

**INTRODUCTION**

Planting trees around homes and in urban areas provides many environmental benefits. Trees help in the following ways:

- Reduce air pollution
- Remove carbon dioxide from the atmosphere
- Modify local temperatures reducing energy consumption
- Buffer urban noise
- Increase property value
- Add color to the landscape
- Improve water quality
- Provide wildlife habitat

**PLANTING PURPOSE**

The planting design will depend on the purpose of the tree planting. Carefully consider why you are planting trees. Common purposes include:

- Creating a windbreak
- Screening unsightly views
- Cool your home and conserve energy by providing shade
- Frame special views from within your home or patio area
- Attract birds and other wildlife
- Beautify your property

**PLANTING DESIGN**

When planting trees around homes and in urban areas do not plant trees that:

- Interfere with driveways, patios, sidewalks, fences, foundations, roof lines, outside lights, and any utilities (call Indiana Underground Plant Protection Service, Inc. 1-800-382-5544)
- Block traffic views or signs
- Shade gardens
- Block desirable views

**Table 1. Tree Spacing Recommendations**

Tree size (feet at maturity)	Crown Spacing Minimum (feet)
Small (<30)	25
Medium (30-60)	35
Large (>60)	40

**SPECIES SELECTION**

Indiana has over 100 native tree species with adaptations to different soil and site conditions. Soil conditions can vary in fertility, rooting depth, available water holding capacity, and wetness usually expressed as drainage class (depth to water table). Site conditions can include; available sunlight, amount of foot traffic, location next to roads (impact of salt spray) etc. Each tree species is adapted to survive and thrive under certain site conditions. It is critical that species selected are adapted to the conditions of the planting site. Appropriate tree species can be found at the NRCS Soil Data Mart or Web Soil Survey and Table 3, Commonly Planted Tree Species on page 2 of this document.

**PLANTING TREES AND DATES**

Trees are usually purchased in plastic containers (container stock) or dug from the ground and wrapped in burlap cloth to hold roots and soil material together (balled and burlapped stock). Trees that are moldy, damaged, or dried out should be discarded. Container stock with circling or girdling roots should be loosened before planting.

**Table 2. Container Tree Sizing Chart**

Container Size	Tree Height	Ave. Stem Caliper <sup>1</sup>
1 gallon	2 – 4'	3/8 – 5/8"
3 gallon	2 – 6'	3/8 – 5/8"

<sup>1</sup> Caliper is the stem diameter at ground level measured at the root collar.

**Balled and Burlapped Tree Sizing**

- Should have a root ball whose diameter equals or exceeds a ratio of 12 inches for each inch of diameter at the base of the trunk (caliper). For example a 2 inch caliper tree should have a minimum rootball diameter of 24 inches.
- Should have a single leader or central trunk or well-spaced, multi-stemmed trunk that does not show signs of crowding
- Should have a stem free of wounds
- Does not have a loose soil ball, separated from the stem.

## Planting Dates

Generally container and balled and burlapped trees can be planted anytime the ground is not frozen with adequate moisture and supplemental irrigation. However the best time to plant in normal years is September 15 through June 1. Trees should not be planted if the soil is dried out or frozen. Always follow specific directions provided by the nursery or plant supplier.

## Best Way to Plant a Tree

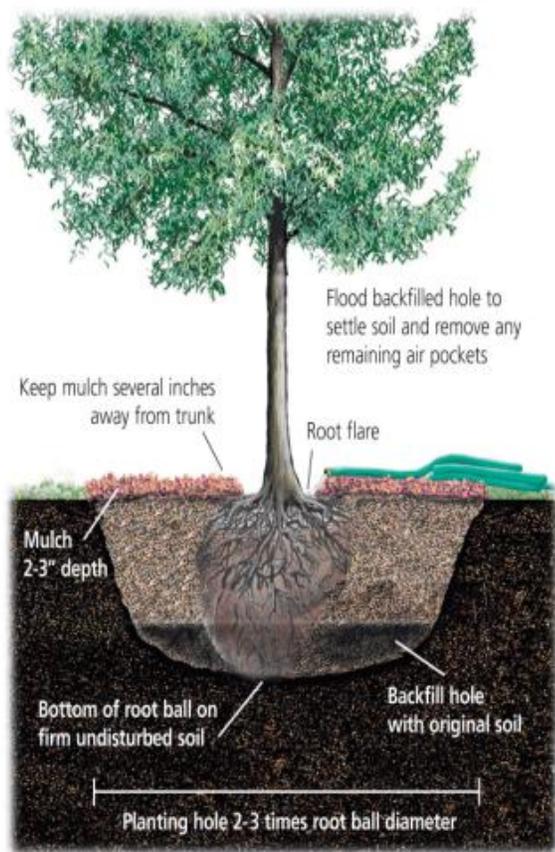


Diagram From: *Under The Canopy Creating Personal Green Space, A Guide to Selecting, Planting And caring for Trees in Illinois*, Illinois Forestry Development Council

## FOR ADDITIONAL INFORMATION:

[Tree Installation: Process and Practices, Purdue University Extension, FNR-433-5, 6/2011](#)

[IDNR, Division of Forestry, Tree Species Information](#)

[NRCS Backyard Conservation Tree Planting](#)

**Table 3. Commonly Planted Species**

Species	Soil Drainage <sup>1</sup>	Shade Tolerance	Ave Mature Height (ft.)
<b>Conifer Species</b>			
Baldcypress	VPD-WD	Intolerant	80
White Pine	MWD-WD	Intermediate	90
Northern White Cedar	PD-WD	Intermediate	40
Spruce, Colorado Blue <sup>3</sup>	SPD-WD	Intermediate	80
Spruce, Norway <sup>3</sup>	SPD-WD	Intolerant	60
<b>Deciduous Hardwood Species</b>			
Kentucky Coffeetree	SPD-WD	Intolerant	50
Maple, Red	VPD-WD	Tolerant	70
Maple, Sugar	SPD-WD	Very Tolerant	70
Oak, Bur	PD-ED	Intolerant	80
Oak, Red	MWD-WD	Tolerant	80
River Birch <sup>2</sup>	VPD-WD	Tolerant	50
Sweetgum	VPD-WD	Tolerant	85
Tulip Tree	MWD-WD	Intermediate	90
<b>Shrub and Small Tree Species</b>			
Black Chokeberry	SPD-WD	Intermediate	10
Blackhaw Viburnum	MWD-WD	Tolerant	20
Dogwood, Flowering	MWD-WD	Very Tolerant	30
Dogwood, Red Osier	VPD-WD	Tolerant	10
Redbud	MWD-WD	Tolerant	30
Serviceberry Species	MWD-WD	Very Tolerant	30
Washington Hawthorn	SPD-ED	Intolerant	30

<sup>1</sup> VPD=very poorly drained, PD=poorly drained, SPD=somewhat poorly drained, MWD=moderately well drained, WD=well drained, ED=excessively drained

<sup>2</sup>Susceptible to wind and ice damage. <sup>3</sup>Not Native to Indiana.

## Right Tree/Right Place Check List

- Species is adapted to soil conditions.
- Space is adequate for the mature tree crown. Consider utility lines, buildings, signs, other landscaping etc.
- Sunlight is adequate for the species.
- Characteristics are attractive:  
Flower, Fruit, Bark, Fall Leaf Shape and Color
- Type of tree  
Deciduous or Evergreen
- Specific site conditions to consider:  
Disturbed soil, Salt spray, Root restrictions  
Future landscape development