

WOODY ORNAMENTAL AND SHELTER PLANTS
FOR THE
NORTH CENTRAL REGION
1966-1970

Five-Year Report on Regional Plantings*
of
Amelanchier alnifolia Nutt. ex Roemer
Saskatoon Serviceberry
PI 303169

Amelanchier alnifolia, a 0.5 to 4.0 m. rosaceous shrub, was not introduced to arboreta until 1918, although it has long been known to man. Indians collected and dried the fruit for their winter use. Lewis and Clark noticed this shrub in their Louisiana Purchase exploration (1804-1806). David Douglas sent seeds to the London Horticultural Society in 1826. Nuttall's description was published in 1834. It occurs from Manitoba and Minnesota westward to Wyoming, Colorado, New Mexico and Utah and northward to central Alaska and the Yukon Territory. The seedlings used in these regional trials were grown at the North Platte Station from seed collected in the wild southwest of Gypsum in central Colorado in 1963 by Glenn Viehmeyer. This was one of 22 introductions of this species which Viehmeyer made from 4 states. In the 45 years (1918 to 1963) only 9 seed lots of this shrub had been given U.S. Department of Agriculture plant introduction numbers.

A total of 90 seedlings of PI 303169 were planted by cooperators at 30 trial sites. 104 reports from 22 of these tests (see Table 1) show 36 plants, (including 2 at Ft. Collins, Colorado), living out of 65 planted, or 55 percent survival. First year losses of 3 plants were noted at 2 South Dakota trials. These losses were attributed to drought and poor condition of planting stock. (The cause of other plant losses is given in Table 1 when this information was available.)

Leaf diseases which annually cause a high percentage of the foliage to die and drop were observed at Roselake, Michigan; Chaska, Minnesota and Arlington, Wisconsin. These reports raise serious doubts as to the use of this species in all but the drier parts of the North Central Region. The alkali induced chlorosis together with the death of 2 plants at Crookston, Minnesota suggest a further limitation to the successful raising of this shrub in the drier parts of the Region.

Trial plants with flowers were observed at Dickinson, North Dakota; Colby, Kansas; Columbia, Missouri and Wooster, Ohio. Plants of PI 303169 did not flower at Palmer, Alaska, while plants of similar size from northern Alberta, Canada did. Fruiting of trial plants was reported from Dickinson, North Dakota and Columbia, Missouri.

If this introduction is to be grown successfully in the Region, plants with desirable growth habit, tolerant to leaf diseases, with good flower and fruit characters, will have to be selected from seedling populations. Seed of this and other of Viehmeyer serviceberry introductions is available at the Regional Station.

1972

* A regional testing program organized as a work plan under the North Central Regional Plant Introduction state-federal cooperative project NC-7 Title: NC-7 "New Plants" -- The Introduction, Multiplication, Preservation, and Evaluation of New Plants for Industrial and Agricultural Utilization. Sub-Title of work plan: Woody Ornamental and Shelter plants for the North Central Region. This report concerns trial plantings of the NC-7 Ornamentals Subcommittee in: Alaska, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; also a planting at Ft. Collins, Colorado in the Western Region in cooperation with Regional Project W-6.

TABLE I

NC-7 Regional Trial of Ornamental Plants

Five Year Summary of: Amelanchier alnifolia, Nutt., ex Roesner

Saskatoon Serviceberry

PI 303169

1966-1970

Plants from: North Platte Station, University of Nebraska

NO. CENTRAL REGION	Site Care	Stock Size	No. Plants	No. Live	Loss Factors	1st Yr. Growth*	Plants Injured	Injury Factors	5th Yr. Ht.	Size (Ft.) Spread	Shoot	Growth Factors	5th Yr. Flowers**	5th Yr. Fruits**
Palmer, Alaska	CT	--	5	2	--	3	1	--	2.2	2.0	--	--	1	1
Ames, Ia.	CT/SA	1.0-1.5'	4	4	--	2	--	--	3.75	2.5	0.7	--	--	--
Colby, Kansas	CT	1.5-2.0'	2	2	--	--	--	--	5.0	4.5	1.25	--	2	--
Roselake, Mich.	Herbicide	1.0-1.5'	5	5	--	--	--	--	2.0	2.0	--	134	1	1
Chaska, Minn.	S/M	1.0-1.5'	3	0	075	3	3	13	--	--	--	--	--	--
Waseca, Minn.	CT/SA	1.0-1.5'	3	2	02	2	--	--	5.7	2.5	--	--	--	--
Morris, Minn.	CT	1.0-1.5'	3	1	52	1	--	--	4.0	2.5	0.7	--	--	--
Crookston, Minn.	CT	1.0-1.5'	2	0	30 83	2	1	804	--	--	--	--	--	--
Grand Rapids, Minn.	NRS	1.5-2.0'	3	1	--	--	1	072	3.0	2.5	.2	--	--	--
Columbia, Mo.	CT	2-3'	3	1	02	3	--	--	12.5	11	1.2	--	3	2
Elsberry, Mo.	S/M	1.0-1.5'	5	4	--	--	--	--	1.7	.7	--	--	2	1
Scottsbluff, Neb.	NRS	1.0-1.5'	2	2	--	1	--	--	1.4	1.5	0.3	--	1	1
Fargo, No. Dak.	CT	1.0-1.5'	2	0	83	2	--	--	--	--	--	--	--	--
Dickinson, No. Dak.	CT	1.0-1.5'	2	1	--	2	--	--	4.5	3.0	0.8	--	2	2
Carrington, No. Dak.	CT	1.0-1.5'	2	1	83	2	--	--	3.6	3.1	0.7	--	1	1
Wooster, Ohio	S/M	1.0-1.5'	3	3	--	--	--	--	3.0	2.2	0.7	--	2	1
Brookings, So. Dak.	CT	.5-1.0'	3	0	42 83	2	--	--	--	--	--	--	--	--
Highmore, So. Dak.	CT	.5-1.0'	3	0	51 52	2	2	19 804 824	--	--	--	--	--	--
Yankton, So. Dak.	CT	.5-1.0'	3	1	41	1	1	10 50 193	--	--	--	--	--	--
Arlington, Wisc.	CT/SA	.5-1.0'	3	2	13	3	--	--	3.5	2.5	.6	--	1	1
Madison, Wisc.	CT	.5-1.0'	3	3	--	3	--	--	4.9	3.2	1.2	--	1	1
WESTERN REGION														
Ft. Collins, Colo.	CT	.5-1.0'	6	2	--	2	1	074	3.5	3.5	1.1	--	3 (6th yr.)	--

CAREFACTORS RELATING TO PLANT LOSS, INJURY AND GROWTH

		Severity		Severity	*1st Yr. Growth Rating
CT - Clean Tilled	02 Plant destroyed	5	<u>Delayed losses and injuries</u>		
CT/SA - Clean Tilled with Sod Alley	07 Farm Equip. Injury	2-5	50 Prolonged drought	2-5	1. Poorly
S/M - Sod with Mulch	10 Plant Competition (Weeds)	2-4	51 Failed to initiate spring growth	5	2. Slowly
NRS - Nursery Row with sod	13 Leaf Diseases	2-4	52 Failed to leaf out in part	2-	3. Readily
	19 Rabbits	2-4	<u>Winter Injury</u>		
	30 Alkali	2-5	80 Tips of Twigs	2-3	**5th Yr. Fruit and Flower
	<u>Failed to Establish</u>		81 One year wood	2-4	1. None
	41 Prolonged drought	5	82 To snow line	4	2. Few
	42 Difficult to transplant	5	83 Entire plant killed	5	3. Many
<u>Severity</u>					
1. none					
2. slight					
3. moderate					
4. severe					
5. dead					