

Trees For Kids/Trees For Teens Grant – Nurseries: please review and submit signed notification letter with your quote. Please do not sign until you have reviewed the attached specifications.

Nursery Notification Letter

The following entity _____ (Grant Applicant) is partnering with the Iowa Department of Natural Resources Forestry Bureau to plant containerized landscape trees with grant funding. The grant recipient will purchase the trees directly from a retail nursery, without being required to get competitive bids. Please provide a quote, using #7 container grown species on the acceptable tree list. All of the trees must meet the **Specifications for Nursery Tree Quality**, which can be found at the end of this document. DO NOT quote a price for a Trees for Kids grant project without reviewing the acceptable tree list and the specification. Trees provided may not be larger than #7 containers with written approval from the grant coordinator, as larger trees are not practical for children to plant.

Any species/cultivar delivered which are not on the acceptable tree list, do not meet the quality nursery specifications, and which are not approved by the DNR Trees For Kids coordinator will be considered a donation to the grant recipient by the nursery. Any plantings using Ball and Burlap stock will not receive grant funding. Nursery stock in air-pruning containers are preferred.

In order to insure future health of our urban forest, diversity of species is required. For any project less than 30 trees, a maximum of 3 trees of each species is allowed. For projects over 30 trees, a maximum of 10% per species and 20% per genus is allowed. Please insure that the cultivar you select is on the approved list. If you have questions about species selection, please contact the Grant Coordinator, Laura Wagner at laura.wagner@dnr.iowa.gov or 515-725-8456.

Grant Applicants receive additional points if root-pruning containers are utilized. Please indicate on quote if root pruning containers are used.

If you are interested in supplying trees to this grant recipient, please sign that you understand the conditions of the grant terms, and will not make size or species substitutions without prior approval by the DNR coordinator, and will follow the quality nursery specification guidelines. If you have any questions, please contact the Trees For Kids Coordinator, Laura Wagner, at 515-725-8456 or laura.wagner@dnr.iowa.gov

Signature, Title

Date

Nursery Phone _____

Nursery E-mail _____

TREES FOR KIDS & TEENS GRANT - ACCEPTABLE TREE LIST

***This is a statewide list; Species survivability may vary by location.**

	Common Name	Scientific Name	Cultivars/ Selections
SHADE TREES	Black Maple	<i>Acer nigrum</i>	
	Sugar Maple	<i>Acer saccharum</i>	Commemoration , Crescendo , Endowment , Fall Fiesta , Legacy , Green Mountain
	Ohio Buckeye	<i>Aesculus glabra</i>	
	River Birch	<i>Betula nigra</i>	Heritage
	White-barked Birch	<i>Betula populifolia</i>	Whitespire Sr.
	Pecan	<i>Carya laciniosa</i>	
	Shellbark Hickory	<i>Carya laciniosa</i>	
	Shagbark Hickory	<i>Carya ovata</i>	
	Hackberry	<i>Celtis occidentalis</i>	Chicagoland , Prairie Pride , Windy City
	Katsuratree	<i>Cercidiphyllum japonicum</i>	
	Yellowwood	<i>Cladrastis kentuckea</i>	
	Persimmon	<i>Diosyros virginiana</i>	
	Turkish Filbert	<i>Corylus Colurna</i>	
	Ginkgo (male only)	<i>Ginkgo biloba</i>	Autumn Gold , Golden Colonnade , Halka , Magyar , Presidential Gold , Princeton Sentry
	Thornless Honeylocust	<i>Gleditsia triacanthos</i>	Northern Acclaim , Skyline , Shademaster
	Kentucky Coffeetree	<i>Gymnocladus dioicus</i>	
	Larch	<i>Larix decidua</i>	
	Sweetgum Southern Iowa only	<i>Liquidambar styraciflua</i>	
	Tuliptree	<i>Liriodendron tulipifera</i>	
Cucumbertree Magnolia	<i>Magnolia acuminata</i>		
Blackgum Southern Iowa only	<i>Nyssa slyvatica</i>		

	American Hophornbeam	<i>Ostrya virginiana</i>	
	London Planetree	<i>Platanus x acerfolia</i>	Bloodgood , Exclamation
	White Oak	<i>Quercus alba</i>	
	Swamp White Oak	<i>Quercus bicolor</i>	
	Scarlet Oak	<i>quercus coccinea</i>	
	Shingle Oak	<i>Quercus imbricaria</i>	
	Bur Oak	<i>Quercus macrocarpa</i>	
	Chinkapin Oak	<i>Quercus muehlenbergii</i>	
	Pin Oak	<i>Quercus Palustris</i>	
	Northern Red Oak	<i>Quercus rubra</i>	
	Shumard Oak	<i>Quercus Shumardii</i>	
	Sassafras	<i>Sassafras albidum</i>	
	Bald Cypress Southern Iowa only	<i>Taxodium distichum</i>	
	Littleleaf Linden	<i>Tilia Cordata</i>	Glenleven This cultivar only
	American Linden	<i>Tilia americana</i>	Boulevard , Front Yard, Legend, American Sentry
	Silver Linden	<i>Tilia tomentosa</i>	
	American Elm	<i>Ulmas Americana</i>	Jefferson , Princeton , Prairie Expeditions
LOW-GROWING TREES	Serviceberry	<i>Amelanchier spp.</i>	Autumn Brilliance , Cole's Select , Cumulus, Princess Diana , Strata
	American Hornbeam	<i>Carpinus caroliniana</i>	

	Eastern Redbud	<i>Cercis canadensis</i>	
	Pagoda Dogwood	<i>Cornus alternifolia</i>	
	Witch hazel	<i>Hamamelis virginiana</i>	
	Smoketree	<i>Cotinus coggyria</i>	
	Eastern Wahoo	<i>Euonymus atropurpureus</i>	
	Loebner Magnolia	<i>Magnolia Xloebneri</i>	Ballerina , Leonard Messell , Merrill , Spring Snow

	Saucer Magnolia	<i>Magnolia soulangeana</i>	
	Star Magnolia	<i>Magnolia stellata</i>	'Centennial' 'Royal Star'
	Flowering Crabapple	<i>Malus spp.</i>	Adirondack , Cardinal , David , Donald Wyman , Doublooms , Floribunda , Golden Raindrops , Harvest Gold , Indian Magic , Louisa , Mary Potter , Purple Prince , Red Jewel , Royal Fountain , Royal Raindrops , Sugar Tyme
	American Plum	<i>Prunus americana</i>	
	Bladdernut	<i>Staphylea trifolia</i>	

	Blackhaw Viburnum	<i>Viburnum prunifolium</i>	
	Paw Paw	<i>Asimina triloba</i>	
Edible	Edible Apple	<i>Malus spp</i>	Enterprise , Freedom , Liberty , Macfree, Redfree , Sundance
	Edible Apricot	<i>Prunus armeniaca mandshurica</i>	Moongold , Sungold
	Edible Cherry	<i>Prunus spp</i>	<i>Mesabi</i> , Meteor , Montmorency , Northstar
	Edible Pear	<i>Pyrus spp</i>	Luscious , Patten , Parker , Summercrisp
	Edible Plum	<i>Prunus spp</i>	Toka , Superior , Mount Royal , Stanley , Green Gage , Damson
CONIFERS	White Fir	<i>Abies concolor</i>	
	Dawn Redwood	<i>Metasequoia glyptostroboides</i>	
	Norway Spruce	<i>Picea abies</i>	
	White Spruce	<i>Picea glauca</i>	May not use in windbreak settings due to rhizosphaera needle cast
	Black Hills Spruce	<i>Picea glauca var. densata</i>	May not use in windbreak settings due to rhizosphaera needle cast
	Serbian Spruce	<i>Picea omorika</i>	
	White Pine	<i>Pinus strobus</i>	
	Arborvitae	<i>Thuja occidentalis</i>	
	Eastern Hemlock	<i>Tsuga canadensis</i>	



Guideline Specifications for Nursery Tree Quality

I. PROPER IDENTIFICATION

All trees shall be true to name as ordered or shown on the planting plans and shall be labeled individually or in groups by species and cultivar (where appropriate).

II. COMPLIANCE

All trees shall comply with federal and state laws and regulations requiring inspection for plant disease, pests and weeds. Inspection certificates required by law shall accompany each shipment of plants.

Even though trees may conform to county, state, and federal laws, the buyer may impose additional requirements.

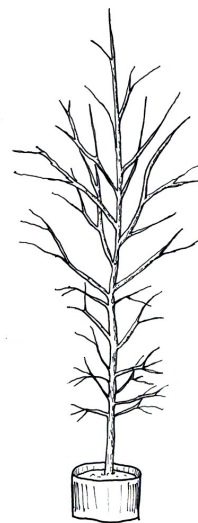


Illustration by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida.

III. TREE CHARACTERISTICS AT THE TIME OF SALE OR DELIVERY

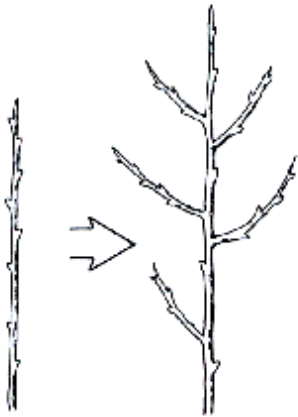
A. TREE HEALTH

As typical for the species/cultivar, trees shall be healthy and vigorous, as indicated by an inspection for the following:

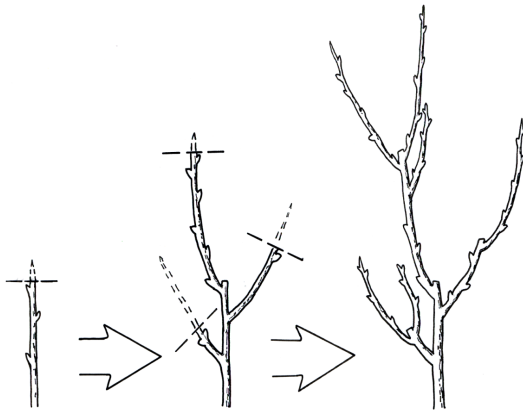
1. Trees shall be relatively free of pests (insects, pathogens, nematodes or other injurious organisms).
2. An inspection of the crown, trunk, and roots shall find the following characteristics:
 - a. Crown Form: The form or shape of the crown is typical for a young specimen of the species/cultivar. The crown is not significantly deformed by wind, pruning practices, pests or other factors.
 - b. Leaves: The size, color and appearance of leaves are typical for the time of year and stage of growth of the species/cultivar. Leaves are not stunted, misshapen, tattered, discolored (*chlorotic or necrotic*) or otherwise atypical.
 - c. Branches: Shoot growth (*length and diameter*) throughout the crown is typical for the age/size of the species/cultivar. Trees do not have dead, diseased, broken, distorted or other serious branch injuries.
 - d. Trunk: The tree trunk should be fairly straight, vertical and free of wounds (*except properly-made pruning cuts*), sunburned areas, conks (*fungal fruiting bodies*), wood cracks, bleeding areas, signs of boring insects, galls, cankers/lesions and girdling ties.
 - e. Tree height and trunk diameter are typical for the age, species/cultivar and container size.
 - f. Roots: The root system is free of injury from biotic (*insects, pathogens, etc.*) and abiotic agents (*herbicide toxicity, salt injury, excess irrigation, etc.*). Root distribution is uniform throughout the soil mix or growth media and growth is typical for the species/cultivar. **Root Pruning containers are preferred, as they are highly effective in eliminating encircling roots.**

B. CROWN

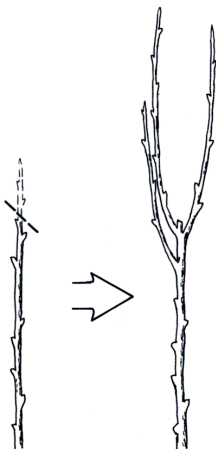
1. Central Leader: Trees shall have a single, relatively straight central leader and tapered trunk, free of codominant stems and vigorous, upright branches that compete with the central leader. If the original leader has been headed, a new leader at least $\frac{1}{2}$ (*one-half*) the diameter of the original leader shall be present.



Maintaining a single, central leader is preferable.



Heading and retaining a leader is acceptable.



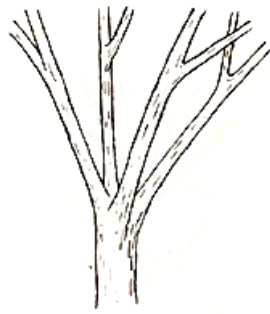
Heading without retaining a leader is unacceptable.

2. Main Branches (scaffolds): Branches should be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species.

a) **Main branches**, for the most part, shall be well spaced.



preferable



unacceptable

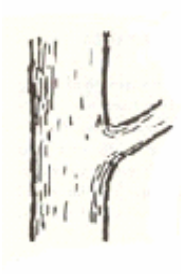


preferable



unacceptable

b) **Branch diameter** shall be no greater than $\frac{2}{3}$ (*two thirds*) the diameter of the trunk, measured 1" (*one inch*) above the branch.



preferable



unacceptable

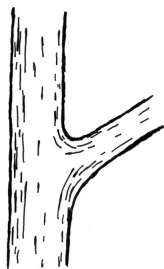


preferable



unacceptable

c) The attachment of scaffold branches shall be free of **included bark**.



preferable



unacceptable

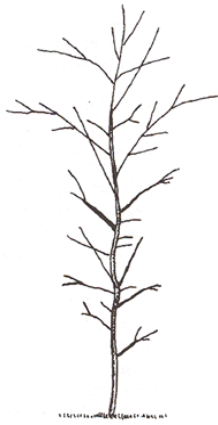


preferable

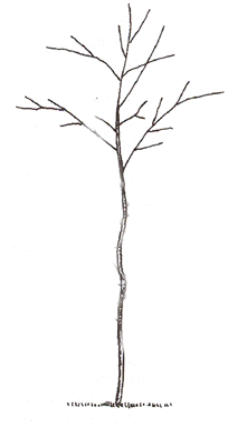
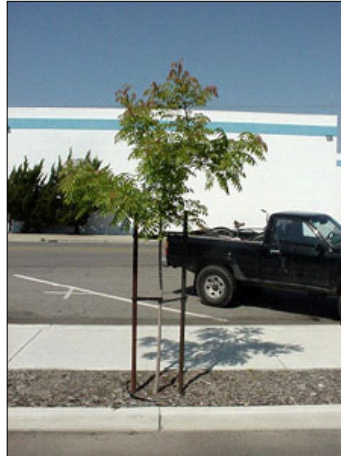


unacceptable

3. Temporary branches: Temporary branches should be present along the lower trunk, particularly for trees less than 1-1/2" (*one and one-half inches*) in trunk diameter. They should be no greater than 3/8" (*three-eighths inch*) in diameter. Heading of temporary branches is often necessary to limit their growth.



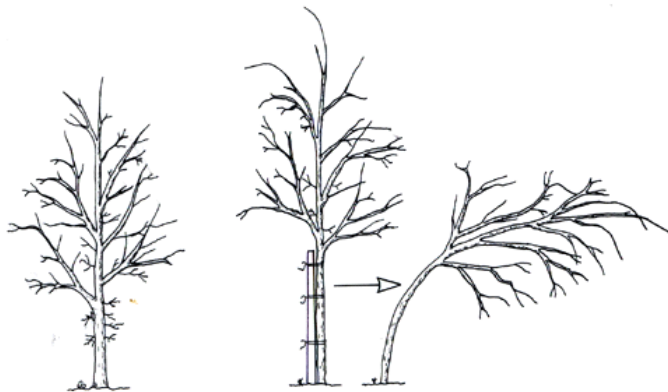
Good



Not as Good

C. TRUNK

1. **Trunk diameter and taper** shall be sufficient so that the tree will remain vertical without the support of a nursery stake.



2. The **trunk shall be free of wounds** (*except properly-made pruning cuts*), sunburned areas, conks (*fungal fruiting-bodies*), wood cracks, bleeding areas, signs of boring insects, galls, cankers and/or lesions.

3. **Trunk diameter** at 6" (*six inches*) above the soil surface shall be within the diameter range shown for each container size below. Maximum height is listed below for each container size:

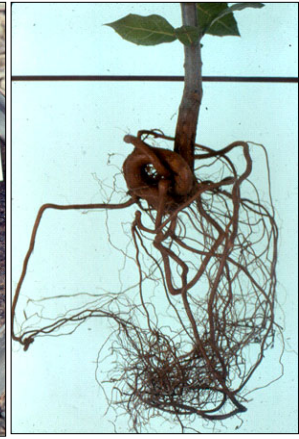
Container Size	Trunk Diameter (<i>inches</i>)	Maximum Height (ft)
# 5 (gallon)	0.5" to 0.75"	10'
# 7 (gallon)	0.75" to 1.25"	12'
#10 (gallon)	1.0" to 1.5"	14'

D. ROOTS

1. The trunk, **root collar** (*root crown*) and large roots shall be free of circling and/or kinked roots. Soil removal near the root collar may be necessary to inspect for circling and/or kinked roots.



preferable



unacceptable

2. The tree shall be **well rooted** in the soil mix. When the container is removed, the rootball shall remain intact. When the trunk is carefully lifted both the trunk and root system shall move as one.



preferable



unacceptable

3. The **upper-most roots** or root collar shall be within 1" (*one inch*) above or below the soil surface.



preferable



unacceptable

4. The **rootball periphery** should be free of large circling and bottom-matted roots. The acceptable diameter of circling peripheral roots depends on species and size of rootball. The maximum acceptable size should be indicated for the species (*if necessary*).



preferable



unacceptable

E. MOISTURE STATUS

At time of inspection and delivery, the rootball shall be moist throughout. The crown shall show no signs of moisture stress as indicated by wilted, shriveled or dead leaves or branch dieback. The roots shall show no signs of excess soil moisture conditions as indicated by poor root growth, root discoloration, distortion, death or foul odor.

V. INSPECTION

The Iowa DNR reserves the right to reject trees that do not meet specifications as set forth in these guidelines or as specified by the buyer. If a particular defect or substandard element or characteristic can be easily corrected, appropriate remedies shall be required. If destructive inspection of a rootball(s) is to be done, the buyer and seller should have a prior agreement as to the time and place of inspection, minimum number of trees or percentage of a species or cultivar to be inspected and financial responsibility for the inspected trees.

GLOSSARY:

Codominant – Two or more vigorous and upright branches of relatively equal size that originate from a common point, usually where the leader has been lost or removed.

Crown – The aboveground part of the tree including the trunk.

Cultivar – A named plant selection from which identical or nearly identical plants can be produced, usually by vegetative propagation or cloning.

Girdling root – A root that partially or entirely encircles the trunk and/or buttress roots, which could restrict growth and downward movement of photosynthate and/or water and nutrients up.

Included bark – Bark embedded within the crotch between a branch and the trunk or between two or more stems that prevents the formation of a normal branch bark ridge. This often occurs in branches with narrow-angled attachments or branches resulting from the loss of the leader. Such attachments are weakly attached and subject to splitting out.

Kinked root – A primary root(s), which is sharply bent, causing a restriction to water, nutrient, and photosynthate movement. Kinked roots may compromise the structural stability of root systems.

Leader – The dominant stem which usually develops into the main trunk.

Photosynthate – Pertains to sugar and other carbohydrates that are produced by the foliage during photosynthesis, an energy trapping process.

Root collar – The flared area at the base of a tree where the roots and trunk merge. Also referred to as the "root crown" or "root flare".

Shall – Used to denote a practice that is mandatory.

Should – Used to denote a practice that is recommended.

Scaffold branches – Large, main branches that form the main structure of the tree.

Temporary branch – A small branch that is retained temporarily along the lower trunk of young trees. Temporary branches provide photosynthate to increase trunk caliper and taper and help protect it from sunburn damage and mechanical injury. Such branches should be kept small and gradually removed as the trunk develops.

Trunk – The main stem or axis of a tree that is supported and nourished by the roots and to which branches are attached.