

USCIA-SOIL CONSERVATION SERVICE
BOZEMAN, MT

Planting Guide

SPECIES: BOZOISKY-SELECT * RUSSIAN WILDRYE, *Psathyrostachys juncea* (Fischer) Nevski 90027398

Description: Russian wildrye is a large, cool-season, long-lived bunchgrass. It has an abundance of long, dense, basal leaves. The primarily basal leaves stand 12 to 18 inches tall with long, naked stems (3-5') supporting the dense, erect spikes. Plants vary from light to dark green with shades of blue-green. The extensive fibrous roots may penetrate to a depth of 10 feet, with 75 percent of the total root mass concentrated in the surface 6 inches. This dense root system restricts most other plant species, including annual grasses, and, depending on available soil moisture, naturally spaced Russian wildrye plants.

Origin: Bozoisky-Select was developed from a collection (PI-440627) recently received from the USSR. The breeding was subjected to two cycles of selection for improved vigor, leafiness, seed yield, coleoptile length, and seedling vigor. Breeder seed was obtained by bulking the open-pollinated seed of 23 clones selected from a nursery consisting of 2,100 second-cycle plants. Bozoisky-Select was jointly released by USDA-ARS, Utah Agricultural Experiment Station, and USDA-SCS in July 1984. Foundation seed is maintained at the Bridger PMC.

Adaptation: Bozoisky-Select is a winter-hardy, drought-resistant bunchgrass widely adapted to semiarid rangelands of the Intermountain West and Northern Great Plains. Russian wildrye is native to the steppe and desert regions of the USSR and China. In general, Russian wildrye performs well with 8 to 16 inches of annual precipitation on loam and clay soils. It is moderately tolerant of soil salinity, but will not tolerate a permanent perched water table. Upper elevation limits are from 7,500 feet in the north to 9,000 feet in its southern adaptive range.

Establishment: Russian wildrye characteristically has relatively poor seedling vigor, and is more difficult to establish than most other introduced forage grasses. Bozoisky-Select was selected for improved seedling vigor, and is definitely an improvement over other Russian wildrye cultivars. It is important to prepare a firm, weed-free seedbed, and preferably use a double-disk drill with packer wheels to place seed at the optimum 1/2-inch seeding depth. The recommended seeding rate is 6 pounds-per-acre. Seed should be drilled in rows at least 18 inches apart and on the contour. On droughty sites, row spacings of up to 42 inches have been used. Seeding can be done either in late fall (dormant) or early spring. Grazing should be deferred for at least one full grazing season.

Uses: Bozoisky-Select adds substantial flexibility to a grazing management program. It is an excellent source of forage during the spring and summer. Spring green-up is almost as early as crested wheatgrass. In addition, Bozoisky-Select's dense, basal leaves retain their greenness and nutritive value longer during the summer than many cool-season range grasses. Russian wildrye is very tolerant of grazing and regrows quickly after clipping.

Although grazing can continue from early spring to winter, it is best to graze lightly in the spring, and save the regrowth for late summer and fall grazing. It remains palatable and of adequate nutritive quality for mature stock on winter maintenance rations. Yields have been increased by the use of alternate-row seeding with legumes. Once established, alfalfa is able to root deeper than Russian wildrye, avoiding the intense competitiveness of this grass.

Seed Production: Seed of Russian wildrye can be produced on irrigated soils (36" row spacing) and on dryland sites (48-60" spacing) with 12 inches or more annual precipitation. Average seed production is approximately 250 pounds-per-acre under irrigation and 100 pounds-per-acre dryland. The long, stout, seed stalks that extend well above the forage make it easy to direct combine; however, some seed drying may be necessary. Bozoisky-Select can also be swathed at the firm dough stage and combined out of the cured windrow. Russian wildrye readily shatters, making it important to harvest at the first sign of shattering from the tip of the seed head. Bozoisky-Select matures early, with an average harvest date of July 1st at the Bridger PMC. The seed head primordia of Russian wildrye begin to develop immediately after the seed crop is removed. The fields should be clipped or grazed immediately to remove crop residue. Fertilization and fall irrigation should be done during the first 2 weeks of September. Bozoisky-Select has approximately 170,000 seed-per-pound. Foundation, Registered, and Certified seed classes are recognized.