

Protocol Information

USDA NRCS - Appalachian Plant Materials
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Plant Materials Program

Family Scientific Name: **Rosaceae**
Family Common Name: **Rose family**
Scientific Name: *Prunus serotina*
Common Name: **Black cherry**
Species Code: **PRSE2**
Ecotype: **Monongahela National Forest**
General Distribution: **Widely distributed throughout the eastern 1/2 of the US.**
Known Invasiveness: **Not known to be invasive in the US.**
Propagation Goal: **Plants**
Propagation Method: **Seed**
Product Type: **Bareroot (field grown)**
Stock Type: **1+0**
Time To Grow: **2 Years**
Target Specifications: **A well developed plant suitable for transplanting by hand with at least 12" top growth and a healthy root system.**
Propagule Collection: **Mature fruit are harvested from existing healthy stands of black cherry within the boundaries of the Monongahela National Forest.**
Propagule Processing: **Fruit was harvested, placed in a container and allowed to ferment to facilitate the seed cleaning process. The fruit was rubbed on a screen with holes just large enough for the seed to pass through.**

A water floatation method was used to separate the seed from the pulp. The viable seed sinks to the bottom while the pulp and unfilled seed float to the top.

Pre-Planting Treatments: Seeds are direct sown in the fall to allow for natural cold stratification.

Growing Area Preparation/

Annual Practices for Perennial Crops: Area for planting of the seeds is roto-tilled to a depth of 4 - 6 inches in long strips.

Establishment Phase: Seeds are hand sewn directly onto the tilled soil surface with an approximate rate of 30 seeds per square foot. Seeds are pressed into the soil by walking on them to ensure good seed to soil contact. They are then covered with a 1/2 - 1 inch layer of soil. A layer of clean straw is placed on top of the soil surface to reduce heaving in the winter. Screens are placed over the beds to prevent predation by rodents.

Length of Establishment Phase: 8 months

Active Growth Phase: Germination begins in the spring after the cold stratification period. A radicle is produced first and then the shoot emerges.

Length of Active Growth Phase: 6 - 9 months

Hardening Phase: No hardening phase is required because the seedlings are being produce in a natural setting and are still dormant when lifted.

Length of Hardening Phase: N/A

Harvesting, Storage and Shipping: Seedlings are lifted in early spring prior to breaking dormancy. The tap roots are often very long and the seedlings may be difficult to remove from the soil. Seedlings are placed in barrels with the roots covered with moist sawdust. Seedling are stored in a cooler at 34 degrees Fahrenheit until ready to be shipped in early spring. Seedlings are bundled together for shipment with moist sphagnum placed around the root systems to prevent drying out.

Length of Storage: 1 - 4 weeks

Outplanting performance on typical sites: Black cherry is a shade-intolerant species so it does not do well under heavy canopy growing conditions. It typically performs well in forest openings, along fence rows, and old fields.

Other Comments: Care should be taken when selecting sites for outplanting of black cherry. The leaves, twigs, bark

and seeds produce a cyanogenic glycoside which can be harmful or fatal to some livestock. The wilted leaves tend to have higher concentration of the toxin.

References: **Bonner, F.T. & R.P. Karrfalt, 2008. The Woody Plants Seed Manual. USDA Forest Service. Agriculture Handbook 727.**

USDA, NRCS. 2012. The PLANTS Database (<http://plants.usda.gov>, 12 July 2012). National Plant Data Team, Greensboro, NC 27401-4901 USA.

Citation:

Lester, Randall K.; Vandevender, John C. 2012. Propagation protocol for production of field-grown *Prunus serotina* plants (1+0); USDA NRCS - Appalachian Plant Materials Center, Alderson, West Virginia. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 3 January 2013). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.