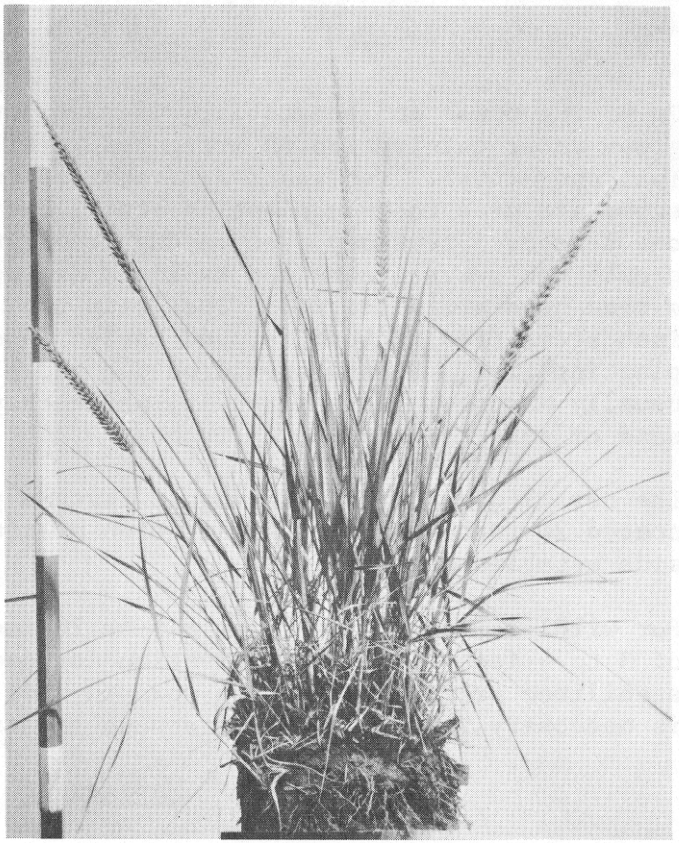
Culture and conservation uses of MAMMOTH WILDRYE



In the State of Washington

'Volga' wildrye is a superior strain of mammoth wildrye, *Elymus giganteus*, Vahl. It was selected for its vigor and rapid vegetative growth, named, released, and registered in *1364*. It is a coarse stemmed, rhizomatous perennial with large, flat, tough, long leaves arising from the base of the plant. Fertile stems are few but grow to one-half inch in diameter to 3 feet tall with dense, round spikes to 1 foot in length and sometimes to 1 inch in diameter at the base.

Adaptation

It is adapted to inland sand dunes and deep sands such as Winchester, Quincy, and Moses Lake sands. It requires at least 7 inches of rainfall annually. Cold, frost, and drought tolerant, it requires neutral to slightly alkaline soils with good drainage. Well established Volga will grow up through 18 inches of sand deposition annually.

Uses

Volga is used primarily for stabilization of inland sand dunes and wind erosion control on sandy and coarse textured soils. Also used in wildlife plantings to provide cover and nesting sites for upland game birds.

Seeds are large, retained in the compact seed heads during fall and winter, and may provide emergency winter food. Foliage is coarse and not used by large animals or rabbits unless other feed is scarce.

Establishment

On moving dunes and nonstabilized areas, stems are used. Plants are grown under cultivation on irrigated fertilized sites and dug during the fall and winter. Two years are required to grow plants from seed. When stems are used to grow planting stock, the increase factor is 15:1 in one season. Stems may also be dug from dune plantings. All the old growth and coarse roots and rhizomes are removed. Stems which have born a seed head are discarded. The leafy tops are cut off to leave a 16-inch stem, tied in bundles, and heeled in or kept cool and moist until planting time. Plants should be dug and planted only during cool weather, usually November 15 to March 15, while they are dormant and as soon as sand or soil is moist to 18 inches.

The normal density of planting is 2 stems per hill to a depth of 8 inches, spaced 20 inches apart. Application of nitrogen at 40 pounds per acre aids establishment.

For wildlife cover, plantings may be 20 inches apart in a row spacing of 3 to 4 feet to allow cultivation for one or more seasons. On well-stabilized areas, seed may be sown in wide-spaced rows. Cultivation is necessary for the first season to get satisfactory growth.

Management

Annual applications of nitrogen, 20 to 40 pounds per acre, will keep plants in a healthy, vigorous growing condition. Plantings should be fenced to protect them from grazing and trampling damage. Mature plantings over 4 years old may be used as a source of new planting stock. Stagnated plantings in low rainfall areas may be rejuvenated by cultivation to overcome sod binding and to provide access to cover for upland game birds.

References

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Stabilization of Active Sand Dunes with Volga Giant Wildrye Grass, Bureau of Reclamation, USDI Columbia River District, Ephrata, Wn. 1953.

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