National Elm Trial
Fargo, North Dakota

- Located at Yunker Farm, Fargo City Park.
- 22 elm cultivars were planted
- All Alee, Dynasty and Regal trees died within 2 years, so were considered “not established.” Each is considered non cold-hardy in ND. They are not included in the data.
- Growing site conditions are only fair due to extended soil saturation of heavy clay soil and root competition from poplars near blocks 3 and 4.
National Elm Trial
Fargo, North Dakota Location

The public is welcome to view the elms in Fargo, ND

The trees are located at Yunker Farm, City Park System, along the bicycle trail between 30th and 32nd Avenues
Fargo Elms in Fall 2014
Plot Plan for
Fargo, ND National Elm Trial

Block 1 from southeast (CV & year last planted)
Pioneer (2005)
Valley Forge (2005)
Jefferson (2007)
Prospector (2006)
Accolade (2009)
Prairie Expedition (2007)
New Horizon (2005)
Regal (2009)
Frontier (2009)
[Nothing planted]
New Harmony (2006)
Cathedral (2009)
Patriot (2005)
[Nothing planted]
[Nothing planted]
Vanguard (2009)
Dynasty (2009)
[Nothing planted]
Emerald Sunshine (2005)
Discovery (2009)
[BAD SOIL]
Homestead (2005)
Discovery (2009)
Danada Charm (2005)
Commendation (2005)
Triumph (2009)

Block 2 from southeast (CV & year last planted)
Pioneer (2005)
Commendation (2005)
Frontier (2009)
Jefferson (2007)
Danada Charm (2005)
Vanguard (2009)
Dynasty (2009)
Regal (2009)
Jefferson (2007)
Prairie Expedition (2007)
Frontier (2006)
Prospector (2006)
New Horizon (2005)
[Nothing planted]
[Nothing planted]
Triumph (2009)
[Nothing planted]
Vanguard (2005)
Dynasty (2009)
Patriot (2005)
[Nothing planted]
Prairie Expedition (2007)
Frederick (2009)
Danada Charm (2005)
New Harmony (2006)
Patriot (2006)
New Horizon (2005)
Triumph (2009)

Block 3 from southeast (CV & year last planted)
Accolade (2005)
Cathedral (2009)
Pioneer (2005)
Discovery (2009)
Regal (2009)
Danada Charm (2005)
Emerald Sunshine (2005)
Commendation (2009)
Homestead (2006)
Dynasty (2009)
Frontier (2009)
Jefferson (2007)
Prairie Expedition (2007)
Frontier (2006)
Prospector (2006)
New Horizon (2005)
[Nothing planted]
Triumph (2009)
Valley Forge (2005)

Block 4 from southeast (CV & year last planted)
Accolade (2005)
Cathedral (2009)
Pioneer (2005)
Discovery (2009)
Regal (2009)
Danada Charm (2005)
Emerald Sunshine (2005)
Commendation (2009)
Homestead (2006)
Dynasty (2009)
Frontier (2009)
Jefferson (2007)
Prairie Expedition (2007)
Frontier (2006)
Prospector (2006)
New Horizon (2005)
[Nothing planted]
Triumph (2009)
Valley Forge (2005)

Block 5 from southeast (CV & year last planted)
Cathedral (2009)
[Nothing planted]
Prairie Expedition (2007)
Vanguard (2005)
Danada Charm (2005)
[Nothing planted]
New Horizon (2005)
Triumph (2009)
Valley Forge (2005)
Discovery (2009)
Emerald Sunshine (2005)
Clone D (2009)
Vanguard (2005)
Patriot (2005)
[Nothing planted]
[Nothing planted]
Emerald Sunshine (2005)
Discovery (2009)
Danada Charm (2005)
New Harmony (2006)
Patriot (2005)
[BAD SOIL]
Triumph (2006)
Homestead (2006)
Prospector (2006)

30th Ave.
= Dead tree as of October 14, 2014
National Elm Trial
North Dakota Contacts

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Diameter Growth/Year

The graph shows the diameter growth per year for various species and genotypes. The y-axis represents diameter growth per year in centimeters, while the x-axis lists the species and genotypes including Lewis & Clark, New Harmony, Princeton, Valley Forge, Frontier, Morton Stalwart, Pioneer, Homestead, Patriot, Morton Red Tip, Morton, Emer II, JFS Bieberich, Morton Plainsman, New Horizon, Morton Glossy, and Prospector. The bars indicate the average growth with error bars representing the standard deviation.
Height Growth/Year

The graph shows the height growth per year (in meters) for various tree cultivars. The cultivars are listed on the x-axis, and the height growth is measured on the y-axis. The error bars indicate the variability in the growth measurements.

Crown Width Growth/Year

The graph shows the crown width growth per year for various tree varieties, including Lewis & Clark, New Harmony, Princeton, Valley Forge, Morton Stalwart, Frontier, Pioneer, Homestead, Patriot, Morton Red Tip, Morton, Emer II, JFS Bieberich, Morton Plainsman, New Horizon, Morton Glossy, and Prospector. The y-axis represents the crown width growth per year in meters (m), ranging from -0.1 to 0.7, while the x-axis lists the different tree varieties.
Rating Notes on Fargo, ND Elms

• The performance of each tree was rated based on a combination of health, vigor, and crown form. Rating scale: Excellent - 5 points; Very good - 4 points; Good - 3 points; Fair - 2 points; Poor - 1 point; Dead - 0 points.

• Tree performance was based on trees that established, whether or not they were alive in 2014.

• Height, crown width (CW), and diameter breast height (dbh) growth rates were the average of trees that established.

• Crown shape was based on trees that were alive in 2014.
‘Emerald Sunshine’ ® (*Ulmus propinqua*)

Date: Fall 2014
Survival: 0%
Performance rating: N/A
Diameter at 1.4m (cm): N/A
Diameter growth rate: N/A
Height (m): N/A
Height growth rate: N/A
Crown shape: N/A
Crown width (m): N/A
Crown width growth rate: N/A
Insects: N/A
Disease: N/A

All trees died so no pictures

‘Princeton’ (*Ulmus americana*)

Date: Fall 2014/ Pictures 2015
Survival: 100%
Performance rating: 4.2
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.0 cm/yr
Height (m): N/A
Height growth rate: 48.8 cm/yr
Crown shape: Vase
Crown width (m): N/A
Crown width growth rate: 30.5 cm/yr
Insects: N/A
Disease: N/A
‘Frontier’ (*Ulmus carpinifolia* X *U. parvifolia*)

- Date: Fall 2014 Pictures 2015
- Survival: 50%
- Performance rating: 1.5
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: 0.5 cm/yr
- Height (m): N/A
- Height growth rate: 6.1 cm/yr
- Crown shape: Vase
- Crown width (m): N/A
- Crown width growth rate: 6.1 cm/yr
- Insects: N/A
- Disease: N/A

‘Homestead’ (*U. glabra* X *U. carpinifolia* X *U. pumila*)

- Date: Fall 2014 Pictures 2015
- Survival: 100%
- Performance rating: 2.4
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: 0.8 cm/yr
- Height (m): N/A
- Height growth rate: 21.6 cm/yr
- Crown shape: Vase (oval)
- Crown width (m): N/A
- Crown width growth rate: 24.4 cm/yr
- Insects: N/A
- Disease: N/A
‘Morton Glossy’ Triumph™ (U. pumila X U. japonica X U. wilsoniana)

Date: Fall 2014/Pictures 2015
Survival: 100%
Performance rating: 3.3
Diameter at 1.4m (cm): N/A
Diameter growth rate: 0.8cm/yr
Height (m): N/A
Height growth rate: 25.9 cm/yr
Crown shape: Vase (irregular)
Crown width (m): N/A
Crown width growth rate: 21.3 cm/yr
Insects: N/A
Disease: N/A

‘Morton Plainsman’ Vanguard™ (U. pumila X U. japonica)

Date: Fall 2014/Pictures 2015
Survival: 75%
Performance rating: 2.3
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.0 cm/yr
Height (m): N/A
Height growth rate: 24.2cm/yr
Crown shape: Vase
Crown width (m): N/A
Crown width growth rate: 30.5 cm/yr
Insects: N/A
Disease: N/A
‘Morton Red Tip’ Danada Charm™ (*U. japonica* × *U. wilsoniana*)

Date: Fall 2014/Pictures 2015
Survival: 100 %
Performance rating: 4.4
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.5 cm/yr
Height (m): N/A
Height growth rate: 46.3 cm/yr
Crown shape: Vase (oval)
Crown width (m): N/A
Crown width growth rate: 39.6 cm/yr
Insects: N/A
Disease: N/A

‘Morton Stalwart’ Commendation™ (*U. carpinifolia* × *U. pumila* × *U. wilsoniana*)

Date: Fall 2014/Pictures 2015
Survival: 100%
Performance rating: 3.0
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.0 cm/yr
Height (m): N/A
Height growth rate: 18.9 cm/yr
Crown shape: Vase (oval)
Crown width (m): N/A
Crown width growth rate: 33.5 cm/yr
Insects: N/A
Disease: N/A
‘Morton’ Accolade ® (U. japonica X U. wilsoniana)

Date: Fall 2014/Pictures 2015
Survival: 100%
Performance Rating: 3.3
Diameter at 1.4m (cm): N/A
Height (m): N/A
Height Growth rate: 31.4 cm/yr
Crown shape: Vase
Crown width (m): N/A
Crown width growth rate: 33.5cm/yr
Insects: N/A
Disease: N/A

‘New Horizon’ (U. pumila X U. japonica)

Date: Fall 2014/Pictures 2015
Survival: 40%
Performance rating: 1.2
Diameter at 1.4m (cm): N/A
Diameter growth rate: 0.5 cm/yr
Height (m): N/A
Height growth rate: 21.3 cm/yr
Crown shape: Vase
Crown width (m): N/A
Crown width growth rate: 15.2cm/yr
Insects: N/A
Disease: N/A
‘Patriot’ (U. glabra X U. carpinifolia X U. pumila) X U. wilsoniana

Date: Fall 2014/Pictures 2015
Survival: 100 %
Performance rating: 3.4
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.3 cm/yr
Height (m): N/A
Height growth rate: 39.9 cm/yr
Crown shape: Vase (irregular,oval)
Crown width (m): N/A
Crown width growth rate: 42.7cm/yr
Insects: N/A
Disease: N/A

‘Pioneer’ (U. glabra X U. carpinifolia)

Date: Fall 2014/Pictures 2015
Survival: 75%
Performance rating: 3.3
Diameter at 1.4m (cm): N/A
Diameter growth rate: 1.3 cm/yr
Height (m): N/A
Height growth rate: 33.5cm/yr
Crown shape: Vase
Crown width (m): N/A
Crown width growth rate: 42.7cm/yr
Insects: N/A
Disease: N/A
**‘Prospector’ (U. wilsoniana)**

- Date: Fall 2014/Pictures 2015
- Survival: 40%
- Performance rating: 1.2
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: 0.8cm/yr
- Height (m): N/A
- Height growth rate: 6.1 cm/yr
- Crown shape: Vase
- Crown width (m): N/A
- Crown width growth rate: 15.2 cm/yr
- Insects: N/A
- Disease: N/A

**‘Valley Forge’ (U. americana)**

- Date: Fall 2014/Pictures 2015
- Survival: 80%
- Performance rating: 3.2
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: 1.0 cm/yr
- Height (m): N/A
- Height growth rate: 45.7 cm/yr
- Crown shape: Vase
- Crown width (m): N/A
- Crown width growth rate: 54.9 cm/yr
- Insects: N/A
- Disease: N/A
‘New Harmony’ (*U. americana*)

- Date: Fall 2014
- Survival: 100%
- Performance rating: 3.4
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: 0.8 cm/yr
- Height (m): N/A
- Height growth rate: 36.3 cm/yr
- Crown shape: Oval (vase)
- Crown width (m): N/A
- Crown width growth rate: 21.3 cm/yr
- Insects: N/A
- Disease: N/A

‘Jefferson’ (*U. americana*)

Jefferson was found to be the same species as Princeton

- Date: Fall 2014
- Survival: 0%
- Performance rating: N/A
- Diameter at 1.4m (cm): N/A
- Diameter growth rate: N/A
- Height (m): N/A
- Height growth rate: N/A
- Crown shape: N/A
- Crown width (m): N/A
- Crown width growth rate: N/A
- Insects: N/A
- Disease: N/A

Not planted at this site
‘Lewis and Clark’ Prairie Expedition  
® *(U.americana)*

Date: Fall 2014/Pictures 2015  
Survival: 67%  
Performance rating: 2.3  
Diameter at 1.4m (cm): N/A  
Diameter growth rate: 0.8cm/yr  
Height (m): N/A  
Height growth rate: 24.4cm/yr  
Crown shape: Vase  
Crown width (m): N/A  
Crown width growth rate: 24.4cm/yr  
Insects: N/A  
Disease: N/A

‘Athena Classic’ Lacebark  
Elm *(U. parvifolia)*

Date: Fall 2014/  
Survival: N/A %  
Diameter at 1.4m (cm): N/A  
Height (m): N/A  
Crown shape: N/A  
Crown width (m): N/A  
Insects: N/A  
Disease: N/A

Not planted at North Dakota
‘Discovery’ (*U. japonica*)

- **Date:** Fall 2014/Pictures 2015
- **Survival:** 100%
- **Performance rating:** 1.5
- **Diameter at 1.4m (cm):** N/A
- **Diameter growth rate:** 0.8 cm/yr
- **Height (m):** N/A
- **Height growth rate:** 18.6 cm/yr
- **Crown shape:** Vase
- **Crown width (m):** N/A
- **Crown width growth rate:** 3.1 cm/yr
- **Insects:** N/A
- **Disease:** N/A

‘Cathedral’ (*U. pumila X U. japonica X U. wilsoniana*)

- **Date:** Fall 2014
- **Survival:** 80%
- **Performance rating:** 2.2
- **Diameter at 1.4m (cm):** N/A
- **Diameter growth rate:** 0.8 cm/yr
- **Height (m):** N/A
- **Height growth rate:** 15.2 cm/yr
- **Crown shape:** Vase
- **Crown width (m):** N/A
- **Crown width growth rate:** 15.2 cm/yr
- **Insects:** N/A
- **Disease:** N/A