

## PLANT MATERIALS TECHNICAL NOTE

---

### Silverscape® olive *Elaeagnus* x 'Jefmorg' or *Elaeagnus* x 'Silverscape'

#### Not a Replacement for Russian Olive in Conservation Plantings

By

Joe Scianna, Manager/Horticulturist, USDA-NRCS, Bridger, Montana  
Craig Stange, State Staff Forester, USDA-NRCS, Bismarck, North Dakota  
Dwight Tober, Plant Materials Specialist, USDA-NRCS, Bismarck, North Dakota



Figure 1. Silverscape® olive

#### Introduction

The discontinued use of Russian olive in conservation plantings in Montana, and the potential future loss of green ash in the western United States to emerald ash borer, has prompted conservationists and landowners to consider alternatives to these species. Much discussion, and misinformation, surrounds Silverscape® olive *Elaeagnus* x 'Jefmorg' or *Elaeagnus* x 'Silverscape'. This technical note describes the selection, functional differences between it and Russian olive, its limitations in conservation plantings as a result of unproven sterility, as well as potential uses should sterility ultimately be proven.

## Description

Silverscape® olive is a naturally occurring hybrid between Russian olive and native silverberry *Elaeagnus commutata* discovered by Greg Morgenson of Bismarck, North Dakota and introduced into Canada by Jeffries Nurseries Ltd. It was one of approximately 25 naturally-occurring hybrid plants selected by Dr. Wilbert Ronald of Jeffries Nursery. The hybrids were planted in a single row and none produced viable seeds over a 10-year period, although they did produce fruit and seeds. In all cases, silverberry was the female plant and Russian olive the male plant (pollen donor). It is theorized that both the pollen and ovule of Silverscape® are sterile, but this has not been proven by laboratory studies to date.

Silverscape® is described as a medium shrub with a weeping growth habit and attractive silver-white foliage. It root suckers like its silverberry parent, but to a lesser degree. It grows at a moderate rate, tolerating low soil moisture and marginal fertility conditions. Although not currently tested, it should tolerate modest soil salinity based on the salinity tolerance of both parents. It does best in full sunlight and grows well in USDA Hardiness Zones 2 through 5 or warmer. It resembles a tall, multi-stemmed silverberry more than a single-trunk Russian olive. No specific insect or disease problems have been noted to date, although some canker-like losses were noted in North Dakota.



Figure 2. Silverscape® olive foliage and stems.



Figure 3. Silverscape<sup>®</sup> olive, Bridger, Montana

### **Field Testing**

In Montana, six rooted cuttings planted at the Bridger Plant Materials Center in 2005 continue to grow well. Cuttings were planted in a clean cultivated field (clay-loam soils) in woven weed fabric and provided limited supplemental irrigation the first and second year of establishment. Heavy deer browsing occurred the first three growing seasons resulting in a compact, dense form. Bridger is located in a 10-inch annual precipitation zone, USDA Hardiness Zone 3, elevation approximately 3,700 feet, with a 135-day+ growing season. No fruit has been produced after seven growing seasons.

Five test plants were established at Morris, Minnesota, in 2006. When inventoried in 2009 they showed very good vigor with 100 percent survival and a height of 9 feet and a width of 9 feet.

Five plants were established at Brookings, South Dakota in 2006. They experienced 60 percent mortality the first season, and dead plants were replaced in 2007. When inventoried in 2009, they exhibited 80 percent survival, 4.5 feet in height, and 4 feet in width.

Some losses to disease, presumably fungal, were noted in North Dakota plantings. Growth of surviving plants was good, reaching 9 feet in height and width on a gravelly site in a 23-inch annual precipitation zone after three growing seasons. Suckering was minimal after five growing seasons and no viable seeds were produced. The lower limbs tend to grow laterally and close to the ground with age, making them susceptible to injury from mechanical cultivation. Additionally, limbs tend to break easily, and may be susceptible to damage from heavy snow loads.

### **Area of Adaptation**

Based on the range of the parents, Silverscape<sup>®</sup> should prove well adapted to most USDA Hardiness Zone 2 through 5 locations in Montana, Wyoming, North Dakota, and South Dakota, below 6,000 feet, with decreasing elevation at the most northerly locations.

## Conservation Uses

This selection is not on the Montana NRCS approved species list for conservation plantings. Based on the observed form of this selection, Silverscape<sup>®</sup> is not considered an acceptable replacement for Russian olive or other small to medium-stature deciduous trees when the functionality of the conservation practice depends on a mature height over 10 feet and a tree form growth habit. If pollen and seed sterility is ultimately proven by laboratory studies, this selection may prove suited for naturalistic, low maintenance, and Xeriscape<sup>®</sup> plantings where suckering is not a concern. It may prove well suited as a medium to tall, multi-stemmed shrub in a windbreak or shelterbelt system, although its weak branches may limit its use in living snow fences. Its suckering habit and fruit production make it a potential source of cover and food in wildlife plantings.

## Recommendations

Given the lack of proven sterility, and no commercially available plant material in the United States, this selection is not on the list of approved plants for use in Montana by the Natural Resources Conservation Service for any conservation application. Consider other native alternatives like silver buffaloberry *Shepherdia argentea*.

## Availability of Plants and Seeds

No retail distributors of this selection are available in the United States. Obtaining plants/cuttings may not be possible. Contact Jeffries Nurseries at [www.jeffriesnurseries.com](http://www.jeffriesnurseries.com) or Jeffries Nurseries Ltd., P.O. Box 402, Portage la Prairie, Manitoba, R1N 3B7, Canada, or call (204)-857-5288 for availability and additional information.

|   |  |  |
|---|--|--|
|  | Visit the Plant Materials Program website at:<br><a href="http://Plant-Materials.nrcs.usda.gov">http://Plant-Materials.nrcs.usda.gov</a> | <b>PLANT SOLUTIONS FOR CONSERVATION NEEDS</b><br>The USDA is an Equal Opportunity Employer |
|---|--|--|