AGRICULTURAL EXTENSION SERVICE UNIVERSITY OF MINNESOTA

Arboretum Review

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Lindens

Lindens have been gaining in popularity as street trees. They have been used for centuries in Europe as street trees and as shade trees in parks and home grounds. Experience in America and especially in the upper midwest has been limited to a few species. In general, species native to Europe have done better in eastern North America than either the American or Asiatic species. Our collection was started in a poor location where excess water and shade were problems. The trees were moved to their new location in 1965. As a result these trees are not as large as they should be for their age. The following species and cultivars are being studied at the arboretum.

Tilia americana **(American Linden or Basswood).** This native species is common throughout the wooded parts of Minnesota and has been widely planted as a lawn tree. Trees growing in the woods are not especially long lived. The wood is soft and wind damage is common. Trees growing in the open have reached a large size and maintain a fairly dense, well formed crown and are longer lived. The flowers are fragrant and are a good source of nectar for bees. The large, heart-shaped leaves are characteristic. These leaves usually fall at one time following a heavy frost and if they aren't removed, can make a sidewalk slippery when wet.

Tilia americana **'Fastigiata'.** This narrowly pyramidal form has real merit where an upright tree is needed. A tree planted in 1973 is off to a good start. It is too soon to tell just how this plant will perform.

Tilia cordata **(Littleleaf Linden).** Because of the smaller leaves, this is considered to be one of the best lindens for landscape use. A tree planted at the Horticultural Research Center in 1954 is now about 30 feet tall with a trunk diameter of at least 12 inches. The crown is dense and well rounded. The leaves are dark green. A number of cultivars of this species are on the market, and these are being evaluated. Some winter injury has been observed in the Twin Cities area and northward, especially where trees have been heavily fertilized.

Tilia cordata **'Chancellor'.** This patented variety has a straight trunk, dense foliage, and a compact, upright habit. It is said to be very resistant to storm damage and drought. Our trees, planted in 1966, are making satisfactory growth.

Tilia cordata **'Erecta'.** An upright form planted in 1972. It is too soon to judge the suitability of this cultivar.

Tilia cordata **'Fairview'.** Planted this spring.

Tilia cordata **'Glenleven'.** Planted this spring.

Tilia cordata **'Greenspire'.** This was one of the first cultivars to be named and is the most widely used of the littleleaf lindens in this area. It grows with a straight trunk with radiating branches, thus forming a densely pyramidal tree. Our trees are growing well.

Tilia cordata **'Olympic'.** Planted this spring.

Tilia cordata **'Pendula Nana'.** Planted in 1973. A slow growing, weeping form.

Tilia cordata **'Rancho'.** Our trees planted in 1968 are doing well. In young trees the branches come out from the main trunk in whorls and then gracefully curve upward to form a compact crown with small, dark green leaves. Mature trees are cone-shaped.

Tilia cordata **'Tures'.** Planted this spring.

Tilia dasystyla **(Caucasian Linden).** Our trees, planted in 1959, are now about 12 feet tall with a 4 inch trunk diameter. The crown is densely pyramidal with dark green foliage.

Tilia x euchlora **(Crimean Linden).** This hybrid, between T. cordata x T. dasystyla, develops into a clean, upright tree of good form. Trees, planted in 1963, are now about 10 feet tall and have a 3 inch trunk diameter. The foliage is dark green and glossy. Two cultivars of this hybrid species are under observation.

Tilia x euchlora **'Aurea'.** Our trees, planted in 1972, are still too small to evaluate. The leaves are a golden yellow. So far there has been no winter injury.

Tilia x euchlora **'Redmond'.** This Nebraska selection has been widely planted here and generally has grown well. The crown is dense and pyramidal. The leaves are dark green and leathery. Trees planted at the Horticultural Research Center about 16 years ago are now about 25 feet tall with a 10 inch trunk diameter. For some reason we have had difficulty getting trees established in the arboretum.

Tilia x euchlora 'Redmond'

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Tilia x europaea (Common Linden). This hybrid between T. cordata and T. platyphyllos is often planted in Europe as a street tree. Our trees planted in 1965 are now 15 feet tall with a trunk diameter of 4 inches. The crown is dense, and our trees have shown no signs of winter injury.

Tilia x europaea 'Pallida'. The leaves on this selection are larger than on the species and are a yellowish or bluish green color underneath. Our trees, planted in 1973, are too young to evaluate.

Tilia flavescens 'Dropmore'. Plants in nursery.

Tilia mongolica (Mongolian Linden). This is a small, graceful tree with small leaves. It has shown no signs of winter injury since planting in 1959. The leaves show a reddish cast when unfolding in the spring and the petioles retain a reddish color. Our trees are now 12 to 15 feet tall with a trunk diameter of 4 inches. A leaf spot disease may develop on this species in a wet season.

Tilia petiolaris (Silverpendent Linden). We have a single tree planted in 1959. It is now 12 feet tall with a 5 inch trunk diameter. The main trunk shows some sunscald injuries. There are a few dead twigs in the center of the tree. The leaves are quite large. Mature trees develop pendent branches, giving a graceful effect.

Tilia platyphyllos (Bigleaf Linden). This linden is doing well. Our trees, planted in 1965, are now 12 feet tall and have a 4 inch trunk diameter. The bark is smooth, and the tree has an open, spreading habit. Several cultivars of this species are on the market. The following are under observation:

Tilia platyphyllos 'Fastigiata' (Upright Bigleaf Linden). Our single specimen, planted in 1959, is now about 15 feet tall, with a 4 inch trunk. The branches are upright, forming a narrow, dense crown.

Tilia platyphyllos 'Laciniata'. The habit of the tree is typical of the species. The leaves are lobed with teeth along the lobes. Our trees are still quite small but appear to be fully hardy.

Tilia platyphyllos 'Tortuosa'

Tilia platyphyllos 'Tortuosa'. Our tree, planted in 1960, is now 15 feet tall with a 5 inch trunk diameter. The form is densely upright. The branches are twisted like the corkscrew willow and even the leaves show a slight twisting or cupping. This should be a popular, novelty tree.

Tilia tomentosa (Silver Linden). Our trees, planted in 1963, did not do well. They showed considerable dieback and were removed. Mechanical injury may have contributed to the failure.

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