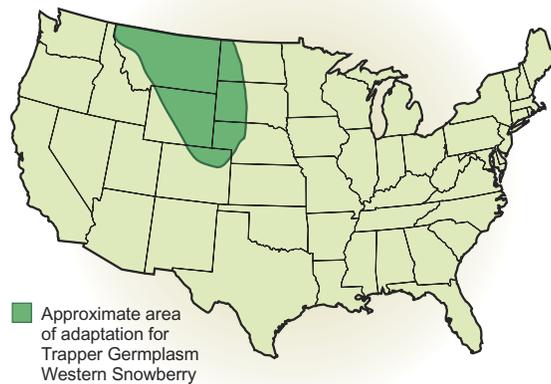


Trapper Germplasm Selected Class Western Snowberry

Trapper germplasm is a selected class germplasm of western snowberry (*Symphoricarpos occidentalis*). It was selected for superior seedling survival and vigor for use in land reclamation, living snow fences, riparian forest buffers, wildlife plantings, and native landscapes. The 329-shrub seed orchard located at the Bridger Plant Materials Center represents a bulk of 14 parent plants consisting of five seed sources from Montana and Wyoming. Trapper germplasm was released in 2004 by the USDA-Natural Resources Conservation Service (NRCS) 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 has a rhizomatous habit, forming dense colonies or thickets by adventitious shoots 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.

Seed Production

Trapper germplasm flowers on the current season's growth. Fruit set occurs in mid- to late-summer with fruit and seed ripening in late-October to mid-November in Bridger, Montana. Fruit color changes from predominantly green or whitish green to completely white upon full maturity. Fruit is normally hand-harvested in mid- to late-November in Bridger. Trapper germplasm typically produces moderate to heavy fruit crops each year when supplemental moisture is provided (approximately 20 or more inches of annual moisture). Fruit may be stored for several weeks if refrigerated at 33° to 37°F, and is readily cleaned in a large macerator. One hundred fifty 5-year-old rooted cuttings will yield approximately 15 pounds of bulk seeds under cultivation, averaging 87,500 seeds per pound. Use weed barrier and clean cultivation in seed orchards to control weeds and limit sprouting.

Propagation

Western snowberry readily propagates from seeds or cuttings. It can be produced as bareroot or container plants, and out-planting 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 one hour in concentrated sulfuric acid prior to warm:moist stratification improves germination. Direct field planting of non-stratified seeds in the fall results in partial germination the following spring and additional germination the second spring. Uniformity of germination is improved by sowing artificially warm:moist stratified seeds in the fall. Adjust seeding rates based on Pure Live Seeds (PLS). 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 inches. Field production is best on fertile, well-drained soils. Both 1-0 and 2-0 bareroot stock is acceptable, but the latter is preferred. Container stock can be grown in 10-cubic-inch pots in one year or 30- to 40-cubic-inch pots in two years. Asexual propagation under greenhouse conditions is successful using dormant hardwood and softwood cuttings. Western snowberry field transplants well at nearly any age if supplemental moisture is provided.

Establishment

Containerized and bareroot plants are preferred stock types for all conservation practices. Both 1-0 and 2-0 stock survives and establishes well when spring planted on moist, fertile sites. Apply supplemental water for one to three growing seasons after planting to increase survival and growth on droughty, well-drained soils. Clean cultivation and the use of weed fabric to control competing vegetation increases planting success.

Adaptation

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 germplasm should grow well on soils within a pH range of 6.6 to 8.0 and on soils with an electrical conductivity of 4 dS/m or less. Anticipate decreasing growth rates and vigor with increasing salinity above 4 to 6 dS/m. It 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. Trapper germplasm grows in 105- to 110-day growing seasons. However, seed set, maturation, and production may increase with longer growing seasons. Western snowberry prefers full sun locations, but performs adequately on partially shaded sites.

Trapper germplasm 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 germplasm should perform well in most of central and eastern Montana between elevations of 1,950 to 4,000 feet, in northwestern Montana, and in eastern Wyoming at elevations between 7,525 to 9,900 feet. 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 these locations, Trapper germplasm should perform well given other favorable site conditions.

Availability

Seedlings are available for commercial sale through state forest tree and commercial nurseries. Check with local nurseries for availability. G1 seeds (equivalent to foundation class) for plant production are available through the Seed Stocks Program at Montana State University-Bozeman and the University of Wyoming Foundation Seed Service at Powell, Wyoming. Dormant hardwood stem cuttings are available for seed orchard establishment. Contact the Montana Plant Materials Specialist, USDA/NRCS, 10 East Babcock Street Room 443, Bozeman, MT 59715; the Bridger Plant Materials Center, Route 2, Box 1189, Bridger, MT 59014; or the Plant Materials website at www.mt.nrcs.usda.gov for more information.

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*References for this brochure available upon request.

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