foundation Seed Program and Utah Crop Improvement Association and Soil Conservation Districts in Idaho, Utah and Nevada. Certified seed shall be limited to not more than one generation from Foundation seed (Certified). Variety Protection has been applied for under the Plant Variety Protection Act of 1970. Conditions of this license specify that Vavilov II can be marketed only as a class of certified seed.

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