

# Successful Gardener

NC STATE UNIVERSITY NORTH CAROLINA COOPERATIVE EXTENSION

Helping Carolinians Increase Their Knowledge of Gardening, Manage Their Landscape Investment & Protect the Environment

## JC Raulston Arboretum Plant Focus

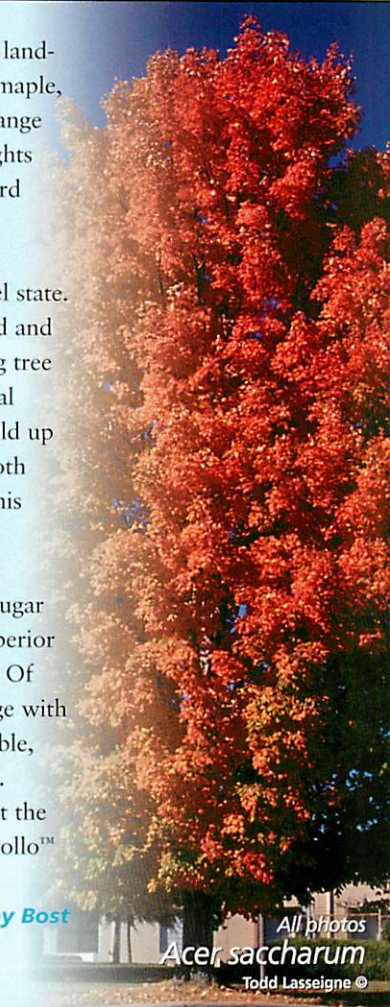
### Sugar Maples Accent Autumn

**O**f the many maples recommended for planting in North Carolina landscapes, none produces more wonderful fall color than the sugar maple, *Acer saccharum*. Its dull green summer leaves turn a gorgeous orange and yellow with the first frosts. Because of its colossal size, reaching heights greater than 60 feet with similar spread, it is not the tree for the courtyard or small residential property. This beauty is a great tree for large yards.

Given plenty of room to mature and precious years, a sugar maple is almost unsurpassable as a shade tree in the cooler regions of the Tar Heel state. Sugar maple, like Norway maple, is better adapted to the Piedmont Triad and westward unless a heat-tolerant cultivar is selected. It is a slower-growing tree than are red and silver maples, but this beauty has a desirable symmetrical form maturing into an upright oval to round tree. Its strong branches hold up well in ice storms, unlike the silver maple, and are distinguished by smooth gray bark that provides winter interest. Unfortunately, you will not see this tree lining many city streets as it is adversely affected by air pollution in urban environments.

The newer heat-tolerant cultivars offer more latitude when planting sugar maples in warm Zone 8 landscapes. The cultivar 'Legacy' has proven superior in the South and appears to be the best of the drought tolerant cultivars. Of equal reputation is Green Mountain®, offering dark green leathery foliage with good scorch resistance. If space is a premium, columnar forms are available, such as Appollo™, a slow-growing tree reaching 30 feet in as many years.

As a whole, the genus *Acer* is one of the treasure troves to be found at the JC Raulston Arboretum where there are dozens of cultivars. In fact, Appollo™ is one of their latest accessions and resides in a new bed adjacent to the parking lot. To learn more, visit [www.ncsu.edu/jcraulstonarboretum](http://www.ncsu.edu/jcraulstonarboretum). **Toby Bost**



All photos  
*Acer saccharum*  
Todd Lasseigne ©

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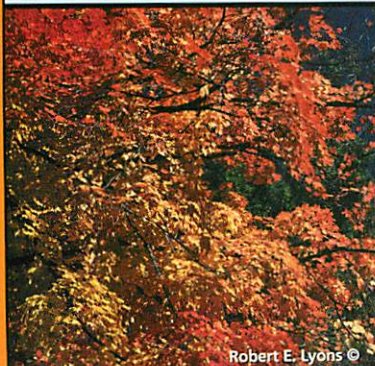
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#### TOP AWARDS RECEIVED FROM:

- Garden Writers Association
- International Association of Business Communicators
- National Association of County Agricultural Agents
- Southern Extension Forest Resource Specialists
- N.C. Association of County Agricultural Agents
- Mecklenburg County Priority Awards



Robert E. Lyons ©



Todd Lasseigne ©



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Trident Maple



'Flame' Eastern Redbud



Persian Ironwood

## Selecting and Caring for Trees

Trees in an urban setting are a valuable long-term investment for landowners. When trees are cared for properly, they provide pleasant aesthetics, refreshing temperature reduction and help to clean our air. Mature trees are a prized possession in the landscape and deserve special attention to ensure longevity. The loss of a mature tree can take a lifetime or longer to replace.

Trees in urban areas are troubled by growing conditions that are much less than ideal due to removal of topsoil, soil compaction, soil contamination, air pollution or lack of growing space. The more limitations on the growing site, the more carefully trees will need to be selected.

When considering a new tree in an urban environment, take these steps to ensure plant survival. First, consider plant location and purpose of planting. Most people select trees for a set purpose. Is the tree desired for shade, aesthetics or screening? What are the site conditions for the intended planting area? What is the soil type? Some plants prefer fertile, well-drained soil and others can tolerate poor, rocky soil. Do you have adequate moisture and space for a tree at maturity?

Growth depends on availability of space, moisture and soil fertility. Be aware of the size of the tree at maturity. It's better to pick the right tree for the space rather than having to replace a tree that has outgrown its surroundings.

Follow the planting guidelines in Extension's *Successful Gardener Tree Planting Guide*. (Available at your county Cooperative Extension Center or at [www.successfulgardener.org](http://www.successfulgardener.org).) After planting, add a 2- to 4-inch layer of mulch around the entire root system. Proper mulching will

reduce environmental stresses by maintaining a cooler root system and adequate moisture.

Fertilization is another important aspect of urban tree care. All plants require certain nutrients to function and grow. Urban landscape soils may not consist of all of the nutrients needed for healthy trees. In this situation, add fertilizer to improve plant vigor. Soil conditions, pH and organic matter content vary greatly, making proper fertilization a complex job. Send off soil samples for testing every three years to determine soil needs. Pick up a free soil test kit at your local Cooperative Extension Center.

Pruning may be necessary for improving tree health in urban landscapes. Removal of dead, diseased and damaged limbs will help improve vigor, structure and safety. Remove branches only as necessary.

### TREES TO CONSIDER

#### Large Trees to 80'

**Japanese Zelkova** – disease resistant, fast growing

**White Oak** – great for spacious areas

**Red Maple** – 'Autumn Radiance', 'Karpick', Northwood® for fall color

**Green Ash** – disease resistant, fast growing, possible new insect pest with emerald ash borer

#### Small Trees to 40'

**Crape Myrtle** – summer color, multi-stemmed

**Kwanzan Cherry** – showy flowers

**Kousa Dogwood** – spring color, disease resistant

**American Linden** – great shade tree

**Amur Maple** – low maintenance

#### Evergreen Trees

**Arborvitae** – *Thuja occidentalis*, large tree

**American Holly** – *Ilex opaca*

*Diane Ashburn*

## Avoid These Common Tree Planting Mistakes

If you are considering planting a tree this fall, you might want to review the most common mistakes folks make when selecting and planting a tree, and avoid them.

The first mistake many people make is selecting the wrong tree for the planting site. Always begin the process by evaluating the site and selecting a tree appropriate for that site. For example, if it is a dry, sunny exposure, get a tree that can tolerate those conditions. Consider the final height and spread of the tree. Be sure to check for overhead power lines that may result in injurious pruning to the tree in the future.

The second mistake that might occur is buying an inferior tree. A healthy tree has healthy bark without any cracks, cuts or discoloring.

Check the stems and foliage or buds to ensure they are free of injury or sign of disease or insects. A healthy tree has a single leader and strong lateral branching with a branch angle from the trunk of 45 degrees or more. Check the root system. Healthy roots are white and should not encircle the container, an indication the tree is root- or pot-bound.

Another common mistake is improper planting. Dig a hole no deeper than the root-ball of the tree and two to five times its diameter. Digging a hole deeper than the root-ball will result in settling of the tree and possible drowning of the roots. Center the tree in the hole and fill back with the original soil, watering in when the hole is half filled, and then finish fill-

see **Tree Planting** on page 3 ▶



## How can I tell whether my tree is dying?

Trees may decline as a result of internal decay, cankers, cut roots, root decay and weak forks.

Trees that are in poor health and low vigor are not able to close wounds and protect themselves from decay. The result is a tree with a narrow layer of living wood that keeps the branches and leaves alive, but with extensive internal decay that may cause the tree to fail at any time. These trees may have vertical bark seams or cracks, poorly closed branch stubs, large open wounds, mushrooms, conks, flux or ooze. All are external signs of possible internal decay.

Cankers are localized dead areas on the bark. The canker-infected tissue appears sunken into the stem. Trees with large cankers do not have much flexibility and often break at the canker face. You can usually detect cankers by the distortions they

cause to the trunk and branches.

Root decay and cut roots decrease the root system's ability to support the tree. When a root is cut, microorganisms may infect the tissue. Infections also occur after a tree has been weakened by fill-dirt, nearby construction, drought, flooding, soil compaction, insect defoliation or paving over roots. Remove trees that have lost 50 percent or more of their root system during construction. Trees infected with root-rot fungi often have mushrooms or other fungal structures growing on the lower trunk. They also may have cracked or loose bark at or just below the soil line.

Weak forks result from angles that are too tight (less than 40 degrees) between the trunk and the branch. As the stem's weight increases, the weak fork will often split. To prevent this problem, prune small branches that have narrow angles. **Carl Matyac**

## Tree Planting

*continued from page 2*

ing. If you are planting a balled-and-burlapped tree, be sure to remove the strapping and at least the top half of the burlap prior to backfilling.

Finally, many people often plant it and forget it. Do not make this mistake. Prune out any dead, broken or crossing branches. If wind could cause the tree to lean, stake it properly. Remove the staking and all support material after the first growing season. Mulch the area to a depth of 2 to 3 inches to help retain soil moisture and prevent weed growth. Always keep the mulch a few inches away from the trunk to avoid decay of the tender bark. Water the tree thoroughly and be sure the tree receives adequate water through its first year.

If you select the right healthy tree for the right place, plant it correctly and maintain it lovingly, you can enjoy the benefits of the tree for many years to come.

**Royce Hardin**

## ENVIRO-TIP

### Hard-working Trees Help Environment

Trees alter the environment in which we live by moderating climate, improving air quality, conserving water and harboring wildlife. Climate control is obtained by moderating the effects of the sun, wind and rain. Radiant energy from the sun is absorbed or deflected by leaves on deciduous trees in the summer and is filtered by their branches in winter. People value the sun's radiant energy during the winter and welcome the relief from it during our hot summers when air conditioners may run nonstop if shade isn't available. Therefore, it is best to plant deciduous trees on the southeast and west side of homes.

Trees affect wind speed and direction. The more compact the foliage on the tree or group of trees, the greater the influence of the windbreak. Trees intercept and store water and reduce storm runoff and the possibility of flooding. Trees also can help

improve air quality. Leaves can filter the air by removing dust. They absorb carbon dioxide from the air to form carbohydrates and absorb other air pollutants such as ozone, carbon monoxide and sulfur dioxide. They also produce much-needed oxygen.

In addition to environmental benefits, trees also provide social, community and economic benefits. Social benefits of trees result in a better quality of life, thanks to their beauty that helps make life pleasant, peaceful and restful. Community benefits provide privacy and a sense of solitude and security. Economic benefits extend to lower heating and cooling costs due to trees planted near our homes. Trees also enhance community economic stability by attracting business and tourists. They also increase property values.

**Willie Earl Wilson**



Robert E. Lyons ©

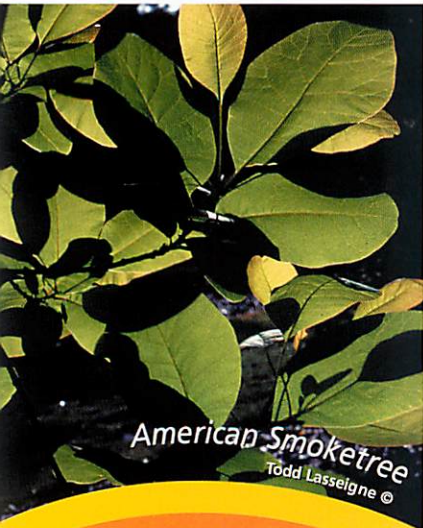
White Oak

## Gardentalk



*"The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources on earth."*

**Frank Lloyd Wright**



### The Cradle of Forestry, located deep

within the Pisgah National Forest, is a 6,500-acre historic site designated by Congress to mark the beginning of forestry conservation in the United States.

The site is home to the Forestry Discovery Center, which boasts an 18-minute movie about the beginning of forestry and an interactive exhibit hall. Visitors can enjoy many outdoor activities centered around two guided trails which feature historical buildings, a 1915 logging locomotive and sawmill.

The Cradle of Forestry is open from mid-October through early November. Special events throughout the year include music, environmental awareness workshops, horticultural seminars, fall foliage tours and an outdoor drama.

This is a great weekend getaway and is located on U.S. Highway 276 west of Asheville. Other attractions such as Sliding Rock and Looking Glass Falls are located nearby. For more information, call (828) 884-5713 or go to [www.cradleofforestry.com](http://www.cradleofforestry.com).

*Donna Teasley*

## Gardening in October

### Lawns

- Fertilize fescue and bluegrass lawns with 1 pound of nitrogen per 1,000 square feet, if not done in September.
- Keep leaves off grass.
- If not treated previously, use the organic milky spore for control of grubs.

### Ornamentals

- Fall is for planting! Set out new landscape plants.
- Plant spring-flowering bulbs like daffodil, tulip, crocus and hyacinth late this month.
- Do not prune shrubs, except to snip off an occasional stray shoot. Wait until plants are dormant.
  - Plant pansies early for best flowering in winter and spring.
  - Take cuttings of begonias, coleus, geraniums and impatiens to root and grow indoors during winter.
  - Store your garden pesticides in a secure, dry location. Clean spray tanks.

### Edibles

- If you do not have a fall vegetable garden, plant cover crops like annual rye, barley and wheat.
  - Start salad vegetables in a coldframe and enjoy them all winter. Plant lettuce, green onions, carrots, radishes, broccoli, cauliflower and most leafy greens inside the coldframe.
  - Rake all leaves and fruit from under fruit trees. Also remove any fruit left hanging in trees. Good sanitation is important to reduce insect and disease populations.
  - Plant garlic and bulbing onions for harvest next summer.

*Karen Neill*



Extension's *Successful Gardener*<sup>SM</sup> program provides timely, research-based horticultural information. The newsletter is part of the statewide horticulture program which includes Extension's *Successful Gardener*<sup>SM</sup> Regional Seminar Series and county workshops. We publish 10 issues per year. Comments concerning *Successful Gardener*<sup>SM</sup> may be sent to:

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**Tree Planting** Ask for Extension's *Successful Gardener* Tree Planting Guide at your county Cooperative Extension Center or find it at [www.successfulgardener.org](http://www.successfulgardener.org). Special thanks to the N.C. Division of Forest Resources for funding support for this guide.

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