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What do you look for when purchasing a tree at your local garden center or nursery? How can you tell if you are selecting a healthy tree? Is the tree damaged? Is the root system adequate? Have you considered where the tree will be planted, the size that it will reach when it matures or any obstacles that might interfere with the aboveground or belowground growth of the tree? This factsheet provides guidance for selecting healthy trees for planting.

Before buying a tree for your landscape, consider the purpose of your planting, the soil conditions, location for planting, tree size, species desired and whether its growth and form are appropriate for your planting spot. For more information about planting the right tree in the right place, refer to UT Extension publication SP511 (<http://utextension.tennessee.edu/publications/spfiles/SP511.pdf>).

Trees are sold based on how the root system is packaged: bare-root, container-grown and balled-and-burlapped (B&B). UT Extension publication SP572 (<http://utextension.tennessee.edu/publications/spfiles/sp572.pdf>) explains the advantages and disadvantages associated with planting each of these root systems.

## Inspecting Your Tree

### Bark and Trunk

Check the trunk for mechanical injury (bark scrapes) and environmental injuries such as sunscald and animal damage. Trunk wraps may hide wounds, incorrect pruning cuts and insect injuries. Wraps should be removed and the trunk inspected. Avoid trees with obvious insect or disease problems. Look for signs of vertical trunk cracks, usually found just below branch unions. These cracks are major starting points for fractures of branches and trunks. Select trees that have only one main trunk that is straight and has not been pruned back at the top.

### Branches

Look to see if there are broken branches, indicating poor or rough handling. Branches should not cross or rub. Branches should be spaced 8 to 12 inches apart, evenly distributed on all sides of the central leader, and should be growing on the upper one-third to one-half of the central leader. Avoid trees with branches that have been excessively pruned back. Weak branch unions or v-shaped branches occur where two branches or a branch and a trunk squeeze together. The squeezing increases during diameter growth, creating cracks and potential breaking of the limb during storms. One of these squeezed branches should be pruned. Avoid purchasing trees with these weak branch unions.

### Foliage

Avoid plants that appear wilted or with off-color foliage. These are indications that tree care has not been optimal or that something is wrong with the root system. Desirable trees possess good foliage color and full-sized leaves.



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A pallet of containerized dogwood trees at a local garden center.



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Balled and burlapped eastern white pine trees.

## Roots

To check for well-rooted trees, grasp the trunk of the tree near the base and try to move the tree in the root ball or container. Well-rooted trees should not create a hole in the soil when the stem is shaken. The container and the tree should move as one. Remove the container without harming the tree and examine the roots. Healthy roots are firm and usually lighter in color than the surrounding soil. There should be no odor or mushiness. Carry trees by their container or root ball rather than by their trunks to avoid damaging their root systems. The roots of B&B trees may be inspected in much the same way as a containerized tree. The ball should not have cracks in the soil or large clumps of loose soil. If it does, these are indications of improper handling.

## Deciduous Trees

Deciduous trees drop their leaves in the fall and grow new ones in the spring. The vitality of these trees is difficult to determine in the early spring before leaves appear. To check the health of these trees in early spring, examine several branches. Scraping the bark of a live branch with a fingernail should show green tissues beneath. If not, the branch may be dead. Live branches of most trees are quite flexible. A dead branch will usually be shriveled and will snap and break. Buds should be swollen and plump. The tree's previous growth can be checked by observing the bud scars on the branches. Very little growth between scars (less than 4 inches) may be a sign that the tree is in trouble.

## Other Considerations

Small trees adapt quicker to planting than larger trees. Special care must be taken when planting a large tree because its root system is not in balance with the above-ground portions of the tree. Much of the lateral root system, perhaps up to 70 percent, was left in the nursery bed during uplifting. Thus, extra maintenance, primarily judicious watering during dry periods, is required to reduce stress and overcome transplanting shock to a new location.

A common practice is for nurseries and garden centers to have end-of-the-season sales of trees. Be careful in purchasing these trees. Many of these trees were leftover

from sales during peak times and have not received the proper handling, care and watering throughout the summer to maintain tree health. Once deciduous trees lose their leaves, it is difficult to determine their tree health. Trees that were lifted from the nursery in the spring should have been planted months ago. Holding these trees over the summer increases their stress and decreases survival. Buy nursery stock from reliable nurseries that are knowledgeable about the trees they sell, offer tree guarantees and practice proper handling and care of their nursery stock.

## Guidelines

What to look for when inspecting trees for purchase:

- Overall health and vigor with at least 4 to 6 inches of growth from the previous growing season to the end of the twig.
- Symmetrical form with a balance between height and crown spread.
- Freshly dug trees grown for your particular use in a climate similar to yours.
- Well-spaced branches that are evenly distributed around the trunk.
- Well-developed buds.
- Branches and crown in the upper half of the central stem.
- No branches with a narrow angle or v-shaped notches.
- No sign of insects or diseases (egg masses, cankers, sunken areas, grubs or borers).
- A single, straight trunk free of mechanical wounds and wounds from incorrect pruning.
- A well-developed root system, but not a dense mass that is pot-bound or with girdling roots.
- A rootball that is proportional to the size of the tree.

## Summary

Plant high-quality stock to avoid future tree hazards associated with your tree. Planting poor stock will probably lead to more expense in the long run because of increased maintenance and a shorter life span. The best protocol is to purchase trees from a reputable nursery, establish careful specifications for your purchased tree and obtain a warranty for your tree.

SP662-15M-9/05 R12-4910-051-007-06 06-0076

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**Printing for this publication was funded by the USDA Forest Service through a grant with the Tennessee Department of Agriculture, Division of Forestry. The Trees for Tennessee Landscapes series is sponsored by the Tennessee Urban Forestry Council.**

