

THIRTY YEARS OF TREE PLANTING AT THE MCKENZIE FIELD EVALUATION SITE 1972 - 2001



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**Thirty Years of Tree Planting
at the McKenzie Field Evaluation Site: 1972-2001
Compiled by Michael Knudson, PMC Forester**

Introduction

A great need exists in the Northern Great Plains for tree and shrub species and cultivars with superior winter hardiness, growth rates, and resistance to disease and insects. These trees and shrubs are used in field and farmstead windbreaks, and in various recreational and wildlife plantings. Many of the species and cultivars available commercially are not adapted or have characteristics that make them unsuited to use in the Northern Great Plains. Since 1972, the McKenzie Slough Game Management Area (North Dakota Game and Fish Department) has served as an initial screening location for new woody plants evaluated by the Plant Materials Center at Bismarck, North Dakota.

Objective

The objective has been to assemble and evaluate woody plants for conservation use on a site, which allows for uniform culture and management over an indefinite period of time. The plants that are tested include new cultivars, older accessions that are used as standards of comparison, and promising accessions obtained from local, regional and foreign sources.

Cooperators

The USDA Natural Resources Conservation Service, Plant Materials Center (PMC), Bismarck, North Dakota, in cooperation with the North Dakota Game and Fish Department.

Location

This study is located at the McKenzie Slough Game Management Area, 1.5 miles south of McKenzie, North Dakota, which is 17 miles east of Bismarck, North Dakota. The legal description is NW1/4 sec. 4, T. 138 N., R. 77 W., Burleigh County, North Dakota. The site is located in Major Land Resource Area 53B, Central Dark Brown Glaciated Plains. Most soils are derived from calcareous glacial till. The elevation at the north end of the planting is 1,700 feet.

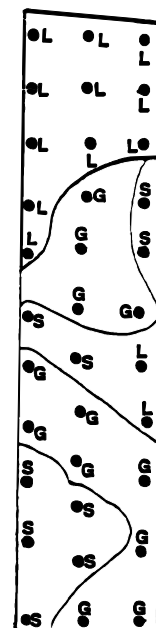
Soils

The three different soils mapping units in the planting area include Grail silty clay loam (G), 0-3 percent slopes; Lawther silty clay (L), 0-1 percent slopes; and Savage silty clay loam (S), 0-3 percent slopes. (See Figure 1).

The Grail series consists of deep, well or moderately well-drained, moderately slow or slowly permeable soils that formed in alluvium. These soils are on upland swales, fans, and foot slopes and have slopes ranging from 0 to 9 percent. The surface soil is a silt loam, while the subsoil is a silty clay loam. These soils are in North Dakota windbreak suitability group 1.

The Lawther series consists of deep, well-drained, slowly permeable soils that formed in calcareous clayey sediments. These soils are on uplands, fans, and terraces, and have slopes ranging from 0 to 9 percent. The surface soil is silty clay and is moderately alkaline. The subsoil is also silty clay and moderately

Figure 1. Soils Investigation

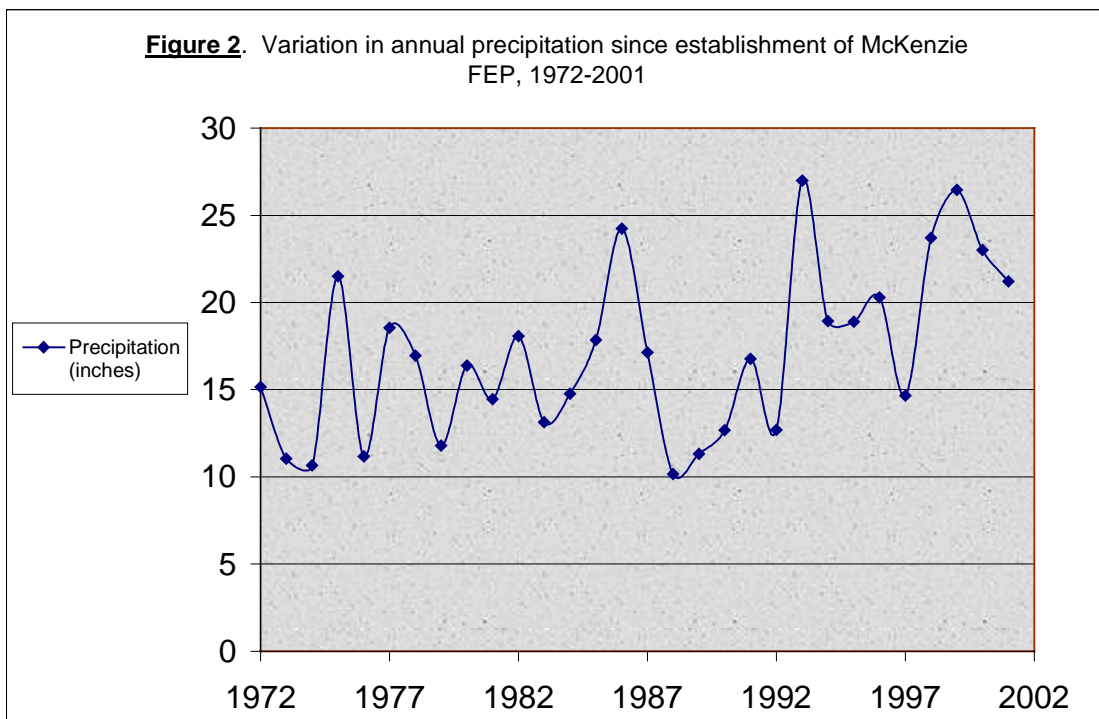


alkaline. These soils are in North Dakota windbreak suitability group 4C.

The Savage series consists of deep, well-drained soils, formed in moderately fine textured glacial plain sediments. The surface soil is silt loam or silty clay loam. The subsoil is silty clay loam or silty clay and contains more clay than the surface soil. The substrata are light colored silty clay loam or silty clay. Permeability is moderately slow. Available water capacity is high. The organic matter content is moderate and fertility is medium. The slopes are 0 to 3 percent. These soils are in North Dakota windbreak suitability group 3.

Climate

The McKenzie site is about 20 miles from Bismarck, where climatic data is recorded. The average annual temperature at Bismarck is about 41 degrees. The average freeze-free period is close to 125 days. The plant hardiness zone is 3b with an average annual minimum temperature of -40 to -30 degrees F. The normal precipitation for Bismarck is about 15.4 inches, of which 76 percent comes during the growing season of April through September. Since 1972, the annual precipitation has varied from 10.2 inches to 27 inches (Figure 2).



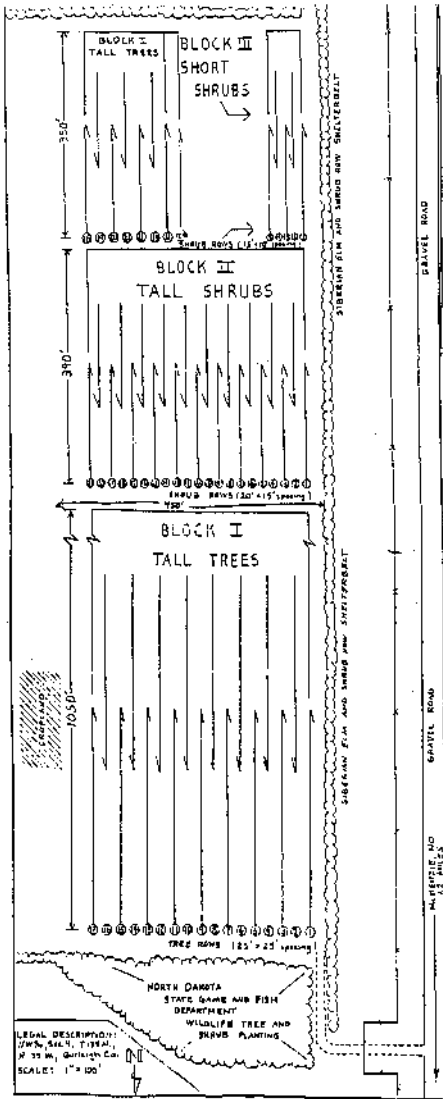
Planting Plan

Since 1972, approximately 480 different accessions of 240 species have been planted. Many of these accessions came from foreign origins, often via the USDA ARS Plant Introduction Stations, and the Morden Arboretum operated by Agriculture Canada at Morden, Manitoba. The plots are not randomized or replicated, but organized in a systematic design for evaluation and demonstration purposes. (See Table 2). The plants are separated into three blocks, depending on height. Block I contains tall and medium-sized trees (greater than 15 feet in height), spaced 25 feet between rows and 25 feet within row. Block II contains tall shrubs and small trees, spaced 20 feet between rows and 15 feet within row. Block III contains medium and small shrubs less than 10 feet in height, spaced 15 feet between rows

and 10 feet within row. Individual plots of 1 to 6 plants are 10 to 150 feet long. Row direction alternates from north-south and south-north, for ease of data collection. (See Figure 3).

Plot Maintenance

Figure 3. Layout of the McKenzie Field Evaluation Planting



A clean, firm planting site was prepared annually by disking. All trees and shrubs were planted by hand in the spring. The newly planted stock was usually watered by hand for the first year. However, many trees did not survive. Some died out the first year, while others lived for several years, only to succumb to adverse weather, disease or herbivores. The most common cause for failure was drought, though in some years severe cold, often in combination with drought, took its toll on the plants.

Between 1972 and 1997, the plots were maintained under clean cultivation. A disk was used between the rows, while hoeing was done around the individual plants. By the mid-1980s the within-row cultivation was done mechanically with a rotary cultivator. This machine worked well after extensive pruning of lower branches on most of the tall trees was completed. During most seasons, the plots were cultivated two or three times. Beginning in the late 1980s, herbicides were used to control some perennial weeds, such as bindweed and Canada thistle. For the first ten years, insecticides were sprayed on some of the trees. A few animal repellents were applied to protect from deer and rabbits. Beginning in 1987, wire cages were used occasionally to protect selected plants from browsing. Tree shelters were also used but were not very helpful. If the shelters are not tall enough to prevent animal browsing, they are not effective.

During the dry years of the late 1980s, cover crops of either rye or oats were sown to reduce erosion. In 1995, the last of new accessions was planted. At that time, a decision was made to establish a permanent cover between the tree rows. Several years of intense weed control were carried out. Then, in the spring of

1998, a permanent cover was established using a variety of native and introduced grasses and legumes. Four strips were seeded. Starting from the west side was an introduced grasses and legumes, followed by a mix of native cool-season grasses and forbs, then warm-season grasses plus forbs, and finally a strip of Russian wildrye on the east side. After four growing seasons, the trees and shrubs are withstanding competition from the grass cover. A few of the smaller trees have died out.

Pruning was done annually to remove dead and broken limbs. Dead or severely damaged or diseased trees were rogued out. Extensive pruning was started in 1986 to allow better weed control around the established plants. During the three-year drought (1988-1990), many trees

died partially or completely. During this period, a lot of trees were removed using a crawler tractor borrowed from the North Dakota Game and Fish Department.

Evaluations and Results

Records have been kept for all the evaluations made on these plants. An evaluation schedule based on year of planting is followed for each plot. Evaluations recorded include height, width, vigor rating, signs of animal browsing, disease, and dieback due to cold or drought.

In the fall of 1990, a survey was taken of the established trees in the tall tree block. In this survey, estimates were made of the percent of dead crowns on the trees showing drought stress. Most of the tree species showing more than 25 percent dead tops were those that are not recommended for planting on soils in windbreak suitability groups 3 and 4. The three families of trees most affected by this drought were the maples, poplars, and willows. These species are often fast growing plants. The tall trees with the best survival were the ash, hackberry, oak, and buckeye. These are relatively slow growing species. Very few of the shrubs were severely affected by the drought.

A complete list of all accessions planted is shown in the Table 3. This is a very wide range of plants. Quite a few plants, especially members of the conifer family, did not survive. The Siberian larch and a few low growing conifers have endured. Many other plants did survive but failed to show outstanding characteristics (Table 4). However, several of the accessions did very well. Based partly on their performance at the McKenzie planting, these plants were released as cultivars by the Bismarck PMC (see Table 1).

Midwest	Manchurian crabapple	1973
Cardan	green ash	1979
Oahe	hackberry	1984
Sakakawea	silver buffaloberry	1984
Scarlet	Mongolian cherry	1984
Centennial	cotoneaster	1987
McDermand	Ussurian pear	1990
Homestead	Arnold hawthorn	1993
Regal	Russian almond	1997
Legacy	late lilac	1999

Table 2. Accessions planted at the McKenzie Field Evaluation Planting by plot location (revised December 2001).

BLOCK I
TALL TREES

<u>ROW NO.</u>	<u>NO. SURV.</u>	<u>ACCESSION/ VARIETY</u>	<u>COMMON NAME</u>
I/01/N-S	10	'Cardan'	Green Ash
	5	SD-13	Green Ash
	6	SD-156	Green Ash
	4	'Marshall'	Green Ash
	2	'Autumn Purple'	Green Ash
	4	SD-13	Green Ash
	10	'Kindred'	Green Ash
	I/02/S-N	6	'Oahe'
6		SD-75	Hackberry
6		SD-211	Hackberry
6		ND-630	Bur Oak
4		ND-994	Swedish Hybrid Oak
I/03/N-S	4	ND-465	Black Walnut
	3	9063130	River Birch
	6	ND-3761	'Siouxland' Cottonwood
	2	ND-3768	'Northwest' Poplar
	2	ND-989	Japanese Elm
	6	9058875	Amur Maple
I/04/S-N	4	9063140	Plains Cottonwood
	6	ND-3814	Crabapple
	5	ND-20	Arnold Hawthorn
	2	ND-25	Downy Hawthorn
	1	A-33985	Crabapple
	6	9063115	Green Ash
I/05/N-S	5	ND-614	Kentucky Coffee Tree
	6	9058876	Common Lilac
	1	9069160	Balkan Pine
	2	ND-14	Harbin Pear
	4	'Midwest'	Manchurian Crabapple
	5	ND-428	Black Walnut
	1	ND-661	Champlain Hawthorn
I/06/S-N	3	PI-495902	Balsam Poplar
	2	ND-1218	Hackberry
	3	NA-49327	Apple
	1	ND-667	River Hawthorn
	1	NA-49317	Apple
	1	NA-49319	Apple
	1	NA-49324	Apple
	5	ND-669	Oneflower Hawthorn
	4	ND-668	Redhaw Hawthorn
	2	ND-20	Arnold Hawthorn
	3	ND-656	Arnold Hawthorn

<u>ROW NO.</u>	<u>NO. SURV.</u>	<u>ACCESSION/ VARIETY</u>	<u>COMMON NAME</u>
I/07/N-S	5	ND-686	Pekin Lilac
	4	'Midwest'	Manchurian Crabapple
	2	'Sakakawea'	Buffaloberry
	2	ND-649	Hackberry
I/08/S-N	1	ND-649	Hackberry
	4	SD-75	Hackberry
	3	ND-632	Hackberry
	6	ND-631	Hackberry
	3	ND-687	Hackberry
	2	'Oahe'	Hackberry
	4	9063141	Eastern Cottonwood
	5	14271	Hybrid Poplar
I/09/N-S	5	Theves	Hybrid Poplar
	3	14272	Hybrid Poplar
	4	ND-14	Harbin Pear
	1	SD-131	Mayday
	4	ND-364	Russian Olive
I/10/S-N	2	ND-364	Russian Olive
	2	ND-650	Bur Oak
	1	ND-674	Bur Oak
	4	ND-3898	Harbin Pear
	2	ND-3796	White Poplar
	2	ND-3803	White Poplar
	2	ND-655	Ohio Buckeye
	2	9057965	Balsam Poplar
I/11/N-S	6	Magenta	Crabapple
	3	ND-465	Black Walnut
	5	ND-1863	Honeylocust
	2	ND-647	Black Ash
	3	SD-13	Green Ash
	3	'Cardan'	Green Ash
I/12/S-N	3	'Cardan'	Green Ash
	6	ND-1843	Russian Olive
	5	ND-3808	Russian Olive
	6	Walker	Hybrid Poplar
	6	Assiniboine	Hybrid Poplar
	3	9069081	Littleleaf Linden
I/13/N-S	2	9069090	Quaking Aspen
	6	Raverdeau	Hybrid Poplar
	5	14394	Hybrid Poplar
	6	14273	Hybrid Poplar
	6	14274	Hybrid Poplar
	6	14390	Hybrid Poplar

<u>ROW NO.</u>	<u>NO. SURV.</u>	<u>ACCESSION/ VARIETY</u>	<u>COMMON NAME</u>
I/14/S-N	6	9016318	Siberian Elm
	1	ND-471	Hackberry
	3	ND-735	Hackberry
	6	14392	Hybrid Poplar
	6	9063126	Japanese Elm
	5	044	Siberian Elm
	4	437	Siberian Elm
	I/15/N-S	5	065
5		14476	Siberian Elm
5		9069116	White Poplar
8		Tower	Poplar
6		9054820	Siberian Elm
5		ND-3919	Hybrid Poplar
I/16/S-N	2	PI-266678	Columnar Euro. Aspen
	2	ND-1248	Brooks Poplar
	5	ND-3920	Hybrid Poplar (screen)
	4	ND-647	Black Ash
	4	ND-3825	Silver Maple
	6	9063116	Black Ash
	4	9063120	Ohio Buckeye
	2	ND-1030	Ohio Buckeye
I/17/N-S	3	ND-1030	Ohio Buckeye
	3	ND-1023	Kentucky Coffee Tree
	5	ND-1024	Kentucky Coffee Tree
	2	ND-1025	Kentucky Coffee Tree
	3	ND-1026	Kentucky Coffee Tree
	4	ND-1135	Kentucky Coffee Tree
	1	ND-1181	Kentucky Coffee Tree
	3	9058896	Austree
I/19/S-N	2	ND-1729	Siberian Larch
	3	ND-1765	Siberian Larch
I/20/N-S	5	SL-383-T	Siberian Larch
	1	9057413	Ponderosa Pine
I/21/S-N	2	ND-2105	Red Mulberry
I/22/N-S	5	9076685	Norway Spruce
I/24/N-S	3	ND-500	Siberian Larch
I/25/N-S	4	ND-2102	Apricot
	6	ND-21	Nannyberry
	1	9057409	American Hazel

BLOCK II
MEDIUM TREES AND TALL SHRUBS

II/01/N-S	4	ND-645	Chokecherry
	5	ND-621	Chokecherry

ROW NO.	NO. SURV.	ACCESSION/ VARIETY	COMMON NAME
II/01/N-S	6	'Schubert'	Chokecherry
	6	ND-83	Late Lilac
	2	ND-629	Amur Maple
II/02/S-N	4	'Konza'	Aromatic Sumac
	2	ND-606	Hardy Almond
	1	MI-1466	Common Juniper
	5	ND-313	Red Tatarian Honeysuckle
	3	0-8-188-5	Japanese Tree Lilac
II/03/N-S	2	ND-1276	Sea Buckthorn
	2	A-2819	Mountain Ash
	6	ND-283	Russian Almond
	6	ND-3	Mongolian Cherry
II/04/S-N	6	ND-678	Smooth Sumac
	5	ND-677	Smooth Sumac
	1	'Schubert'	Chokecherry
II/05/N-S	3	'Indigo'	Silky Dogwood
	5	'Hansen'	Hedge Rose
	6	ND-83	Late Lilac
	5	'Success'	Juneberry
	3	ND-46	Timm's Juneberry
II/06/S-N	2	ND-46	Timm's Juneberry
	3	A-53217	Tatarian Maple
II/07/N-S	3	M-398	Skunkbush Sumac
	4	ND-11	Amur Honeysuckle
	2	9063148	Corktree
II/08/S-N	6	ND-621	Yellow Chokecherry
	6	'Big Horn'	Skunkbush Sumac
	3	ND-1336	Chokecherry
II/09/N-S	2	'Flame'	Amur Maple
	1	NY-5219	Dogwood
	3	ND-532	Nanking Cherry
	5		Juneberry
II/10/S-N	3	ND-28	Cotoneaster
	1	ND-27	Cotoneaster
	5	ND-629	Amur Maple
II/11/N-S	3	ND-473	Mongolian Cherry
	5	'Scarlet'	Mongolian Cherry
	6	'Scarlet'	Mongolian Cherry
	4	ND-170	European Cotoneaster
II/12/S-N	6	9063143	Red Tatarian Honeysuckle
	6	9069080	Arnolds Red Honeysuckle
	1	9069098	Russian Caragana
	2	ND-3813	Rugosa Rose

ROW NO.	NO. SURV.	ACCESSION/ VARIETY	COMMON NAME
II/12/S-N	5	ND-1134	Select Plum
II/13/N-S	5	9069161	Spoil Ax
	4	ND-686	Pekin Lilac
	2	303182	False Indigo
	6	9069115	Honeysuckle
	6	9069128	Honeysuckle
II/14/S-N	3	ND-1029	Yellow Chokecherry
	6	9069129	Amur Chokecherry
	5	PI-384493	Honeysuckle
	1	PI-384494	Honeysuckle
	4	ND-29-7	Golden Currant
II/15/N-S	4	K-1812	Black Cherry
	5	Mich-1342	Silver Buffaloberry
	6	ND-1420	Silver Buffaloberry
	7	ND-1422	Silver Buffaloberry
	1	ND-1029	Yellow Chokecherry
II/16/S-N	1	ND-284	Plum
	5	PI-323957	Black Chokeberry
	3	ND-1421	Silver Buffaloberry
	2	ND-1423	Silver Buffaloberry
	6	ND-1171	Caragana
II/17/N-S	6	ND-663	False Indigo
	6	ND-1173	Chokecherry
	5	ND-288	Plum
II/18/S-N			
II/19/N-S	9	ND-26	Honeysuckle
	6	ND-452	Honeysuckle
	5	'Bighorn'	Skunkbush Sumac
	3	ND-1877	Pekin Lilac
	2	ND-3902	Sandbar Willow
II/20/S-N	1	ND-3902	Sandbar Willow
	6	ND-3887	Caragana
	6	ND-3888	Cotoneaster
	4	'Indigo'	Silky Dogwood

BLOCK III
SHORT SHRUBS

III/01/N-S	5	ND-992	'Coronation' Potentilla
	3	ND-716	Shrubby Cinquefoil
	5	'Dakota Sunrise'	Bush Cinquefoil
	6	ND-3744	Korean Barberry
	5	Mich-768	Blue Creeping Juniper
III/02/S-N	1	Mich-1587	Common Juniper

<u>ROW NO.</u>	<u>NO. SURV.</u>	<u>ACCESSION/ VARIETY</u>	<u>COMMON NAME</u>
III/02/S-N	3	'Hoseri'	American Arborvitae
	1	'Cling Red'	Amur Honeysuckle
	4	PI-371894	Grass Pink #3
	5	PI-371883	Grass Pink #1
III/03/N-S	8	ND-3811	Early Forsythia
	8	ND-3810	Amur Maple
	2	ND-3742	Common Juniper
	3	ND-1550	Horizontal Creeping Juniper
III/04/S-N	6	'Darts Golden'	Dwarf Ninebark
	2	'Vermont Sun'	Forsythia
	4	'Compacta'	Dwarf Amur Maple
	3	'Red Cap'	Euonymus
	3	ND-3745	'Meadowlark' Forsythia
III/05/N-S	3	ND-3745	'Meadowlark' Forsythia
	6	ND-3746	Spoil Ax
	1	ND-3746	Spoil Ax
	6	9047236	False Indigo (L-O-N)
	6	9008041	False Indigo
	3	'Cardinal'	Redosier Dogwood
III/06/S-N	2	ND-3892	Red Tatarian Honeysuckle
	5	'Roselow'	Sargent Crabapple
	5	ND-3893	American Plum
	6	ND-3894	Sandcherry
	5	ND-3896	Nanking Cherry
	4	ND-3903	Korean Willow
III/07/N-S	4	ND-3904	Blue Fountain Willow
	6	ND-3900	Late Lilac
	1	Mich-1841	Northern White Cedar
	5	Mich-1468 ('Affinity')	Northern White Cedar
	1	ND-3904	Blue Fountain Willow
	4	ND-451	Dwarf Korean Lilac
III/08/S-N	4	A-10098	Germander Spirea
	6	'Redwing'	Autumn Olive
	6	'Freedom'	Honeysuckle
	6	ND-2106	Hardy Almond
III/09/N-S	5	'Streamco'	Purpleosier Willow
	6	9057449	Caragana
	5	9057450	Caragana
	2	PI-495882	Water Birch
	3	A-7778	Ural False Spirea
	2	9005399	Blueleaf Honeysuckle
	3	15914	'Emerald Triumph' Viburnum

Table 3. TREES AND SHRUBS PLANTED AT MCKENZIE FEP SINCE 1972
(plants removed have a '-' before the year planted)

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Acer campestre</i>	399308	-1977	hedge maple	Yugoslavia/ARS, Ames, IA	1978	
<i>Acer ginnala</i>	9058875	1972	amur maple	Asia		
	ND-629	72/74	amur maple	Asia/Morden, MB		
	Flame	1978	amur maple	Asia/PMC, Elsberry, MO		
	ND-3810	1982	amur maple	Asia/ARS, Ames, IA		
	ND-1768	1978	amur maple	Asia/ARS, Ames, IA		
<i>Acer negundo</i>	ND-670	-1973	boxelder	Morden, Manitoba	1987	drought
	ND-759	-1974	boxelder	Oliver Co., ND	1991	drought
	ND-758	-1974	boxelder	Oliver Co., ND	1991	drought
<i>Acer nigrum</i>	ND-1246	-1974	black maple	US/ARS, Ames, IA	1976	
<i>Acer obtusatum</i>	399315	-1977		Yugoslavia/ARS, Ames, IA	1978	
<i>Acer rubrum</i>	Armstrong	-1981	red maple	US/ARS, Ames, IA	1987	
<i>Acer saccharinum</i>	ND-3825	1983	silver maple	Burleigh Co., ND		
	ND-3886	-1983	silver maple	Lawyer Nursery, Plains, MT	1992	drought
	ND-654	-1972	silver maple	Pembina Co., ND	1991	
	ND-722	-1973	silver maple	Ramsey Co., MN	1991	
	ND-769	-1974	silver maple	Ramsey Co., MN	1991	
	ND-1009	-1975	silver maple	Steele Co., ND	1992	
<i>Acer saccharum</i>	9063131	-1993	sugar maple	SD/Smith Nursery, IA	2000	not adapted to site
<i>Acer truncatum</i>	18578	-1973	purpleblow maple	China/ARS, Ames, IA	1973	
<i>Acer tatarica</i>	A-53217	1990	Tatarian maple	Asia/ARS, Cheyenne, WY		
<i>Aesculus glabra</i>	ND-655	1973	buckeye	Hettinger Co., ND		
	ND-1030	1975	buckeye	Murray Co., MN		
	ND-1432	-1978	buckeye	Morden, Manitoba	1982	
	ND-350	-1972	buckeye	Morden, Manitoba	1976	
	9069120	1994	buckeye	Ransom Co., ND		
	ND-574	-1973	buckeye	Morden, Manitoba	1976	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Aesculus glabra x octandra</i>	A-7114	-1987	hybrid buckeye	SD/ARS, Ames, IA	1989	drought
<i>Alnus glutinosa</i>	Mich-823	-1975	European alder	Europe/PMC, Rose Lake, MI	1981	
	ND-3776	-1982	European alder	Netherlands/ARS, Ames, IA	1982	
<i>Alnus incana</i>	ND-3777	-1982	gray alder	Netherlands/ARS, Ames, IA	1991	
<i>Amelancier alnifolia</i>	Success	1973	juneberry	ARS, Mandan, ND		
	Timms	1973	juneberry	Towner Co., ND		
	unknown	1973	juneberry			
	495876	-1992	juneberry	Colorado/ARS, Ames, IA	1996	
<i>Amorpha fruticosa</i>	ND-633	1977	false indigo	Washington Co., MN		
	9047236	1987	false indigo	Burleigh Co., ND		
	9008041	1987	false indigo	PMC, Aberdeen, ID		
	303182	1994	false indigo	ARS, Ames, IA		
<i>Aronia melanocarpa</i>	323957	1976	chokeberry	Russia/ARS, Ames, IA		very promising
<i>Berberis koreana</i>	ND-3744	1972	Korean barberry	Asia/NDSU, Fargo, ND		
<i>Betula maximowicziana</i>	ND-1742	-1978	monarch birch	Japan/ARS, Ames, IA	1981	
<i>Betula nana</i>	414758	-1979	dwarf arctic birch	Norway/ARS, Ames, IA	1979	
<i>Betula nigra</i>	9063130	1993	river birch	MN Forestry Assn.		
<i>Betula occidentalis</i>	495882	1990	water birch	CO/ARS, Ames, IA		
<i>Betula papyrifera</i>	9057405	-1988	paper birch	Bottineau Co, ND	1992	drought
	9069129	-1993	paper birch	MN Forestry Assn.	1997	
<i>Caragana arborescens</i>	ND-1171	1975	Siberian pea shrub	Asia/Harding Co., SD		
	ND-3887	1983	Siberian pea shrub	Asia/Lawyer Nursery, Plains, MT		
	9057450	1990	Siberian pea shrub	Asia/ARS, Cheyenne, WY		
<i>Caragana frutex</i>	9069098	1993	Russian pea shrub	Asia/ARS, Ames, IA		
<i>Caragana frutex</i> var. <i>grandiflora</i>	9057449	1990		Asia/ARS, Cheyenne, WY		
<i>Caragana pygmaea</i>	ND-2507	-1988	pygmy caragana	China/Bottineau, ND	1994	
<i>Carpinus betulus</i>	377783	-1977	European hornbeam	Yugoslavia/ARS, Ames, IA	1978	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Celtis occidentalis</i>	Oahe	72/73	hackberry	SD/ARS, Mandan, ND		
	SD-75	72/73	hackberry	Potter Co., SD		
	SD-211	1972	hackberry	Sanborn Co., SD		
	ND-1218	1976	hackberry	Sheridan Co, MT		
	ND-682	-1973	hackberry	Gregory Co., SD	1985	
	ND-649	1973	hackberry	Potter Co., SD		
	ND-632	1973	hackberry	Potter Co., SD		
	ND-631	1973	hackberry	Potter Co., SD		
	ND-687	1973	hackberry	Potter Co., SD		
	ND-471	1974	hackberry	Morden, Manitoba		
	ND-735	1974	hackberry	Potter Co., SD		
	ND-1199	-1976	hackberry	Nicollet Co., MN	1978	
	ND-1200	-1976	hackberry	Waseca Co., MN	1978	
	9057410	-1988	hackberry	McHenry Co., ND	2001	
	9043523	-1989	hackberry	PMC, Beltsville, MD		
<i>Cercocarpus montanus</i>	495886	-1988	mountain mahogany	CO/ARS, Ames, IA	1993	winter injury
<i>Cornus amomum</i>	Indigo	1983	silky dogwood	PMC, Rose Lake, MI		
<i>Cornus mas</i>	Redstone	-1988	cor. cherry dogwood	Asia/PMC, Elsberry, MO	1990	drought
<i>Cornus sericea</i>	Cardinal	1987	redosier dogwood	MN/ARS, Ames, IA		
	495887	-1988	redosier dogwood	CO/ARS, Ames, IA	1988	drought
<i>Cornus stolonifera</i>	Ruby	1984	redosier dogwood	PMC, Big Flats, NY		very low vigor
	Isanti	-1975	redosier dogwood	MN/ARS, Ames, IA	1977	
<i>Corylus</i>	9076683	-1995	hazelnut	MN	1998	small stock
	9076684	-1995	hazelnut	MN	1997	small stock
<i>Corylus americana</i>	9057409	1988	American hazel	Bottineau Co., ND		
<i>Corylus colurna</i>	ND-713	-1972	Turkish filbert	Asia/ARS, Ames, IA	1975	
<i>Cotoneaster acutifolia</i>	ND-3888	1983	Peking cotoneaster	Asia/Lawyers Nursery, MT		
<i>Cotoneaster integerrima</i>	ND-170	1974	European cotoneaster	Asia/Kingsbury Co., SD		
	ND-27	1974	European cotoneaster	Asia/ARS, Mandan, ND		
	ND-28	1974	European cotoneaster	Asia/ARS, Mandan, ND		
<i>Crataegus sp.</i>	ND-1567	-1988	hawthorn	Wells Co., ND	1997	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Crataegus ambigua</i>	49-A-31709	1990	Russian hawthorn	Asia/ARS, Cheyenne, WY		heavily browsed
<i>Crataegus arnoldiana</i>	ND-20 ND-656	72/73 1973	Arnold hawthorn Arnold hawthorn	New England/Morden, Manitoba PMC, Bismarck, ND		
<i>Crataegus caesia</i>	ND-762	-1974		Morden, Manitoba		
<i>Crataegus champlainensis</i>	ND-661	1973	Champlain hawthorn	Morden, Manitoba		
<i>Crataegus flabellata</i>	ND-662	-1973	fanleaf hawthorn	Morden, Manitoba	1976	
<i>Crataegus mollis</i>	ND-25	1972	downy hawthorn	NDSU, Fargo, ND		
<i>Crataegus pedicellata</i>	ND-665	-1973	Ontario hawthorn	Morden, Manitoba	1973	
<i>Crataegus phaenopyrum</i>	MI-7705	-1972	Washington hawthorn	PMC, Elsberry, MO	1981	
<i>Crataegus pinnatifida</i>	ND-622	-1972	Chinese hawthorn	Asia/Morden, Manitoba	1976	
<i>Crataegus punctata</i>	ND-666	-1973	dotted hawthorn	Morden, Manitoba	1973	
<i>Crataegus rivularis</i>	ND-667	-1973	river hawthorn	Morden, Manitoba	1998	
<i>Crataegus sanguinea</i>	ND-668	1973	redhaw hawthorn	Asia/Morden, Manitoba		
<i>Crataegus uniflora</i>	ND-669	1973	oneflower hawthorn	US/Morden, Manitoba		
<i>Crataegus</i> 'Vaughn'	Vaughn	-1973	hawthorn	ARS, Ames, IA	1977	
<i>Dianthus plumarius</i>	371894 371883	1975 1975	grass pink grass pink	Siberia/ARS, Ames, IA Siberia/ARS, Ames, IA		
<i>Elaeagnus angustifolia</i>	ND-364 ND-1843 ND-3808 ND-1022 ND-3890 ND-1557 9047231 WY-160 ND-363 ND-541 ND-736	1973 1980 1982 -1974 -1983 -1977 -1988 -1974 -1974 -1974 -1974	Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive Russian olive	Siberia/Burleigh Co., ND Siberia/Morden, Manitoba Siberia/ARS, Ames, IA Siberia/Cass Co., NE Siberia/ Lawyer Nursery, MT Siberia/ND Highway Dept. Siberia/Chinle, AZ Siberia/ARS, Cheyenne, WY Siberia/Burleigh Co., ND Siberia/Haakon Co., SD Siberia/Pennington Co., SD	1989 1991 1987 1994 1989 1989 1989	cold disease

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
	ND-737	-1974	Russian olive	Siberia/McIntosh Co., ND	1989	
	ND1232	-1974	Russian olive	Siberia	1992	
<i>Elaeagnus commutata</i>	ND-628	-1972	silverberry	Wells Co., ND	1991	
<i>Elaeagnus umbellata</i>	Cardinal	-1987	autumn olive	China/PMC, Elsberry, MO	1991	
	Redwing	1987	autumn olive	China/PMC, Rose Lake, MI		
	MI-6369	-1973	autumn olive	Asia/PMC, Elsberry, MO	1983	
	MI-777	-1973	autumn olive	Asia/PMC, Elsberry, MO	1987	
<i>Euonymus bungeana</i>	Pink Lady	-1974	winterberry euonymus	China/PMC, Manhattan, KS	1993	cold
<i>Euonymus europaea</i>	Red Cap	1978	Eur. spindle tree	Europe/ARS, Ames, IA		
<i>Euonymus vulgaris</i>	399360	-1977	euonymus	Yugoslavia/ARS, Ames, IA	1982	
<i>Forsythia europea x ovata</i>	Meadowlark	1973	forsythia	Arnold Arboretum/NDSU, Fargo		
<i>Forsythia mandshurica</i>	Vermont Sun	1987	forsythia	China/ARS, Ames, IA		
<i>Forsythia ovata</i>	Nakai	1982	early forsythia	Korea/ARS, Ames, IA		
<i>Fraxinus americana</i>	Autumn Purple	1972	white ash	ARS, Ames, IA		
	9063127	-1992	white ash	WI/LON, Bismarck, ND	1994	cold
<i>Fraxinus excelsior</i>	265620	-1973	European ash	Germany/ARS, Ames, IA	1981	
	385251	-1979	European ash	Bosnia/ARS, Ames, IA	1980	
<i>Fraxinus nigra</i>	ND-647	73/78	black ash	Morden, Manitoba		looks good, but no seed
	9063116	1994	black ash	Itasca State Park, MN		
	ND-672	-1973	black ash	Morden, Manitoba	1991	
<i>Fraxinus pennsylvanica</i>	SD-13	72/73	green ash	Potter Co., SD		
	SD-156	1972	green ash	Deuel Co., SD		
	Marshall	1972	green ash	ARS, Ames, IA		
	Kindred	1972	green ash	ARS, Ames, IA		good looking accession
	ND-3207	-1982	green ash	Hettinger Co., ND		
	Cardan	72/73	green ash	MT/ARS, Mandan, ND		
	9063115	1994	green ash	Itasca State Park, MN		
<i>Gleditsia triacanthos</i>	ND-1863	1982	honey locust	Brown Co., SD		moderate die back
	ND-1879	-1980	honey locust	Woodward, OK	1987	cold
	ND-777	-1976	honey locust	Hughes Co., SD	1981	cold

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	ND-685	-1974	honey locust	Harding Co., SD	1981	
	ND-969	-1974	honey locust	Fall River Co., SD	1981	
	ND-309	-1974	honey locust	ND		
	ND-1204	-1975	honey locust	Kingsbury Co., SD	1981	
	ND-1202	-1975	honey locust	Kingsbury Co., SD	1981	
	ND-1219	-1975	honey locust	Beadle Co., SD	1987	
	ND-1220	-1975	honey locust	Beadle Co., SD	1981	
	ND-1221	-1975	honey locust	Beadle Co., SD	1981	
	ND-1237	-1975	honey locust	Stearns Co., MN	1980	
	ND-1233	-1975	honey locust	Harding Co., SD	1981	
	ND-1223	-1975	honey locust	Hand Co., SD	1981	
	ND-1222	-1975	honey locust	Beadle Co., SD	1981	
	ND-1238	-1975	honey locust	Stearns Co., MN	1991	
<i>Gymnocladus dioicus</i>	ND-614	1972	Kentucky coffeetree	Union Co., SD		many root suckers
	ND-1023	1975	Kentucky coffeetree	Washington Co., NE		
	ND-1024	1975	Kentucky coffeetree	Madison Co., SD		
	ND-1025	1975	Kentucky coffeetree	Union Co., SD		
	ND-1026	1975	Kentucky coffeetree	Clay Co., SD		
	ND-1135	1975	Kentucky coffeetree	Madison Co., NE		
	ND-1181	1976	Kentucky coffeetree	Spink Co., SD		
<i>Hamamelis vernalis</i>	ND-1310	-1975	vernal witchhazel	ARS, Ames, IA	1976	
<i>Hamamelis virginiana</i>	ND-1311	-1975	common witchhazel	ARS, Ames, IA	1975	
<i>Hippophae rhamnoides</i>	ND-1276	-1972	sea buckthorn	Asia/Morden, Manitoba	2001	
	ND-3891	-1983	sea buckthorn	Lawyer Nursery, MT	1983	
<i>Ilex verticillata</i>	ND-1769	-1978	winterberry	IN/ARS, Ames, IA	1983	
	Mich-1588	-1975	winterberry	PMC, Rose Lake, MI	1976	
<i>Juglans cathayensis</i>	ND-573	-1972	Cathay walnut	China/Morden, Manitoba	1989	drought/cold
<i>Juglans cinerea</i>	ND-547	-1972	butternut	Morden, Manitoba	1991	
	ND-601	-1976	butternut	Morden, Manitoba	1977	
<i>Juglans mandshurica</i>	ND-548	-1972	Manchurian walnut	China/Morden, Manitoba	1989	drought
<i>Juglans nigra</i>	ND-465	72/73	black walnut	Morden, Manitoba		
	ND-428	1972	black walnut	NDSU, Fargo, ND		
	ND-679	-1973	black walnut	Grant Co., SD	1976	
	9063098	-1991	black walnut	Big Sioux Nursery, SD	1997	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
	SD-158	-1973	black walnut	Davison Co., SD	1976	
	ND-676	-1973	black walnut	Davison Co., SD	1985	
	ND-774	-1974	black walnut	Renville Co., MN	1991	
	ND-1210	-1975	black walnut	Jackson Co., MN	1977	
<i>Juglans regia</i>	ND-1247	-1974	Hansen Persian walnut	ARS, Ames, IA	1977	
<i>Juniperus communis</i>	Mich-1466	1972	common juniper	PMC, Rose Lake, MI		
	Mich-1587	1975	common juniper	PMC, Rose Lake, MI		
	ND-3742	1982	common juniper	ND Game & Fish Dept.		
<i>Juniperus conferta portatore</i>	Emerald Sea	-1973	shore juniper	Japan/PMC, Cape May, NJ	1973	
<i>Juniperus horizontalis</i>	Mich-768	1972	creeping juniper	ND/PMC, Rose Lake, MI		
	Wisconsin	-1981	creeping juniper	ARS, Ames, IA	1995	
	ND-1550	1982	creeping juniper	Lawrence Co., SD		
	Wiltonii	-1973	creeping juniper	National Arboretum	1973	
	Livingston	-1981	creeping juniper	ARS, Ames, IA	1981	
<i>Larix laricina</i>	9058862	-1990	tamarack	Grand Rapids, MN	1992	drought
<i>Larix sibirica</i>	ND-1729	1978	Siberian larch	Asia/NDFS, Towner, ND		
	505	-1974	Siberian larch	Asia/USFS, Bottineau, ND	1982	
	ND-1765	1978	Siberian larch	Asia/USFS, Bottineau, ND		
	SL-383-T	1978	Siberian larch	Asia/USFS, Bottineau, ND		
	ND-1312	-1975	Siberian larch	Asia/USFS, Bottineau, ND	1976	
	ND-500	1977	Siberian larch	Asia/Morden, Manitoba		
<i>Lonicera</i> sp.	ND-26	1979	honeysuckle	Asia/ARS, Mandan, ND		
	9069115	1994	honeysuckle	Asia/ARS, Ames, IA		
<i>Lonicera bella albida</i>	Mich-484	-1973	whitebelle honeysuckle	Asia/PMC, Rose Lake, MI	1992	aphids
<i>Lonicera caerulea</i>	384493	1974	sweetberry honeysuckle	Asia/ARS, Ames, IA		
	384494	1974	sweetberry honeysuckle	Asia/ARS, Ames, IA		
	377880	-1973	sweetberry honeysuckle	Asia/ARS, Ames, IA	1992	drought
	377881	-1973	sweetberry honeysuckle	Asia/ARS, Ames, IA	1974	
<i>Lonicera involucrata</i>	323719	-1973	twinberry	Utah/ARS, Ames, IA	1978	
<i>Lonicera korolkowii</i>	Freedom	1990	blueleaf honeysuckle	Asia/U of Minnesota		
	9005399	1991	blueleaf honeysuckle	Asia/PMC, Bridger, MT		

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Lonicera maackii</i>	ND-11	1978	Amur honeysuckle	Asia/Morden, Manitoba		
	Cling-Red	1987	Amur honeysuckle	Asia/PMC, Elsberry, MO		
	Rem-Red	-1973	Amur honeysuckle	Asia/PMC, Cape May, NJ	1979	
	MI-4701	-1973	Amur honeysuckle	Asia/PMC, Elsberry, MO	1973	
<i>Lonicera tatarica</i>	9069080	1993	Tatarian honeysuckle	Asia/Lee Nursery, Fertile, MN		
	9063143	1993	Tatarian honeysuckle	Asia/Schumacher Berry Farm, MN		
	9069128	1994	Tatarian honeysuckle	Asia/Big Sioux Nursery, SD		
<i>Lonicera tatarica sibirica</i>	ND-3892	1983	Tatarian honeysuckle	Asia/Lawyer Nursery, MT		
	ND-313	-1972	Tatarian honeysuckle	Asia/ARS, Cheyenne, WY	1992	aphids
<i>Lonicera xylosteoides</i>	Hedge King	-1988	honeysuckle	Asia/Wedge Nursery, MN	1991	poor stock
<i>Lonicera xylosteum mollis</i>	ND-452	1979	fly honeysuckle	Asia/ARS, Cheyenne, WY		
<i>Maclura pomifera</i>	ND-993	-1972	Osage orange	ARS, Ames, IA	1973	
	ND-1031	-1975	Osage orange	Union Co., SD	1975	
<i>Malus</i>	49327	1984	apple	NPMC, Beltsville, MD		
	49317	1984	apple	NPMC, Beltsville, MD		
	49319	1984	apple	NPMC, Beltsville, MD		
	33985	1990	apple	ARS, Cheyenne, WY		
	Magenta	1992	apple	PMC, Rose Lake, MI		
	ND-714	-1972	silver moon crabapple	ARS, Ames, IA	1981	
<i>Malus baccata</i>	ND-3814	1984	Siberian crabapple	Asia/Cass Co., ND		
<i>Malus mandshurica</i>	Midwest	72/73	Manchurian crabapple	Manchuria/Morden, Manitoba		
<i>Malus sargentii</i>	Roselow	1983	Sargent's crabapple	PMC, Rose Lake, MI		
<i>Malus yunnanensis</i>	49324	-1984		Asia/NPMC, Beltsville, MD	1990	deer browsed
<i>Morus alba</i>	ND-1170	-1976	white mulberry	China/Burleigh Co., ND	1985	
	ND-1153	-1976	white mulberry	China/Pennington Co., SD	1985	
	ND-1163	-1976	white mulberry	China/Jerauld Co., SD	1985	
	ND-1169	-1976	white mulberry	China/Pennington Co., SD	1985	
<i>Morus rubra</i>	ND-2105	1988	red mulberry	Big Stone Co., MN		
<i>Ostrya virginiana</i>	ND-1004	-1972	ironwood	ARS, Ames, IA	1979	

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<i>Phellodendron</i>	A-10095	-1991	corktree	Asia/ARS, Ames, IA	1992	
<i>Phellodendron amurense</i>	ND-3805	-1982	Amur corktree	Japan/SDSU, Brookings, SD	1983	
<i>Phellodendron sachalinensis</i>	ND-3806	-1982	Sakhalin corktree	Asia/SDSU, Brookings, SD	1983	
	9063148	1995	Sakhalin corktree	Asia/Clay Co., MN		
<i>Physocarpus monogynus</i>	495901	-1988	ninebark	CO/ARS, Ames, IA	1988	
<i>Physocarpus opulifolius</i>	Darts Golden	1980	common ninebark	Holland/ARS, Ames, IA		
	Nugget	-1989	common ninebark	ARS, Ames, IA	1990	
<i>Picea abies</i>	ND-1724	-1979	Norway spruce	Europe/USFS, Lincoln, NE	1980	
	9076685	1995	Norway spruce	Europe/Pope Co., MN		
<i>Picea engelmannii</i>	ND-1760	-1975	Engelmann spruce	ID/USFS, Bottineau, ND	1978	
<i>Picea omorika</i>	399396	-1979	Serbian spruce	Yugoslavia/ARS, Ames, IA	1980	
<i>Picea pungens</i>	ND-1761	-1975	blue spruce	USFS, Bottineau, ND	1978	
<i>Pinus aristata</i>	ND-1565	-1977	bristlecone	USFS, Bottineau, ND	1980	
<i>Pinus contorta</i>	9057411	-1988	lodgepole pine	Canada/NDFS, Towner, ND	1989	
<i>Pinus densiflora</i>	ND-718	-1972	Japanese red pine	Japan/ARS, Ames, IA	1976	
	ND-1720	-1979	Japanese red pine	Japan/USFS, Lincoln, NE	1980	
<i>Pinus flexilis</i>	ND-1203	-1981	limber pine	Slope Co., ND	1983	
<i>Pinus nigra</i>	ND-1715	-1979	Austrian pine	Spain/USFS, Lincoln, NE	1980	
<i>Pinus nigra caramanica</i>	ND-1714	-1979		Turkey/USFS, Lincoln, NE	1980	
<i>Pinus nigra pallasiana</i>	ND-1710	-1979	Crimean pine	Turkey/USFS, Lincoln, NE	1980	
	ND-1712	-1979	Crimean pine	Turkey/USFS, Lincoln, NE	1980	
<i>Pinus nigra x densiflora</i>	ND-1716	-1979		USFS, Lincoln, NE	1980	
<i>Pinus peuce</i>	9069160	1995	Balkan pine	Yugoslavia/ARS, Ames, IA		poorly adapted
<i>Pinus ponderosa</i>	9057413	1988	ponderosa pine	MT/NDFS, Towner, ND		poor survival
	ND-1763	-1976	ponderosa pine	SD/USFS, Bottineau, ND	1980	

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<i>Pinus rigida</i>	ND-1721	-1979	pitch pine	ME/USFS, Lincoln, NE	1980	
<i>Pinus strobus</i>	unknown	-1972	white pine	WI	1975	
<i>Pinus sylvestris</i>	ND-1718	-1979	Scots pine	Turkey/USFS, Lincoln, NE	1980	
	ND-1719	-1979	Scots pine	Czechoslovakia/USFS, Lincoln, NE	1980	
	ND-1717	-1979	Scots pine	Greece/USFS, Lincoln, NE	1980	
	ND-715	-1972	Scots pine	ARS, Ames, IA	1977	
	ND-1762	-1975	Scots pine	Finland/USFS, Bottineau, ND	1977	
<i>Platanus occidentalis</i>	9069088	-1993	sycamore	TEC, Osseo, MN	1994	
<i>Populus</i>	ND-3919	1983	poplar	Van Pines Inc., MI		
	ND-3920	1983	poplar	Van Pines Inc., MI		
	14390	1990	poplar	ARS, Mandan, ND		released as 'Canam'
	14392	1990	poplar	ARS, Mandan, ND		released as 'Manitou'
	14394	1991	poplar	ARS, Mandan, ND		
	Theves	1993	poplar	Lee Nursery, Fertile, MN		
	9063146	1993	Walker poplar	PFRA, Indianhead, Saskatchewan		
	Assiniboine	1993	hybrid poplar	PFRA, Indianhead, Saskatchewan		
Raverdeau	1993	hybrid poplar	Lee Nursery, Fertile, MN		poor survival	
<i>Populus acuminata</i>	9057983	-1991	lanceleaf cottonwood	PMC, Bridger, MT	1993	
<i>Populus alba</i>	ND-3796	1983	white poplar	Turner Co., SD		many suckers
	ND-3803	1983	white poplar	Turner Co., SD		many suckers
	14178	1994	white poplar	ARS, Mandan, ND		
	ND-1441	-1976	white poplar	Morden, Manitoba	1976	
<i>Populus alba x tremula</i>	Tower	1982	poplar	Morden, Manitoba		many suckers
<i>Populus balsamifera</i>	495902	1986	balsam poplar	CO/ARS, Ames, IA		stem cankers
	9057965	1991	balsam poplar	PMC, Bridger, MT		
	495903	-1987	balsam poplar	CO/ARS, Ames, IA	1991	
<i>Populus canadensis eugenei</i>	Imperial	-1972	hybrid poplar	PMC, Rose Lake, MI	1991	
	ND-3780	-1981	Carolina poplar	LON, Bismarck, ND	1995	
<i>Populus deltoides</i>	Ashford	-1982	cottonwood	Dept. of Forestry, Lincoln, NE	1991	
	Lydick	-1982	cottonwood	Dept. of Forestry, Lincoln, NE	1991	
	9039340	-1991	cottonwood	PMC, Bridger, MT	1992	
	9063141	1993	cottonwood	LON, Bismarck, ND		

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Populus deltoides siouxlandii</i>	ND-3761	1981	Siouxland cottonwood	LON, Bismarck, ND		
<i>Populus deltoides x balsamifera</i>	ND-3768	1981	Northwest poplar	LON, Bismarck, ND		
<i>Populus deltoides x nigra</i>	14271	1990	Walker poplar	ARS, Mandan, ND		released as 'Prairie Sky'
	14272	1990	Walker poplar	ARS, Mandan, ND		
	14273	1990	Walker poplar	ARS, Mandan, ND		
	14274	1990	Walker poplar	ARS, Mandan, ND		
	Noreaster	-1981	hybrid poplar	Dept. of Forestry, Lincoln, NE	1991	
<i>Populus deltoides x petrovskyana</i>	ND-1248	1974	Brooks poplar	ARS, Ames, IA		
<i>Populus laurifolia</i>	ND-3779	-1982	Manchurian poplar	Asia/Lee Nursery, Fertile, MN	1991	
<i>Populus robusta</i>	ND-3781	-1981	robusta poplar	LON, Bismarck, ND	1989	
	Mich-86	-1972	robusta poplar	PMC, Rose Lake, MI	1991	
<i>Populus sargentii</i>	9063140	1994	plains cottonwood	ARS, Mandan, ND		
<i>Populus tremula</i> 'Erecta'	266678	1974	European aspen	ARS, Ames, IA		
<i>Populus tremuloides</i>	9069090	1993	quaking aspen	Lee Nursery, Fertile, MN		has potential
<i>Potentilla</i> 'Coronation Triumph'	ND-992	1972	bush cinquefoil	Canada/ARS, Ames, IA		
<i>Potentilla fruticosa</i>	Forrestii	1972	bush cinquefoil	ARS, Ames, IA		
	Dakota Sunrise	1983	bush cinquefoil	ARS, Mandan, ND		
<i>Prinsepia sinensis</i>	ND-15	-1973	cherry prinsepia	Manchuria/Morden, Manitoba	2001	
<i>Prunus</i>	ND-2106	1990	hardy almond	Carl Carlson, Bismarck, ND		
	ND-1134	1990	select plum	Hand Co., SD		
<i>Prunus americana</i>	ND-284	1976	American plum	PMC, Manhattan, KS		
	ND-288	1976	American plum	SD/LON, Bismarck, ND		
	ND-3893	1983	American plum	Lawyer Nursery, Plains, MT		
<i>Prunus armeniaca</i>	ND-1178	-1976	apricot	Asia/Walsh Co., ND	1987	
	ND-423	-1978	apricot	Asia/Stark Co., ND	1987	
	Mantoy	-1974	apricot	Asia/ARS, Mandan, ND	1987	
	Morden	-1974	apricot	Asia/Morden, Manitoba	1987	
	SD-132	-1978	apricot	Asia/Brookings Co., SD	1984	
	SD-133	-1978	apricot	Asia/Brookings Co., SD	1984	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
	SD-134	-1978	apricot	Asia/Brookings Co., SD	1984	
	ND-416	-1978	apricot	Asia/Burleigh Co., ND	1984	
	ND-2102	1986	apricot	Asia/Hand Co., SD		
	ND-1255	-1977	apricot	Asia/Beadle Co., SD	1987	
<i>Prunus fruticosa</i>	Scarlet	73/74	Mongolian cherry	Asia/Morden, Manitoba		
	ND-473	1974	Mongolian cherry	Asia/Morden, Manitoba		
<i>Prunus maackii</i>	9069129	-1994	Amur chokecherry	Asia/Big Sioux Nursery, SD	2001	
<i>Prunus padus</i>	SD-131	1973	mayday	Asia/Moody Co., SD		severe black knot
<i>Prunus pedunculata</i>	ND-606	-1978	hardy almond	NDSU, Fargo, ND	1997	
<i>Prunus persica</i>	ND-3925	-1986	hardy peach	China/Meade Co., SD	1987	
<i>Prunus pumila</i>	ND-983	-1974	sand cherry	Meade Co., SD	1987	
	ND-1327	-1978	sand cherry	Mercer Co., ND	1987	
	ND-1348	-1978	sand cherry	Burleigh Co., ND	1987	
<i>Prunus pumila besseyi</i>	ND-3894	1983	western sandcherry	Lawyer Nursery, Plains, MT		
<i>Prunus pumila depressa</i>	9051508	-1995	sand cherry	PMC, Big Flats, NY	1999	
<i>Prunus sargentii</i>	ND-1249	-1974	Sargent's cherry	Asia/ARS, Ames, IA	1975	
<i>Prunus serotina</i>	K-1812	1975	black cherry	PMC, Manhattan, KS		
<i>Prunus spinosa</i>	ND-81	-1974	sloe	Europe/Morden, Manitoba	1993	
<i>Prunus tenella</i>	ND-283	1973	Russian almond	Russia/Morden, Manitoba		
<i>Prunus tomentosa</i>	ND-532	-1973	Nanking cherry	China/Oliver Co., ND	1987	old age
	ND-433	-1974	Nanking cherry	China/ARS, Mandan, ND	1993	old age
	ND-32	-1974	Nanking cherry	China/Sutherland, Saskatchewan	1993	old age
	ND-3896	1983	Nanking cherry	China/Lawyer Nursery, MT		
<i>Prunus tomentosa x pumila</i>	ND-459	-1974	hybrid Nanking cherry	McHenry Co., ND	1993	old age
<i>Prunus virginiana</i>	ND-645	1972	chokecherry	Ransom Co., ND		
	ND-621	72/73	chokecherry	Grant Co., ND		
	Schubert	1973	chokecherry	ARS, Mandan, ND		
	ND-1336	1978	chokecherry	Mercer Co., ND		

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
	ND-1349	-1978	chokecherry	Burleigh Co., ND	1992	western X disease
	ND-1029	1974	yellow chokecherry	Logan Co., ND		
	ND-1173	1976	chokecherry	Pembina Co., ND		
<i>Pseudotsuga menziesii glauca</i>	ND-1722	-1979	Douglas fir	CO/USFS, Lincoln, NE	1980	
<i>Ptelea trifoliata</i>	ND-624	-1972	common hoptree	Ramsey Co., ND	1991	
<i>Pyrus communis</i>	ND-3897	-1983	common pear	Asia/Lawyer Nursery, MT	1987	
<i>Pyrus ussuriensis</i>	McDermand ND-3898	72/73 1983	Ussurian pear Ussurian pear	Manchuria/Morden, Manitoba Manchuria/Lawyer Nursery, MT		
<i>Quercus</i>	ND-994	1972	Swedish hybrid oak	ARS, Ames, IA		
<i>Quercus alba</i>	9069084	-1993	white oak	Lee Nursery, Fertile, MN	1996	
<i>Quercus bicolor</i>	ND-1842	-1981	swamp white oak	Morden, Manitoba	1982	
<i>Quercus ellipsoidalis</i>	9069082	-1993	pin oak	Lee Nursery, Fertile, MN	2001	
<i>Quercus macrocarpa</i>	ND-630 ND-650 ND-674 9057412 K-1407	1972 1973 1973 -1988 1990	bur oak bur oak bur oak bur oak bur oak	Barnes Co., ND Meade Co., SD Barnes Co., ND Foster Co., ND PMC, Manhattan, KS	2001	barely surviving
<i>Quercus muehlenbergii</i>	A-7814	-1988	chinkapin oak	ARS, Ames, IA	1989	
<i>Quercus robur</i>	9069089	-1993	English oak	Europe/TEC, Osseo, MN	1996	
<i>Quercus rubra</i>	9069083	-1993	red oak	Lee Nursery, Fertile, MN	1999	
<i>Rhododendron</i>	ND-3812	-1983	Northern Lights azalea	ARS, Ames, IA	1985	
<i>Rhus aromatica</i>	Konza	1986	fragrant sumac	PMC, Manhattan, KS		
<i>Rhus glabra</i>	ND-677 ND-678	1973 1973	smooth sumac smooth sumac	Ottertail Co., MN Dewey Co., SD		
<i>Rhus trilobata</i>	M-398 Bighorn Autumn Amber	1973 73/79 -1990	skunkbush sumac skunkbush sumac skunkbush sumac	Broadwater Co., MT Bighorn, Co., WY TX/PMC, Los Lunas, NM	1990	not adapted

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Rhus typhina</i>	ND-1250	-1974	cut-leaf sumac	ARS, Ames, IA	1977	
<i>Ribes odoratum</i>	29-7	1974	golden currant	ARS, Mandan, ND		
<i>Robinia pseudoacacia</i>	ND-3804	-1982	black locust	NDFS, Towner, ND	1983	
<i>Rosa 'Aylsham'</i>	ND-1267	-1977	rose	Morden, Manitoba	1991	
<i>Rosa laxa</i>		-1973	Turkestan rose	Asia	1987	
<i>Rosa rugosa</i>	ND-3813	1984	rose	Russia/ARS, Ames, IA		
<i>Rosa rugosa x</i>	Hansen	1973	hedge rose	Asia/Anderson Nursery, SD		
<i>Rosa virginiana</i>	BN-10784	-1973	Virginia rose	Herbst Brothers, Inc, NY	1973	
<i>Rosa 'Wanderin Wind'</i>		-1973	rose	ARS, Ames, IA	1982	
<i>Rubus idaeus</i>		-1972	raspberry	Asia	1988	
<i>Rubus parviflorus</i>	MI-5195	-1972	Japanese raspberry	Asia/PMC, Elsberry, MO	1991	old age
<i>Salix</i>	ND-3773	-1983	willow	Norman Co., MN	1991	
	ND-3899	-1983	willow	Lawyer Nursery, Plains, MT	1991	
	ND-3904	1983	blue fountain willow	NDSU, Fargo, ND		
	ND-3907	-1983	Miyabe willow	NDSU, Fargo, ND	1991	
<i>Salix alba metmondiana</i>	ND-1435	-1976		Morden, Manitoba	1976	
<i>Salix alba sericea</i>	ND-1437	-1976	silky white willow	Morden, Manitoba	1976	
<i>Salix alba vitellina</i>	ND-1438	-1976	golden willow	Morden, Manitoba	1991	
<i>Salix doniana</i>	ND-1518	-1978	Don's willow	Europe/Morden, Manitoba	1992	
<i>Salix exigua</i>	Arctic Circle	-1973	coyote willow	Alaska	1980	
	9051643	-1995	sandbar willow	PMC, Big Flats, NY	1999	
	9051650	-1995	sandbar willow	PMC, Big Flats, NY	1999	
	9051639	-1995	sandbar willow	PMC, Big Flats, NY	1999	
	9051652	-1995	sandbar willow	PMC, Big Flats, NY	1997	
<i>Salix fragilis</i>	370126	-1973	crack willow	Russia/ARS, Glenn Dale, MD	1991	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Salix humilis</i>	ND-995	-1982	prairie willow	ARS, Ames, IA	1991	
<i>Salix interior</i> 'Silver Sands'	ND-3902	1983	sandbar willow	Smith Nursery, IA/NDSU, Fargo, ND		
<i>Salix koreensis</i>	ND-3903	1983		Asia/NDSU, Fargo, ND		
<i>Salix lutea</i> 'Carberry'	ND-1436	-1976	yellow willow	Morden, Manitoba	1976	
<i>Salix matsudana x alba</i>	9058897 (E)	-1990	austree	Australia/CA	1991	
	9058896 (C)	1991	austree	Australia/CA		
	9058899	-1991	austree	Australia/MN	1992	
	9063100	-1991	austree	Australia/CA	1992	
<i>Salix pentandra</i>	Mich-433	-1973	laurel leaf willow	Europe/PMC, Rose Lake, MI	1991	
<i>Salix x pontederana</i>	ND-1439	-1976	slender purple willow	Europe/Morden, Manitoba	1976	
<i>Salix purpurea</i>	Streamco	1990	purple leaf osier	Europe/PMC, Big Flats, NY		
<i>Salix purpurea gracilis</i>	ND-1440	-1976	purple willow	Morden, Manitoba	1992	drought
<i>Salix purpurea nana</i>	ND-3905	-1983	dwarf arctic willow	NDSU, Fargo, ND	1992	drought
<i>Sambucus</i>	ND-671	-1977	elderberry	Morden, Manitoba	1992	drought
<i>Sambucus canadensis</i>	ND-760	-1974	American elder	Morden, Manitoba	1993	drought
<i>Sambucus racemosa</i>	ND-450	-1974	European red elder	ARS, Cheyenne, WY	1992	drought
<i>Sambucus sibirica</i>	376939	-1973	elder	Asia/ARS, Glenn Dale, MD	1992	drought
	A-4961	-1986		Asia/ARS, Ames, IA	1986	
<i>Securinega suffruticosa</i>	ND-3746	1973	spoil ax	Asia		
	9069161	1994	spoil ax	Asia/ARS, Ames, IA		
<i>Shepherdia argentea</i>	Sakakawea	1973	silver buffaloberry	Morden, Manitoba		
	Mich-1342	1975	silver buffaloberry	PMC, Rose Lake, MI		
	ND-1420	1978	silver buffaloberry	Slope Co., ND		
	ND-1422	1978	silver buffaloberry	Mercer Co., ND		
	ND-1421	1978	silver buffaloberry	Billings Co., ND		
	ND-1423	1978	silver buffaloberry	Dunn Co., ND		
<i>Shepherdia canadensis</i>	9057445	-1989	russet buffaloberry	NDFS, Towner, ND	1989	drought

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Sorbaria sorbifolia</i>	A-7778	1990	Ural false spirea	Czechoslovakia/ARS, Ames, IA		
<i>Sorbaria tomentosa</i>	A-10200	-1992	false spirea	ARS, Ames, IA	1994	cold
<i>Sorbus aria</i>	399409	-1977	white beam	Yugoslavia/ARS, Ames, IA	1980	
<i>Sorbus aucuparia</i>	ND-673	-1973	European mountain ash	Morden, Manitoba	1991	drought
<i>Sorbus decora</i>	ND-134	-1972	showy mountain ash	Morden, Manitoba	1973	
<i>Sorbus tianshanica</i>	A-2819	1986	mountain ash	ARS, Ames, IA		
<i>Spirea chamaedryfolia</i>	A-10098	1992	Germander spirea	ARS, Ames, IA		
<i>Syringa</i>	9058876	1972	common lilac			
<i>Syringa meyeri</i>	ND-451	1983	dwarf Korean lilac	Asia/Interstate Nursery, Hamburg, IA		
<i>Syringa pekinensis</i>	ND-686 ND-1877	73/84 1979	Pekin lilac Pekin lilac	Asia/LON, Bismarck, ND Asia/ARS, Ames, IA		
<i>Syringa reticulata</i> var. <i>mandshurica</i>	0-8-188-5	1972	Japanese tree lilac			
<i>Syringa villosa</i>	ND-83 ND-3900	72/73 1983	late lilac late lilac	China/Morden, Manitoba China/Lawyer Nursery, Plains, MT		
<i>Thuja</i>	MI-2810	-1972	Rochester arborvitae	PMC, Elsberry, MO	1982	
<i>Thuja occidentalis</i>	Hoseri Mich-1841 Mich-1468 ND-1723 ND-1257	1981 1983 1983 -1979 -1975	northern white cedar northern white cedar northern white cedar northern white cedar northern white cedar	MD/ARS, Ames, IA PMC, Rose Lake, MI PMC, Rose Lake, MI Canada/USFS, Lincoln, NE Kittson Co., MN	1980 1980	
<i>Tilia cordata</i>	9069081	1993	littleleaf linden	Europe/Lee Nursery, Fertile, MN		
<i>Tilia euchlora</i>	Redmond	-1973	Crimean linden	Asia/ARS, Ames, IA	1977	
<i>Ulmus</i>	ND-997 ND-1005	-1972 -1972	hybrid elm hybrid elm	ARS, Ames, IA Gurneys Nursery, SD	1981 1973	
<i>Ulmus x Hollandica</i> 'Groeneveld'	ND-717	-1972	Groeneveld elm	ARS, Ames, IA	1981	

Scientific name	Accession	Year planted	Common Name	Origin/source	Year removed	Remarks
<i>Ulmus x Hollandica</i> 'Commelin'	ND-996	-1972	Commelin elm	ARS, Ames, IA	1981	
<i>Ulmus japonica</i>	ND-989	1972	Japanese elm	Asia/ARS, Mandan, ND		
	9063126	1992	Japanese elm	Asia/PFRA, Indianhead, Saskatchewan		
<i>Ulmus parvifolia</i>	Elsmo	-1990	lacebark elm	China/PMC, Elsberry, MO	1994	cold
<i>Ulmus pumila</i>	ND-990	-1972	Siberian elm	Asia/ARS, Mandan, ND	1973	
	ND-991	-1972	Siberian elm	Asia/ARS, Mandan, ND	1981	
	44	1993	Siberian elm	Asia/ARS, Mandan, ND		
	65	1993	Siberian elm	Asia/ARS, Mandan, ND		
	437	1993	Siberian elm	Asia/ARS, Mandan, ND		
	14476	1993	Siberian elm	Asia/ARS, Mandan, ND		
	70	-1993	Siberian elm	Asia/ARS, Mandan, ND	1999	
	ND-723	-1973	Siberian elm	Asia/Norman Co., MN	1981	
	9016318	1995	Siberian elm	Asia/PMC, Bridger, MT		
9054820	1995	Siberian elm	Asia/Bridger, MT			
<i>Viburnum</i> 'Emerald Triumph'	15914	1992	viburnum	MN/ARS, Ames, IA		looks good
<i>Viburnum dentatum</i>	495621	-1988	arrow-wood	ARS, Ames, IA	1988	drought
<i>Viburnum lantana</i> 'Mohican'	316679	-1981	wayfaringtree viburnum	ARS, Ames, IA	1981	drought
<i>Viburnum lentago</i>	ND-21	1986	nannyberry	ARS, Mandan, ND		
	ND-276	-1988	nannyberry	Morden, Manitoba	1989	drought
<i>Viburnum opulus</i>	399414	-1977	European cranberry	Yugoslavia/ARS, Ames, IA	1992	drought
	399415	-1977	European cranberry	Yugoslavia/ARS, Ames, IA	1978	
	399416	-1977	European cranberry	Yugoslavia/ARS, Ames, IA	1978	
<i>Viburnum x rhytidophylloides</i>	Alleghany	-1980	lantanaphyllum viburnum	ARS, Ames, IA	1990	cold
<i>Viburnum sargentii</i>	Onondaga	-1981	Sargent's viburnum	ARS, Ames, IA	1981	drought

Table No. 4. Project No.: 38I302K Field Evaluation of Woody Plant Materials - McKenzie, North Dakota

Year of Record: 2000-2001

PLOT <u>LOCATION</u>	ACCESSION <u>NUMBER</u>	PLANT <u>SYMBOL</u>	GENUS/SPECIES <u>ORIGIN/SOURCE</u>	TRANS <u>DATE</u>	YR <u>PLT</u>	YR <u>REC</u>	MATL <u>PLTD</u>	NO <u>PLTS</u>	NO <u>SRV</u>	PCT <u>SRV</u>	CAN		PLT <u>HT</u>	<u>REMARKS</u>
											<u>VI</u>	<u>COV</u> (ft)		
TALL TREES														
I/01/N-S	'Cardan' MDN-12002 9005895 PI-469226	FRPE	green ash <i>Fraxinus pennsylvanica</i> USDA-ARS, Mandan, ND	15-May	72	72	PLBR	6					3.0	
						73			6	100			3.5	
						74			6	100	1.5		4.0	
						76			6	100	2	3.5	6.0	
						78			6	100	5	7.8	9.9	
						81			6	100	3	11.9	13.5	
						83			6	100	4	15.8	15.3	
						86			6	100	3	20.3	20.7	
						91			6	100		23.6	21.9	
						96			5	83	4	24.0	23.0	top broken on 2
						01			5	83	4	23.0	27.2	
	'Cardan' MDN-12002 9005895 PI-469226	FRPE	green ash <i>Fraxinus pennsylvanica</i> USDA-ARS, Mandan, ND	15-May	72	72	PLBR	5					3.0	
						73			5	100			4.5	
						74			5	100	3.5		5.5	
						76			5	100	1	8.1	9.4	
						78			5	100	2	13.0	13.9	
						81			5	100	2	17.7	17.0	
						83			5	100	2	20.8	21.7	
						86			5	100	3	24.8	24.6	
						91			5	100		23.6	26.6	
						96			5	100	3	26.6	28.0	part of crown broken on 2
						01			4	100	4	27.9	32.4	
	SD-13 9005888 PI-501527	FRPE	green ash <i>Fraxinus pennsylvanica</i> Potter Co., SD	15-May	72	72	PLBR	5					3.5	
						73			4	80			4.7	
						74			5	100	3.0		6.8	
						76			5	100	1	8.5	10.7	
						78			4	80	2	11.6	15.4	
						81			4	80	3	16.1	17.7	
						83			4	80	3	22.1	21.7	
						86			4	80	2	22.0	22.9	
						91			5	100		18.2	22.5	
						96			5	100	3	20.6	23.6	
						01			5	100	4	20.0	24.0	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS										
											COV VI	PLT (ft)											
I/01/N-S	SD-156 9005890	FRPE	green ash <i>Fraxinus pennsylvanica</i> Deuel Co., SD	15-May	72	72	PLBR	6					2.5										
																	2.8						
																			6				
																			100	1.5	2.8		
																			100	2	6.0	7.7	
																			100	3	9.6	11.7	
																			100	2	14.3	15.3	
																			100	3	19.8	19.2	
																			100	2	23.7	22.5	
																			100		24.5	24.6	
										100	3	28.4	27.0										
										100	2	26.7	33.4										
'Marshall'	9019587	FRPE	green ash <i>Fraxinus pennsylvanica</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	4					5.5										
																			5.0				
																			100	1.5	5.0		
																			100	3	5.2	8.9	
																			100	2	10.1	13.5	
																			100	3	14.1	15.7	
																			100	3	20.1	20.8	
																			100	2	26.1	23.3	
																			100		25.5	25.4	
																			100	3	28.3	27.7	
										100	3	29.6	33.5										
'Autumn Purple'	9019588	FRAM2	white ash <i>Fraxinus americana</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	5					4.0										
																				5.2			
																			60		5.2		
																			60	1.7	5.2		
																			60	3	4.0	6.4	
																			100	6	6.7	8.2	
																			100	5	9.1	11.7	
																			100	6	12.8	14.1	
																			40	2	21.8	22.7	
																			40		20.2	23.7	
										40	3	23.5	27.4										
										40	2	27.0	35.0										

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS								
											COV VI	PLT (ft)		HT (ft)							
I/01/N-S	SD-13 9005888 PI-501527	FRPE	green ash <i>Fraxinus pennsylvanica</i> Potter Co., SD	15-May	72	72	PLBR	4					6.0								
																	6.0				
															4	100			5.0	8.0	
															4	100		1	9.3	12.3	
															4	100		2	12.1	15.0	
															4	100		2	15.2	17.7	
															4	100		2	20.5	21.9	
															4	100		2	26.1	24.8	
															4	100			23.9	26.4	
															4	100		3	22.9	28.3	broken crown on 2,4
						01		4	100	4	22.5	25.9									
'Kindred' 9019589	FRPE	green ash <i>Fraxinus pennsylvanica</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	5						5.0								
																	4.8				
														5	100			2.8	5.8		
														5	100		2	6.4	7.9		
														5	100		3	12.7	12.6		
														5	100		2	14.9	16.5		
														5	100		3	22.0	20.7		
														5	100		5	22.4	21.6		
														5	100			23.6	23.7		
														5	100		3	26.6	24.7		
						01		5	100	3	28.0	30.0									
'Kindred' 9019589	FRPE	green ash <i>Fraxinus pennsylvanica</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	5						5.5								
																	5.7				
														5	100			2.5	7.0		
														5	100		2	7.3	11.0		
														5	100		2	11.4	13.4		
														5	100		4	14.5	17.2		
														5	100		3	21.0	20.5		
														5	100		2	23.4	23.8		
														5	100			21.8	24.9		
														5	100		4	23.1	24.5		
						01		5	100	4	26.4	27.3									

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS									
											COV VI	PLT HT (ft)										
I/02/S-N	Oahe MDN-12003 9005725 PI-476982	CEOC	hackberry <i>Celtis occidentalis</i> USDA-ARS, Mandan, ND	15-May	72	72	PLBR	6					1.0									
																		1.0				
															6	100				1.8	2.5	
															6	100		2	5.1	7.9		
															6	100		2	1.0	13.5		
															6	100		4	9.8	13.5		
															6	100		3	15.1	17.7	insect gall	
															6	100		2	19.2	20.9		
															6	100			17.3	23.1		
															6	100		3	20.4	24.4	tip dieback on 6	
						01		6	100	3	21.9	27.1										
SD-75 9005713	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	72	72	PLBR	6						1.0									
																	1.2					
														6	100			1.2	2.2			
														6	100		2	3.2	5.4			
														6	100		3	8.5	9.8			
														6	100		5	11.8	13.7			
														6	100		4	16.2	17.8	insect gall		
														6	100		2	14.7	20.1			
														6	100			18.3	22.0			
														6	100		4	20.5	22.6	tip dieback on 2,6		
						01		6	100	4	23.6	25.7										
SD-211 9005714	CEOC	hackberry <i>Celtis occidentalis</i> Sanborn Co., SD	15-May	72	72	PLBR	6						1.0									
																	1.5					
														6	100			2.0	3.2			
														6	100		2	6.4	7.1			
														6	100		2	15.3	14.2			
														6	100		3	16.1	15.9			
														6	100		3	23.3	21.4	insect gall		
														6	100		2	18.2	23.0			
														6	100			21.7	25.8			
														6	100		3	24.0	26.9			
						01		6	100	3	27.3	30.2										

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS							
											COV VI	PLT (ft)								
I/02/S-N	ND-630 9006096	QUMA2	bur oak <i>Quercus macrocarpa</i> Barnes Co., ND	15-May	72	72	PLBR	6					2.0							
																	1.0			
															6	100			1.5	1.2
															6	100	2	3.3	5.0	
															6	100	2	7.0	9.3	
															6	100	4	11.1	12.1	
															6	100	3	14.3	17.3	
															6	100	2	12.9	19.8	
															6	100		17.0	22.0	
															6	100	2	21.7	24.8	
						01		6	100	3	24.9	28.5								
ND-994 9019610		QUERC	Swedish hybrid oak <i>Quercus</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	5					1.5							
																	0.7			
															5	100		0.7	1.0	
															5	100	2	1.1	2.0	
															5	100	7	2.9	3.4	
															5	100	5	5.9	6.5	
															4	80	6	8.6	10.0	
															4	80	4	11.5	13.8	
															4	80		14.9	15.3	
															4	80	3	19.4	19.7	
						01		4	80	4	23.4	21.1								
K-1407 9004392		QUMA2	bur oak <i>Quercus macrocarpa</i> USDA-NRCS, PMC, Manhattan, KS	10-May	90	90	PLBR	5	3	60	4	0.4	0.9							
																	0.3	0.5		
															1	20	5	0.3	1.3	
															1	20	4	0.7	1.5	
															1	20	6	0.7	1.1	
															00		1	20	8	0.6
I/03/N-S	ND-465 9005971	JUNI	black walnut <i>Juglans nigra</i> Res. Station, Morden, MB, Canada	15-May	72	72	PLBR	6					1.0							
																	0.7			
															4	67			1.2	
															2	33				
															6	100	2	2.7	2.4	
															4	67		6.0	4.1	
															4	67	4	10.8	8.5	
															4	67	3	17.7	14.5	
															4	67	3	13.2	13.5	
															4	67	4	15.4	17.3	
						96		4	67	4	19.2	20.4								
						01		4	67	4	20.9	22.8								

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS								
											COV VI	PLT (ft)		HT (ft)							
I/03/N-S	9063130	BENI	river birch	13-May	93	93	CONT	6	3	50	4	0.8	1.2								
			<i>Betula nigra</i>				94					3	50		5	1.1	1.0				
			MN Forestry Association				95					3	50		4	2.0	1.7				
							97					3	50		4	4.7	3.6				
							99					3	50		4	6.2	6.6	1 multi-stemmed, 3 bushlike			
ND-3761 9016288			<i>Populus deltoides siouxlandii</i>																		
			Lincoln-Oakes Nursery,				82								6	100	3	4.4	4.7		
			Bismarck, ND				83								6	100	3	9.7	11.9		
							85								6	100	3	13.7	18.6		
							87								6	100	2	14.2	24.9	borers	
	90	6	100	6	13.0	20.1															
ND-3768 9019603		PODE3X POBA2	'Northwest' poplar	15-Jun	81	81	PLBR	6	6	100	4	1.4	1.8								
			<i>Populus deltoides x</i>				82								4	67	3	3.0	2.7		
			<i>P. balsamifera</i>				83								4	67	4	5.1	5.8	severe deer damage	
			Lincoln-Oakes Nursery,				85								4	67	4	8.7	11.3		
			Bismarck, ND				87								6	100	4	9.3	16.5		
							90								6	100	6	8.1	15.1		
	95	2	33	4	18.4	27.4															
ND-989 9046 9019624		ULJA	elm	15-May	72	72	PLBR	2						4.5	grafted on U. pumila rootstock						
			<i>Ulmus japonica</i>				73									2	100		2.0	2.0	
			USDA-ARS, Mandan, ND				74									2	100		3.5	3.5	
							76									2	100	3	5.5	7.7	
							78									2	100	4	13.2	12.7	
							81									2	100	3	16.2	16.8	
							83									2	100	3	25.9	24.1	
							86									2	100	2	26.8	27.8	
							91									2	100		29.9	29.8	
							96									2	100	3	30.3	36.3	some dead branches 2 (borers)
							01									2	100	4	34.1	37.4	
9058875		ACGI	amur maple	15-May	72	72	PLBR	6							2.5						
			<i>Acer ginnala</i>				73									6	100		3.2	3.2	
			Unknown				74									6	100		2.5	4.3	
							76									6	100	2	5.9	5.8	
							78									6	100	3	10.5	8.2	
							81									6	100	2	12.6	10.0	
							83									6	100	3	16.6	11.7	
							86									6	100	3	15.7	13.6	
							91									6	100		17.6	14.1	
							96									6	100	4	19.3	15.3	
	01	6	100	4	22.5	16.1															

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS								
											COV VI	PLT (ft)		HT (ft)							
I/03/N-S	9063140	PODEM	plains cottonwood <i>Populus deltoides</i> ssp. <i>mon.</i> USDA-ARS, Mandan, ND	24-May	94	94	CONT	6	6	100	5	0.7	1.6								
I/04/S-N	ND-3814 9034903	MABA	crabapple <i>Malus baccata</i>	11-May	84	85	CONT	6	6	100	3	1.4	1.2								
'Homestead' ND-20 9005731 PI-503530	CRAN6		Arnold hawthorn <i>Crataegus anomala</i> Res. Station, Morden, MB, Canada	24-May	72	72	PLBR	6					0.7								
ND-25 9005741	CRMO2		downy hawthorn <i>Crataegus mollis</i> NDSU	24-May	72	72	PLBR	6					1.5								
A-33985 PI-72107			crabapple <i>Malus</i> USDA-ARS, Cheyenne, WY	10-May	90	90	CONT	5	4	80	6	0.3	0.8								

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											COV VI	(ft)		
I/04/S-N	9063115	FRPE	green ash <i>Fraxinus pennsylvanica</i> Itasca State Park, MN	24-May	94	94	CONT	6	5	83	4	0.8	1.4	
									6	100	3	1.1	2.2	
									6	100	4	1.1	2.2	
									5	83	4	1.7	3.3	
									6	100	5	1.7	3.7	
I/05/N-S	ND-614 9005910	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Union Co., SD	24-May	72	72	PLBR	6					1.0	
									6	100			1.2	
									6	100			1.2	
									6	100	2	2.0	3.4	
									6	100	2	3.4	4.5	
									6	100	5	5.8	7.2	
									6	100	3	8.2	10.2	
									6	100	4	8.0	10.3	
									5	83		12.7	13.4	
									5	83	3	15.3	16.5	
									5	83	3	19.6	19.6	many suckers
9058876	SYVU	common lilac <i>Syringa vulgaris</i> unknown origin	24-May	72	72	PLBR	6						1.0	
								6	100			1.5		
								6	100		2.0	2.5		
								6	100	2	3.1	4.7		
								6	100	3	7.2	5.5		
								6	100	3	8.9	7.0		
								6	100	2	10.5	8.0		
								6	100	3	12.2	9.7		
								6	100		14.9	11.0		
								6	100	4	17.5	11.7		
								6	100	4	20.7	12.9		
A-20192 9069160	PIPE	Balkan pine <i>Pinus peuce</i> USDA-ARS, P.I. Station, Ames, IA	12-May	95	95	CONT	3	3	100	4	0.5	0.5		
								3	100	5	0.7	0.4		
								3	100	3	0.7	0.5		
								1	33	5	0.8	0.7		
								1	33	8	0.8	0.5		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS								
											COV VI	PLT (ft)		HT (ft)							
I/05/N-S	'McDermant' ND-14 9006095 PI-478004	PYUS	Ussurian pear <i>Pyrus ussuriensis</i> Res. Station, Morden, MB, Canada	24-May	72	72	PLBR	6					2.0								
																	1.5				
															6	100			1.8	2.8	
															6	100		2	4.7	6.7	
															6	100		3	8.9	10.0	
															6	100		5	12.9	13.2	
															2	33		3	19.5	17.2	
															2	33		4	18.1	16.4	
															2	33		4	19.9	18.5	
															2	33			22.8	18.3	
															2	33		5	26.0	18.7	
															2	33		4	28.8	23.5	
'Midwest'	ND-282 9006003 PI-478000	MAMA37	Manchurian crabapple <i>Malus mandshurica</i> Res. Station, Morden, MB, Canada	24-May	72	72	PLBR	6					2.5								
																	2.2				
															5	83		2.5	4.0		
															5	83		2	6.6	6.5	
															5	83		2	10.4	10.4	
															5	83		4	13.6	12.6	
															3	50		4	17.2	13.3	fireblight
															3	50		3	18.6	16.0	
															3	50			25.5	17.3	
															4	67		4	27.8	19.0	
						4	67		4	30.3	22.4										
ND-428	9005970	JUNI	black walnut <i>Juglans nigra</i> NDSU, Fargo, ND	24-May	72	72	PLBR	6					4.0								
																	3.7				
															5	83		2.0	4.8		
															5	83		2	6.4	6.2	
															5	83		2	9.2	8.3	
															5	83		3	12.9	12.4	
															5	83		3	19.1	14.7	
															5	83		3	19.7	19.4	
															4	67			24.9	20.0	
															5	83		5	21.1	22.1	dieback on 2,4,5
						5	83		4	25.0	29.3										

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											VI	COV (ft)		
I/05/N-S	ND-661 9005733	CRSU2	champlain hawthorn <i>Crataegus submollis</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	1	1	100			1.0	
													1.0	
													1.6	2 1.0
													2.0	2 2.0
													3.3	1 2.8
													4.4	1 3.4
													6.7	1 3.6
													10.8	1 8.2
													11.8	1 10.2
		14.1	1 19.4											
I/06/S-N	PI-495902	POBA2	Balsam poplar <i>Populus balsamifera</i> P.I. Station, Ames, IA	03-Jun	86	86	CONT	5	1	20	9	1.3	2.1	
										100	8	0.9	1.4	browsed
										80	4	1.5	3.7	
										60	5	2.3	4.2	
										60	2	9.3	14.9	
	ND-1218 9005724	CEOC	hackberry <i>Celtis occidentalis</i> Sheridan Co., MT	24-May	76	76	PLBR	6	5	83	3		1.3	
										67	3		0.7	
										33	4	1.1	2.0	
										33	5	3.4	3.9	
										33	5	6.3	7.7	
										33	6	6.7	8.9	
										33	6	8.2	10.4	
										33	5	10.2	14.9	
										33	3	16.0	20.6	
										33		19.1	24.1	
NA-49327 9058877	MALUS	apple <i>Malus</i> USDA-NRCS, NPMC, Beltsville, MD	11-May	84	85	CONT	3	3	100	5	1.6	1.6		
									100	4	1.9	1.6		
									100	4	2.1	2.9		
									100	3	1.6	3.3		
									100	4	2.1	3.5		
									100	5	4.5	7.7		
ND-667 9005745	CRR1	river hawthorn <i>Crataegus rivularis</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	1	17			1.0		
									17			0.5		
									0					
									0					
									17		2.1	3.1		
									17	7	1.8	3.0		
									17	7	1.8	3.3		
									17		1.6	3.3		
									17	7	1.8	2.6		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT HT (ft)		
I/06/S-N	NA-49319 9058879	MALUS	apple <i>Malus</i> USDA-NRCS, PMC, Beltsville, MD	11-May	84	85	CONT	1	1	100	4	1.8	2.0	
												2.1	1.6	
												2.1	3.0	
												2.1	3.3	
												2.1	3.3	
												3.3	5.2	
ND-669 9005750	CRUN	one flower hawthorn <i>Crataegus uniflora</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	6	100			0.7		
												1.0	1.8	
												2.2	3.0	
												2.6	4.4	
												3.8	6.9	
												8.1	9.6	
												9.3	9.7	
												14.1	12.2	
												10.2	9.4	
												15.6	12.1	aphids on all
ND-668 9005747	CRSA	redhaw hawthorn <i>Crataegus sanguinea</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	5	83			0.7		
												1.5		
												1.3	2.7	
												3.0	3.8	
												3.9	6.7	
												8.0	9.7	
												8.6	9.7	
												12.5	12.0	
												10.2	8.9	
												14.2	12.1	
'Homestead' ND-20 9005731 PI-503530	CRAN6	Arnold hawthorn <i>Crataegus anomola</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	6	100			0.5		
												1.5		
												1.0	2.0	
												2.1	2.6	
												3.1	5.5	
												4.9	4.6	
												5.8	7.3	
												9.4	9.4	
												9.7	9.3	
												9.4	9.2	
17.9	15.2													

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	HT (ft)	
I/06/S-N	ND-656 90058881	CRAN6	Arnold hawthorn <i>Crataegus anomola</i> USDA-NRCS, PMC, Bismarck, ND	24-May	73	73	PLBR	3	3	100			0.5
													1.0
													1.0
											2	0.4	1.0
											3	1.6	1.9
													4.1
											6	4.2	6.4
											5	5.3	6.9
											5	8.5	9.2
											5	8.5	9.9
		12.0											
I/07/N-S	49A31709 9058855		Russian hawthorn <i>Crataegus ambigua</i> USDA-ARS, Cheyenne, WY	10-May	90	90	CONT	6	2	33	8	0.2	0.4
												0.3	1.2
											2	0.3	1.8
											1	1.1	1.0
											1	1.7	1.3
	ND-686 9006225 PI-478008	SYPE	Pekin lilac <i>Syringa pekinensis</i> ND Game & Fish Dept.	24-May	73	73	PLBR	6	5	83			1.2
												1.0	1.2
											2	1.6	1.9
											2	3.9	3.8
													5.0
											3	9.2	8.5
											4	11.5	9.6
											3	15.6	11.8
											4	16.7	12.1
											4	18.0	13.1
		5,6 flowering on 10/1											
	'Midwest' ND-282 9006003 PI-478000	MABA	Manchurian crabapple <i>Malus baccata mandshurica</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	3	50			1.2
												1.0	2.0
											2	2.2	2.6
											1	2.9	3.1
											6	5.7	5.6
											6	9.9	9.0
											6	100	9.0
											5	14.3	10.3
											4	15.3	10.8
											4	19.8	13.6
4	19.6	15.7											
		fireblight											

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		HT (ft)
I/07/N-S	'Sakakawea' ND-10 9006158 PI-478005	SHAR	silver buffaloberry <i>Shepherdia argentea</i> Res. Station, Morden, MB, Canada	24-May	73	73	PLBR	6	6	100			1.2	
													1.8	2.5
													4.5	4.1
													6.4	7.3
													9.9	9.5
													13.2	11.1
													14.5	10.7
													14.0	10.0
													9.4	9.9
													14.6	12.1
I/08/S-N	ND-649 9005718	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	24-May	73	73	PLBR	4	2	50			0.7	
													1.5	1.9
													5.3	3.3
													7.9	7.3
													12.6	11.2
													14.7	12.1
													18.7	18.3
													19.7	20.2
													24.9	23.8
	ND-649 9005718	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	24-May	73	73	PLBR	2	2	100			0.7	
													2.0	3.0
													2.9	3.0
													3.6	5.6
													11.2	12.5
													13.1	16.4
													22.1	18.0
													23.5	21.5
													24.4	23.3
													27.9	27.6
SD-75 9005713	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	73	73	PLBR	6	6	100			1.0		
												1.8	2.0	
												1.3	2.0	
												3.7	4.0	
												7.7	8.3	
												13.0	12.9	
												15.0	16.1	
												17.7	20.3	
												18.4	20.7	
												24.1	23.5	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS																			
											COV VI	(ft)																					
I/08/S-N	ND-632 9005717	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	73	73	PLBR	6	6	100			0.7																				
																			1.8														
																					4	67	3	2.6	3.2								
																							2	5.8	4.7								
																									3	8.9	10.3						
																									3	14.0	14.5						
																									3	15.2	16.2						
																									4	18.1	19.4						
																									3	19.4	21.6						
																									3	22.7	23.8						
	ND-631 9005726	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	73	73	PLBR	6	6	100			0.7																				
																							1.8										
																									2	3.7	4.4						
																									1	7.3	7.0						
																											10.7	11.1					
																											3	14.3	14.2				
																											3	15.6	16.2				
																											4	19.3	20.0				
																											4	19.3	21.9				
																											3	21.6	25.3				
	ND-687 9005720	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	73	73	PLBR	6	6	100			0.7																				
																									0.7								
																										3	2.1	3.1					
																											2	5.0	4.9				
																													8.2	8.5			
																												4	11.6	12.7			
																												4	12.6	14.0			
																												3	16.6	19.6			
																												4	17.0	19.8			
																												3	21.1	23.6			
'Oahe'	MDN-12003 9005725 PI-476982	CEOC	hackberry <i>Celtis occidentalis</i> USDA-ARS, Mandan, ND	15-May	73	73	PLBR	6	6	100			1.0																				
																											1.2						
																											3	2.6	3.7				
																												3	3.5	4.1			
																														7.4	8.0		
																													2	33	4	9.8	11.3
																													2	33	5	10.5	12.4
																													2	33	4	13.1	17.1
																													2	33	4	14.8	18.9
																													2	33	4	19.6	20.9

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	HT (ft)		
I/08/S-N	9063141	PODE	eastern cottonwood <i>Populus deltoides</i> Lincoln-Oakes Nursery, Bismarck, ND	06-May	93	93	PLBR	6	4	67	4	1.1	2.1	
											3	5.5	7.5	
											4	10.3	14.7	severe rust
											2	12.2	22.6	
											2	13.3	30.8	4-6 multi-stemmed
	14271 9058869	PDXP8	poplar <i>Populus deltoides</i> x <i>P. nigra</i> USDA-ARS, Mandan, ND	10-May	90	90	PLBR	6	5	83	4	0.9	2.4	
												0.8	2.0	
											4	1.9	3.1	
											2	8.8	11.8	
											2	13.2	20.6	
				5	83	3	14.5	32.9	1-3 multi-stemmed					
I/09/N-S	Theves 9069086	POPUL	hybrid poplar <i>Populus</i> Lee Nursery, Fertile, MN	13-May	93	93	PLBR	6	5	83	3	0.9	2.1	
											2	3.3	7.3	
											2	7.2	13.1	
											5	5.9	12.0	3 chlorotic
											3	5.6	18.9	
	14272 9058870	PDXP8	poplar <i>Populus deltoides</i> x <i>P. nigra</i> USDA-ARS, Mandan, ND	10-May	90	90	PLBR	6	5	83	3	1.1	3.1	
												1.3	2.2	
											4	2.7	4.3	
											2	9.8	15.1	
											2	13.9	24.5	
				3	50	2	16.0	38.1						
'McDermand' ND-14 9006095 PI-478004	PYUS	Ussurian pear <i>Pyrus ussuriensis</i> Res. Station, Morden, MB, Canada	15-May	73	73	PLBR	6	4	67			0.7		
												1.5		
										2	2.1	3.2		
										1	4.5	6.0		
										4	8.1	9.5		
										4	11.8	12.0		
										4	15.5	14.9	fireblight	
										2	18.2	16.9		
										4	18.8	18.6		
										4	23.0	18.1		
4	24.8	20.4												

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS			
											COV VI	PLT (ft)		HT (ft)		
I/09/N-S	SD-131 9006073 PI-536048	PRPA5	mayday <i>Prunus padus</i> Moody Co., SD	15-May	73	73	PLBR	6	6	100		1.2				
												6	100		1.5	2.8
												6	100	2	3.9	4.0
												6	100	2	7.3	6.3
												6	100		11.2	10.6
												6	100	3	13.2	12.9
												6	100	3	15.7	14.2
												6	100	3	23.2	16.7
												1	17	7	12.8	12.3
												1	17	4	20.5	17.4
ND-364 9005867	ELAN	Russian olive <i>Elaeagnus angustifolia</i> Burleigh Co., ND	15-May	73	73	PLBR	4	3	75		1.2					
											2	50		2.5	3.5	
											2	50	2	5.2	5.0	
											4	100	2	7.0	6.2	
											2	50		13.0	12.1	
											2	50	2	19.0	16.8	
											2	50	2	21.1	18.3	
											4	100	2	23.0	22.5	
											4	100	5	21.8	22.9	
											4	100	5	22.9	22.1	many dead branches on 4
I/10/S-N	ND-364 9005867	ELAN	Russian olive <i>Elaeagnus angustifolia</i> Burleigh Co., ND	15-May	73	73	PLBR	2	1	50		1.2				
												1	50		2.0	2.0
												1	50	2	5.0	4.0
												2	100	2	6.4	6.4
												1	50		13.8	11.8
												1	50	2	19.7	16.4
												1	50	2	23.5	18.4
												2	100	3	22.6	19.3
												2	100	7	17.4	18.9
												2	100	6	14.4	19.0
ND-650 9006097	QUMA2	bur oak <i>Quercus macrocarpa</i> Meade Co., SD	15-May	73	73	PLBR	6	4	67							
											2	33			1.5	
											2	33	3	1.0	1.3	
											2	33	3	0.8	1.8	
											2	33		1.7	3.3	
											2	33	5	3.9	5.6	
											2	33	7	4.1	5.7	
											2	33	8	6.8	7.9	
											2	33	4	8.8	10.8	
											2	33	3	12.5	16.4	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		HT (ft)
I/10/S-N	ND-674 9006098	QUMA2	bur oak <i>Quercus macrocarpa</i> Barnes Co., ND	15-May	73	73	PLBR	6	5	83			0.7	
													1.2	
													0.8	
													0.5	
													1.6	
													3.3	
													3.3	
													4.4	
													2.1	
													8.4	
ND-3898 9035208	PYUS	Ussurian pear <i>Pyrus ussuriensis</i> Lawyer Nursery, Plains, MT	02-Jun	83	83	PLBR	6	5	83	6	0.2	1.0		
												1.4		
												1.2		
												1.7		
												4.3		
												9.3		
												10.3		
ND-3796 9030611	POAL	white poplar <i>Populus alba</i> Turner Co., SD	02-Jun	83	83	CONT	2	2	100	3	3.0	2.6		
												4.5		
												7.3		
												17.3		
												23.3		
												21.7		
												28.7		
ND-3803 9030612	POAL	white poplar <i>Populus alba</i> Turner Co., SD	02-Jun	83	83	CONT	3	3	100	4	2.4	2.7		
												4.0		
												8.2		
												18.0		
												23.8		
												20.2		
												27.3		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
I/10/S-N	ND-655 9005656	AEGL	Ohio buckeye <i>Aesculus glabra</i> Hettinger Co., ND	15-May	73	73	PLBR	6	6	100		0.5	
												0.7	
												1.0	
												2.2	2
												4.3	
												8.2	5
												8.4	3
												11.2	2
												13.6	2
												16.2	3
	9057965		balsam poplar <i>Populus balsamifera</i> Daniels County, MT USDA-NRCS, PMC, Bridger, MT	20-May	91	91	CONT	5	5	100		1.0	
												1.2	5
												2.7	5
												11.1	3
												13.4	4
												19.8	
I/11/N-S	'Magenta' 514275	MALUS	crabapple <i>Malus</i> USDA-NRCS, PMC, East Lansing, MI	14-May	92	92	PLBR	6	6	100	5	0.9	
												1.0	5
												0.9	6
												1.4	6
			mowed during weed control										
ND-465 9005971		JUNI	black walnut <i>Juglans nigra</i> Res. Station, Morden, MB, Canada	15-May	73	73	PLBR	6	6	100		0.7	
												0.7	
												1.6	4
												2.2	3
												3.5	
												8.1	5
												9.6	3
												14.6	3
												15.8	4
												19.0	5
ND-1863 9005909		GLTR	honeylocust <i>Gleditsia triacanthos</i> Brown Co., SD	19-May	82	82	PLBR	6	6	100	3	1.6	
												4.1	4
												4.6	
												9.4	4
												13.5	4
												14.6	
												10.5	7
												16.8	6

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											COV VI	(ft)		
I/12/S-N	ND-1843 9011840	ELAN	Russian olive <i>Elaeagnus angustifolia</i> Res. Station, Morden, MB, Canada	20-May	80	80	PLBR	6	6	100	3	1.3	2.2	
												3	4.4	
												2	6.5	
												3	10.1	
													15.5	
												6	14.5	
												4	20.8	
4	23.1													
ND-3808 9030932	ELAN	Russian olive <i>Elaeagnus angustifolia</i> P.I. Station, Ames, IA	19-May	82	82	PLBR	8	5	63	4	1.4	1.9		
											4	4.9		
												10.1		
											3	14.4		
											5	15.0		
											5	21.0		
5	24.4													
'Walker' 9063146	POPUL	hybrid poplar <i>Populus</i> PFRA, Indianhead, Sask.	14-May	93	93	PLBR	6	3	50	5	0.4	0.9		
											3	1.4		
											2	4.2		
											3	8.3		
											2	8.6		
											2	10.3		
9063147 Assiniboine	POPUL	hybrid poplar <i>Populus</i> PFRA, Indianhead, Sask.	14-May	93	93	CONT	6	4	67	6	0.5	1.2		
											3	1.7		
											4	6.0		
											4	9.9		
9069081	TICO2	littleleaf linden <i>Tilia cordata</i> Lee Nursery, Fertile, MN	14-May	93	93	PLBR	6	6	100	6	0.4	0.9		
											5	0.5		
											5	1.1		
											6	2.4		
											4	67		
I/12/S-N & I/13/N-S	9069090	POTR5	quaking aspen <i>Populus tremuloides</i> Lee Nursery, Fertile, MN	14-May	93	93	PLBR	6	4	67	6	0.5	1.1	
												3	1.1	
												3	2.0	
												4	4.8	
												3	7.5	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		HT (ft)
I/13/N-S	'Raverdeau' 9069085	POPUL	hybrid poplar <i>Populus</i> Lee Nursery, Fertile, MN	13-May	93	93	PLBR	6	3	50	6	0.6	1.4	
									2	33	2	1.7	3.8	
									2	33	2	5.3	11.0	
									2	33	5	8.2	12.6	
									2	33	4	11.5	22.5	
14394 9063097	POPUL	poplar <i>Populus</i> USDA-ARS, Mandan, ND	20-May	91	91	PLBR	5	5	100		0.9	1.8		
								5	100	3	1.6	3.8		
								5	100	3	3.3	7.0		
								5	100	3	7.1	16.0		
								5	100	3	7.7	18.3		
14273 9058871	PDXP8	poplar <i>Populus deltoides</i> X <i>P. nigra</i> USDA-ARS, Mandan, ND	10-May	90	90	PLBR	6	6	100	5	0.5	3.1		
								6	100		1.1	3.0		
								5	83	4	2.4	3.8		
								4	67	3	7.5	12.8		
								4	67	3	12.0	21.8		
14274 9058872	PDXP8	poplar <i>Populus deltoides</i> X <i>P. nigra</i> USDA-ARS, Mandan, ND	10-May	90	90	PLBR	6	5	83	5	0.5	3.3		
								5	83		2.3	2.8		
								5	83	2	2.6	3.8		
								5	83	3	9.1	11.5		
								5	83	3	11.5	20.3		
Canam 14390 9058873	POPUL	poplar <i>Populus</i> USDA-ARS, Mandan, ND	10-May	90	90	PLBR	6	5	83	6	0.7	3.2		
								6	100		0.9	1.9		
								5	83	6	0.6	1.5		
								4	67	4	3.6	6.6		
								4	67	4	8.2	12.9		
I/14/S-N	9016318	ULPU	Siberian elm <i>Ulmus pumila</i> USDA-NRCS, PMC, Bridger, MT	15-May	95	95	PLBR	6	6	100	4	0.8	2.2	deer browsed
									6	100	4	2.0	2.1	
									6	100	4	2.6	2.9	
									6	100	4	4.0	5.2	
									6	100	5	5.4	8.5	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	HT (ft)		
I/14/S-N	ND-471 9005717	CEOC	hackberry <i>Celtis occidentalis</i> Res. Station, Morden, MB, Canada	15-May	74	74	PLBR	6	6	100			1.0	
											3	0.8	1.5	
											3	1.1	1.8	
											4	4.9	3.6	
											4	7.4	6.8	
											6	13.1	12.6	
											3	19.2	16.4	
											3	20.7	24.3	
	4	29.5	21.5											
	ND-735 9005721	CEOC	hackberry <i>Celtis occidentalis</i> Potter Co., SD	15-May	74	74	PLBR	6	6	100			1.0	
											3	0.1	0.8	
											3	0.3	1.6	
											3	4.1	3.6	
											4	6.5	5.8	
											4	15.1	13.7	
											3	19.8	19.6	
											3	20.4	21.6	
	4	26.0	24.9											
14392 9058874		POPUL	hybrid poplar <i>Populus</i> Lincoln-Oakes Nursery, Bismarck, ND	10-May	90	90	PLBR	6	6	100	5	0.7	2.2	
												1.3	2.2	
											5	2.2	3.2	
											4	4.2	7.0	
											4	7.7	15.3	rust, early leaf drop
											3	8.6	25.8	
9063126		ULJA	Japanese elm <i>Ulmus japonica</i> PFRA, Indianhead, Saskatchewan Lincoln-Oakes Nursery, Bismarck, ND	13-May	92	92	CONT	6	3	50	5	0.8	1.4	
									0	0			did not establish	
									2	33	5	0.5	0.8	
									5	83	6	1.1	1.1	1 browsed
									3	50	8	1.3	1.0	2,3 mowed off?
9069093 44		ULPU	Siberian elm <i>Ulmus pumila</i> USDA-ARS, NGPRL, Mandan, ND	25-May	93	93	CONT	5	5	100	5	0.8	1.2	
									5	100	4	1.3	1.8	
									5	100	5	1.8	2.1	browsed
									5	100	6	2.6	2.0	
									3	60	6	3.8	3.2	
9069096 437		ULPU	Siberian elm <i>Ulmus pumila</i> USDA-ARS, NGPRL, Mandan, ND	25-May	93	93	CONT	4	3	75	4	0.6	1.8	
									3	75	2	1.2	2.7	
									3	75	3	1.7	3.5	
									3	75	2	4.8	8.3	
									3	60	5	6.7	10.4	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS					
											COV VI	PLT (ft)		HT (ft)				
I/15/N-S 65	9069094	ULPU	Siberian elm <i>Ulmus pumila</i> USDA-ARS, NGPRL, Mandan, ND	25-May	93	93	CONT	5	5	100	5	0.5	1.3	excellent growth rate				
9069097 14476	9069097	ULPU	Siberian elm <i>Ulmus pumila</i> USDA-ARS, NGPRL, Mandan, ND	25-May	93	93	CONT	5	5	100	5	0.7	1.8					
9069116 14178	9069116	POAL	white poplar <i>Populus alba</i> USDA-ARS, NGPRL, Mandan, ND	20-May	94	94	CONT	6	6	100	3	1.6	2.6	winter dieback				
'Tower' ND-3809 9022896	9022896	POAL7 X POTR10	poplar <i>Populus alba</i> X <i>Populus tremula</i> 'Erecta' Res. Station, Morden, MB, Canada P.I. Station, Ames, IA	20-May	82	82	PLBR	10	10	100	4	0.9	2.2					
9054820	9054820	ULPU	Siberian elm <i>Ulmus pumila</i> USDA-NRCS, PMC, Bridger, MT	12-May	95	95	PLBR	6	6	100	3	1.1	2.2	browsed 3-6 browsed				
ND-3919 9042583	9042583	POPUL	hybrid poplar (shade) <i>Populus</i> Van Pines Inc., West Olive, MI	02-Jun	83	83	PLBR	5	5	100	4	1.4	3.0					

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS		
											COV VI	PLT (ft)			
I/16/S-N	PI-266678	POTR10	European columnar aspen <i>Populus tremula</i> P.I. Station, Ames, IA	15-May	74	74	PLBR	3	3	100		3.7			
											2	0.8		3.7	
											2	4.4		6.3	
											3	7.7		12.8	
											3	10.7		8.7	
											4	16.0		19.3	
											4	24.6		34.9	
											6	24.4		22.1	
											6	27.7		26.2	
															many dead branches on 1
ND-1248 9006049	PODE3 X POPE*	Brooks poplar, hybrid <i>Populus deltoides</i> X <i>P. petrovskyana</i> P.I. Station, Ames, IA	15-May	74	74	PLBR	2	2	100		3.5				
										2	5.9		7.8		
										2	9.3		10.4		
										3	13.8		21.3		
										7	15.8		19.7		
										3	23.1		28.6		
										2	28.5		38.4		
										5	27.4		39.7		
										4	35.8		37.6		
										ND-3920 9042584	POPUL		hybrid poplar (screen) <i>Populus</i> Van Pines Inc., West Olive, MI	02-Jun	83
6	3.5	4.6													
4	7.1	8.5													
3	11.5	19.1													
3	14.6	23.7													
4	16.0	29.7													
ND-647 9005887	FRNI	black ash <i>Fraxinus nigra</i> Res. Station, Morden, MB, Canada	24-May	78	78	PLBR	6	6	100			3			
										5	83	0.2	1.3		
										5	83	5	1.4	2.0	
										5	83	5	2.2	4.3	
										4	67	6	2.6	5.3	
										4	67	2.6	5.9		
										4	67	5	3.5	8.7	
										4	67	3	8.7	15.9	
										4	67	2	13.1	21.8	
ND-3825 9034904	ACSA2	silver maple <i>Acer saccharinum</i> Bismarck, ND	02-Jun	83	83	CONT	5	4	80	5	0.3	1.1			
										4	80	0.4		1.1	
										4	80	7		0.5	1.1
										4	80	5		2.7	3.8
										4	80	5		3.8	3.8
										4	80	5		7.2	5.7
										4	80	5		17.4	15.1
					many stems										

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											COV VI	(ft)		
I/16/S-N	9063116	FRNI	black ash <i>Fraxinus nigra</i> Itasca State Park, MN	20-May	94	94	CONT	6	6	100	4	0.2	0.9	
									6	100	5	0.5	1.2	
									6	100	5	0.3	1.1	
									00					too much weed competition & mowed during thistle control
9063120	AEGL	Ohio buckeye <i>Aesculus glabra</i> Ransom County, ND	20-May	94	94	CONT	6	1	17	4	0.5	0.8		
								3	50	4	0.5	1.1		
								4	67	5	0.7	1.0		
								4	67	4	1.6	2.3		
								4	67	5	1.8	3.0		
ND-1030 9005657	AEGL	Ohio buckeye <i>Aesculus glabra</i> Murray Co., MN	15-May	75	75	PLBR	3	3	100	3		0.8		
								3	100	3		1.1		
								2	67	3	0.9	0.9		
								2	67		2.0	3.8		
								2	67	5	3.4	5.2		
								2	67	3	8.3	8.5		
								2	67		9.7	9.8		
								2	67	4	15.6	14.4		
								2	67	2	18.9	17.0		
								3	100	3	17.6	14.9		
								2	67	2	23.8	20.0		
I/17/N-S	ND-1030 9005657	AEGL	Ohio buckeye <i>Aesculus glabra</i> Murray Co., MN	15-May	78	78	PLBR	3	3	100	3	1.4	1.4	
									3	100		2.0	2.5	
									3	100	6	1.0	1.0	
									3	100	6	2.7	2.6	
									3	100	6	3.7	3.6	
									3	100		4.8	3.3	
									3	100	4	9.3	8.4	
									3	100	3	13.4	11.3	
ND-1023 9005911	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Washington Co., NE	15-May	75	75	PLBR	6	6	100	3		0.7		
								5	83	2	0.4	1.3		
								3	50	3	1.5	1.7		
								3	50		2.0	4.3		
								3	50	6	2.7	4.0		
								3	50	4	3.8	5.2		
								3	50		3.6	5.7		
								3	50	4	9.1	11.4		
								2	33	4	8.4	9.0	crowd dieback	
								2	33	4	8.7	10.2		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT HT (ft)	
I/17/N-S	ND-1024 9005912	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Madison Co., NE	15-May	75	75	PLBR	6	6	100	3	1.0	
												1.8	
												2.0	1.4
												2.4	0.5
												4.1	2.1
												4.8	3.4
												4.8	3.2
												11.0	7.8
												12.2	9.7
												14.6	10.5
	ND-1025 9005913	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Union Co., SD	15-May	75	75	PLBR	6	6	100	2	1.0	
												1.3	0.4
												1.1	1.0
												3.0	1.6
												4.3	2.7
												4.5	2.6
												3.8	2.2
												9.9	7.5
												10.7	9.0
												14.1	13.6
	ND-1026 9005914	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Clay Co., SD	15-May	75	75	PLBR	6	6	100	2	1.0	
												1.8	
												1.7	0.8
												1.9	0.8
												3.1	2.2
												4.8	3.6
												3.8	3.1
												10.1	10.3
												10.1	10.7
												12.9	13.9
	ND-1135 9005915	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Madison Co., NE	15-May	75	75	PLBR	6	6	100	3	1.0	
												1.8	
												0.9	0.5
												2.3	1.1
												4.1	2.8
												5.3	4.2
												6.0	4.4
												12.1	9.2
												13.8	10.7
												18.2	13.5

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
I/17/N-S	ND-1181 9005916	GYDI	Kentucky coffeetree <i>Gymnocladus dioicus</i> Spink Co., SD	15-May	76	76	PLBR	6	5	83	4	0.5	
									5	83	4	0.6	0.6
									4	67	4	1.0	1.1
									2	33	5	1.7	2.8
									2	33	4	3.9	4.9
									2	33	5	4.1	5.7
									2	33	6	2.9	5.7
									1	17		5.4	12.1
									1	17	3	11.2	15.3
									1	17	2	16.5	19.5
9058896			Austree <i>Salix matsudana</i> X <i>S. alba</i> Austree Inc., Pescadero, CA	20-May	91	91	PLBR	6	6	100		0.6	2.7
									4	66	4	1.0	3.4
									3	50	6	1.4	3.6
									3	50	4	4.8	9.9
									3	50	4	6.3	11.6
									3	50	4	11.7	20.8
I/19/S-N	ND-1729 9005979	LASI	Siberian larch <i>Larix sibirica</i> NDFS, State Nursery, Towner, ND	24-May	78	78	CONT	6	6	100	3	0.4	1.7
									5	83		1.1	1.8
									4	67	5	1.6	2.8
									4	67	5	1.8	3.8
									3	50	5	3.0	5.2
									3	50		3.5	5.2
									1	17	2	7.2	8.7
									2	33	4	8.7	13.1
2	33	4	11.5	17.8									
ND-1765 9005980		LASI	Siberian larch <i>Larix sibirica</i> USDA-FS, Bottineau, ND	24-May	78	78	CONT	6	6	100	4	0.2	0.7
									6	100		0.5	1.4
									4	67	5	1.7	2.8
									3	50	5	3.9	4.1
									3	50	4	4.2	5.8
									3	50		5.7	7.0
									3	50	4	9.9	11.6
									3	50	4	13.4	15.4
3	50	2	16.5	23.2									

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
I/20/N-S	SL-383-T 9005976	LASI	Siberian larch <i>Larix sibirica</i> USDA-FS, Bottineau, ND	24-May	78	78	CONT	6	6	100	3	0.2	2.2
I/20/N-S	9057413	PIPO	ponderosa pine <i>Pinus ponderosa</i> Glendive, MT NDFS	26-May	88	88	CONT	6	6	100	3	0.6	1.1
1/22/N-S	9076685	PIAB	Norway spruce <i>Picea abies</i> Carl Carlson, Glenwood, MN USDA-NRCS, PMC, Bismarck, ND	18-May	95	95	CONT	6	4	67	4	1.1	1.1
I/24/N-S	ND-500 9005977	LASI	Siberian larch <i>Larix sibirica</i> Res. Station, Morden, MB, Canada	15-May	77	77	CONT	6	6	100	2	0.5	1.0
I/25/N-S	ND-2102 9036029	PRAR3	apricot <i>Prunus armeniaca</i> Hand Co., SD	03-Jun	86	86	PLBR	6	5	83	6	1.0	1.5

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS	
											COV VI	(ft)			
I/25/N-S	ND-21 9034900	VILE	nannyberry <i>Viburnum lentago</i> USDA-ARS, Mandan, ND	03-Jun	86	86	PLBR	6	6	100	5	0.5	0.9		
											4	0.8	1.8		
											3	1.7	2.9		
											3	2.6	3.7		
											2	4.1	4.9		
											2	6.0	7.5		
											2	9.0	8.8		
											4	0.7	1.6		
											6	100	0.3		0.6
											4	0.5	0.9		
5	0.5	1.5													
3	0.8	1.6													
5	1.4	1.8													
TALL SHRUBS II/01/N-S	ND-645 9006085	PRVI	chokecherry <i>Prunus virginiana</i> Ransom Co., ND	15-May	72	72	PLBR	6	6	100			1.2		
													2.2		
												2.5	3.7		
											2	5.0	6.0		
											3	7.4	7.8		
											4	9.1	10.6		
											6	10.7	11.6		
											4	11.9	12.4		
											5	10.8	11.1		
											6	9.9	11.7		
6	15.5	16.3													
ND-621 9006084	PRVI	chokecherry <i>Prunus virginiana</i> Grant Co., ND	15-May	72	72	PLBR	6		6	100			1.2		
													2.8		
												2.5	4.8		
											2	6.2	8.1		
											3	9.1	9.6		
											2	13.5	12.7		
											4	16.2	13.7		
											2	16.7	15.3		
											5	13.9	14.7		
											6	14.9	16.4		
7	14.8	14.1													

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		
II/01/N-S	ND-83 9006228 PI-540443	SYVI	late lilac <i>Syringa villosa</i> Res. Station, Morden, MB, Canada	15-May	72	72	PLBR	6					1.2	
										6	100		1.5	
										6	100		2.0	2.8
										6	100	2	3.9	4.5
										6	100	3	5.8	5.1
										6	100	3	7.7	7.2
										6	100	4	9.6	8.9
										6	100	3	10.8	10.4
										6	100	5	8.3	9.1
										6	100	5	10.8	11.2
			6	100	4	12.2	11.0							
	ND-629 9005645 PI-477992	AGCI	amur maple <i>Acer ginnala</i> Res. Station, Morden, MB, Canada	15-May	72	72	PLBR	2					2.5	
										2	100		3.0	
										2	100		3.2	4.5
										2	100	2	6.1	6.1
										2	100	2	10.6	8.1
										2	100	2	11.6	9.8
										2	100	3	14.7	11.6
										2	100	2	16.5	12.5
										2	100	4	13.5	11.4
										2	100	4	14.9	12.8
			2	100	6	15.3	12.5							
II/02/S-N	'Konza' PI-477981	RHAR4	aromatic sumac <i>Rhus aromatica</i> P.I. Station, Ames, IA	03-Jun	86	86	CONT	5	4	80	4	1.6	1.7	
									5	100	3	4.6	4.1	
									5	100	3	4.7	4.0	
									4	80	3	6.9	5.1	
									4	80	2	8.8	5.9	
									4	67	2	13.2	7.6	
									4	67	3	12.2	8.9	
	Mich-1466 9005010	JUCO6	common juniper <i>Juniperus communis</i> USDA-NRCS, PMC, Rose Lake, MI	15-May	72	72	PLBR	6					1.0	
										1	17		1.0	
										1	17		1.0	
										1	17	2	1.7	2.0
										1	17	2	3.2	2.7
										1	17	3	5.1	3.9
										1	17	5	6.7	5.1
										1	17	2	10.3	6.9
										1	17	3	8.4	9.2
										1	17	4	9.7	11.0
			1	17	6	13.0	11.8							

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS													
											COV VI	HT (ft)														
II/02/S-N	ND-313 9005996 PI-477999	LOTA	red tatarian honeysuckle <i>Lonicera tatarica sibirica</i> USDA-ARS, Cheyenne, WY	15-May	72	72	PLBR	6					1.8													
																	2.2									
															6	100			3.0	3.5						
															6	100		2	6.6	5.5						
															6	100		3	9.4	7.6						
															6	100		3	11.3	8.1						
															6	100		4	12.3	9.6	honeysuckle aphid					
															6	100		4	13.0	10.6						
															5	83		4	13.2	10.5						
															5	83		4	15.5	11.7						
						01		5	83	4	18.0	11.5														
0-8-188-5	9058883	SYREM8	Japanese tree lilac <i>Syringa reticulata</i> var. <i>mandschurica</i> Canada	15-May	72	72	PLBR	3						2.5												
																	1.2									
															3	100		1.5	2.2							
															3	100		3	2.0	3.0						
															3	100		4	3.4	4.9						
															3	100		4	4.9	7.0						
															3	100		4	7.2	9.3						
															3	100		3	9.3	11.3						
															3	100		3	10.1	11.3						
															3	100		2	13.0	14.3						
						01		3	100	2	14.3	15.2														
II/03/N-S	A2819 9058884	SOTI*	mountain ash <i>Sorbus tianshanica</i> P.I. Station, Ames, IA	03-Jun	86	86	CONT	2	2	100	6	0.3	0.4													
																				2	100		7	0.3	0.7	browsed
																				2	100		4	1.2	1.8	
																				2	100		6	1.0	2.6	
																				2	100		5	1.4	3.3	
																				2	100		6	1.3	4.0	
						00		1	50	2	5.8	12.2														
ND-283	9006079 PI-540442	PRTE80	Russian almond <i>Prunus tenella</i> Res. Station, Morden, MB, Canada ND Game & Fish Dept.	15-May	73	73	PLBR	6	6	100																
																	6	100				1.8				
																	6	100		2	3.7	2.7				
																	6	100		2	5.2	3.5				
																	6	100			6.7	4.4				
																	6	100		2	8.8	5.3				
																	6	100		2	9.6	5.4				
																	6	100		3	9.9	5.8				
																	6	100		5	9.2	5.5				
						97		4	67	10.5	3.9	good seed crop														

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS				
											COV VI	HT (ft)					
II/03/N-S	'Scarlet' ND-3 9006072 PI-478003	PRFR2	Mongolian cherry <i>Prunus fruticosa</i> Res. Station, Morden, MB, Canada	15-May	73	73	PLBR	6	6	100		1.5					
												6	6	100		1.8	2.0
												6	6	100	2	3.1	2.9
												6	6	100	2	5.2	2.7
												6	6	100		7.1	4.1
												6	6	100	4	7.1	5.1
												6	6	100	3	7.9	5.2
												6	6	100	3	7.1	5.8
												5	83	7	3.8	3.3	
II/04/S-N	ND-678 9006109	RHGL	smooth sumac <i>Rhus glabra</i> Dewey Co., SD	15-May	73	73	PLBR	6	5	83		2.2					
												5	5	83		2.8	2.8
												6	6	100	1	2.2	3.5
												6	6	100	1	8.3	5.4
												6	6	100		7.7	6.8
												6	6	100	4	9.4	8.8
												6	6	100	3	11.0	8.2
												6	6	100	4	10.5	9.0
												6	6	100	6	10.9	8.2
	6	100	6	13.5	11.9												
	ND-677 9006108	RHGL	smooth sumac <i>Rhus glabra</i> Otter Tail Co., MN	15-May	73	73	PLBR	6	5	83		2.2					
												5	5	83		3.2	3.0
												5	5	83	1	4.1	4.1
												5	5	83	2	8.3	4.1
												5	5	83		8.8	6.4
5												5	83	3	10.9	7.5	
5												5	83	3	12.2	7.8	
6												6	100	5	10.3	8.0	
5												83	6	12.3	8.6		
5	83	3	16.5	10.4													
'Schubert' 9012608 PI-11223	PRVI	chokecherry <i>Prunus virginiana</i> USDA-ARS, Mandan, ND	15-May	73	73	PLBR	6	5	83		1.5						
											5	5	83		1.5	2.5	
											5	5	83	2	2.9	4.3	
											5	5	83	2	5.8	5.8	
											5	5	83		8.7	8.9	
											5	5	83	3	12.0	11.1	
											5	5	83	4	12.0	11.6	
											3	50	3	16.7	14.2		
											1	17		19.7	16.1		
1	17	3	28.2	17.2													

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	HT (ft)		
II/05/N-S	'Indigo' Mich-765 9004971 PI-468117	COAM2	silky dogwood <i>Cornus amomum</i> USDA-NRCS, PMC, Rose Lake, MI	15-May	73	73	PLBR	4	3	75			1.2	
													1.2	
													2.6	
													2.8	
													4.8	
													7.5	
													7.8	
													9.3	
													9.3	
													9.6	contaminants on 2
	'Hansen' 9019612	ROSA	hedge rose <i>Rosa</i> Canada	15-May	73	73	PLBR	6	6	100			1.7	
													3.0	
													3.7	
													4.1	
													5.7	
													6.3	
													6.3	
													6.2	
													4.6	
													6.6	contaminants on 1,3
ND-83 9006228 PI-540443	SYVI	late lilac <i>Syringa villosa</i> Res. Station, Morden, MB, Canada	15-May	73	73	PLBR	6	6	100			1.0		
												1.5		
												2.6		
												3.7		
												5.9		
												7.9		
												8.6		
												9.5		
												9.8		
												9.4		
	'Success' 9005662	AMAL2	juneberry <i>Amelanchier alnifolia</i> USDA-ARS, Mandan, ND	15-May	73	73	PLBR	6	0				0.7	
													1.3	
													2.5	
													1.8	
													2.6	
													3.0	
													4.2	
													4.2	
													5.3	
													7.6	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS											
											COV VI	PLT HT (ft)												
II/05/N-S	'Timms' ND-46 9005661	AMAL2	juneberry <i>Amelanchier alnifolia</i> Towner Co., ND	15-May	73	73	PLBR	4	2	50			1.0											
II/06/S-N	'Timms' ND-46 9005661	AMAL2	juneberry <i>Amelanchier alnifolia</i> Towner Co., ND	15-May	73	73	PLBR	2	1	50			1.0											
A-53217 9058854		ACTA	tatarian maple <i>Acer tataricum</i> USDA-ARS, Cheyenne, WY	10-May	90	90	CONT	6	2	33			0.6											
II/07/N-S	M-398 9005518	RHTR	skunkbush sumac <i>Rhus trilobata</i> Broadwater Co., MT	15-May	73	73	PLBR	4	2	50			0.7											

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		
II/07/N-S	ND-11 9005993 PI-477998	LOMA6	amur honeysuckle <i>Lonicera maackii</i> Res. Station, Morden, MB, Canada	24-May	78	78	PLBR	6	6	100	4	1.2	1.5	
												1.8	1.9	
												3.1	2.1	
												3.7	2.7	
												5.6	4.2	
												6.7	5.6	
												9.6	7.9	
												9.1	8.7	
												9.5	8.7	
												10.8	9.7	
9063148	PHSA	corktree <i>Phellodendron sachalinense</i> Clay Co., MN	18-May	95	95	CONT(P)	6	6	100	4	0.3	1.1		
											0.5	1.5		
											1.5	2.2		
											1.5	3.0		
											4.5	6.1		
II/08/S-N	ND-621 9006084	PRVI	chokecherry <i>Prunus virginiana</i> Grant Co., ND	15-May	73	73	PLBR	6	6	100		2.0		
												2.0	2.5	
												3.5	4.3	
												6.7	6.8	
												9.4	8.7	
												12.9	11.3	
												13.7	11.5	
												16.3	13.7	
												15.7	15.9	
												20.7	16.7	
'Bighorn' WY-843 9004646 PI-483445	RHTR	skunkbush sumac <i>Rhus trilobata</i> Bighorn Co., WY	15-May	73	73	PLBR	6	6	100			1.0		
												1.8	2.0	
												4.9	3.7	
												9.4	5.4	
												12.1	7.2	
												11.7	8.1	
												13.5	8.9	
												13.4	9.8	
												13.4	10.2	
												17.0	10.6	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS												
											COV VI	PLT (ft)		HT (ft)											
II/08/S-N	ND-1336 9006088	PRVI	chokecherry <i>Prunus virginiana</i> Mercer Co., ND	24-May	78	78	PLBR	6	6	100	2	0.6	1.9												
												1.5	3.0												
												3.1	4.4												
												6.6	8.8												
												7.8	10.1												
												9.5	11.5												
												13.8	14.3												
												15.6	15.4												
												18.6	18.4												
II/09/N-S	'Flame' MI-891 9005157 PI-483442	ACGI	amur maple <i>Acer ginnala</i> USDA-NRCS, PMC, Elsberry, MO	24-May	78	78	PLBR	6	5	83	4	0.6	1.3												
												2.1	2.3												
												2.6	3.4												
												7.2	6.8												
												9.0	8.1												
												12.7	10.1												
												16.5	12.6												
												16.7	12.8												
												20.7	16.1												
												'Ruby' NY-5214 PI-443229	COST	dogwood <i>Cornus stolonifera</i> USDA-NRCS, PMC, Big Flats, NY	11-May	84	85	CONT	6	6	100	4	1.1	0.9	
																							2.3	1.6	
																							2.7	2.2	
																							2.7	2.4	
																							3.6	2.6	
	3.6	4.4																							
ND-532 9006083	PRTO	Nanking cherry <i>Prunus tomentosa</i> Oliver Co., ND	15-May	73	73	PLBR	4	4	100			2.0													
											1.8	2.8													
											3.0	4.5													
											7.0	6.6													
											9.7	8.5													
											12.6	9.3													
											12.9	9.8													
											15.0	10.8													
											13.4	10.8													
											17.2	12.4													

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											COV VI	(ft)		
II/09/N-S	9058885	AMAL2	juneberry <i>Amelanchier alnifolia</i> Unknown	15-May	73	73	PLBR	5	5	100			0.5	
													1.5	
													1.8	2 1.2
													2.0	3 2.6
													3.9	5 4.5
													5.2	5 5.6
													5.2	4 6.0
													6.2	4 6.7
													6.1	6 6.8
													8.7	5 8.3
II/10/S-N	ND-28 9005727	COIN16	cotoneaster <i>Cotoneaster integerrimus</i> USDA-ARS, Mandan, ND	15-May	74	74	PLBR	4	3	75			1.5	
													2.9	2 2.9
													3.2	3 3.3
													6.0	3 7.5
													6.6	1 9.4
													8.0	3 7.5
													8.8	7 9.7
													10.2	5 9.6
													10.2	4 11.5
													10.3	3 13.0
		10.3	5 16.4											
ND-27 9005726	COIN16	cotoneaster <i>Cotoneaster integerrimus</i> USDA-ARS, Mandan, ND	15-May	74	74	PLBR	6	3	50			1.2		
												1.5	3 1.2	
												2.3	2 3.2	
												5.2	1 17	
												5.7	4 8.0	
												7.7	1 17	
												9.2	6 9.4	
												10.8	7 9.8	
												10.8	3 10.7	
												10.7	3 13.8	
		10.7	4 16.1											
ND-629 9005645 PI-477992	ACGI	amur maple <i>Acer ginnala</i> Res. Station, Morden, MB, Canada	15-May	74	74	PLBR	6	6	100			1.8		
												3.4	2 3.3	
												4.9	2 5.1	
												7.9	6 100	
												9.1	3 9.0	
												11.9	6 100	
												11.9	2 11.4	
												13.8	2 15.2	
												15.7	3 18.1	
												16.3	3 20.1	
		16.3	3 26.4											

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTR	NO PLTS	NO SRV	PCT SRV	CAN		PLT HT	REMARKS
											COV VI	(ft)		
II/11/N-S	ND-473 9019980	PREF2	Mongolian cherry <i>Prunus fruticosa</i> Res. Station, Morden, MB, Canada	15-May	74	74	PLBR	6	5	83			1.0	
													1.7	
													2.1	
													3.1	
													4.0	
													4.5	
													5.1	
													7.1	
	'Scarlet' ND-3 9006072 PI-478003	PRFR2	Mongolian cherry <i>Prunus fruticosa</i> Res. Station, Morden, MB, Canada	15-May	74	74	PLBR	6	6	100			1.2	
													1.6	
													1.7	
													2.2	
													2.2	
													3.8	
													3.7	
5.1														
ND-170 9005728	COIN16	European cotoneaster <i>Cotoneaster integerrimus</i> Kingsbury Co., SD	15-May	74	74	PLBR	6	5	83			1.2		
												1.4		
												1.5		
												2.4		
												3.4		
												4.1		
												5.1		
												5.8		
6.6														
II/12/S-N	9063143	LOTA	red tatarian honeysuckle <i>Lonicera tatarica</i> Iowa Lincoln-Oakes Nursery, Bismarck, ND	13-May	93	93	PLBR	6	5	83	5	0.6	0.9	
												0.8		
												1.2		
												1.7		
												2.2		
	9069080 Arnolds Red	LOTA	red tatarian honeysuckle <i>Lonicera tatarica</i> Lee Nursery, Fertile, MN	13-May	93	93	PLBR	6	4	67	5	0.7	0.9	
												1.2		
												1.5		
												2.7		
												4.3		
6.1														

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		
II/12/S-N	9069098 13823	CAFR80	Russian peashrub <i>Caragana frutex</i> P.I. Station, Ames, Iowa	13-May	93	93	CONT	3	1	33	4	0.3	1.3	
									1	33	4	0.5	1.3	
									1	33	3	0.7	1.5	
									1	33	4	2.0	3.0	
									1	33	4	2.3	3.3	
ND-3813 PI-384453	RORU	rugosa rose <i>Rosa rugosa</i> P.I. Station, Ames, IA	11-May	84	85	CONT	5	4	80	4	1.8	1.0		
								4	80	3	3.1	1.6		
								4	80	4	3.0	1.8		
								4	80	6	3.1	1.6		
								2	33	5	2.0	2.0		
	2	33	8	1.7	2.3									
ND-1134 9047203	PRUNU	plum <i>Prunus</i> Miller, SD USDA-NRCS, PMC, Bismarck, ND	10-May	90	90	PLBR	6	5	83	4	0.5	1.5		
								6	100	5	0.6	1.7		
								6	100	5	0.7	1.6		
								5	83	4	1.8	2.6		
								5	83	5	3.0	4.3		
	5	83	5	5.1	5.1									
II/13/N-S	9069161	SESU	spoil ax <i>Securinega suffruticosa</i> P.I. Station, Ames, IA	25-May	94	94	CONT	5	5	100	3	1.5	1.5	
									5	100	2	2.6	3.9	
									5	100	2	5.7	4.9	
									5	100	4	5.2	5.2	
									5	100	2	6.0	6.1	
ND-686 9006225 PI-478008	SYPE	pekin lilac <i>Syringa pekinensis</i> ND Game and Fish Dept.	11-May	84	85		5	4	80	4	1.2	1.1		
								4	80	4	2.3	2.5		
								4	80	3	3.4	4.1		
								4	80	3	5.3	5.2		
								4	80	3	8.1	8.5		
	4	80	4	12.1	10.9									
303182	AMFR	false indigo <i>Amorpha fruticosa</i> P.I. Station, Ames, IA	16-May	94	94	CONT	2	2	100	2	1.8	2.0		
								2	100	4	3.3	3.9		
								2	100	3	5.4	4.4	deformed growth on 2	
								1	50	5	5.4	4.6		
								1	50	2	9.0	6.4		
9069115		honeysuckle <i>Lonicera</i> P.I. Station, Ames, IA	16-May	94	94	CONT	6	5	83	5	1.0	1.0		
								5	83	4	1.3	2.7		
								5	83	3	2.7	3.0		
								5	83	3	3.5	5.2		
								5	83	3	4.5	6.5		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
II/13/N-S	9069128	LOTA	red tatarian honeysuckle <i>Lonicera tatarica</i> Big Sioux Nursery, Watertown, SD	24-May	94	94	PLBR	6	6	100	5	0.7	0.9
											5	0.9	1.3
											4	1.5	1.7
											7	1.4	2.0
											4	2.5	3.7
II/14/S-N	PI-384493	LOCA	sweetberry honeysuckle <i>Lonicera caerulea</i> P.I. Station, Ames, IA	15-May	74	74	PLBR	6	6	100			0.7
											4	0.7	0.7
											3	0.9	1.1
											3	2.1	0.9
											5	2.4	0.8
											4	3.3	1.7
	PI-384494	LOCA	sweetberry honeysuckle <i>Lonicera caerulea</i> P.I. Station, Ames, IA	15-May	74	74	PLBR	3	3	100			0.5
											4		0.5
											4		0.5
											2	1.0	0.6
											5	1.6	0.5
											5	2.8	1.0
											3	3.3	2.5
ND-29-7 9006110	RIAUV	golden currant <i>Ribes aureum</i> var. <i>villosum</i> USDA-ARS, Mandan, ND	15-May	74	74	PLBR	4	4	100			1.5	
										2	2.9	3.0	
										2	3.5	3.1	
										3	5.5	4.5	
										4	8.6	4.6	
										4	9.1	5.6	
										4	8.8	5.7	
5	9.2	5.7											
5	9.0	6.6											

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
II/15/N-S	K-1812 9004383	PRSE2	black cherry <i>Prunus serotina</i> USDA-NRCS, PMC, Manhattan, KS	15-May	75	75	PLBR	5	5	100	2	1.0	2.0
											2	2.1	3.2
											2	3.4	3.1
												6.5	6.8
											4	10.6	10.5
											4	13.3	10.6
												15.9	12.1
											4	17.7	16.2
											4	15.5	16.8
											4	17.4	18.2
Mich-1342	9005058	SHAR	silver buffaloberry <i>Shepherdia argentea</i> USDA-NRCS, PMC, Rose Lake, MI	15-May	75	75	PLBR	5	5	100	3		0.7
											3	1.0	1.6
											2	2.2	2.6
												5.9	6.4
											2	9.3	9.1
											2	12.9	10.2
												13.8	11.5
											3	14.9	14.1
											6	10.8	12.7
											ND-1420	9006159	SHAR
	3.0	2.9											
2	4.7	3.9											
3	8.5	7.5											
4	10.4	7.7											
	11.9	9.1											
4	11.2	10.4											
5	9.5	8.5											
6	9.1	9.0											
ND-1422	9006161	SHAR	silver buffaloberry <i>Shepherdia argentea</i> Mercer Co., ND	24-May	78	78	PLBR	7	7	100			
												3.2	3.1
											2	5.2	4.7
											3	8.9	8.7
											7	10.5	9.0
												11.9	11.0
											3	13.8	12.3
											5	10.4	11.3
											6	8.1	8.5

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	HT (ft)		
II/16/S-N	ND-284 9006055	PRAM	American plum <i>Prunus americana</i> USDA-NRCS, PMC, Manhattan, KS	15-May	76	76	PLBR	5	2	40	4	1.3		
											4	0.7	1.3	
											3	2.7	3.2	
											4	4.9	5.9	
											3	8.9	10.0	
											5	1.0	8.7	
											7	11.6	7.5	
											7	6.2	6.9	
											6	10.2	10.5	
											6	12.0	10.4	
PI-323957	PHME13	black chokeberry <i>Photinia melanocarpa</i> P.I. Station, Ames, IA/Russia	15-May	76	76	PLBR	5	5	100	3	0.2	1.3		
										3	0.9	0.8		
										3	2.1	1.9		
										3	3.3	2.6		
										4	4.8	4.3		
										3	6.5	5.3		
										3	7.2	6.1		
										3	7.3	7.4		
										3	8.5	7.4		
										40	10.0	8.9		
ND-1421 9006160	SHAR	silver buffaloberry <i>Shepherdia argentea</i> Billings Co., ND	24-May	78	78	PLBR	3	3	100	3	0.9	1.1		
										3	2.9	2.3		
										2	4.2	3.5		
										3	7.3	6.8		
										3	9.9	8.3		
										3	11.6	10.7		
										4	12.6	11.2		
										3	11.4	10.6		
										3	100	6	12.0	11.4
										ND-1423 9006162	SHAR	silver buffaloberry <i>Shepherdia argentea</i> Dunn Co., ND	24-May	78
3	2.6	2.4												
3	4.1	3.1												
4	8.2	7.8												
4	9.6	8.1												
2	12.1	9.4												
4	11.5	11.5												
4	12.1	11.2												
5	7.5	8.9												

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS											
											COV VI	HT (ft)												
II/16/S-N	ND-1171 9005710	CAAR	Siberian peashrub <i>Caragana arborescens</i> Harding Co., SD	15-May	75	75	PLBR	6	6	100	2	1.2												
											2	0.9												
											2	2.8												
											2	4.1												
											4	5.6												
											3	7.7												
												7.9												
											3	13.7												
											5	16.9												
II/17/N-S	ND-633 9005664	AMFR	false indigo <i>Amorpha fruticosa</i> Washington Co., MN	15-May	77	77	PLBR	6	6	100	2	1.1												
											2	3.9												
											6	5.0												
											2	10.9												
											2	13.0												
											4	10.6												
											5	7.6												
											5	11.0												
											8	7.8												
														many contaminants										
											ND-1173 9006087	PRVI		chokecherry <i>Prunus virginiana</i> Pembina Co., ND	15-May	76	76	PLBR	6	6	100	2	1.4	
																						2	1.8	
																						3	3.0	
																						4	5.5	
3	8.7																							
3	12.0																							
3	13.9																							
3	17.0																							
4	19.6																							
ND-288 9006059	PRAM	American plum <i>Prunus americana</i> South Dakota	15-May	76	76	PLBR	6	6	100	3	1.4													
										3	0.9													
										5	2.4													
										4	4.7													
										4	8.1													
										3	10.8													
										6	10.3													
										6	6.9													
										4	11.2													
										4	13.0													

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS		
											COV VI	PLT (ft)		HT (ft)	
II/19/N-S	ND-26 9011852	LONIC	honeysuckle <i>Lonicera</i> USDA-ARS, Mandan, ND	15-May	79	79	PLBR	10	9	90	90	1.3	1.1	honeysuckle aphids	
												7	1.4		1.2
												4	2.2		2.5
												5	3.5		3.6
												6	4.2		4.4
												6	5.4		5.4
												4	7.9		7.9
4	11.6	9.9													
ND-452 9019978	LOXYM*	honeysuckle <i>Lonicera xylosteum mollis</i> USDA-SCS, PMC, Bismarck, ND	15-May	79	79	PLBR	6	6	100	100	100	1.5	1.0	honeysuckle aphid	
												7	1.7		1.4
												3	2.9		2.7
												4	5.0		4.7
												5	5.6		5.2
												6	6.7		5.8
												6	6.4		5.8
4	6.7	7.3													
'Bighorn' WY-843 9004646 PI-483445	RHTR	skunkbush sumac <i>Rhus trilobata</i> Bighorn Co., WY USDA-NRCS, PMC, Bismarck, ND	15-May	79	79	PLBR	5	5	100	100	100	0.7	1.3		
												3	2.5		2.3
												3	5.2		3.3
												3	9.0		5.2
												3	11.4		6.7
												3	12.5		8.0
												3	13.0		9.0
3	15.7	10.4													
ND-1877 9009483	SYPE	pekin lilac <i>Syringa pekinensis</i> P.I. Station, Ames, IA	15-May	79	79	PLBR	3	3	100	100	100	1.2	1.1		
												4	1.2		1.1
												3	3.2		2.9
												3	6.0		5.4
												1	8.2		7.1
												3	9.9		9.8
												3	14.2		12.7
2	17.1	15.6													
'Silver Sands' ND-3902 9035212	SAIN	sandbar willow <i>Salix interior</i> Smith Nursery, IA NDSU, Fargo, ND	03-Jun	83	83	CONT	2	2	100	100	100	3	1.6	1.1	
													3.2	2.2	
												2	5.5	3.1	
												4	10.2	7.4	
												3	12.4	8.0	
												2	10.0	7.2	
												1	11.2	7.2	

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN PLT		REMARKS	
											COV VI	HT (ft)		
II/20/S-N ND-3887 9035197	'Silver Sands' ND-3902 9035212	SAIN	sandbar willow <i>Salix interior</i> Smith Nursery, IA NDSU, Fargo, ND	03-Jun	83	83	CONT	2	1	50	2	1.8	1.3	
									1	50		4.3	2.0	
									1	50	2	5.1	2.6	
									2	100	4	7.4	5.0	
									2	100	4	10.4	6.4	
									2	100	2	10.3	6.6	
									2	100	1	14.8	11.8	
	CAAR	caragana <i>Caragana arborescens</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	5	83	5	0.4	1.1		
								6	100		1.4	2.6		
								6	100	4	2.2	3.5		
								6	100	3	3.2	4.3		
								6	100	4	3.9	6.5		
								6	100	4	5.0	7.0		
	COAC*	cotoneaster <i>Cotoneaster acutifolia</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	6	100	4	0.6	1.1		
								6	100		1.8	1.6		
								6	100	3	2.9	2.4		
								6	100	3	5.4	4.0		
								6	100	3	5.2	4.7		
6								100	4	6.7	5.2			
COAM2	silky dogwood <i>Cornus amomum</i> USDA-NRCS, PMC, Rose Lake, MI	03-Jun	83	83	PLBR	6	6	100	5	0.3	0.9			
							6	100		1.1	1.0			
							6	100	4	1.2	1.0			
							6	100	6	1.7	1.1			
							6	100	5	2.2	2.7			
							5	83	6	2.8	3.0			
SHORT SHRUBS	'Coronation' ND-992 9006050	PEFL15	potentilla <i>Pentaphylloides floribunda</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	5					1.5	
										5	100		2.0	
										5	100		2.5	
										5	100	2	3.2	3.2
										5	100	5	4.2	3.3
										5	100	2	5.0	3.9
										5	100	4	4.4	3.8
	5	100	3	5.8	4.0									
	5	100	6	4.2	3.8									
	4	80	7	5.0	3.9									

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS																				
											COV VI	HT (ft)																					
III/01/N-S	'Forrest' ND-716 PI-242217	PEFL15	shrubby cinquefoil <i>Pentaphylloides floribunda</i> P.I. Station, Ames, IA	15-May	72	72	PLBR	3						0.5																			
																	0.7																
																						1.0											
																				2	2.5	1.6											
																				4	2.2	1.7											
																				4	3.3	1.9											
																				3	3.2	1.9											
																					4.7	2.4											
																				4	3.7	2.6											
																				5	4.4	3.0											
'Dakota Sunrise' 9023431	PEFL15	bush cinquefoil <i>Pentaphylloides floribunda</i> USDA-ARS, Mandan, ND	83	83	83										1.2																		
																										2.1							
																													2.9				
																														2.9			
																														3.9			
																														3.7			
																														2.1			
ND-3744 9019577	BEKO	Korean barberry <i>Berberis koreana</i> NDSU Hort. Dept., Fargo, ND	15-May	72	72	PLBR	6									2.0																	
																														2.0			
																																2.5	
																																4.3	
																																5.8	
																																7.5	
																																8.4	
																																9.3	
																																9.7	
																																10.3	
Mich-768 9012606	JUHO2	blue creeping juniper <i>Juniperus horizontalis</i> USDA-NRCS, PMC, Rose Lake, MI	15-May	72	72	PLBR	6									2.0																	
																															1.2		
																																	3.0
																																	5
																																	83
																																	2
																																	3
																																	5.5
																																	2
																		8.9															
																		6.6															
																		1															
																		8.4															
																		9.2															
																		2															
																		11.0															
																		1.0															
																		lots of elm tree contamination															

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	HT (ft)	
III/02/S-N	Mich-1587 9012605	JUCO6	common juniper <i>Juniperus communis</i> USDA-NRCS, PMC, Rose Lake, MI	15-May	75	75	PLBR	6	2	33	4	0.5	
												0.6	
												0.7	0.7
												3.2	1.4
												2.0	1.1
												3.9	2.1
												5.9	2.5
												8.9	3.4
												4.3	3.0
												2.6	2.0
'Hoseri'	9019623	THOC	American arborvitae <i>Thuja occidentalis</i> P.I. Station, Ames, IA	15-May	81	81	PLBR- CONT	3	3	100	3	0.8	0.6
												0.9	0.8
												1.0	1.0
												1.3	1.1
												2.0	1.7
												2.2	2.1
												3.1	3.0
												3.1	3.5
'Cling-Red'	PI-483450	LOMA	amur honeysuckle <i>Lonicera maackii</i> USDA-NRCS, PMC, Elsberry, MO	12-May	87	87	PLBR	6	5	83	3	0.8	1.2
												0.7	1.0
												1.2	0.9
												1.5	1.7
												2.6	2.3
												5.6	6.1
												17	6.5
9007628	DIPL		grass pink #3 <i>Dianthus plumaris</i> P.I. Station, Ames, IA	10-May	75	75	PLBR	6	6	100	2	1.0	1.0
												1.1	1.1
												1.8	1.9
												3.4	1.1
												4.4	0.7
												5.4	0.7
												5.7	0.4
												5.9	0.3

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS											
											COV VI	PLT HT (ft)												
III/02/S-N	PI-371883	DIPL	grass pink #1 <i>Dianthus plumaris</i> P.I. Station, Ames, IA	15-May	75	75	PLBR	6	6	100	2	1.0	1.0											
											2	2.0	2.0											
											2	2.4	2.6											
												4.0	1.0											
											1	4.8	0.7											
											3	4.9	0.6											
												5.2	0.5											
												6.1	0.3											
III/03/N-S	'Nakai' ND-3811 9030933	FOOV	early forsythia <i>Forsythia ovata</i> U of MN Arboretum P.I. Station, Ames, IA	20-May	82	82	PLBR	10	10	100	4	0.8	0.6											
											4	2.9	2.4											
												4.4	3.8											
												5.8	6.0											
											4	5.6	6.0											
											5	5.5	5.7											
											4	12.4	8.5											
											3	11.5	9.4											
											ND-3810 PI-420830	ACGI	amur maple <i>Acer ginnala</i> P.I. Station, Ames, IA	20-May	82	82	PLBR	10	8	80	4	0.4	0.7	
																					4	1.4	1.3	
	4.0	2.3																						
	5.8	2.8																						
4	7.3	5.0																						
3	7.8	6.4																						
7	6.6	5.1	dieback on all but 10																					
4	13.0	8.2	many contaminants																					
ND-3742 9019593	JUCO	common juniper <i>Juniperus communis</i> Wilton Mine Burleigh Co., ND	20-May	82	82	CONT	2	2	100	3	1.4	0.6												
										4	2.1	1.0												
											3.8	1.9												
											7.5	1.9												
										3	7.2	2.4												
										3	8.1	2.7												
										3	5.9	2.6												
										4	11.0	3.5												
ND-1550 9019592	JUHO	horizontal creeping juniper <i>Juniperus horizontalis</i> Lawrence Co., SD	20-May	82	82	CONT	6	3	50	4	0.7	0.6												
										4	1.6	0.4												
											3.3	1.1												
											5.0	0.7												
										4	3.9	0.7												
										2	4.1	0.8												
										2	5.2	0.8												
										4	6.0	0.8												

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
III/04/S-N Golden' 9019601		POFR4	dwarf ninebark <i>Physocarpus opulifolius</i> P.I. Station, Ames, IA	20-May	80	80	PLBR	6	6	100	4	1.1	0.9
											3	3.7	2.7
											3	3.7	2.5
											3	5.8	3.5
												7.8	5.0
											2	9.6	7.3
											3	10.7	7.5
											3	10.8	8.1
											3	10.5	9.2
											'Vermont Sun' 9057431		FOMA
3	1.1	2.3											
3	1.7	2.6											
3	2.0	3.3											
2	4.1	5.1											
2	5.2	5.6											
4	6.4	6.4											
'Compacta' ND-1768 9005647		ACGI	dwarf amur maple <i>Acer ginnala</i> P.I. Station, Ames, IA Minnesota	24-May	78	78	PLBR	6	5	83	1	2.1	2.1
												3.3	3.3
											5	3.1	3.4
											3	6.1	5.7
											3	7.7	6.9
												9.8	8.3
											4	11.6	10.5
											4	14.4	11.6
											2	15.4	13.1
'Red Cap' ND-1743 9005885		EUEU	euonymus <i>Euonymus europa</i> P.I. Station, Ames, IA	24-May	78	78	PLBR	3	3	100	3	1.0	1.7
												1.4	1.6
											4	2.9	3.0
											4	5.1	4.2
											5	5.3	4.9
												5.9	5.2
											3	9.6	7.1
											4	9.3	7.8
											5	12.8	9.8

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN COV VI	PLT HT (ft)	REMARKS												
III/04/S-N	'Meadowlark' ND-3745 9005886	FORSY	forsythia	15-May	73	73	PLBR	3	3	100		0.7													
			<i>Forsythia europa</i> X				74			3		100		1.5	1.8										
			<i>F. ovata</i>				75			3		100		2	3.1	3.4									
			P.I. Station, Ames, IA				77			3		100		2	4.6	4.1									
							79			3		100			6.2	5.6									
							82			3		100		2	7.2	6.9									
							83			3		100		3	7.7	7.5	leaf blight								
							87			3		100		3	10.2	8.2									
							92			3		100		4	9.3	8.7									
							97			3		100		2	12.5	10.5									
III/05/N-S	'Meadowlark' ND-3745 9005886	FORSY	forsythia	15-May	73	73	PLBR	3	3	100		0.7													
			<i>Forsythia europa</i> X				74			3		100		2.0	2.2										
			<i>F. ovata</i>				75			3		100		2	2.8	4.3									
			P.I. Station, Ames, IA				77			3		100		2	4.1	4.3									
							79			3		100			7.0	6.2									
							82			3		100		3	8.1	6.9									
							83			3		100			9.9	8.4									
							87			3		100		2	10.6	8.9									
							92			3		100		6	9.3	7.3									
							97			3		100			12.5	10.5									
			ND-3746 9019622				SECUR2			spoil ax		15-May		73	73	PLBR	7	7	100		1.2				
										<i>Securinga suffruticosa</i>						74			7		100		2.5	2.5	
																75			7		100		2	3.7	3.0
																77			7		100		3	5.9	3.7
																79			7		100			7.2	5.1
																82			7		100		4	6.9	5.0
																83			7		100		5	9.9	6.0
																87			7		100			10.5	6.8
	92	7		100	5	9.6		6.8	fruit formed on 3 plants																
	97	7		100	5	10.6		7.9																	
9047236	AMFR	false indigo	12-May	87	87	PLBR	6	6	100		1.1	1.9													
		<i>Amorpha fruticosa</i>				88			6		100		4	3.4	2.6										
		Lincoln-Oakes Nursery,				89			6		100			4.6	3.3										
		Bismarck, ND				91			6		100		4	6.2	3.5										
						93			6		100		4	7.0	4.3										
						96			6		100		4	9.7	5.5										
						01			6		100		5	8.0	4.5	many contaminants									

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		
III/05/N-S	9008041	AMFR	false indigo <i>Amorpha fruticosa</i> USDA-NRCS, PMC, Aberdeen, ID	12-May	87	87	PLBR	6	6	100	2	1.9	2.2	
											3	5.9	3.0	
												7.3	3.9	
											2	9.1	4.5	
											3	10.3	5.0	
											3	10.5	6.1	
	Selection #66 'Cardinal' 9057423	COSE	redosier dogwood <i>Cornus sericea</i> University of MN P.I. Station, Ames, IA	12-May	87	87	PLBR	3	3	100	5	0.8	0.8	
											2	1.6	2.9	
											2	1.5	3.3	
											4	2.6	3.5	
											4	4.0	4.4	
											3	7.6	6.5	
	4	9.5	7.5											
	III/06/S-N	ND-3892 9035202	LOTA	red tatarian honeysuckle <i>Lonicera tatarica sibirica</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	4	67	3	0.6	1.1
													1.9	1.5
5												2.2	1.5	
5												3.5	2.6	
6												2.4	2.2	
6												2.2	2.5	
6		6.2	6.6											
ND-3893 9035203		PRAM	American plum <i>Prunus americana</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	5	83	3	0.6	1.2	
												0.9	2.0	
											5	1.1	1.9	
											3	2.6	3.4	
											6	2.0	2.4	
											7	1.5	2.2	
6		2.7	4.9											
ND-3894 9035204		PRPUB	western sandcherry <i>Prunus pumila besseyi</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	6	100	3	0.8	1.1	
											3.4	2.6		
	4										4.0	2.3		
	3										9.4	5.3		
	3										8.4	5.1		
	6										4.3	2.6		
6	3.0	2.5												

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTL	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT HT (ft)		
III/06/S-N	ND-3896 9035206	PRTOX	nanking cherry <i>Prunus tomentosa</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	PLBR	6	5	83	3	0.5	1.1	
												1.9	2.5	
												3.2	4.1	
												6.0	5.7	
												5.0	5.7	
												4.9	6.4	
												9.1	7.5	
	ND-3903 9035213	SAKO*	willow <i>Salix koreensis</i> NDSU, Fargo, ND	03-Jun	83	83	CONT	4	4	100	2	1.3	1.7	
												5.1	3.5	
												7.7	6.9	
												13.3	17.4	
												13.3	17.9	
												13.3	15.3	
												29.2	20.4	
												III/07/N-S	ND-3904 9035214	
8.7	3.9													
10.5	5.0													
12.5	7.5													
11.5	8.6													
ND-3900 9035210	SYVIX	late lilac <i>Syringa villosa</i> Lawyer Nursery, Plains, MT	03-Jun	83	83	CONT	6	6	100	3	0.9		1.2	
											2.1		2.1	
											3.3		3.3	
											5.7		5.9	
											6.9		6.7	
Mich-1841 9005060	THOC	northern white cedar <i>Thuja occidentalis</i> USDA-NRCS, PMC, Rose Lake, MI	03-Jun	83	83	PLBR	6	2	33	8	0.2	0.3		
											0.5	0.5		
											0.5	0.7		
											1.8	2.3		
											3.0	3.1		
											2.3	2.5		
											6.4	8.2		
											17	17		
											17	17		

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS	
											COV VI	PLT (ft)		
III/07/N-S	Mich-1468 9005059	THOC	northern white cedar <i>Thuja occidentalis</i> USDA-NRCS, PMC, Rose Lake, MI	03-Jun	83	83	PLBR	6	5	83	7	0.4	0.4	
												0.8	0.8	
												1.2	1.4	
												3.2	3.5	
												4.6	4.7	
												4.8	3.8	
												8.3	9.9	
ND-3904 9035214	SALIX	blue fountain willow <i>Salix</i> NDSU, Fargo, ND	03-Jun	83	83	CONT	1	1	100	2	2.8	1.5		
											6.6	3.0		
											9.8	4.3		
											15.7	7.9		
											15.1	8.7		
											8.9	6.6		
											21.2	8.2		
ND-451 9023432	SYME*	dwark Korean lilac <i>Syringa meyeri</i> Interstate Nursery, Hamburg, IA USDA-NRCS, PMC, Bismarck, ND	03-Jun	83	83	CONT	5	5	100	4	0.8	1.0		
											2.2	2.1		
											3.1	2.5		
											5.0	4.4		
											6.1	4.7		
											6.9	5.1		
											10.5	7.3		
III/08/S-N	9063132 A-10098	SPCH	germander spirea <i>Spirea chamaedryfolia</i> P.I. Station, Ames, Iowa	14-May	92	92	CONT	5	3	60	5	0.5	0.4	
												1.3	1.2	
												2.4	2.5	
												2.9	2.6	
												3.4	3.9	
												3.0	4.7	
'Redwing' PI-477008	ELUM	autumn olive <i>Elaeagnus umbellata</i> USDA-NRCS, PMC, Rose Lake, MI	12-May	87	87	PLBR	6	4	67	4	0.9	1.4		
											2.1	2.4		
											3.4	3.3		
											2.8	3.2		
											6.3	5.9		
											7.0	5.8		
											4.3	5.5		

browsed

severe dieback

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS
											COV VI	PLT (ft)	
III/08/S-N	Freedom 9057424	LOKO80	honeysuckle <i>Lonicera korolkowii</i> U of MN, Morris, MN	10-May	90	90	PLBR	6	6	100	4	1.7	1.2
											6	1.5	1.8
											3	3.8	3.7
											2	10.1	8.3
											4	10.7	9.0
2	14.8	11.2											
ND-2106 9047151	PRUNU	hardy almond <i>Prunus</i> USDA-NRCS, PMC, Bismarck, ND	10-May	90	90	CONT	6	0	0				
										7	0.2	0.6	
										4	1.0	1.1	
										4	3.0	2.1	
										2	8.3	6.5	
3	7.9	7.5											
III/09/N-S PI-434309	'Streamco' PI-434309	SAPU2	purpleosier willow <i>Salix purpurea</i> USDA-NRCS, PMC, Big Flats, NY	10-May	90	90	PLBR	6	6	100	4	1.4	1.8
											5	1.6	2.0
											4	4.9	1.7
											2	10.6	7.0
											1	19.0	11.0
2	18.4	14.4											
9057449 A-58256	CAFR80	caragana <i>Caragana frutex grandiflora</i> USDA-ARS, Cheyenne, WY	10-May	90	90	CONT	6	6	100	6	0.4	0.5	
										4	0.9	1.2	
										4	0.9	1.4	
										4	2.2	2.5	
										4	3.8	3.7	
4	5.1	5.1											
9057450 A-51218	CAAR18	caragana <i>Caragana arborescens pyramidal</i> USDA-ARS, Cheyenne, WY	10-May	90	90	CONT	6	4	67	3	0.5	1.1	
										4	0.3	1.3	
										4	0.7	2.0	
										4	1.9	4.0	
										3	2.6	6.1	
4	4.6	8.5	buck rubbed										
PI-495882	BEOC2	water birch <i>Betula occidentalis</i> P.I. Station, Ames, IA	29-May	90	90	CONT	3	3	100	6	0.9	2.5	
										5	1.0	2.4	
										4	1.0	2.8	
										4	2.1	3.7	
										2	5.5	8.9	
2	10.3	13.1											

PLOT LOCATION	ACCESSION NUMBER	PLANT SYMBOL	GENUS/SPECIES ORIGIN/SOURCE	TRANS DATE	YR PLT	YR REC	MATL PLTD	NO PLTS	NO SRV	PCT SRV	CAN		REMARKS							
											COV VI	PLT HT (ft)								
III/09/N-S	A-7778 9058895	SOSO2	ural false spirea <i>Sorbaria sorbifolia</i> P.I. Station, Ames, IA	29-May	90	90	CONT	3	3	100	5	1.0	1.2							
	9005399	LOKO80	blueleaf honeysuckle <i>Lonicera korolkowii</i> USDA-NRCS, PMC, Bridger, MT	20-May	91	91	PLBR	5	5	100	5	0.9	1.1							
	9063133 'Emerald Triumph'	VIBUR	hybrid viburnum <i>Viburnum</i> P.I. Station, Ames, Iowa	14-May	92	92	CONT	3	3	100	5	0.6	0.5							