

Plants for Solving Resource Problems

NORTHERN COLD DESERT WINTERFAT Selected Class Germplasm

Species: *Krascheninnikovia lanata*

Common Name: Winterfat

Plant Symbol: KRLA2

Accession Number: 9067481

Source: Northern Cold Desert Selected Class Germplasm winterfat is a composite of five seed collections made from 1974 to 1977 and evaluated at the Aberdeen Plant Materials Center. Source locations are Carbon, Emery, Kane and Washington Counties in Utah and Rio Blanco County, Colorado.

Native Site Information: Winterfat is a widely distributed native shrub ranging from Saskatchewan and Manitoba, Canada and northern Washington to western Nebraska, Colorado, and western Texas to southern California. It is found from near sea level to 10,000 feet elevation.

Method of Selection: The five original seed collections were selected from an assembly of 45 collections planted and evaluated at the Plant Materials Center from 1978 to 1986. They were selected for their superior tolerance to cold temperatures. The five original collections were then planted into a seed increase block. The seed harvested from the increase block was bulked and used in off-center testing near Grantsville, Utah, and Boise, Idaho to evaluate it under field conditions.

Description: Northern Cold Desert Selected Class Germplasm winterfat is an erect shrub that can grow to three feet tall under



**Northern Cold Desert
Winterfat**

ideal soil and moisture conditions. Leaves are simple, alternate, narrowly linear (1/2 to 2 inches long); flat, with rolled under edges and densely hairy.

Winterfat is monocious with both male and female flowers on the same plant. The seed is a utricle and the seed coat is thin and covered with fine, white, silky hairs 1/8 to 1/4 inch long arranged in dense spreading tufts.

Use: The uses of Northern Cold Desert winterfat are erosion control; rangeland restoration; livestock and big game browse; and wildlife plantings in dry, moderately

saline or alkaline areas. It has a deep taproot and an extensive fibrous root system near the soil surface to help stabilize soil. Winterfat is one of the most valuable rangeland browse plants on winter ranges because it maintains high crude protein content (10 percent) during winter.

Insect and Disease Problems: No detrimental disease symptoms or insect problems have been observed in plantings of Northern Cold Desert winterfat.

Environmental Considerations: This selected class alternative release is from a species native to the Intermountain West and has no known negative impacts on wild or domestic animals. Northern Cold Desert winterfat is not considered a weedy or invasive species but could spread to adjoining vegetative communities under ideal environmental conditions.

Potential Area of Adaptation: Northern Cold Desert winterfat is potentially adapted to the northern portion of the Intermountain Western United States where annual precipitation averages 7 to 16 inches. It may be adapted to the northern Great Plains.

Potential Soil Adaptation: Winterfat can tolerate moderate to highly saline and alkaline areas. It is adapted to soil textures ranging from clay loams to gravelly loams, stony loams and rocky outcrops. It does not tolerate flooding or extended wet conditions.

Planting and Harvesting: Seed should be placed on the soil surface and pressed into the soil. Do not bury the seed. The full seeding rate is 0.5 pounds Pure Live Seed (PLS) per acre. When used as a component of a mix, adjust to the percent of mix desired.

Establishing plants in a greenhouse from seed and transplanting to the field will result in the most productive stands for seed production. Plant spacing in the field should be 4 to 6 feet within row and a minimum of 8 feet between rows. The use of weed barrier fabric can improve plant establishment,

moisture conservation, weed control and seed production. Seed production fields may also be established by seeding. A minimum of 15 pure live seeds per linear foot of row should be seeded on the soil surface to no deeper than 1/4 inch into a firm, weed-free seedbed. Once plants become established, plants can be thinned to optimize seed production. Full seed production is usually reached by the third or fourth year after establishment. Seed ripens following a hard frost in the fall. Harvesting seed is best accomplished by hand stripping.

Mechanized harvesting techniques have been investigated but are unsatisfactory. Expected seed yields range from 200 to 400 pounds per acre.

Seed Maintenance: G0 and G1 seed is maintained at:

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

G1 seed is available through the University of Idaho Foundation Seed Program, Utah Crop Improvement Association and Soil Conservation Districts in Idaho, Utah and Nevada. Growers may produce one generation each of G2 and G3 seed.

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