

Trapper Germplasm western snowberry

Symphoricarpos occidentalis Hook.

A Conservation Plant Release by USDA-NRCS Bridger Plant Materials Center, Bridger, Montana



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Trapper Germplasm is a Selected Class germplasm of western snowberry *Symphoricarpos occidentalis* Hook (accession number 9081963). It was released in 2004 by the USDA-Natural Resources Conservation Service (NRCS) Plant Materials Center in Bridger, Montana (BPMC) in cooperation with the Montana Agricultural Experiment Station, the Wyoming Agricultural Experiment Station, and the Montana Department of Natural Resources and Conservation.

Description

Western snowberry is a perennial, woody, deciduous shrub native to broad areas of the United States. It forms dense colonies or thickets from widely spreading roots and rhizomes. The species is an erect to semi-erect shrub that normally grows 2 to 4 feet tall. The average mature height under wildland conditions is 3 feet. Trapper Germplasm western snowberry reaches 5 feet in height within 6 to 8 years under cultivated conditions with supplemental moisture on productive sites. The fruit are greenish white to white drupes containing two white nutlets that ripen in the fall. Trapper has approximately 74,400 seeds per pound.

Origin

The seed orchard of 329 Trapper western snowberry, located at the BPMC, represents a bulk of 14 parent plants consisting of 5 seed sources from Montana and Wyoming.

Conservation Uses

Trapper was selected for superior seedling survival and vigor for use in a variety of conservation applications. It can be used in windbreaks, living snowfences, riparian forest buffers, wildlife enhancement projects, reclamation, and other conservation practices. Trapper has a full stand

seeding rate of 1 to 3 pounds of pure live seed (PLS) per acre.

Area of Adaptation and Use

Western snowberry is adapted to a wide range of site conditions. It grows best on fertile, moist, well-drained to moderately well-drained silt loams. It will not perform well on clayey textured or excessively drained soils. It may tolerate brief or periodic flooding, but is not considered flood tolerant. Trapper western snowberry should grow well on soils within a pH range of 6.6 to 8.0, and on soils with an electrical conductivity of 4 decisiemens per meter or less. It may grow on some well-drained soils with an electrical conductivity as high as 6 decisiemens per meter. Anticipate decreasing growth rates and vigor with increasing salinity above 4 to 6 decisiemens per meter. Trapper grows well in areas characterized by 12 to 45 inches of natural annual precipitation and will grow in drier locations if regular supplemental irrigation is provided. It grows in 105- to 110-day growing seasons. Seed set, maturation, and production, however, may increase with longer growing seasons. Western snowberry prefers full sun locations, but performs adequately on lightly shaded sites or sites in partial sun.

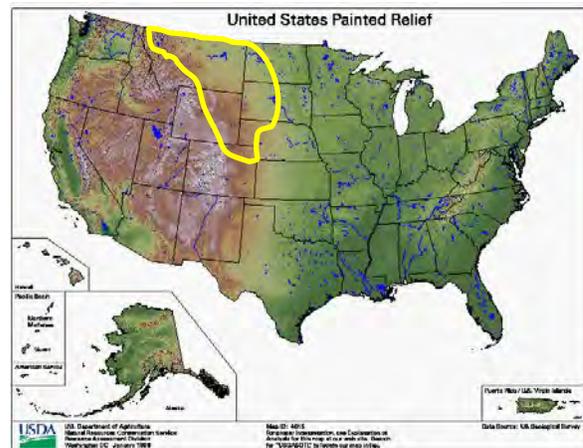


Figure 1. Range of adaptation of Trapper western snowberry.

Trapper is fully adapted to USDA Plant Hardiness Zone 4a (average minimum winter temperatures of -25° to -30°F) or warmer zones, should grow well in Zone 3b (-30° to -35°F), and has been observed growing in Zone 3a (-35° to -40°F).

Based on the species natural range, Trapper western snowberry should perform well in most of central and eastern Montana between elevations of 1,950 to 4,000

feet. In northwestern Montana, and eastern Wyoming, it should grow well at elevations between 7,525 to 9,900 feet (see Figure 1). It should also perform well in western North Dakota and South Dakota at elevations between 800 to 1,800 feet and in northeastern Colorado at elevations between 3,500 to 8,500 feet. Although it has not been field tested in all of these locations, Trapper should perform well given other favorable site conditions.

Establishment and Management for Conservation Plantings

Containerized and bareroot plants are the preferred stock types for all conservation practices. Both 1-year and 2-year stock survives and establishes well when spring planted on moist, fertile sites. Apply supplemental water for 1 to 3 growing seasons after planting to increase survival and growth on droughty, well-drained soils. Clean cultivation and weed fabric (see Figure 2) to control competing vegetation increases planting success.



Figure 2. Trapper Germplasm western snowberry seed orchard.

Ecological Considerations

No special ecological considerations are known.

Seed and Plant Production

Western snowberry readily propagates from seeds or cuttings. It can be produced as bareroot or container plants, and transplanting success is good with either stock type. Seeds germinate well after a combination of warm:moist stratification (70° to 85°F) for 45 to 90 days, followed by cold:moist chilling (33° to 37°F) for 120 to 150 days. Acid scarification for up to 1 hour in concentrated sulfuric acid prior to warm:moist stratification may improve germination. Direct field planting of non-stratified seeds in the fall results in partial germination the following spring. Additional germination often occurs the second spring. Uniformity of germination is improved by sowing artificially warm:moist stratified seeds in the fall. Adjust seeding rates based on percentage

PLS value. For field production, sow seeds at a rate to produce 6 to 10 seedlings per linear foot of row. Sow to a depth of 1/8- to 1/4-inch. Field production is best on fertile, well-drained soils. Containerized stock can be produced in 10-cubic inch pots in 1 year or 30- to 40-cubic inch pots in 2 years. Asexual propagation under greenhouse conditions is successful by both dormant hardwood and softwood cuttings. All stock types and ages of western snowberry transplant well outdoors if supplemental moisture is provided.

Availability

Commercial seedlings are available from state and private conservation seedling nurseries. Seed of Trapper western snowberry for commercial seedling production is available by contacting the Foundation Seed Stocks Program, Department of Plant Sciences and Plant Pathology, Montana State University, Bozeman, Montana 59717-3150 or Wyoming Seed Certification Service, Powell Research and Extension Center, University of Wyoming, P.O. Box 983, Powell, Wyoming 82435-9135.

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Citation

Release brochure for Trapper Germplasm western snowberry *Symphoricarpos occidentalis* Hook. USDA-Natural Resources Conservation Service, Bridger Plant Materials Center, Bridger, Montana, 59014. Revised 01/2013.

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