

Plants for Solving Resource Problems

SNAKE RIVER PLAINS FOURWING SALTBUSH Selected Class Germplasm

Species: *Atriplex canescens*

Common Name: Fourwing Saltbush

Plant Symbol: ATCA2

Accession Number: 9067480

Source: Snake River Plains Selected Class Germplasm fourwing saltbush is a composite of four seed collections made on the Snake River Plains in Power, Owyhee and Elmore Counties, Idaho in 1976 and evaluated at the Aberdeen Plant Materials Center.

Native Site Information: Fourwing saltbush is one of the most widely distributed and important native shrubs on rangelands in the western United States. Its natural range extends from below sea level to above 8,000 feet elevation.

Method of Selection: The four original seed collections were selected from an assembly of 83 collections planted and evaluated at the Plant Materials Center from 1977 to 1986. They were selected for their superior tolerance to cold temperatures. The four 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, Boise, Idaho, Squaw Butte, Oregon and Lind, Washington.

Description: Snake River Plains Selected Class Germplasm fourwing saltbush is an erect shrub that can grow to six feet tall under ideal soil and moisture conditions.



**Snake River Plains
Fourwing Saltbush**

Leaves are simple, alternate, and linear to oblong (1/2 to 2 inches long) and are covered with fine whitish hairs.

Fourwing saltbush is mostly dioecious, with separate male and female plants. Some plants have both male and female flowers. Male flowers are red to yellow and form dense spikes at the ends of branches. Female flowers are nondescript in axillary clusters. The seed is enclosed in a four 'winged' membranous capsule.

Use: The potential uses of Snake River Plains fourwing saltbush are erosion control, rangeland restoration, livestock and big game browse, and wildlife plantings in dry, moderately saline or alkaline areas. Its shape and root system provides excellent erosion control especially in areas where very little other vegetation can survive. Fourwing saltbush can be utilized as browse throughout the year.

Insect and Disease Problems: No detrimental disease symptoms or insect problems have been observed in plantings of Snake River Plains fourwing saltbush.

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

Area of Adaptation: Snake River Plains fourwing saltbush is adapted to the northern portion of the Intermountain West where annual precipitation averages 8 to 14 inches. It may also be adapted to the northern Great Plains.

Soil Adaptation: Fourwing saltbush can tolerate moderately saline and alkaline areas. It is adapted to shallow rocky loams, sandy loams, gravelly loams, and silt loams that are well-drained to moderately well-drained.

Planting and Harvesting: Snake River Plains fourwing saltbush should be seeded with a drill to a depth of ¼ to ½ inch in a firm, weed-free seedbed. The full seeding rate is 1 pound Pure Live Seed (PLS) per acre. When used as a component of a seed mix, adjust to the percent of mix desired.

Establishing plants in a greenhouse from seed or rooted cuttings and transplanting to the field will result in the most productive stands for seed production. Because the species is dioecious, planting one male plant to 5 female plants will maximize potential seed production. Plant spacing in the field should be 6 to 8 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 planted approximately 1/2 to 3/4 inch deep into a firm, weed-free seedbed. Once plants are mature

enough to distinguish sex, plants can then be thinned to approximate one male per five female plants. Full seed production is usually reached by the third or fourth year after establishment. Seed ripens, turning a dull yellow, 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 may 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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