



**2007 Report**  
**Off-center Evaluation of Woody Plant Materials**  
**Bottineau, ND**

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**Introduction**

The Bismarck Plant Materials Center (PMC) was established in 1954 as part of the Soil Conservation Service, now Natural Resources Conservation Service (NRCS). A principal task of the PMC has always been tree improvement. There is a need to evaluate how different trees and shrubs will perform in various conservation plantings, under diverse soils and climate conditions. The PMC is currently testing woody plants at eight locations in Minnesota, North Dakota and South Dakota. The City of Bottineau is the northernmost site in our three-state area. The PMC first started evaluating trees and shrubs at Bottineau in 1974, in cooperation with the North Dakota State Forest Service. The soils and climate at Bottineau have had a strong effect on survival. The care and attention that the test site has received over the years is the main reason for its continuation and success. All cooperators have contributed to the maintenance of the site. The current Memorandum of Understanding expires on July 19, 2009. This summary does not contain the complete list of woody plants being evaluated. A separate report containing all data can be found at the NRCS Area Office at Devils Lake, or the Bismarck Plant Materials Center. Contact Mike Knudson at the PMC for additional species information.

**Recent Activities**

On May 8, 2007, three new entries were planted. These were 9082687 American currant from eastern SD, 9082747 American cranberry from Sandy Lake, and 9091964 skunkbush sumac from western SD. At present, there is not a lot of room for new entries. In 2007, an extra row was created, as there was wide spacing between some of the rows in Block III. At that time, a number of entries were cut down. These plants were either completely dead or doing very poorly. The equipment suited to removing the stumps was not available. It may take several years to finish removing the old stumps and the other volunteer plants. Chokecherry, boxelder, and Amur maple seedlings have invaded a lot of the existing rows. Some of the entries cut down were Imperial poplar, SD-131 mayday, Streamco willow, and ND-3890 Russian olive. More plants need to be removed. The juneberries in Block III, row 4, and the Bighorn skunkbush sumac and ND-629 Amur maple in row 5 should be removed. The original plants of the sumac and the juneberries are mostly dead.

Some of the tall tree species, especially the green ash have grown well. There are a number of shrub species which show great promise. These shrubs can be colorful,

attractive to wildlife, as well as great snow barriers. Some accessions that are doing well at this location are:

**9057409 American hazel**, which originates from the Turtle Mountains, has grown well at several evaluation sites in the three-state area. The nuts are great for wildlife.

**ND-170 European cotoneaster**, which seems more resistant to fire blight than the variety Centennial. It is also somewhat shorter. Under good care, it will form a dense row.

**9047238 sea berry**, also known as sea buckthorn, has bright orange fruit that is very high in vitamin C. It is a suckering shrub and performs best on coarse-textured soils.

**'Meadowlark' forsythia** was released by NDSU and named in honor of our state bird, because of its bright yellow flowers, which form early in the spring. It prefers clays to loamy soils.

**323957 black chokeberry** produces a heavy fruit crop useful in making juices. It is best when blended with other juices such as grape or apple. Leaves show nice fall color. It does best on sites with more moisture. In the Midwest, the Ruffed Grouse feed on the berries. The PMC plans on releasing this accession as 'McKenzie' black chokeberry in 2008.

### **PMC Releases**

Since 1973, the PMC has released 14 new selections and cultivars of woody plants. The performance at Bottineau of the plants listed below was used as support for their formal release. All these releases are available from several conservation nurseries for conservation plantings. The newest variety is the 'Prairie Red' plum, which was released this year. This tasty plum is available in limited quantities from conservation nurseries for the spring of 2007.

'Midwest' Manchurian crabapple (1973)

'Cardan' green ash (1979)

'Centennial' European cotoneaster (1987)

'McDermid' Ussurian (or Harbin) pear (1990)

'Regal' Russian almond (1999)

Survivor Germplasm false indigo (2005)

Silver Sands Germplasm sandbar willow (2005)

'Prairie Red' plum (2006)

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