

# Dupuyer Streambank Germplasm and Pondera Floodplain Germplasm silverberry

*Elaeagnus commutata* Bernh. ex Rydb.

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



*Pondera Floodplain Germplasm silverberry*

Dupuyer Streambank and Pondera Floodplain silverberry *Elaeagnus commutata* Bernh. ex. Rydb. (accession numbers 9081339 and 9081340, respectively), are Source-Identified, germplasm selections released cooperatively by the USDA-Natural Resources Conservation Service (NRCS), Plant Materials Center (PMC) at Bridger, Montana, the Montana Department of Natural Resources and Conservation, and the Montana and Wyoming Agricultural Experiment Stations.

## Description

Dupuyer Streambank and Pondera Floodplain exhibit the same general anatomical and phenological attributes as noted below for the species. Silverberry is a multi-stemmed, suckering, deciduous shrub ranging from 5 to 12 feet tall. In Montana, heights of 5 to 8 feet are most common. It has an erect, upright habit with slender and sometimes twisted branches. Bark of the new stems is initially light to medium brown in color, becoming dark gray, but remaining smooth, with age. The leaves are deciduous, alternate, 1.5 to 3.5 inches long and 0.75 to 1.5 inches wide. The leaf shape is described as oval to narrowly ovate with an entire leaf margin. Both the upper and lower leaf surfaces are covered with silvery-white scales, the bottom sometimes with brown spots. The highly fragrant, yellow flowers are trumpet-shaped,

approximately 0.5 inches in length, and borne in the leaf axils in large numbers in May or June. The fruit is a silvery-colored, 0.3 inches long, egg-shaped drupe that ripens in September to October. Some fruit may persist on the plant until well into December. It spreads vegetatively by underground stems, forming thicket-like colonies.

## Source

Both Dupuyer Streambank and Pondera Floodplain silverberry were identified and collected in Montana near Dupuyer Creek approximately 0.25 miles due south of the Dupuyer Diversion. The site is located in Section 28, Township 29N, Range 6W at a North Latitude of 48°14'30.53" and a West Longitude of 112°23'15.45". The original collection site is at an elevation of 3,857 feet with a 2 percent, or less, slope and a westerly exposure. The soils are mapped as Havre/Ryell fine loams.

## Conservation Uses

Dupuyer Streambank silverberry is recommended for lower riparian, bottomland sites characterized by high levels of soil moisture and periods of temporary inundation. In contrast, Pondera Floodplain silverberry is recommended for upper streambank and floodplain terraces characterized by fairly well-drained sites and adequate, but not excessive, available soil moisture. Both selections have potential applications in streambank stabilization, wildlife habitat, and windbreak and shelterbelt projects.

## Area of Adaptation and Use

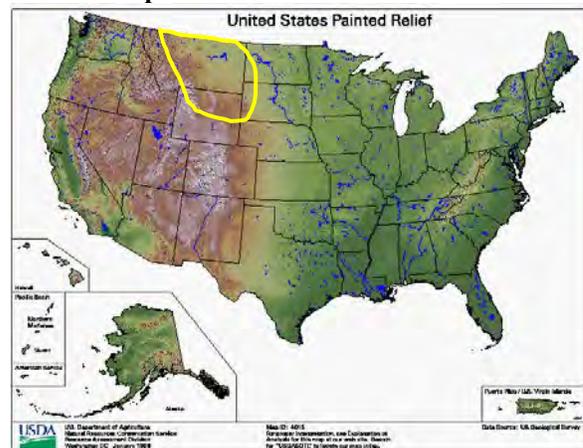


Figure 1. Range of adaptation of Dupuyer Streambank and Pondera Floodplain silverberry.

For updated distribution information, please consult the Plant Profile page for this species on the PLANTS Web site.

Silverberry native range is from eastern Canada, west to the Northwest Territories and south to Minnesota, South Dakota, and Utah. It is the only *Elaeagnus* native to North America. Both selections should grow well in all areas where the species is found occurring in Montana and Wyoming east of the Continental Divide (see Figure 1). They may also perform well in western Montana and Wyoming, but have not been field tested in those areas. Silverberry falls in USDA Hardiness Zone 2 hardy, capable of tolerating average minimum winter temperatures of -40° to -50°F.

### **Establishment and Management for Conservation Plantings**

Dormant bareroot or container nursery stock, planted in the spring, is preferred. Control all competing vegetation at least one year prior to planting.

Silverberry averages 3,800 seeds per pound. The recommended seeding rate for a full stand of silverberry is 1 to 2 pounds of pure live seed (PLS) per acre, although less seed is used when combined with other species in a mix. A seeding depth of ½- to ¾-inch is recommended. Fresh seeds germinate without a moist:chilling treatment, whereas stored seeds respond to such a pretreatment with improved total germination and germination rate. Silverberry can be field established by both early spring and dormant fall sowing.

### **Ecological Considerations**

Silverberry is adapted to high pH (8.0) and saline soils. It is quite drought tolerant and once established will grow well in 11- to 12-inch annual precipitation zones in eastern Montana. Silverberry may spread aggressively on moist, high fertility sites. Mechanical cultivation between rows has effectively controlled the spread of suckers into adjacent rows in a long-term planting at the PMC. In naturally occurring populations in Montana, silverberry is not invasive. Few insect or disease problems are reported, but include aphids, scale, and branch canker. Silverberry is shade intolerant.

### **Seed and Plant Production**

Greenhouse propagation by seed is easy as fresh seed germinates readily with little or no cold chilling. Moist:chilling of older seeds for 30 to 90 days may increase total germination and germination rate. Growth of this species is rapid, so fairly large (20-cubic-inch or greater) containers are needed, even when producing 1-year-old stock.

Late-fall (after November 1) sown seeds germinate the next spring. Fresh seed sown in the field in the spring often germinates within 2 to 4 weeks. Use a 60-day

artificial chilling pretreatment prior to field sowing to ensure good germination. Bareroot production in a nursery bed is similar to that of other easy-to-grow species. Spray and cultivate a fairly well-drained soil to eradicate weeds and allow good seed-to-soil contact. Because germination is normally high, sow 15 to 20 PLS seeds per linear foot of row. Root prune production beds after the second growing season if 2-0 or older plants are to be produced. Harvest 1- or 2-year-old stock in the early spring or late fall as dormant material.

Both selections propagate well (>80 percent) by dormant, hardwood cuttings taken in January through February. Use conventional cutting protocols including basal wounding, treatment with 3,000 to 5,000 parts per million indole-3-butyric acid powder, a well-drained, sterile media, overhead mist, and bottom heat. Cuttings should root in about 8 weeks. Information on the field propagation of this species by dormant, un-rooted hardwood cuttings is not available, but may prove successful on favorable sites.

### **Availability**

Commercial seedlings are available from state conservation seedling nurseries. Nursery growers should contact the USDA-NRCS Plant Materials Center, 98 South River Road, Bridger, Montana, 59014 to inquire about seed availability.

Authors: Staff of USDA-NRCS, Plant Materials Center, Bridger, Montana.

*For more information, contact:*  
Bridger Plant Materials Center  
98 South River Road  
Bridger, Montana 59014  
Phone 406-662-3579  
Fax 406-662-3428  
<http://plant-materials.nrcs.usda.gov/mtpmc>

### **Citation**

Release Brochure for Dupuyer Streambank Germplasm and Pondera Floodplain Germplasm silverberry *Elaeagnus commutata* Bernh. ex. Rydb. USDA-Natural Resources Conservation Service, Bridger Plant Materials Center, Bridger, Montana, 59014. Published February 2013.

For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

*Helping People Help The Land*

USDA IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER