



## *Tilia cordata* 'Greenspire' 'Greenspire' Littleleaf Linden<sup>1</sup>

Edward F. Gilman and Dennis G. Watson<sup>2</sup>

### INTRODUCTION

'Greenspire' Littleleaf Linden grows 50 to 75 feet tall and can spread 40 to 50 feet, but is normally seen 40 to 50 feet tall with a 35 to 40-foot-spread in most landscapes (Fig. 1). This tree has a faster growth rate than the species and a dense pyramidal to oval crown which casts deep shade. The leaves are smaller than the species adding a delicate touch to the tree. From a distance the tree almost resembles a narrow version of the Bradford Callery Pear. This cultivar of Littleleaf Linden is more popular than the species or any of the other cultivars. It is a prolific bloomer, the small fragrant flowers appearing in late June and into July. Many bees are attracted to the flowers, and the dried flowers persist on the tree for some time. Japanese beetles often skeletonize Linden foliage, in certain areas in the northern part of its range. Defoliation can be nearly total and mature trees can be killed by severe infestations. Planting Linden in areas with severe infestations of this pest may not be wise. However, at least one reference reports that defoliation by Japanese beetles is common but control is seldom needed.

### GENERAL INFORMATION

**Scientific name:** *Tilia cordata* 'Greenspire'

**Pronunciation:** TILL-ee-uh kor-DAY-tuh

**Common name(s):** 'Greenspire' Littleleaf Linden

**Family:** *Tiliaceae*

**USDA hardiness zones:** 3 through 7A (Fig. 2)

**Origin:** not native to North America

**Uses:** container or above-ground planter; hedge; large parking lot islands (> 200 square feet in size); wide

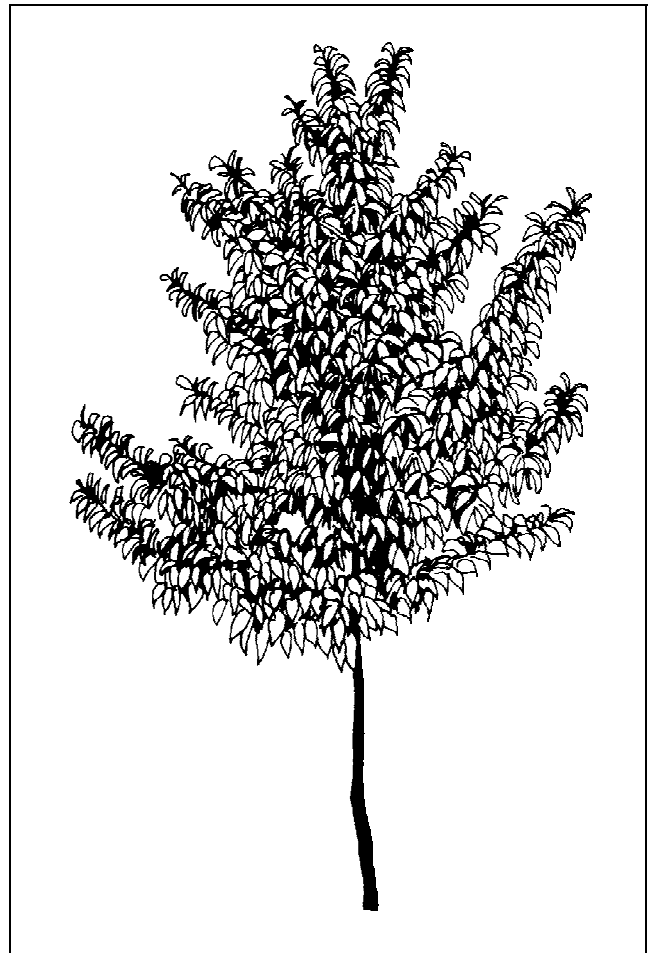


Figure 1. Middle-aged 'Greenspire' Littleleaf Linden.

tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; screen; shade tree; specimen; sidewalk cutout

1. This document is adapted from Fact Sheet ST-639, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.
2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.



**Figure 2.** Shaded area represents potential planting range.

(tree pit); residential street tree; tree has been successfully grown in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common

**Availability:** generally available in many areas within its hardiness range

**DESCRIPTION**

**Height:** 40 to 60 feet

**Spread:** 35 to 50 feet

**Crown uniformity:** symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms

**Crown shape:** pyramidal

**Crown density:** dense

**Growth rate:** medium

**Texture:** medium

**Foliage**

**Leaf arrangement:** alternate (Fig. 3)

**Leaf type:** simple

**Leaf margin:** serrate

**Leaf shape:** cordate; orbiculate

**Leaf venation:** pinnate

**Leaf type and persistence:** deciduous

**Leaf blade length:** 2 to 4 inches

**Leaf color:** green

**Fall color:** yellow

**Fall characteristic:** not showy

**Flower**

**Flower color:** yellow

**Flower characteristics:** pleasant fragrance; showy; summer flowering

**Fruit**

**Fruit shape:** round

**Fruit length:** < .5 inch

**Fruit covering:** dry or hard

**Fruit color:** brown; tan

**Fruit characteristics:** does not attract wildlife; no significant litter problem; persistent on the tree; showy

**Trunk and Branches**

**Trunk/bark/branches:** droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns

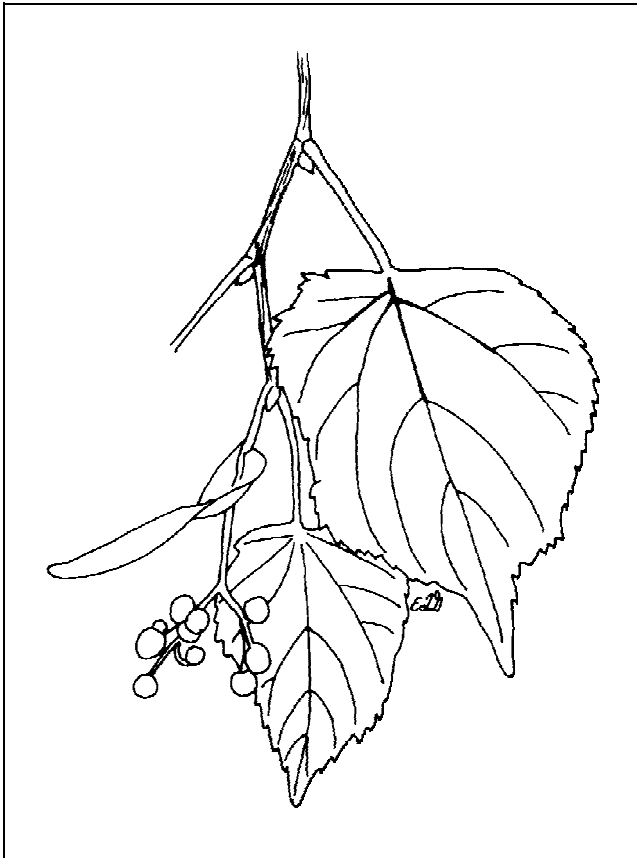


Figure 3. Foliage of 'Greenspire' Littleleaf Linden.

**Pruning requirement:** needs little pruning to develop a strong structure

**Breakage:** resistant

**Current year twig color:** brown; green

**Current year twig thickness:** thin

### Culture

**Light requirement:** tree grows in part shade/part sun; tree grows in full sun

**Soil tolerances:** clay; loam; sand; acidic; occasionally wet; alkaline; well-drained

**Drought tolerance:** moderate

**Aerosol salt tolerance:** none

### Other

**Roots:** surface roots are usually not a problem

**Winter interest:** no special winter interest

**Outstanding tree:** tree has outstanding ornamental features and could be planted more

**Invasive potential:** little, if any, potential at this time

**Verticillium wilt susceptibility:** susceptible

**Pest resistance:** long-term health usually not affected by pests

## USE AND MANAGEMENT

Small lateral branches arise from the straight, central trunk in an upswept curve and bend toward the ground as they grow older. Due to the radially produced, small diameter branches, this may be the least-maintenance cultivar. Multiple trunks and upright, large-diameter branches occasionally develop on the species and they may be poorly attached to the trunk, but this cultivar does not appear to have this problem. Although the tree usually grows with good form without much pruning, be sure to purchase and train Linden to one central trunk with well-spaced, small-diameter lateral branches. The cultivars 'Glenleven' and 'June Bride' have also been developed for their very straight trunk. Linden may sprout from the base and these will have to be removed from time to time.

The tree grows in sun or partial shade, will tolerate alkaline soil if it is moist, and it transplants well. It is not particularly tolerant of drought, scorching at the leaf margins in summer drought. But this apparently does little long-term harm. It is more tolerant of heat and compact soil than American Basswood. Many communities plant Linden along the streets due to its rapid growth rate and dense, symmetrical crown but littleleaf Linden is sensitive to road salt.

The wood of Linden is clear white, soft and often used for drawer sides in inexpensive furniture. Though not as soft as balsa wood, it sands poorly and is difficult to finish.

There are several other cultivars: 'Chancellor' - upright when young but becoming pyramidal, fast growth, with a straight, single trunk; 'Glenleven' - conical (pyramidal), fast growth, straight trunk, more open canopy than species; 'June Bride' - pyramidal, glossy leaves, profuse flowering; 'Pyramidalis' - widely pyramidal; 'Rancho' - narrow, upright growth habit, very small, fine textured leaf - a beautiful tree; 'Sterling' is supposed to resist Japanese beetles.

### Pests

Despite susceptibility to various insects and diseases, control is usually not needed except for Japanese beetle.

Japanese beetles often skeletonize Linden foliage, in certain areas in the northern part of its range.

Defoliation can be nearly total and mature trees can be killed by severe infestations. Planting Linden in areas with severe infestations of this pest is not recommended.

Aphids can be a problem on Linden causing the production of honeydew. This is more of a nuisance than a life threatening problem.

Several caterpillars feed on Linden. Have the insect identified then apply the appropriate control, if needed. *Bacillus thuringiensis* will not be effective against sawfly larvae. Fall webworm nests can be pruned out when still small.

Lace bugs cause discoloration of the leaves. The insects are found on the undersides of the leaves and can cause some early defoliation but are otherwise harmless.

Spider mites cause leaves to become stippled and yellowed. The mites are usually not discovered until there is a significant infestation.

## **Diseases**

No diseases are usually serious.

Anthracnose causes elongated light brown areas next to the veins. The spots may be anywhere on the leaf but are most often near the tip. The spots are bordered by a distinct black band. Severe infections defoliate the tree. The disease does not require chemical controls every year but repeated severe infections may justify spraying.

Leaf blight causes leaves to brown and fall. The early symptoms are round, brown spots with dark borders. The spots become numerous leading to leaf browning and drop.

Several fungi cause cankers and dieback on branches and trunks. Remove infected branches as they occur and avoid wounding the tree. Fertilizing infected trees may help.

Powdery mildew forms a white coating on the leaves but is usually not serious and does not require treatment.

Verticillium wilt causes dieback and death of individual branches or the entire tree. Keep trees healthy with a regular fertilizer program to help prevent the disease.