

2007 Report
Off-Center Evaluation of Woody Plant Materials
Dickinson, North Dakota

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Introduction

The Bismarck Plant Materials Center (PMC) was established in 1954 as part of the Soil Conservation Service, now Natural Resources Conservation Service (NRCS). A principal task of the PMC has always been tree improvement. There is a need to evaluate how different trees and shrubs will perform in various conservation plantings, under diverse soils and climate conditions. The PMC is currently testing woody plants at seven locations in Minnesota, North Dakota, and South Dakota. The evaluation site at the Dickinson Research Extension Center is the driest site in our three-state area. The PMC first started evaluating tree and shrubs at Dickinson in 1978. The current agreement between NRCS and the North Dakota Agricultural Experiment Station expires in January 2010. The care and attention that the site received over the years is the main reason for its continuation and success. All cooperators have contributed to the maintenance of the site. This summary does not contain the complete list of woody plants being evaluated. A separate report containing all data can be found at the NRCS Area Office in Dickinson, or at the Bismarck PMC. Contact Mike Knudson at the PMC for additional species information.

Recent Activities

The soils at the PMC plot are a Parshall fine sandy loam, which is in Windbreak Suitability Group (WSG) 5. The hybrid poplars that were planted in 1990 grew very well initially, especially with years of above average rainfall in 1993-1995. Now, they have reached a point where they need to be removed. In April 2007, a number of the declining poplars were cut down. The stumps still need to be removed. This may take several years to clear the rows and prepare them for new plantings. On May 9, 2007, Mike Knudson helped the Western and Central Stark Soil Conservation District with their Seventh and Eighth Grade Tour. Seedlings on new entries of American black currant and Korean mountain ash were planted as a demonstration of tree planting for the students. Precipitation for April, May and most of July were below normal (see attached graph of weather published for 2007). The new entries had poor survival. Selected trees were measured on September 4, 2008.

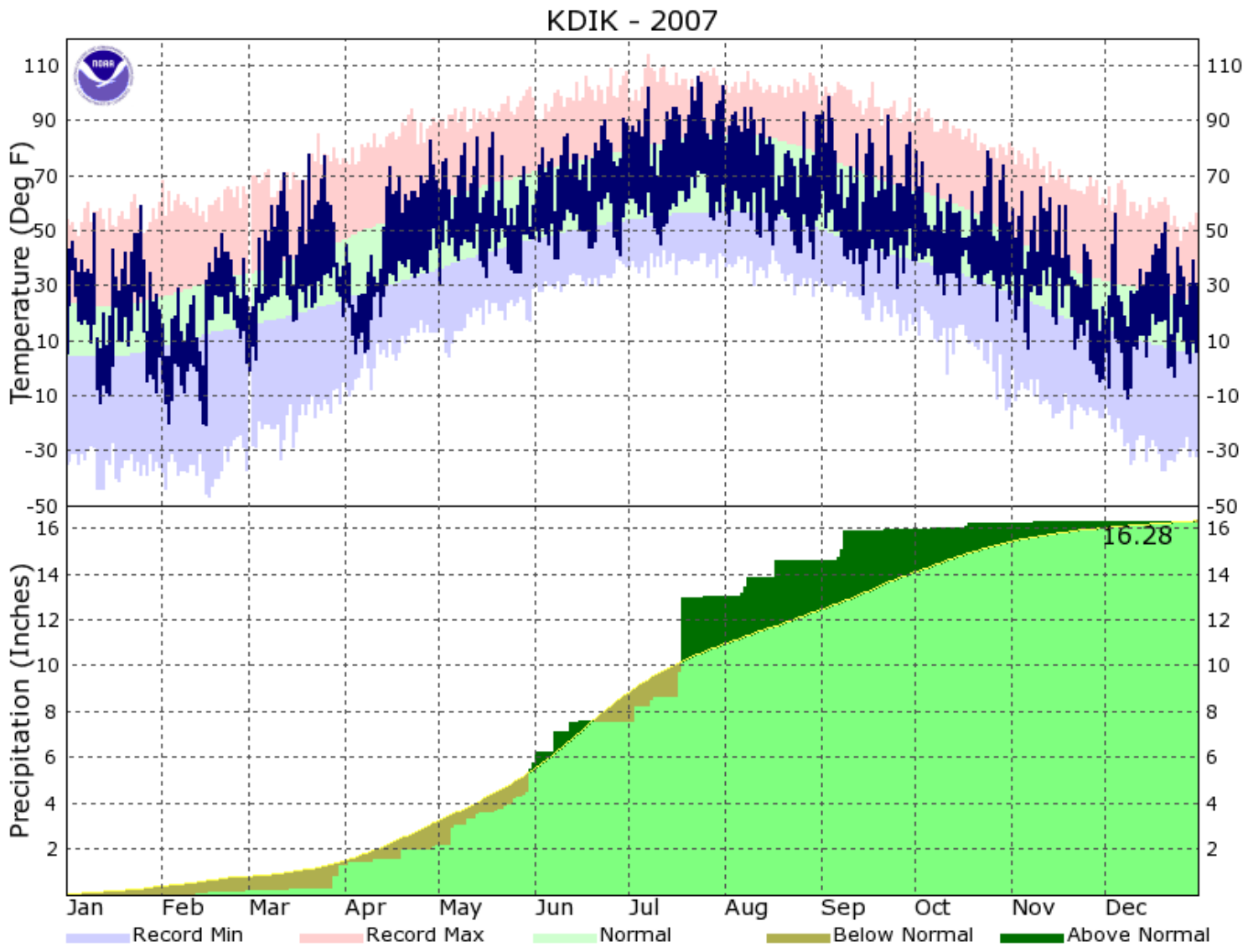
PMC releases

Since 1973, the PMC has released 14 new selections or cultivars of woody plants. The following releases are planted at Dickinson. Most of them are doing quite well, and most are available from conservation nurseries. Some of the varieties that are doing the best at Dickinson are the McDermand pear, the Homestead hawthorn, and the Regal Russian almond. The McDermand pear seems to have better drought resistance than the Midwest crabapple. The pear does have beautiful flowers in the spring, and the fruit will become edible to wildlife after a frost. Deer do not seem to browse or rub on the pear very often.

We suggest that they should be used as often as possible in various conservation plantings.

PMC releases growing at Dickinson

- 'Midwest' Manchurian crabapple (1973)
- 'Cardan' green ash (1979)
- 'Oahe' hackberry (1982)
- 'Sakakawea' silver buffaloberry (1984)
- 'Scarlet' Mongolian cherry (1984)
- 'Centennial' European cotoneaster (1987)
- 'McDermant' Ussurian or Harbin pear (1990)
- 'Homestead' Arnold hawthorn (1993)
- 'Regal' Russian almond (1997)
- 'Legacy' late lilac (1999)
- 'Prairie Red' hybrid plum (2006)



<http://www.crh.noaa.gov/Image/bis/KDIK2007plot.png>

Off Center Evaluation Planting Map at Dickinson Research Extension Center, Dickinson, North Dakota

	Block 1A		Block 1B		Block 2		Block 3			Block 4		
Row 1	14272 poplar X	14271 poplar X	ND-1729 Siberian larch		ND-313 red tatarian honeysuckle	ND-1730 red tatarian honeysuckle	‘Midwest’ Manchurian crabapple		‘Red Splendor’ crabapple	SD-156 green ash	ND-1734 green ash	
Row 2	9082885 aspen	9082619 green ash	SL-383-T Siberian larch		9082684 smooth sumac	9008183 Sheridan source chokecherry	ND-1731 Siberian crabapple		‘McDermant’ Ussurian pear	‘Cardan’ green ash	ND-1759 green ash	
Row 3	14392 Walker poplar	Canam Walker poplar	ND-1765 Siberian larch		ND-26 honeysuckle/ ND-452 honeysuckle	ND-170 cotoneaster	‘Freedom’ honey-suckle	9063143 red tatarian honey-suckle	Survivor false indigo	‘Arnolds Red’ honey-suckle	ND-647 black ash	ND-1432 Ohio buckeye
Row 4	ND-3796 white poplar	Raverdeau poplar	ND-1763 ponderosa pine	ND-1565 bristlecone pine	9082711 winterberry euonymus	‘Regal’ Russian almond	‘Konza’ aromatic sumac	‘Scarlet’ Mongolian cherry		‘Legacy’ late lilac	ND-1879 honeylocust	
Row 5	9082640 Gambel oak	9069090 quaking aspen	9057413 ponderosa pine	9069169 Siberian pine	ND-11 amur honeysuckle	‘Centennial’ cotoneaster	‘Sakakawea’ silver buffaloberry		‘Magenta’ crabapple	9063116 black ash		
Row 6	9063146 Walker Poplar X	Assiniboine poplar	9069172 Scots pine	Silverscape R. olive X silverberry	9057406 rugosa rose	9082638 western blue elderberry	9076726 tatarian maple		9091969 Russian peashrub	9063115 green ash	9076724 Russian olive	
Row 7	9063141 eastern cottonwood			ND-3803 white poplar	9076737 black cherry	323957 chokeberry	9076686 roundleaf hawthorn		9082653 skunkbush sumac	ND-989 Japanese elm	9069166 Russian olive	
Row 8	Hunter ponderosa pine	Bridger-Select juniper	9092140 Korean Mtn. Ash	9082687 black currant	9063142 Japanese cherry	9082713 Siberian peach	‘Prairie Red’ plum		ND-629 amur maple		‘Oahe’ hackberry	
Row 9	9069164 Scots pine	9069168 Siberian larch	9063148 corktree	ND-21 nannyberry	‘Homestead’ Arnold hawthorn		ND-1873 amur maple		ND-686 Pekin lilac		SD-75 hackberry	
Row 10	9082641 pinyon pine	9082889 mugo pine	9069081 littleleaf linden	9063126 Japanese elm	mayday/ common juniper	salt tree/ bittersweet	9069129 amur chokecherry				9057410 hackberry	
	Block 1A		Block 1B		Block 2		Block 3			Block 4		

X = trees cut in 2007