

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
ELSBERRY, MISSOURI

**NOTICE OF RELEASE OF MIDWEST PREMIUM GERmplasm AMERICAN PLUM
SELECTED CLASS OF NATURAL GERmplasm**

The Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture announce the release of a selected ecotype of American plum (*Prunus americana*, Marsh.) for the Elsberry, Missouri Plant Materials Center three state service area; Iowa, Missouri, and Illinois.

As a selected release, this plant will be referred to as Midwest Premium Germplasm American plum. It has been assigned the NRCS accession number 9083241. Midwest Premium Germplasm is a selected class of certified seed.

This alternative release procedure is justified because there is a lack of available selections of American plum, specifically for the three state service area.

Collection Site Information: Midwest Premium Germplasm originally was collected from naturally occurring wild plants in the states of Missouri, Illinois, and South Dakota. Midwest Premium American plum, 9083241, is made up of six different collections.

Description: *Prunus americana*, American plum is one of the first shrubs or small trees to flower in the woodland. The showy clusters of fragrant white flowers are blooming while most of the woods are bare of foliage. American plum flowers from April through May and produces fruit from July to September. The flowers are bisexual and normally have five white petals and 15 to 20 stamens. Pollination of the flowers is achieved by insects. Flowers are solitary, in umbellike clusters and usually appear before the leaves. Leaves alternate and are somewhat oval, long and narrow-pointed. The leaves are doubled-toothed along the edge and have a dark green top and a paler bottom. The length is 2 to 5 inches and width is about 2 inches for each leaf. The fruit is thick and fleshy consisting of a one-seeded drupe that has a bony pit. American plum is very prone to root suckering and can form a thicket from a single tree. Bark from American plum is thin, reddish-brown and broken into thin plates. Thorny extrusions are often found on the trunk and branches. Mature American plum trees can grow to an average maximum height of 24 feet and can have a diameter of 5 to 10 inches.

Method of Selection: There were 18 different collections (170 individual plants) of the American plum assembly. From 1993 to 2000, evaluations were conducted for height, width, drought tolerance, insect and disease resistance, form, and survival. Six collections were selected based primarily on fruit production, drought tolerance, and insect and disease resistance. There were four accessions, (9068545, 9068546, 9068580, and 9058485) that exemplified excellent fruit production. Accession 9057088 was selected based on its remarkable resistance to drought and insect and disease resistance. Accession 9062309 is a collection from South Dakota and it has extraordinarily large fruit. This accession was selected based on the size of fruit and because it did not differ significantly in other categories from the other selected accessions.

(Refer to table 1 for evaluation data.) The six collections were made up of 37 trees and all other trees were eliminated from the assembly.

Ecological Considerations and Evaluation: Midwest Premium American plum is a selection of naturally occurring germplasm and has undergone minimal purposeful selection. Midwest Premium American plum does not differ significantly in rate of spread and vigor from naturally occurring wild plum. Midwest Premium American plum was “O.K. to release” when evaluated through the “Worksheet for Conducting an Environmental Evaluation of NCRS Plant Releases”.

Anticipated Conservation Use: American plum provides excellent food and wildlife habitat. There is a potential use for American plum in windbreaks as a medium size shrubby tree. American plum thickets could be used to help prevent soil erosion with their root systems. American plum can be used in poor soils with a wide range of pH.

Anticipated Area of Adaptation: American plum can generally be found in thickets, particularly along stream banks. It grows in rich soil or in moist locations, but also has a hardiness that will withstand severe locations. American plum trees perform best in a well drained soil and a sunny location. *Prunus americana* is present from Florida to New Mexico and Arizona, north to Massachusetts, New York, Ontario, Michigan, Wisconsin, Minnesota, Manitoba, Wyoming, and Utah.

Availability of Plant Materials: G1 material is being produced in limited supply by the Elsberry Plant Materials Center. For information contact USDA, NRCS, Elsberry Plant Materials Center, 2803 N. Hwy 79, Elsberry, Missouri 63343 (573 898-2012).

References:

Young, J. and Young, C. 1992. Seeds of Woody Plants in North America. Dioscorides Press. Portland, OR.

Styermark, J. 1963. Flora of Missouri. Iowa State University Press. Ames, IA.

Wisconsin Department of Natural Resources 2005. American Plum (*Prunus americana*). www.dnr.state.wi.us/org/land/forestry/treeid/TreePgs/prunusamer.htm, 3/24/2005 11:40am

Prepared by:

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Midwest Premium American Plum Selection Data								Table 1	
<i>Acc. Number</i>	<i>Height</i>	<i>Width</i>	<i>Fruit Production</i>	<i>Drought Tolerance</i>	<i>Insect Damage</i>	<i>Disease Damage</i>	<i>Percent Survival</i>	<i># of Plants in Assembly</i>	<i># of Plants Selected</i>
9068545	10.06	12.33	3.44	1.22	2.33	2.11	87	15	9
9068546	10.63	12.88	4.63	1.63	2.50	2.13	100	12	8
9068580	9.89	10.67	4.78	1.11	1.67	1.22	78	18	9
9068485	8.50	9.11	5.14	3.00	3.86	3.57	70	10	4
9057165	8.30	9.30	5.80	3.20	4.00	3.60	100	5	
9068514	8.83	9.08	6.50	5.67	2.50	2.50	86	7	
9062308	8.58	9.67	6.50	3.00	3.67	2.33	60	10	
9068543	8.88	10.13	6.75	3.75	3.50	2.25	40	10	
9068480	8.38	9.21	6.75	2.58	4.00	2.75	80	15	
9062309	9.40	10.60	6.80	3.20	3.20	2.00	71	7	5
9068516	8.75	10.17	6.83	4.83	2.67	2.00	86	7	
9068515	8.33	9.28	6.89	0.44	3.00	2.78	82	11	
9068478	8.25	8.95	7.40	2.10	1.50	1.30	91	11	
9057088	11.50	14.00	8.00	1.00	1.00	1.00	91	11	2
9057096	10.10	9.30	8.00	3.40	4.00	2.60	42	12	
9057146	7.50	10.00	2.00	2.00	2.00	1.00	100	1	
434340	9.00	11.00	9.00	0.00	7.00	7.00	29	7	
ND286	0.00	0.00	0.00	0.00	0.00	0.00	0	1	
*Height and width are measured in feet (ft.)									
*Fruit Production, Drought Tolerance, Insect Damage, and Insect Damage were									
Evaluated and given a 1-9 rating; (1 is excellent and 9 is poor)									
*Plants selected for the Midwest Premium Germplasm American plum release are highlighted									

Signatures for release of:

Midwest Premium Germplasm American plum (*Prunus americana*, Marsh.)

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