



BOZOISKY-SELECT
RUSSIAN
WILDRYE



One month after seeding on range site in SE Idaho: showing Vinall (left) and Bozoisky-Select (right).

Bozoisky-Select is an improved cultivar of Russian wildrye (*Psathyrostachys juncea* Syn. *Elymus junceus*) that was developed from an introduction recently obtained from the U.S.S.R. The original breeding population was subjected to two cycles of selection for improved vegetative vigor, leafiness, seed yield, and seedling vigor. Bozoisky-Select has been significantly more vigorous and productive than the check cultivar 'Vinall' in range seedings. At eight semiarid range locations in Utah, Idaho, Wyoming, and Montana, it yielded **23%** more forage than Vinall during the first two production years. Stand establishment of the new cultivar has been equal to or superior to Vinall.

Bozoisky-Select was released in 1984 by the USDA-Agricultural Research Service in cooperation with the Utah Agricultural Experiment Station and the USDA-Soil Conservation Service.

Adaptability

Bozoisky-Select is a winter hardy, drought-resistant, bunch grass that is

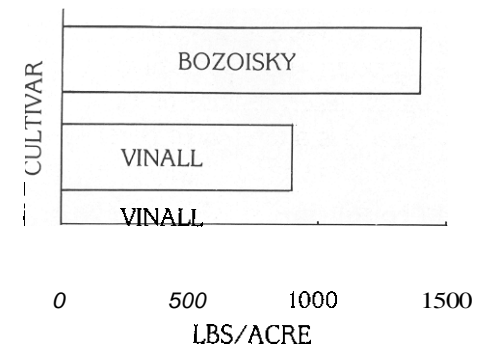
widely adapted to semiarid rangelands of the Mountain West and Northern Great Plains. Russian wildrye is native to the steppe and desert regions of the U.S.S.R. and China. It is a long-lived perennial acclaimed for its productivity of early-season forage, resistance to cold and drought, and excellent forage quality. Its range of adaptation is similar to crested wheatgrass. In general, Russian wildrye performs well with 8 to 16 inches of annual precipitation. It is most productive on loam and clay soils and is moderately tolerant of soil salinity. Upper elevation limits are from 7,500 feet in the north to 9,000 feet in its southern adaptive range.

Uses

Bozoisky-Select adds substantial flexibility to a grazing management program. It is an excellent source of forage during the spring and summer. In addition, the cultivar's dense basal leaves retain their greenness and nutritive value longer during the summer than many other cool-season range grasses, such as crested wheatgrass. Its leaves also cure relatively well during the fall and provide good roughage for grazing animals.

Stand Establishment

Russian wildrye characteristically has relatively poor seedling vigor and is more difficult to establish on range sites than many other grasses. Although Bozoisky-Select has been selected for improved seedling vigor, it is more difficult to establish than crested wheatgrass, especially when planted too deep, or when subjected to limited soil moisture, blowing soil, weed competition, and other adverse



Forage yield of Russian Wildrye cultivars on western range sites.

environmental conditions encountered on western rangelands.

It is important to prepare a firm seedbed. If possible, follow the furrow opener with a cover wheel to provide better contact between the seed, soil, and water. Place seed deep enough to ensure that adequate moisture is imbibed, but depth of seeding should never exceed $\frac{3}{4}$ inch. Seeding at depths greater than 1 inch will almost always result in partial to complete stand failure in Russian wildrye. Recommended seeding rates are 8 to 10 lbs. of pure live seed (PLS) per acre on droughty sites and 10 to 12 lbs. of PLS under more optimum conditions. Seed should be drilled in rows from 10 to 12 inches apart. An 18-inch row spacing is recommended when soil moisture is likely to be limited (8 to 10 inches of annual precipitation).

As with crested wheatgrass, range seedings can be made in early spring (before mid April), fall (Sept. 1 to Oct. 1), or late fall (after Nov. 1). Adequate soil moisture is especially critical in spring and fall seedings. Late fall seedings should be done late enough so germination and seedling emergence are delayed until the following spring when tempera-

ture and moisture conditions are more favorable. Delay grazing at least one year after seedling emergence to permit stands to become established.

Seed Production

For optimum seed production, drill seed in rows from 3 to 3½ feet wide. From 40 to 60 lbs. per acre of available nitrogen is recommended during the fall or early spring. Follow instructions on label when using herbicides. For example, 2,4-D and Dicamba should not be applied after the grass begins to joint. Only moderate seed harvests should be expected during the year of establishment. Because Russian wildrye seed tends to shatter very soon after maturity, timing of harvesting operations is especially critical. Seed should be considered mature when shattering begins at the top of the spike. When combined, the platform should be set high enough to cut all seedheads without removing the green basal leaves. Windrowing is a good alternative to combining in that it allows seed and stems to mature more evenly. Windrow the grass about a week before seed maturity. Seed should be dried immediately after combining.

Seed Availability

Breeder seed is maintained by the USDA-ARS at Logan, Utah. Foundation seed is produced by the USDA-SCS Plant Material Center at Bridger, Montana. Registered and certified seed classes, produced by commercial growers, will be available in 1986.

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