

A Conservation Plant Released by the Natural Resources Conservation Service
Plant Materials Center, Pullman, Washington

'Alkar'

Tall Wheatgrass

Thinopyrum ponticum (Podp.) Z.-W Liu & R.-C. Wang

'Alkar' is a tall wheatgrass (*Thinopyrum ponticum*) cultivar released in 1951 by the NRCS Pullman Plant Materials Center in cooperation with the Washington, Oregon, and Idaho Agriculture Experiment Stations.



Figure 1. Alkar tall wheatgrass seed head spike.

Description

Alkar tall wheatgrass is a late maturing, stemmy bunchgrass that frequently attains a height of 84 inches. The stems are stiff, upright, and smooth. The seed heads are 6-10 inches long, and the glumes are blunt tipped. Each seed is $\frac{1}{2}$ - $\frac{3}{4}$ inch long, and there are approximately 79,000 seeds/pound. The leaves are wide, mostly upright, and bluish in color. Alkar is distinguished from other tall wheatgrasses by its bluish-green color which is intensified by drought or alkaline conditions. Plants are weakly self-sterile, tall, erect with numerous coarse stems. Seeds are large, and seedling vigor is good. Plants are resistant to leaf and stripe rust and have been used for transference of rust resistance to wheat.

Source

Alkar tall wheatgrass originates from a seed collection made in 1934 from the former USSR. It was isolated after several generations of phenotypic selections from the original accession, PI-98526.

Conservation Uses

Alkar tall wheatgrass is used primarily for reclaiming saline-sodic, alkaline pastureland but it can be used as standing hay for winter feed, as silage, and in wildlife and cropland retirement plantings. It grows well in irrigated, sub-irrigated, and seasonally wet sites despite alkaline conditions. Alkar can produce over 7 tons biomass/acre. It is less palatable than most pasture grasses, but livestock will make good use of it.

Area of Adaptation and Use

Alkar tall wheatgrass plantings can be found throughout the Northern Great Plains and Intermountain West at elevations of 270-5,500 feet. It is not adapted to the coastal areas. It grows best on deep soils that are either seasonally wet or irrigated. It can be grown in dryland upland sites that receive at least 12-14 inches of annual precipitation. Alkar tall wheatgrass is one of the most saline-alkali tolerant revegetation plants available and will grow on sites that only support greasewood and/or inland saltgrass.

Establishment and Management for Conservation Plantings

Alkar tall wheatgrass is large seeded and can be planted as much as $\frac{3}{4}$ -1 inch deep on coarse soil or heavy soils, respectively. It can be planted alone or in mixtures. Seedlings develop slowly but are quite competitive once they achieve the five-leaf stage. Irrigated or sub-irrigated sites can be planted in the spring or late summer. Spring planting is recommended for dryland plantings. Alkar tall wheatgrass should be drill seeded into a firm, weed-free seedbed. A deep-furrow drill is preferred for planting subirrigated, saline soils. The typical seeding rate for upland plantings is 8-10 lb/acre. Saline sites should be seeded at 15 lb/acre.

Alkar tall wheatgrass should not be grazed during the establishment year. Weeds such as annual kochia need to be controlled during the establishment year. Stand longevity is achieved by not cutting hay too short (8-inch stubble height) and/or not overgrazing the stand.

Ecological Considerations

Alkar tall wheatgrass is not native and should not be used in restoration plantings.

Seed and Plant Production

Propagation of Alkar tall wheatgrass is by seed and it needs to be drill seeded into a clean seedbed using a minimum of 20 seeds/linear foot. Irrigated plantings can be established in the spring and early fall. Dryland seedings should occur in the spring. Alkar tall wheatgrass is late maturing and a growing season of 140 frost free days is needed for seed production. Seed typically is ripe by late-August. Harvest requires swathing and combining.

Availability

For conservation use: Certified seed of Alkar tall wheatgrass is readily available in the commercial market. Much of the certified seed is grown and marketed by growers in Washington state.

For seed or plant increase: The USDA Pullman Plant Materials Center maintains the Breeder Seed production. Foundation Seed is maintained and distributed by the Washington State Crop Improvement Association. Registered and Certified Seed classes are recognized.

Citation

Release Brochure for Alkar Tall Wheatgrass (*Thinopyrum ponticum*). 2022. USDA-Natural Resources Conservation Service, Pullman Plant Materials Center. Pullman, Washington.

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>>



Figure 2. Established planting of Alkar tall wheatgrass in the field at Pullman Plant Materials Center.

For more information, contact:

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<https://www.plant-materials.nrcs.usda.gov/wapmc>



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