WVDF-700

Caring For Your Young Tree

- Do not fertilize your tree at time of planting. Allow at least one year for establishment.
- Water thoroughly every seven to ten days during the first growing season, depending on weather.
- Adjust staking materials every month during the first year to avoid damage to trunk. Remove stakes after the first year.

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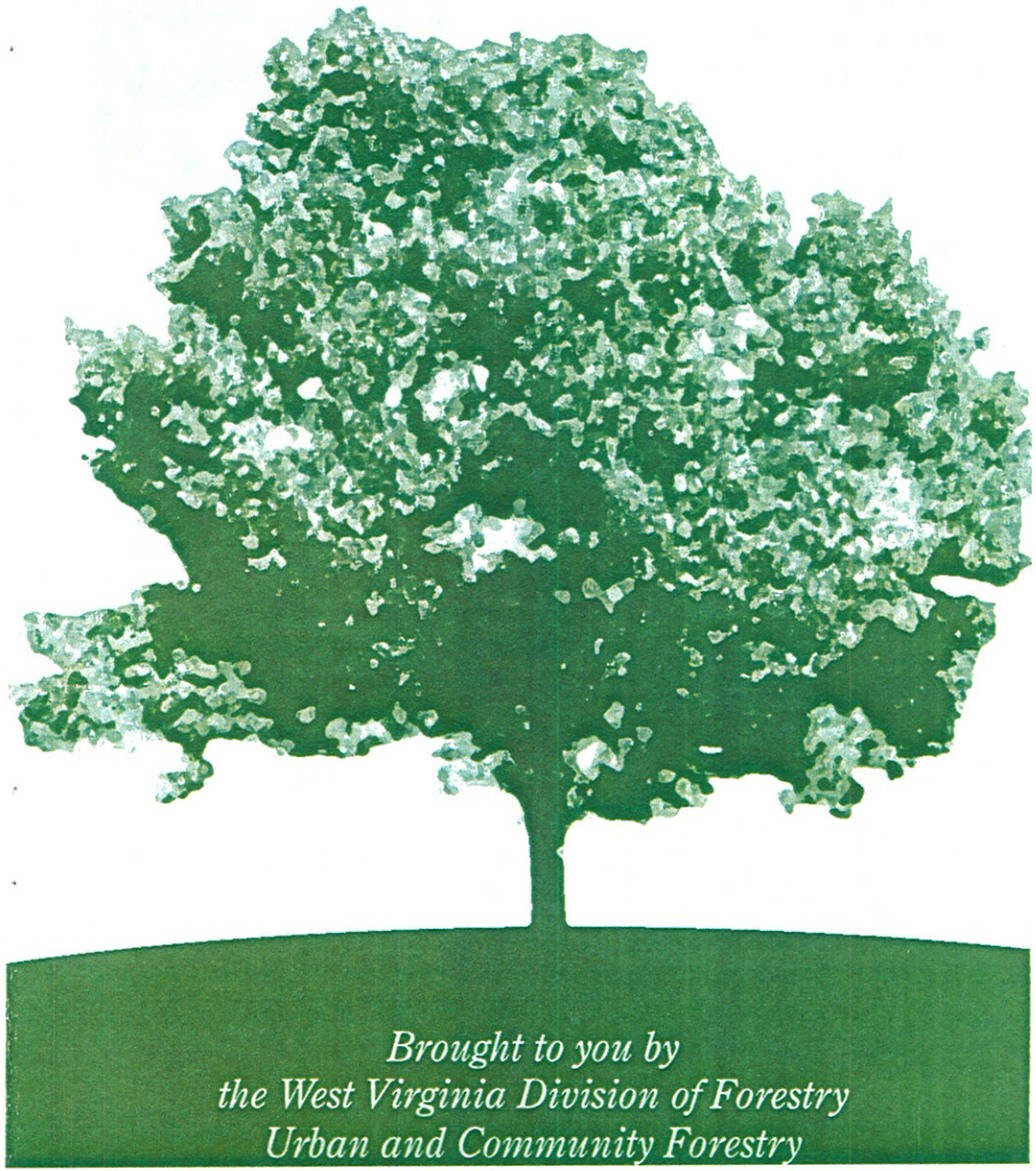
West Virginia Division of Forestry
URBAN & COMMUNITY FORESTRY

WEST VIRGINIA DIVISION OF FORESTRY

THE GUS R. DOUGLASS LAND-GRANT INSTITUTE
West Virginia State University
AGRICULTURAL, CONSUMER, ENVIRONMENTAL, & OUTREACH PROGRAMS

Choosing & Planting Trees
for Cities and Communities



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Urban and Community Forestry

This booklet provides a list of tree species intended to be used as a starting point for planting projects. These species will perform well in West Virginia if they are compatible with the restrictions of their planting site.

Benefits of Trees

- Provide cooling shade during summer months and screening from winter winds
- Adds softness to harsh urban landscapes
- Reduce air and noise pollution
- Conserve water and reduce soil erosion
- Create wildlife and plant diversity

Planting Site Design Tips

- Incorporate trees into designs for roadways, sidewalks and parking lots. For maximum benefit create continuous planting strips (tree lawns) between the sidewalk and roadway that are at least 6' wide.
- Keep trees at least 40' from intersections, road signs and traffic signals.
- Do not plant trees with a mature height >30' under or near overhead utility lines.
- Find out the mature height and width of your tree and make sure the planting site is large enough to accommodate future growth.
- Pick sites with ample soil moisture and good soil quality and volume. A healthy root system will spread farther than the branches.
- Construct sidewalk cutouts and planters to maximize tree rooting area. A minimum of 6' × 6' is needed for a small or medium tree.

Unsuitable Planting Sites

- ✘ Presence of overhead utility lines, except when planting small trees
- ✘ Sites with highly compacted soil
- ✘ Sites with high exposure to vehicle exhaust
- ✘ Sites with underground utility lines or pipes
- ✘ Within 40' of an intersection, road sign, or traffic signal
- ✘ Within 20' of a building foundation
- ✘ Sites in close proximity to entryways

- Mulch tree to a depth of 2" to 3" in an 18" diameter circle around each trunk. Maintaining adequate mulch increases growth and vigor while reducing damage from mowers and string trimmers.
- Do not allow mulch to be in direct contact with the trunk. This can promote the growth of decay causing agents.
- Trees will need very little pruning, if any, at the time of plating. Only dead, damaged or diseased branches should be removed.
- Do not add fertilizer or other soil amendments.
- If support is needed, place wooden stakes on opposite sides of the tree and support with wide, flexible material. Do not use wire or other rigid material. The tree must be able to flex to promote strong trunk development.

Tips for a Successful Planting

- Dig planting hole at least twice the width of the roots to allow for optimum root growth and expansion.
- Do not plant the tree too deeply. The upper roots should be just under the surface of the soil.
- Do not plant the tree to shallow. The roots should not be exposed above the soil line.
- Remove ALL materials from the root ball, including burlap, rope, wire baskets, etc.
- Remove trunk wrap - its only purpose is to protect the tree during shipping and planting.
- Water thoroughly – provide enough to soak entire root ball.
- Provide a layer of mulch 2"-3" deep, 18" in diameter around the tree. Do not mound mulch or leave mulch in contact with trunk.
- Do not prune newly planted trees. Only dead, broken, or diseased branches should be removed at the time of planting.

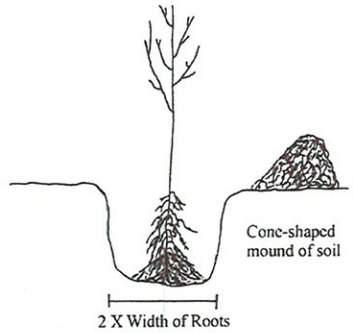


Figure 1. Dig planting hole two times the width of the roots. A cone-shaped mound of soil can be formed in the bottom of the hole to help support the roots.

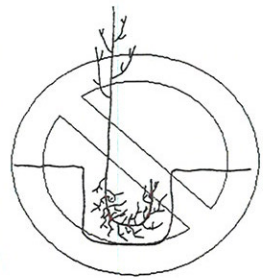


Figure 2. Do not bend the roots to force them into a planting hole that is too small.

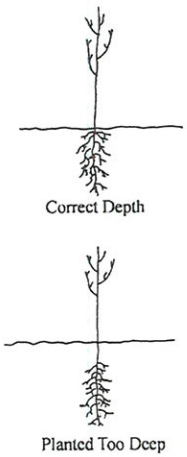


Figure 3. Plant the seedlings at the correct depth. Do not plant too deep.

Planting Instructions

Items You Will Need:

- ❑ Shovel
- ❑ Gloves
- ❑ Bucket of water for holding trees
- ❑ Mulch
- ❑ Pruning Shears
- ❑ Hammer or mallet (for driving stakes)
- ❑ Wooden stakes
- ❑ Flexible staking material
- ❑ Plenty of water for each tree

Selecting Nursery Stock

- Choose healthy, vigorous trees.
- Avoid trees with insects, disease, or damage to the trunk, branches or roots.
- Avoid trees with damage to trunk or branches, disease, or insects.
- Select trees with open, "U"-shaped branch attachment angles and trees with a single main stem (central leader). Avoid trees with narrow, "V"-shaped branch attachment angles, dense or crowding branches, or multiple main stems (codominant leaders).
- Avoid trees with circling and/or girdling roots.

Steps for Successful Planting:

- Dig a hole at least twice as wide and only as deep as the root system. *See Figure 1.*
- You may need to prune off dead or excessively long root tips. Always use clean, sharp pruning shears.
- Spread the roots out so they are evenly distributed in the planting hole. A cone shaped mound of soil can be formed in the hole to help support the roots of bare root seedlings. *See Figure 1.*
- Do not bend the roots to force them into a planting hole that is too small. *See Figure 2.*
- Plant the tree at the correct depth. The upper roots should be just under the surface of the soil. Do not plant too deep. *See Figure 3.*
- Place the soil back in the hole and gently tamp to remove any air spaces. Roots should not be exposed above ground.
- You will need to provide a deep soaking watering for each tree at the time of planting and once each week for the first two growing seasons. Lack of water is the number one killer of newly planted trees!

General Considerations for Tree Selection

- Consider tree function. Shade, screening, aesthetics, or erosion control/prevention. Look for trees with nice year-round characteristics, such as those with an interesting bark, crown shape and branching habit.
- Consider tree shape. How fast will it grow? How tall will it grow? How far will the branches spread?
- Consider tree character. Does the tree have a dense canopy (more summer shade) or a sparse canopy (less summer shade)?
- Consider tree maintenance. Is it easy to care for? Does the tree produce messy fruit?
- Planting site factors: Hardiness zone, space restrictions (above and below), soil pH, moisture, density and amount of sunlight.
- Select trees suitable for urban environments that tolerate poor soils, heat and pollutants.
- Avoid planting trees that are already all too common and those with poor growth habits, such as callery pear (*Pyrus calleryana*), silver maple *(Acer saccharinum)*, Norway maple *(Acer platanoides)*, and weeping willow *(Salix babylonica)*.
- Develop a list of tree species that will perform well at the proposed planting site.
- Each tree species has advantages and disadvantages.
- Strive for diversity – always plant a variety of tree species of several different genera.

Two good sources of additional information are:

Dirr, Michael A. 1998. Manual of Woody Landscape Plants. Stipes Publishing, Champaign, IL

Gerhold, H. D. 2005. Landscape Tree Facts CD. School of Forestry Resources. Penns State University, University Park, PA

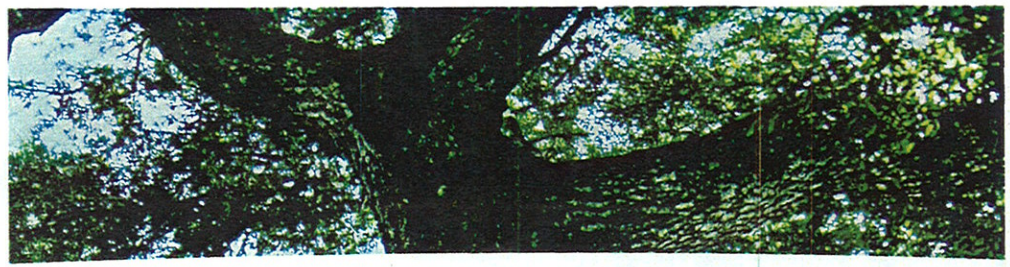
Small Trees

<30' mature height; <35' mature width; Ideal for tree lawns >2' wide, cutouts at least 4' wide by 4' deep and under utility lines

Crown Shape	Symbol
Globose	G
Oval	O
Rounded	R
Pyramidal	P
Upright	U
Columnar	C
Wide-spreading	W
Vase	V
Irregular/variable	I

Special Applications	Symbol
Sidewalk cutout	SW
Planter	PL
Native	N
Showy Flowers	SF
Fruit/Nut Conflicts	F/N

Common Name	Scientific Name	Shape	Special
Amanogawa Oriental Cherry	Prunus serrulata 'Amanogawa'	C	SF
Crabapples			
Adams	Malus 'Adams'	G	SF,FN
Adirondack	Malus 'Adirondack'	C	SF,FN
Centurion	Malus 'Centzam'	O	SF,FN
Donald Wyman	Malus 'Donald Wyman'	G	SF,FN
Harvest Gold	Malus 'Horgozam'	C	SF,FN
Prairifire	Malus 'Prairifire'	O	SF,FN
Professor Sprenger	Malus 'Professor Sprenger'	O	SF,FN
Sentinel	Malus 'Sentinel'	C/V	SF,FN
Snowdrift	Malus 'Snowdrift'	O	SF,FN
Sugar Tyme	Malus 'Sutyzam'	O	SF,FN
Eastern redbud	Cercis canadensis	O	
Hawthorns			
Thornless Cockspur	Crataegus crus-galli	G	FN
Crimson Cloud	Crataegus laevigata 'Superba'	O	SF,FN
Washington	Crataegus phaenopyrum	O	FN
Winter King Green	Crataegus viridis	V	FN
Vaughn	Crataegus 'Vaughn'	G	FN
Japanese Snowbell	Styrax japonica	C	



Common Name	Scientific Name	Shape	Special
Ginkgo (male trees only)	Ginkgo biloba	I	
Shagbark Hickory	Carya ovata	U	N
Honeylocust			
Shademaster	Gleditsia tricanthos 'PNI 2835'	O/V	
Skyline	Gleditsia tricanthos 'Skycole'	O	
Horsechestnut	Aesculus hippocastanum	O	N
Hackberry	Celtis occidentalis	G	N
Katsuratree	Cercidiphyllum japonicum	P	
Kentucky Coffeetree	Gymnoclaudus dioicus	O	
Oaks			
Pin	Quercus palustris	N,FN	
Chinkapin	Quercus muehlenbergii	O	N,FN
Shingle	Quercus imbricaria	G	FN
Sawtooth	Quercus acutissima	O/G	FN
Willow	Quercus phellos	O	FN
English	Quercus robur	O/G	FN
Northern Red	Quercus rubra	O	N,FN
Shumard	Quercus shumardii	O	FN
White	Quercus alba	R	N,FN
Pagodatree	Sophora japonica	O	N
Spruce			
Norway	Picea abies	P	
Colorado Blue	Picea pungens	P	
Sweetgum	Liquidambar styraciflua	P/U	N,FN
Turkish Filbert	Corylus colurna	P	
White Pine	Pinus strobus	P	
Yellow Poplar	Liriodendron tulipifera	P/U	N

Large Trees

>50' Mature Height; up to 90' Mature Width; Ideal for parks, open lawns, and greenspaces, tree lawns >8' wide or greater and sites with no utility lines.

Crown Shape	Symbol
Globose	G
Oval	O
Rounded	R
Pyramidal	P
Upright	U
Columnar	C
Wide-spreading	W
Vase	V
Irregular/variable	I

Special Applications	Symbol
Sidewalk cutout	SW
Planter	PL
Native	N
Showy Flowers	SF
Fruit/Nut Conflicts	F/N

Common Name	Scientific Name	Shape	Special
Ash			
White	Fraxinus americana	O	N
Green	Fraxinus pennsylvanica	O/G	N
Baldcypress	Taxodium distichum	P/C	
Beech			
American	Fagus grandifolia	P/U	N
European	Fagus sylvatica 'Atropunicea'	P	
Black Gum	Nyssa sylvatica	P	N
Bloodgood London Planetree	Platanus x acerifolia 'Bloodgood'	O	
Cucumber Tree	Magnolia acuminata	O/U	N
Dawn Redwood	Metasequoia glyptostroboides	C	
Japanese Zelkova	Zelkova serrata	V	
Lindens			
Littleleaf	Tilia cordata	O	
American	Tilia americana	C	
Silver	Tilia tomentosa	C/O	
Maples			
Sugar	Acer saccharum	O	N
Red	Acer rubrum	O/G	N

Common Name	Scientific Name	Shape	Special
Kousa Dogwoods			
Milky Way	Cornus kousa 'Milky Way'	V	SW,PL
Prophet	Cornus kousa 'Propzam'	V	SW,PL
Samaritan	Cornus kousa 'Samzam'	R	SW,PL
Satomi	Cornus kousa 'Satomi'	O	SW,PL
Constellation Dogwood	Cornus kousa x Cornus florida 'Rutcan'	R	
Maples			
Amur Maple	Acer ginnala	G/O	SW,PL
Tatarian Maple	Acer tataricum	G/O	SW,PL
Serviceberries			
Spring Glory	Amelanchier canadensis 'Sprizam'	O/C	
Cumulus	Amelanchier laevis 'Cumulus'	C	
Majestic	Amelanchier laevis ' Majestic'	O	
Autumn Brilliance	Amelanchier x grandiflora 'Autumn Br.'	O	
Princess Diana	Amelanchier x grandiflora 'Princess Diana'	O	
Robin Hill	Amelanchier x grandiflora 'Robin Hill'	O	
Tradition	Amelanchier x grandiflora 'Trazam'	O	
Silverbell	Halesia carolina	C	
Tree Lilacs			
Ivory Silk Japanese	Syringa reticulata 'Ivory Silk'	O	SF
Summer Snow	Syringa reticulata 'Summer snow'	G	SF
Evergreens			
Hicks Yew	Taxus media hicksi	P	
Junipers			
Gray Gleam	Juniperus scopulorum 'Gray Gleam'	P	
Moffettii	Juniperus scopulorum 'Moffettii'	P	
Moonglow	Juniperus scopulorum 'Moonglow'	P	
Emeral Sentinel	Juniperus virginiana 'Emerald'	P	
(Do not plant near rust susceptible crabapple, hawthorn, or serviceberry; select for use in hedgerows for wind and snow breaks and for screening)			
Arborvitae			
Elegantissima	Thuja occidentalis 'Elegantissima'	P	
Emerald	Thuja occidentalis 'Emerald'	P	
Nigra	Thuja occidentalis 'Nigra'	P	
Wintergreen	Thuja occidentalis 'Wintergreen'	P	
(Select for use in hedgerows for wind and snow breaks and for screening)			

Medium Trees

30'-50' Mature Height; <45' Mature Width; Ideal for plantings at least 25' from buildings and utility lines, and tree lawns >4' wide

Crown Shape	Symbol
Globose	G
Oval	O
Rounded	R
Pyramidal	P
Upright	U
Columnar	C
Wide-spreading	W
Vase	V
Irregular/variable	I

Special Applications	Symbol
Sidewalk cutout	SW
Planter	PL
Native	N
Showy Flowers	SF
Fruit/Nut Conflicts	F/N

Common Name	Scientific Name	Shape	Special
American Holly	Ilex opaca	P	N
American Hophornbeam	Ostrya virginiana	P	N
American Hornbeam	Carpinus carliniana	O/C	N
Cherries			
Columnar Sargent	Prunus sergentii 'Columnaris'	C	
Kwanzan	Prunus serrulata 'Sekiyama'	V	
Yoshino	Prunus x yedoensis	R	
Goldenrain Tree	Koelreuteria paniculata	G	SF
Hedge Maple	Acer campestre	R	
Corktrees			
Macho Amur	Phellodendron amurense 'Macho'	O	
Shademaster Amur	Phellodendron amurense 'PNI 4551'	O	
Mountain Ash	Sorbus spp.	I	N
Sourwood	Oxydendrum arboreum	P	N
Southern Magnolia	Magnolia grandiflora	C	SF