The cover features a large, stylized tree graphic. The tree's trunk and branches are rendered in a light tan color, while the foliage is represented by dark green shapes with white leaf cutouts. At the base of the tree, a globe is depicted with a grid of latitude and longitude lines. The background is a textured, light tan paper.

Selection
guide
to
planting

**Healthy
&
Happy
Trees**

A Publication of
Northern Kentucky
Urban and Community
Forestry Council

Trees play a vital role in our environment and provide a capital asset in our communities. They reduce air and noise pollution, conserve water, reduce soil erosion, save energy, modify local climate, and increase property value.

Trees come in an amazing array of colors, sizes, and shapes. There are over 1,000 species of trees which grow naturally throughout the United States, with many more cultivated varieties. The colors of their flowers, fruit, bark, and leaves range from the bright white of the dogwood blossom to the spectacular red fall color of the 'October Glory' Red Maple cultivar.

In Northern Kentucky, there are several hundred species that thrive in our climate and soil; this guide lists some of those. By following a few simple guidelines of site and species selection, soil preparation, and planting and follow-up care, you can expect a lifetime of enjoyment from your trees.

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TREE BASICS: PURPOSE & SHAPES

For the sake of simplicity, we have classified our trees into three types based on their use and purpose.

Ornamentals

Normally low to intermediate trees, ornamentals are known for their beautiful flowers, bark, fragrance, leaf colors, or unusual shape. They are planted for show and tend to be the focal point of any given site. They delight us in spring with their flowers and then again in the fall with their berries and leaf color.

Shade Trees

These are the majestic trees that give our homes, streets, and neighborhoods a backdrop of color and coolness. We delight in their fall color and the sound as the wind stirs their leaves. Our shade trees are deciduous, that is leaf-bearing and leaf-dropping.

Evergreens

Evergreens provide us with year-round beauty! In addition, some species of evergreens are ideal for screening and privacy.

THE SIX BASIC SHAPES OF TREES

Most trees have a clearly identifiable shape which will match one of the six shapes listed below.



Columnar



Pyramidal



Oval



V-Shaped



Picturesque



Round

CULTIVARS

Throughout this booklet, you may see the term cultivar ('cvs') used. The use of cultivars is extremely important when selecting a tree for a specific site.

The term, "cultivar" literally means "cultivated variety." They are reproduced asexually by grafting — not from seed — to insure that the desired traits are passed on. A specific cultivar may be selected for a superior or unusual trait, such as fall color, urban tolerance, or upright growth habit.

For example, seedling Red Maples taken from the woods will not have uniform growth or fall color, whereas 'October Glory', a Red Maple cultivar, has a uniform growth habit and annual, spectacular, orange-red fall color in October. Another example is the Princeton Sentry, an upright, columnar male Ginkgo cultivar which can be planted much closer to a structure than the standard v-shaped Ginkgo.



For help in selecting a cultivar which has the special attributes you want, contact your county Extension Horticulture agent or nursery professional. They can provide you with information on the traits of many cultivars which do well in the Northern Kentucky area.

Recognizing a Grafted Cultivar

These cultivars can be distinguished by the swelling on the trunk just above the soil line where the graft was made.

EVALUATING THE SITE FOR YOUR TREE

The first question to start with is —

Where will the tree be planted?

Before selecting a tree, give your full attention to the site you have in mind. Walk around it. Look down, up, and around. Observe it at different seasons and at different times of the day to see when the sun falls on it and for how long.

What do you see?

- Is it in full sun or shade for most of the day?
- Are there utility lines overhead or pipes underground?
- Is there protection from the elements or will the tree be fully exposed?
- Is it close to a road or sidewalk and, if so, will reflected heat from the pavement or salt from deicing be a problem?
- Are there buildings or signage which will be blocked by the tree?
- Is it close to a house or building which will restrict its growth?
- Will low limbs, flowers, fruit, or leaf litter be a concern or hazard?
- Is there a sidewalk? No tree should be planted between a sidewalk and the road unless there is five feet or more in between.
- Does there appear to be a drainage problem resulting in excessively dry or wet soil?
- Does your community have ordinances for planting restrictions?

As tempted as you may be to force a favorite tree into a site for which it is poorly adapted, don't! It may survive but you'll both be sorry.

DETERMINING THE SOIL CONDITIONS

After you have taken a good hard look at the site, dig into the soil. Take some in your hand and rub the soil between your thumb and the palm of your other hand. As a general rule

If it forms a ball, you have clay soil.

If it crumbles, you have silty organic soil.

If it is grainy and falls apart, you have sandy soil.

Clay is the dominant soil type in Northern Kentucky.

Acidic versus Alkaline

If you have a few weeks before purchasing your tree, take a sample of the soil and have it tested at your county's Extension Service. Soil testing for acidity/alkalinity and nutrient content is a service provided by all Extension offices in Northern Kentucky. If you do not test, assume that your soil is alkaline as is most soil in the area.

SELECTING A HEALTHY TREE FROM THE NURSERY

General Appearance

The tree should have a balanced shape with one strong central leader with no bare spots in the foliage or damaged/missing limbs.

Crown

The branches should come off the leader trunk between 45° -90° angle. Branches should be evenly distributed without any obvious clusters, and wounds from any pruning should be healed over.

Trunk

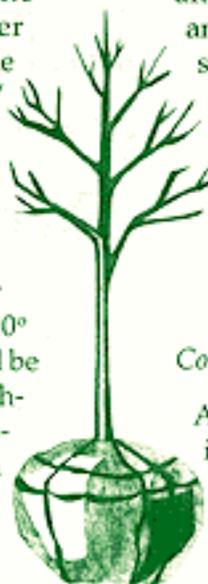
The trunk should be straight and free of insect damage and discolored, swollen, or sunken areas.

Burlapped Trees

Make sure the burlap is wrapped tightly with the trunk in the center of the rootball.

Containerized Trees

Avoid trees with roots coming out the bottom or with roots circling the surface of the soil.



PLANTING TECHNIQUES TO START YOUR TREE OFF RIGHT

Planting in compacted soil found around homes requires special care.



- Till or dig up a planting area 2 - 5 times the diameter of the root ball and just as deep.
- Set the tree in a shallow hole on solid ground in the center of the area. The surface of the rootball should be level with or slightly above the top of the surrounding soil.
- Cut any wires or rope securing the burlap around the rootball and leave them in the hole. If the rootball is in a container, remove the container, spread out the roots so they will expand, and set the tree in the hole. Backfill the hole with soil and use water — not your feet — to settle the soil.
- Apply no more than 3 inches of mulch over the entire area, keeping mulch away from the trunk. Shredded bark or woodchips are recommended.
- Prune off only those branches which are dead, diseased, rubbing, or have narrow crotch angles. There is no need to stake unless the site is very windy, or tree is top heavy. If staking is necessary, use a broad, belt-like material rather than a wire.

FOLLOW-UP CARE

- Water thoroughly every 7 to 14 days during the growing season for the first 3 years, adjusting according to rainfall. Most roots stay in the top 12" to 18" of soil for oxygen availability, especially in clay soils. If using a deep root-feeder, do not water or fertilize below the root zone.
- Don't fertilize the first year. If soil levels are low, phosphorus may be added but do not add nitrogen. Soil test every 2 or 3 years if the tree is not growing well. Apply additional mulch only as needed to maintain a depth no greater than 3 inches.

PRUNING BASICS

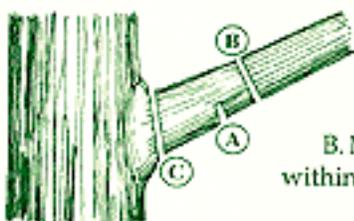
Safety First!

While small trees can be pruned safely by an amateur, it is best to call a professional for bigger jobs. As a rule of thumb, if you need a ladder to prune, it's time to call a professional. They have the equipment and expertise to do the job safely and well.

For small trees, there are two basic pruning principles to remember:

- remove deadwood, diseased, defective, and dying branches, and
- eliminate weak V-forks and crossing or interfering branches.

How To Cut



A. Undercut 12" to 24" from the branch collar.

B. Make a top cut all the way through the branch, within 1" of the undercut.

C. Make the final cut just beyond the branch collar.

A Few Basic Do's and Don'ts

- Don't flush-cut. Removing a branch's collar will wound the trunk.
- Don't leave branch stubs on the tree. These wounds rarely seal and often lead to the formation of hazardous hollows.
- Do not over prune. Excessive pruning leads to sunscald, excessive sprouting, weakened roots and decreased vigor.
- Don't use wound dressings; they do not prevent rot.

Topping

Topping (also referred to as heading, stubbing or de-horning) is the drastic removal of large branches in mature trees. Topping leads to the growth of weak upright branches, disease, insect attack, scalding, and eventual death. *Don't do it and don't let anyone work on your trees who does!*



USING THE SELECTION GUIDE

On the following pages, you will find the trees best suited to Northern Kentucky. They are classified by the following criteria:

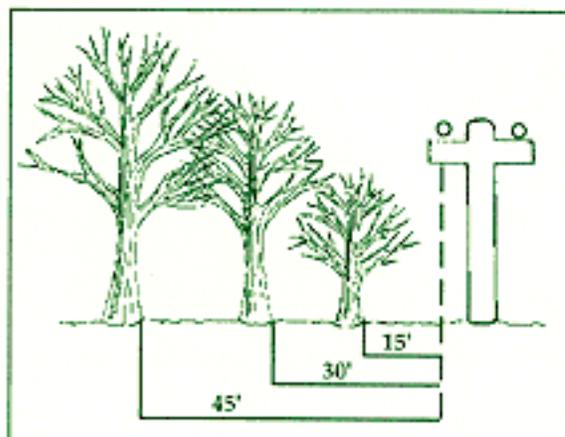
Height

Low

Mature height up to 25'. Plant at least 15' from utility lines.

Intermediate

Mature height from 25' to 50'. Plant at least 30' from utility lines.



Tall

Mature height greater than 50'. Plant at least 45' from utility lines.

Soil Conditions

Please see page 6 for an explanation of soil conditions.

Light Conditions

Shade: Tolerates shade at least 8 hours a day.

Appropriate for Street Planting

Those trees suitable for planting near the street are indicated.

Tree Identification

Each tree is listed by its common and botanical name and its shape.

Special Features

A brief description of the tree's most outstanding feature or quality such as fragrance, fall color, or bark.

LOW ORNAMENTALS

Mature growth up to 25 feet; plant at least 15 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Trident Maple</i> Acer buergeranum	*			*			*	Great yellow, orange, or red foliage in late fall; good tree for small sites
<i>Amur Maple</i> Acer ginnala	*	*		*		*	*	Yellow or red fall color; very hardy; small specimen tree; good for grouping and screens
<i>Japanese Maple</i> Acer palmatum	*	*				*		Used as a specimen tree; graceful; needs protection from wind and cold; shade needed for red-leaf cultivars
<i>Kousa Dogwood</i> Cornus kousa	*			*		*	*	Creamy white flowers appear in June; bark peels with age; reddish-purple fall color; very hardy
<i>Corneliancherry Dogwood</i> Cornus mas	*	*	*	*		*	*	Yellow flowers open early in spring; works well as hedge, screen, or foundation plant
<i>Serviceberry</i> Amelanchier species	*	*		*		*	*	Delicate white flowers appear in April, some cultivars provide fall color; birds love the fruits
<i>Sweetbay Magnolia</i> Magnolia virginiana	*		*		*	*	*	Very graceful specimen; lemon-scented creamy white flowers open in June

Notes:

LOW ORNAMENTALS, CONTINUED

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Washington and Winter King Hawthorns</i> Crataegus phaenopyrum Crataegus viridis	*	*	*	*			*	White flowers in spring; red, orange and purple fall foliage with red berries; tough and adaptable; excellent in poor-soil area and around parking lots
<i>White Fringetree</i> Chionanthus virginicus	*				*			Small graceful tree produces a feathery cloud of white flowers each May and June
<i>Blackhaw Viburnum</i> Viburnum prunifolium	*	*	*	*		*	*	The white flowers in May change into red and black fruits by September; leaves turn red/purple in fall
<i>Persian Parrotia</i> Parrotia persica	*	*					*	Outstanding fall color in brilliant yellow, orange, and red; interesting mottled bark in different colors
<i>Common Smoke tree</i> Cotinus coggygria	*	*	*	*				Graceful wafts of pinkish "smoke" created by delicate flowers; purple-leaf adds color throughout summer
<i>Hally Joliette Cherry</i> Prunus 'Hally Joliette'	*	*						Pink double-flowers add a delicate texture to the spring landscape with three week blooming period
<i>Eastern Redbud</i> Cercis canadensis	*	*	*				*	Pink flowers in early spring; golden-yellow fall leaves; some white flowered cultivars

Notes:

LOW ORNAMENTALS, CONTINUED

Mature growth up to 25 feet; plant at least 15 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Crabapples</i> Malus species	*	*	*				*	Outstanding bloom; many colors; select cultivars resistant to apple scab, rust, and fireblight
<i>Carolina Silverbell</i> Halesia carolina	*						*	Showy white flowers in April & May; an excellent small tree; likes organic soil
<i>Winterberry & Possumhaw Hollies</i> Ilex verticillata cultivars & Ilex decidua	*		*		*		*	Both present a display of bright red or orange fruits on female plants; birds enjoy fruit; male needed to produce fruit
<i>Red Buckeye</i> Aesculus pavia	*						*	Nice red flowers in April and May; can be grown as a single or multiple-stemmed tree
** <i>Tanigasho Pine</i> v-shaped Pinus densiflora (Umbracultifera)	*							Specimen tree due to its orange-red bark and its umbrella-like crown
** <i>Junipers</i> columnar Juniperus species	*	*	*	*				Numerous cultivars are available; good choices for difficult sites
** <i>Arbovitae</i> columnar/pyramidal Thuja species		*	*	*				Grown because of their dense pyramidal habit; numerous good cultivars exist

Notes:

** Evergreens

INTERMEDIATE ORNAMENTALS

Mature growth from 25 to 50 feet; plant at least 30 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Paperbark Maple</i> round Acer griseum	•	•	•					Cinnamon-brown exfoliating bark and trifoliate leaves differ from other maples; bronze/red fall color
<i>Goldenrain tree</i> round Koelreuteria paniculata	•	•	•	•			•	Yellow flowers in mid-summer; extremely adaptable; interesting pods and golden in fall
<i>Japanese Tree Lilac</i> oval Syringa reticulata	•	•		•			•	Majestic white plumes in mid-June; toughest, most trouble free lilac; cultivars are smaller
<i>American Yellowwood</i> V-shaped Cladrastis kentuckea	•	•		•				Beech-like bark, it is clothed in a net of feathery white, fragrant flowers in late spring; nice yellow fall color
<i>Callery Pear</i> oval Pyrus calleryana cultivars	•	•	•	•			•	Prolific spring bloom of white flowers; glossy summer foliage, red fall color; hardy
<i>Japanese Stewartia</i> picturesque Stewartia pseudocamellia	•						•	White flowers in July; fall colors are yellow, red and purple; exfoliating bark; likes moist soil
<i>Japanese Pagodatree</i> round Sophora japonica	•	•	•	•			•	Excellent creamy-white flowers bloom in mid-July; lustrous, green leaves; upright spreading habit

Notes:

INTERMEDIATE SHADE TREES

Mature growth from 25 to 50 feet; plant at least 30 feet from power lines

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Hedge Maple</i> round Acer campestre	*	*	*				*	A tough, adaptable plant with a long-lasting, late season yellow fall color
<i>Katsuratree</i> round Cercidiphyllum japonicum	*	*					*	Beautiful shade tree; reddish in spring; bluish in summer, yellow in fall; weeping form available
<i>European Alder</i> oval Alnus glutinosa	*	*	*	*	*		*	Grows anywhere; makes a good replacement tree where willows and poplars would do well
<i>Amur Maackia</i> round Maackia amurensis	*	*			*		*	Hardy; puts on a great white flower show in summer; bronze bark adds winter interest to the landscape
<i>Honeylocust</i> v-shaped Gleditsia triacanthos inermis	*	*	*	*			*	Interesting, compound leaves; yellow fall color; has some insect and disease problems
<i>River Birch</i> oval Betula nigra	*		*	*	*		*	Cinnamon color; flaky bark provides year round interest; grown in clump or single specimen
<i>Black Gum</i> round Nyssa sylvatica	*			*	*	*	*	Consistent glossy green foliage turns to a spectacular orange-scarlet in the fall

Notes:

INTERMEDIATE EVERGREENS

Mature growth from 25 to 50 feet; plant at least 30 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Lacebark Pine</i> oval Pinus bungeana		*						Slow-growing specimen tree; has very showy bark similar to the London Planetree
<i>American Holly</i> pyramidal Ilex opaca	*						*	A specimen tree, female produces very showy red berries in winter; male needed to produce fruit
<i>White fir</i> pyramidal Abies concolor	*			*	*	*		Very soft, bluish-green, beautiful foliage sets this evergreen apart from others
<i>Japanese White Pine</i> picturesque Pinus parviflora	*	*	*					Very graceful, small evergreen with fine textured foliage; irregular but effective growth habit makes it a specimen tree
<i>Juniper</i> columnar Juniperus species	*	*	*	*				Numerous cultivars are available which are good choices for difficult sites
<i>Longstalk Holly</i> round Ilex pedunculosa	*		*				*	Extremely hardy evergreen holly; not well-known but should be planted more because of its spectacular red fruit

Notes:

TALL SHADE TREES

Mature growth from 50 - 60 feet; plant at least 45 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Red Maple Cultivars</i> round Acer rubrum	•	•	•	•	•		•	Fast-growing; cultivars should be used for exquisite fall color; columnar cultivar available
<i>Lucembark elm</i> v-shaped Ulmus parvifolia	•	•	•	•			•	Great tough street tree; magnificent mottled bark provides year-round effect
<i>Green Ash</i> round Fraxinus pennsylvanica	•	•	•	•	•		•	Cultivars provide brilliant fall color; this tree can grow to be quite large and needs room to grow; hardy
<i>Japanese Zelkova</i> v-shaped Zelkova serrata	•	•		•			•	Good street tree; exhibits good yellow, orange & brown fall color; bark exfoliates with age
<i>European Beech</i> oval Fagus sylvatica	•						•	Great specimen tree; lustrous dark green leaves turn golden bronze in fall; smooth, gray attractive bark
<i>Baldcypress</i> pyramidal Taxodium distichum	•		•	•	•		•	Specimen tree; evergreen-like leaves turn orange-brown in fall; reddish-brown bark

Notes:

TALL EVERGREEN TREES

Mature growth over 75 feet; plant at least 45 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Canadian Hemlock</i> pyramidal <i>Tsuga canadensis</i>	*						*	Slow growing, graceful evergreen; very dark green lustrous foliage; prefers well-drained soil
<i>Norway Spruce</i> pyramidal <i>Picea abies</i>	*		*	*				Probably the most durable evergreen
<i>Serbian Spruce</i> pyramidal <i>Picea omorika</i>	*	*	*				*	Contrasting green upper and bluish underside give this tree character; very effective evergreen specimen
<i>Colorado Blue Spruce</i> pyramidal <i>Picea pungens</i>	*	*	*	*				Fairly hardy evergreen which is popular because of its numerous cultivars with blue color
<i>White Spruce</i> pyramidal <i>Picea glauca</i>	*	*	*				*	Durable; cvs 'Densata' recommended; also known as the Black Hills Spruce which is smaller
<i>White Pine</i> pyramidal <i>Pinus strobus</i>	*			*			*	Widely grown; low cost and fast growth rate; soft green needles; prefers well-drained soil
<i>Japanese Red Pine</i> picturesque <i>Pinus densiflora</i>	*							Specimen tree due to its irregular growth habit and orange-red bark

Notes:

VERY TALL SHADE TREES

Mature height over 60 feet; plant at least 45 feet from power lines.

Species	Acidic	Alkaline	Clay	Dry	Wet	Shade	Street	Primary Features
<i>Sugar Maple</i> round <i>Acer saccharum</i>	•	•					•	Brilliant yellow to orange fall color; lacks pollution tolerance; needs room for root growth
<i>Red Oak</i> round <i>Quercus rubra</i>	•			•			•	Good shade tree; fastest growing of the desirable oaks; fall color varies from bright red to dull brown
<i>White Oak</i> round <i>Quercus alba</i>	•		•	•				Stately large tree with a slow growth rate; reddish-purple fall color; wonderful shade tree for parks or sites with growing room
<i>White Ash</i> round <i>Fraxinus americana</i>	•	•	•				•	Yellow to purple fall color; handsome tree for large sites; may develop problems if grown in poor sites
<i>Ginkgo</i> v-shaped <i>Ginkgo biloba</i>	•	•	•	•			•	Beautiful, fan-shaped leaves turn a vivid yellow in the fall; good city tree; select male trees only since female fruit is messy and smells
<i>Kentucky Coffeetree</i> round <i>Gymnocladus dioica</i>	•	•	•	•				Tough, good tree as it ages; distinct bark pattern provides interest; can be somewhat messy
<i>London Planetree</i> round <i>Platanus x acerifolia</i>		•	•	•	•		•	Good for large open sites; beautiful exfoliating bark; powdery mildew and anthracnose minor problems

Notes:

HORTICULTURAL RESOURCES IN THE NORTHERN KENTUCKY AREA

Boone County Extension Office
6028 Camp Ernst Road
Burlington, KY 41005
(606) 586 - 6101

Spring Grove Cemetery & Arboretum
5421 Spring Grove Avenue
Cincinnati, OH 45232
(513) 681 - 6680

Kenton County Extension Office
10990 Marshall Road
Covington, KY 41015
(606) 356 - 3155

Civic Garden Center of Greater
Cincinnati
2715 Reading Road
Cincinnati, OH 45206
(513) 221 - 0981

Campbell County Extension Office
3500 Alexandria Pike
Highland Heights, KY 41076
(606) 572 - 2600

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Northern Kentucky
Urban and
Community
Forestry Council

The Northern Kentucky Urban and Community Forestry Council is an interdisciplinary group of citizens and professionals who support the work of existing organizations and agencies interested in urban forestry. The Council provides a forum of learning and, by researching and sharing technical information about the value of urban forestry, seeks to make it a part of our planning and action that will result in an improved quality of life and shared landscape.

The Council helps communities improve the management of their trees and green spaces so as to protect and enhance them for future generations. In addition, it provides an opportunity to join others who are interested in community trees.