National Elm Trial in Indiana
2014 Status

• Established in 2005 in Lafayette, IN
• Site is located on Purdue University Richard Lugar Forestry Farm
• Visitors are welcome during business hours:
  • Please contact James McKenna (765-426-6003) or Brian Beheler (765-583-3507)
• Publications: None to date
• Insects noted: Japanese Beetle, European Elm Flea Weevil
• Diseases noted: Wetwood and cankers
• Outstanding cultivars: Prospector, Accolade, Patriot, Morton Glossy’ Triumph.
• Princeton is not doing well at this trial site
• Contacts: Cliff Sadof and James McKenna
National Elm Trial
Indiana Contacts

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<table>
<thead>
<tr>
<th>Code #</th>
<th>Nursery Paint</th>
<th>Species / Hybrid</th>
<th>Cultivar</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1</td>
<td>Blue &amp; Red</td>
<td>Ulmus Americana</td>
<td>Valley Forge</td>
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<tr>
<td>2</td>
<td>Light Blue</td>
<td>U. hybrid</td>
<td>Accolade</td>
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<tr>
<td>3</td>
<td>Orange &amp; White</td>
<td>U. hybrid</td>
<td>Commendation</td>
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<td>4</td>
<td>Purple &amp; White</td>
<td>U. hybrid</td>
<td>Danada Charm</td>
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<td>5</td>
<td>Pink</td>
<td>U. hybrid</td>
<td>Frontier</td>
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<td>Dark Blue</td>
<td>U. hybrid</td>
<td>Homestead</td>
<td></td>
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<td>7</td>
<td>Pink &amp; Blue</td>
<td>U. hybrid</td>
<td>New Horizon</td>
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<td>8</td>
<td>White &amp; Red</td>
<td>U. hybrid</td>
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<td>no paint</td>
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<td>Pioneer</td>
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<td>Pink</td>
<td>U. hybrid</td>
<td>Triumph</td>
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<td>11</td>
<td>Red &amp; Orange</td>
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<td>12</td>
<td>Purple\</td>
<td>U. hybrid</td>
<td>Allee</td>
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<td>Pink &amp; Pink</td>
<td>U. propinqua</td>
<td>Bieberich</td>
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<td>14</td>
<td>Yellow</td>
<td>Ulmus</td>
<td>Prospector</td>
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</table>

| A     | plain-        | Ulmus Americana  | Princeton | to add July '05 - containerized |
| B     |              |                  |          | to add in '06                   |
| C     |              |                  |          | to add in '06                   |
| (W)ld |              | Local Am. Elm check |              | to add in '06                   |
‘Emerald Sunshine’ (*Ulmus propinqua*)

Date: 2014  
Survival: 100%  
Diameter at 1.4m (cm): 11.4  
Height: 7.2 m  
Crown shape: Vase  
Japanese Beetle: 2% of leaves, 2% leaf area lost  
European elm flea weevil: 31% of leaves, 6% leaf area lost  
Diseases: All trees had some branch tip dieback and one tree had cankers that were healing.

‘Emer II Allee’® (*U. parvifolia*)

Date: 2014  
Survival: 40%  
Diameter at 1.4m (cm): 12.1  
Height: 7.9 m  
Crown shape: Vase  
Japanese Beetle: 0% of leaves, 0% leaf area lost  
European elm flea weevil: 90% of leaves, 10% leaf area lost  
Diseases: The one tree remaining had Fusarium-like cankers on stem associated with and without sapsucker damage.
‘Frontier’ (*Ulmus carpinifolia X U. parvifolia*)

Date: 2014  
Survival: 100%  
Diameter at 1.4m (cm): 15.1  
Height: 8.4 m  
Crown shape: Vase  
Japanese Beetle: 12% of leaves, 6% leaf area lost  
European elm flea weevil: 73% of leaves, 7% leaf area lost  
Diseases: None

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

Date: 2014  
Survival: 40%  
Diameter at 1.4m (cm): 14.0  
Height: 9.2 m  
Crown shape: Vase, Oval  
Japanese Beetle: 0% of leaves, 0% leaf area lost  
European elm flea weevil: 90% of leaves, 10% leaf area lost  
Diseases: None
‘Morton Glossy’ Triumph™ (U. pumila X U. japonica X U. wilsoniana)

Date: 2014
Survival: 100%
Diameter at 1.4m (cm): 22.0
Height: 8.5 m
Crown shape: Vase
Japanese Beetle: 8% of leaves, 6% leaf area lost
European elm flea weevil: 26% of leaves, 9% leaf area lost
Diseases: One tree wilting and dying from unknown disease, wetwood noted

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

Date: 2014
Survival: 60%
Diameter at 1.4m (cm): 20.0
Height: 7.7 m
Crown shape: Vase
Japanese Beetle: 0% of leaves, 0% leaf area lost
European elm flea weevil: 35% of leaves, 5% leaf area lost
Diseases: Wetwood noted on one tree
‘Morton Red Tip’ Danada Charm™ (U. japonica × U. wilsoniana)

Date: 2014
Survival: 60%
Diameter at 1.4m (cm): 24.0
Height: 9.8 m
Crown shape: Vase
Japanese Beetle: 3% of leaves, 3% leaf area lost
European elm flea weevil: 47% of leaves, 7% leaf area lost
Diseases: One tree had sparse foliage and branch dieback

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

Date: 2014
Survival: 80%
Diameter at 1.4m (cm): 19.4
Height: 8.0 m
Crown shape: Vase
Japanese Beetle: 2% of leaves, 2% leaf area lost
European elm flea weevil: 75% of leaves, 9% leaf area lost
Diseases: None
‘Morton’ Accolade ® (U. japonica X U. wilsoniana)

Date: 2014
Survival: 100%
Diameter at 1.4m (cm): 16.5
Height: 6.9
Crown shape: Vase
Japanese Beetle: 20 % of leaves, 30 % leaf area lost
European elm flea weevil: 85 % of leaves, 5 % leaf area lost
Diseases: None

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

Date: 2014
Survival: 80% (only four planted)
Diameter at 1.4m (cm): 24.0
Height: 9.2 m
Crown shape: Vase
Japanese Beetle: 0 % of leaves, 0 % leaf area lost
European elm flea weevil: 68 % of leaves, 6 % leaf area lost
Diseases: None
‘Patriot’ (U. glabra X U. carpinifolia X U. pumila) X U. wilsoniana

Date: 2014
Survival: 100%
Diameter at 1.4m (cm): 21.0
Height: 11.1 m
Crown shape: Vase
Japanese Beetle: 2% of leaves, 2% leaf area lost
European elm flea weevil: 88% of leaves, 9% leaf area lost
Diseases: Wetwood noted

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

Date: 2014
Survival: 80%
Diameter at 1.4m (cm): 18.2
Height: 7.8 m
Crown shape: Vase
Japanese Beetle: 18% of leaves, 10% leaf area lost
European elm flea weevil: 50% of leaves, 7.5% leaf area lost
Diseases: Wind tipped over one of the remaining four trees
Prospector’ (*U. wilsoniana*)

- Date: 2014
- Survival: 100%
- Diameter at 1.4m (cm): 23.3
- Height: 8.2 m
- Crown shape: Vase
- Japanese Beetle: 0% of leaves, 0 % leaf area lost
- European elm flea weevil: 38% of leaves, 5 % leaf area lost
- Diseases: All trees had evidence of wetwood

Valley Forge’ (*U. americana*)

- Date: 2014
- Survival: 40%
- Diameter at 1.4m (cm): 18.2
- Height: 8.3 m
- Crown shape: Vase
- Japanese Beetle: 0% of leaves, 0 % leaf area lost
- European elm flea weevil: 10% of leaves, 7.5 % leaf area lost
- Diseases: One tree wilting and dying from unknown disease, wetwood noted
‘Princeton’ (U. americana)

Date: 2012
Survival: 40%
Diameter at 1.4m (cm): 22.4
Height: 9.6 m
Crown shape: Vase
Japanese Beetle: 0% of leaves, 0% leaf area lost
European elm flea weevil: 10% of leaves, 10% leaf area lost
Diseases: Four trees dead after growing well for a decade, last tree is dying as seen in picture. Cause of deaths unknown but Dutch elm disease is suspected
‘New Harmony’ (*U. americana*)

Date: 2014
This cultivar was not planted at the Indiana test location

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

Date: 2014
This cultivar was not planted at the Indiana test location
‘Everclear’ Lacebark Elm (*U. parvifolia*)  
Date: 2014  
This cultivar was not planted at the Indiana test location

‘Lewis and Clark’ Prairie Expedition ®  
(*U.americana*)  
Date: 2014  
This cultivar was not planted at the Indiana test location
Red Elm, Slippery Elm (*U. rubra*)

Date: 2014  
Survival: 60%  
Diameter at 1.4m (cm): 12.5  
Height: 7.5 m  
Crown shape: Vase  
Japanese Beetle: 2% of leaves, 3 % leaf area lost  
European elm flea weevil: 5% of leaves, 7 % leaf area lost  
Diseases: One tree with wetwood noted
Cankers on Emerald Sunshine

Fusarium like cankers on Allee and weeping cankers associated with sapsuckers damage

Princeton with small chlorotic leaves and flecking in phloem
Damages

Pioneer damaged from wind

Typical flea weevil feeding damage

Typical flea weevil feeding damage and Japanese beetle feeding in circle