Southern Magnolia
*Magnolia grandiflora*
This stately southeastern native is a well known symbol of southern landscapes. With large evergreen leaves and chalice shaped, creamy white, fragrant flowers, Southern magnolia works well planted as a single specimen, in groups, or as a large screen. Be sure to give this tree plenty of room to mature—most varieties will eventually reach 50’ or more in height and 30’-50’ in width. Smaller growing varieties like ‘Little Gem’, which grows to 20’ tall and 10’ wide, are popular for smaller landscapes. All southern magnolias grow best in well drained, acidic soil in sun or part shade. Leaving this tree’s lower branches intact will maintain a more formal, pyramidal habit and reduce the need to clean up fallen leaves and seed cones.

Bald Cypress and Pond Cypress
*Taxodium distichum* and *Taxodium ascendens*
These two closely related trees are commonly found in the southeast in swampy habitats, though both grow equally as well in drier landscape situations. Both are conifers and have attractive, ferny foliage, making nice textural accents in the landscape. Bald cypress is the better known of the two, growing to 50’-60’ in height and 20’ to 30’ in width. Smaller growing varieties like ‘Little Gem’, which grows to 20’ tall and 10’ wide, are popular for smaller landscapes. All southern magnolias grow best in well drained, acidic soil in sun or part shade. Leaving this tree’s lower branches intact will maintain a more formal, pyramidal habit and reduce the need to clean up fallen leaves and seed cones.

Fall Plant Pick:
Hurricane Resistant Trees!

Strong winds can cause many trees to lose limbs or topple over altogether, posing a serious risk of damage to life and property in their way. Because of this, people living in hurricane prone areas may be hesitant to plant trees in their landscapes, resulting in a reduction in tree populations in coastal communities and loss of the benefits mature trees bring to a community. These benefits include higher property values for homes that have mature trees in the landscape, energy savings due to shading, wildlife habitat, cleaner air, and beauty.

Researchers at the University of Florida have recently released recommendations for trees species that are more resistant to wind damage during hurricanes, based on 10 years of observation in Florida and along the Gulf Coast through hurricanes including Andrew, Katrina, and Rita. During these storms, the following tree species showed high resistance to wind damage. In addition, all of these trees are well adapted to growing in coastal and southeastern North Carolina.

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**Live Oak**
*Quercus virginiana*  
Live oaks are well known for being long lived, durable, and highly resistant to wind damage. These picturesque, wide spreading, evergreen trees can grow to 50’ tall and 75’ wide and live hundreds of years. Though it will take them many years to reach this size, be sure to plant them somewhere they have room to spread. Live oaks prefer to grow in sunny areas with well drained soil, are very tolerant of salt spray, and are very drought tolerant once established.
Attracting Birds to Your Yard

Birds help bring a landscape to life with their melodious songs, bright colors and lively movements. They also help keep plants healthy by eating many potentially damaging insects. Adding a birdfeeder to the landscape is a good way to draw birds into your garden, but if you want to attract a wide range of birds and have them call your backyard home, you need to create a suitable habitat. Modifying your landscape to make it a welcoming place for migrating and resident birds is not difficult and usually just involves adding a few more plants.

Plant in Layers!
Having a wide variety of plant species of different heights, flowering times, and growth forms will create the best habitat. Since different types of birds prefer to nest at different heights, planting layers of groundcovers, shrubs, small trees and large trees will allow many different kinds of birds to live in the same horizontal space. Diverse plantings also ensure a wide range of food is available throughout the year. Some birds, such as indigo buntings, scarlet tanagers, and orchard orioles, only visit our area for a portion of the year and are known as migratory species. Others, known as resident species, live here year round and include cardinals, bluebirds, and chickadees. Planting evergreen trees and shrubs is particularly important for resident birds who need places to shelter from wind and rain in winter. Fall is the best time to plant trees and shrubs in this area. Cooler air and soil temperatures encourage plants to put their energy into growing roots, while winter rains help plants become well established before the onset of summer heat and drought. Consider adding bird friendly plants to your landscape this fall.

Grow Your Own Birdfeeder!
Seed and berry producing plants are essential food sources for many bird species, especially during fall migration. Native plants are particularly well suited to our climate and our native birds. A few commonly available native plants appropriate for home landscapes that produce seeds and berries that birds favor include beautyberry (Callicarpa americana), fringe tree (Chionanthus virginicus), eastern red cedar (Juniperus virginiana), dogwood (Cornus florida), wax myrtle (Myrica cerifera), river birch (Betula nigra), southern magnolia (Magnolia grandiflora), oaks, and pines.

Native perennials that produce seeds for birds include orange coneflower (Rudbeckia fulgida), purple coneflower (Echinacea purpurea), ‘Fireworks’ goldenrod (Solidago rugosa), tickseed (Coreopsis species), swamp sunflower (Helianthus angustifolius), aromatic aster (Aster oblongifolius) and panic grass (Panicum virgatum). To benefit birds, do not cut these perennials back in fall. Instead wait to cut them back in early spring to allow birds to feed on their seeds over winter. Evergreen plants, such as wax myrtle, yaupon (Ilex vomitoria), inkberry (Ilex glabra), and American holly (Ilex opaca), provide shelter from wind and rain and should be included in any wildlife habitat planting.

Minimize Pesticides
Many birds are prolific insect eaters, providing a valuable service to plants and people. As the seasons change, so do the availability and types of food present for birds. In spring, both migratory and resident birds feed on caterpillars and other insects found on new plant growth. Insects and spiders are especially important to young songbirds born in spring and summer because these foods fill the birds’ protein and calcium requirements for bone and tissue growth. Plants provide food and shelter for many insects, which in turn are food for many different birds. Pesticides kill both good and bad insects, removing a valuable food source from the food chain. Rather than relying solely on pesticides for insect control, create a balanced ecosystem where good insects, birds, and other beneficials keep plant-damaging insect populations in check naturally.

New Website Helps Homeowners Choose Native Plants for Wildlife
You can restore wildlife habitat in your own yard by planting native plants that will provide food and shelter for native species. And now a new website developed by specialists with NC State University’s Wildlife Extension Program makes this task easier by providing the information you need to choose and establish native plants for wildlife habitat in your yard. Titled ‘Going Native: Urban landscaping for wildlife with native plants’, the new site offers expert advise and step by step instructions on how to incorporate native plants for wildlife habitat in your yard, and includes a searchable plant database that allows you to create a personalized list of native species for your landscape. Find out more at:

http://ncsu.edu/project/cnr/fer/going-native/index.html
Fall Plant Sale!

and Plant Clinic, Featuring Gardening Demonstrations

Wednesday, October 15, 8am—1pm
Poplar Grove Farmer’s Market,
Poplar Grove Plantation
10200 US Hwy 17 N.
Hampstead

Details:
Pender County Master Gardeners are holding a fall plant sale in combination with the Poplar Grove Farmer’s Market from 8am to 1pm, Wednesday, October 15. The sale will feature plants home grown by Pender County Master Gardeners with a focus on varieties that have grown well in their yards over the years. Additional plants will be available for purchase from Farmer’s Market vendors and shoppers can expect to find a bounty of annuals, houseplants, perennials, and woody plants available for purchase at the market on the 15th.

In addition, Master Gardeners will be on hand to answer questions about lawn, garden, and landscape care, including pest and weed identification. Demonstrations of various gardening topics will be held each hour at 9am, 10am, 11am and 12pm. Topics include how to plant a tree, dividing daylilies, pruning Japanese maples, and how to plant a fall container. For more information, contact Charlotte Glen at Pender County Cooperative Extension by calling 259-1235.

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FALL: The Best Time to Plant!

Fall is the perfect time of the year to garden! Cooler temperatures and lower humidity not only make being outdoors more pleasant for people but also reduce stress on new plantings, making it more likely they will establish successfully and thrive in the future. In fact, fall is the best time to plant trees, shrubs, and perennials in the Southeast. Fall planted trees, shrubs and perennials grow roots throughout the fall and winter so when spring arrives they are well established and ready to get growing. Larger root systems help fall planted plants perform better during the hot and dry weather of summer as compared to spring planted trees, shrubs and perennials.

When choosing plants for your landscape, choose varieties that are naturally suited for your growing conditions. Conditions to consider include the amount of sun or shade a location gets, soil type, drainage, and how much space there is for a plant to grow both up and out.

For suggestions of plants that grow well in Pender County, see the Recommended Plant Lists available online at:

http://pender.ces.ncsu.edu

Click on the Lawn & Garden link to access lists of annuals, perennials, trees, shrubs and more recommended for local conditions!
Clean Up!
Fall is the time to give your landscape a good clean out. In fact, cleaning up well at this time of the year will help prevent disease and insect problems next year since many diseases and insects spend the winter sheltering in old leaves and debris left from the previous season. Cleaning up this debris will remove them from your landscape and prevent, or at least delay, their onset next season. If there are plants in your landscape that have had disease or insect problems this year, carefully clean up their fallen leaves and debris and remove it from your yard. Leaves that fall from healthy plants can be used as mulch or collected and composted.

As perennials go dormant, and leave behind only dry, dead stems, you can cut them back to the ground. You may want to leave some standing to provide a food source for birds, particularly perennials with lots of seeds like purple coneflowers and black eyed susans. Most ornamental grasses stand up well through winter, adding texture and interest to the winter landscape. It is fine to cut back ornamental grasses whenever they start to look messy. Minimal pruning to remove only dead, broken or diseased limbs and twigs from trees and shrubs is okay to do now, but fall is not a good time for large scale pruning. Pruning trees and shrubs at this time of the year can increase winter injury and cause them to waste energy on growth that will be killed by frost. Most trees and shrubs should not be pruned until late winter (Feb-March for our area), while spring blooming shrubs should not be pruned until after they flower.

Mulch!
Once all the leaves have fallen, give your landscape plantings a finishing touch by spreading a layer of mulch over top, but first check to see how deep your mulch already is. Three to four inches of mulch is perfect around most plants while deeper levels can cause problems. If your mulch is already four inches deep but you want to give it a fresh look, try raking the mulch to turn over the brighter colored layer underneath the surface. Be careful to not pile mulch against the trunks of trees and shrubs since this can encourage disease and insect problems. When mulching close to the base of trees and shrubs, taper down the mulch thickness to apply only a thin layer next to trunks. When mulching over dormant perennials, simply spread a two to three inch layer over the ground. A few perennials have evergreen leaves. Avoid covering the foliage of evergreen perennials with mulch whenever possible.

Plant!
Fall is the best time of the year to plant and transplant most trees, shrubs, and perennials! Plant winter annuals like pansies, violas, ornamental cabbages, and snapdragons throughout the month of October.

Spring blooming bulbs should be planted in November and December. Daffodils, Spanish bluebells, summer snowflake (Leucojum), and blue star (Ipheion) are all long lived and deer resistant varieties. October and November are a great time for dividing and replanting perennials, while trees and shrubs can be purchased and planted throughout the fall and winter.

Lawn Care
Lawns require little care in fall and winter. Avoid applying any fertilizers at this time of the year as this will only encourage weeds to grow and can pollute our water supplies. On the other hand, fall and winter are a good time to apply lime — but only if your soil test results indicated you need it. Lime raises soil pH and is usually recommended for acidic soils, depending on what you are trying to grow. In Pender County, soils range from very acidic to very basic.

Soil Test!
The only way to accurately find out what your soil needs is to submit a soil sample to the NC Department of Agriculture for free testing. Soil testing boxes, forms and instructions are available from any Cooperative Extension office. Samples can be submitted any time of the year.
Make Your Own Compost!

Compost can do wonderful things for your landscape and garden! When mixed into the soil, compost increases the amount of nutrients available to plants and helps hold moisture in the soil, helping plants to grow better. Compost is also full of beneficial microbes; tiny living organisms that improve the soil and can actually combat harmful, soil-dwelling fungi and bacteria that cause plant diseases. And the best thing is you can make it yourself for free! In fact, you may be throwing away the materials you need to make this valuable garden resource. By turning your yard clippings and vegetable scraps into compost you can help your plants grow better and reduce your contribution to the local landfill.

How to Compost
Composting is simply the act of helping organic materials (leaves, grass clippings, vegetable scraps, etc) to break down or rot. The finished product of composting is compost - a dark brown, crumbly, earthy smelling, soil-like substance. Some gardeners refer to it as black gold because of the wonderful benefits it brings to the soil and plant growth. There are many ways to go about composting, but they can be generally categorized into two methods: passive or active. Passive composting methods, sometimes referred to as cold composting because these methods do not generate heat, allow nature to do most of the work, but take a lot longer to get a finished product. In passive composting, raw materials such as leaves, straw, grass clippings, and vegetable scraps are made into a free-standing pile or placed inside a composting bin and allowed to break down on their own, which takes one to two years. These methods produce good compost, just not very quickly.

Active composting, on the other hand, can produce ready to use compost in as little as two months, but it takes more work on the part of the gardener. Because active composting produces heat, it is sometimes referred to as hot composting. In active composting, raw materials are made into a pile similar to passive composting, but then the pile is turned every week to encourage more rapid break down. More attention must be paid to the details in active composting as well for successful decomposition to take place. For example you need to have the right balance of brown (dry, carbon-containing) and green (fresh, nitrogen-containing) materials. Examples of brown materials include leaves, straw, newspapers (black and white, not color), and wood chips. Green materials include vegetable scraps, grass clippings, plant debris, coffee grinds, and animal manure (but not pest waste, which can contain harmful bacteria). A 50/50 mix of brown and green materials should provide a good balance. Starting with materials that have been chopped into small pieces (1” to 3”) will help the pile break down quicker and more evenly. A few things that should not be added to compost piles include meat and bone scraps, dairy products, grease or oil, perennial weed roots like Florida betony, dollarweed, and nutsedge, and diseased plants, since the pile may not reach high enough temperatures to kill disease organisms.

To build a compost heap, green and brown materials are placed in 3”-4” alternating layers in a free-standing pile or inside a compost bin. Thin layers of soil or old compost are sometimes added to the pile to make sure plenty of microbes are present. Some garden centers sell ‘compost activators’ to add to piles but research has shown these provide no benefit and are unnecessary. If a large percentage (over 60%) of brown material is being used, it is helpful to add an additional nitrogen source to the pile, such as blood meal or nitrogen fertilizer. When building the pile it is important to water each layer so the finished pile has the moisture content of a damp sponge. Air circulation is also critical and can be increased within the pile by inserting a perforated plastic pipe into the center. Turning the pile regularly (every 5 to 7 days) also helps keep the pile aerated.

When turning the pile you should be able to feel heat in the pile’s center, which is a sign that things are going right. After several weeks the pile will start to cool down. The compost is ready when you can no longer recognize any of the original materials because they have all broken down to a crumbly brown soil like consistency and it has an earthy smell. If your pile fails to break down properly it may be too small. Ideally you want a pile that is three to four feet tall, deep, and wide. Or it may be drying out – remember to water your compost pile occasionally to keep it moist. Also, if you are continually adding new materials to the pile it will never be completely finished. Stop adding new materials to the pile after a few weeks. Save these to make a new pile once you have enough. When the compost is finished, mix it into the soil in your garden and landscape beds and be prepared for wonderful results!

Learn More!
To learn more about composting, request a copy of the NC Extension publication, Composting, from the Pender County Extension Center by calling 259-1235 or pick one up at our office at 801 S. Walker St. in Burgaw. This publication is also available online at http://www.ces.ncsu.edu/depts/hort/hil/pdf/ag-467.pdf.
Crape Myrtle
*Lagerstroemia* varieties
Crape myrtles are extremely popular due to their tough nature and showy summer flowers. There are many different selections of crape myrtle on the market, with flowers that range in color from white to pink to magenta to lavender. There is also a large range in mature size, with some varieties only growing to 10’-15’ tall, while others reach heights of 30’ or more, though all are equally as wind resistant. When choosing a crape myrtle for your yard be sure to select a variety that fits the space you have available. Crape myrtles grow best when planted in well drained soils and full sun, are tolerant of salt spray, and have good drought tolerance once they are established.

Other Hurricane Resistant Trees
Other trees that were found to be highly resistant to wind damage were palmetto palm (*Sabal palmetto*), American holly (*Ilex opaca*) and yaupon (*Ilex vomitoria*). Those rated with medium high wind resistance include Japanese maple (*Acer palmatum*), river birch (*Betula nigra*), ironwood (*Carpinus caroliniana*), shumard oak (*Quercus shumardii*), sweet bay magnolia (*Magnolia virginiana*), and hickories (*Carya* species). When planting new trees, consider using these species to reduce future damage potential, and stay away from species that demonstrated poor survival in hurricanes. Trees that are commonly found in local landscapes that showed low wind resistance include pecan, Bradford pear, Leyland cypress, lacebark elm, red maple, silver maple, green ash, pines, laurel oak, water oak, and tulip poplar.

**Other Recommendations to Increase Wind Resistance**

**Plant in Groups**—Another important recommendation resulting from the study is to plant trees in groups, rather than as single specimens. A group of trees is defined as five or more trees growing together, each within ten feet of another tree, but does not include trees growing in a line. Trees growing in groups survived hurricane winds better and received less damage than those standing individually.

When planting new trees, consider planting them as a grove, with several specimens grouped together. Including several different types of trees in the planting will help maintain local diversity. If you have existing single trees, consider planting additional trees and shrubs close by and mulching the entire area as a landscape bed.

**Good Soil and Healthy Roots Increase Wind Resistance**
Not surprisingly, the study found trees with damaged root systems were more vulnerable to failure during hurricane conditions. Construction activities are a common cause of root damage in area landscapes. Damage may be direct, such as cutting roots, or indirect, such as the long term damage caused to root systems by soil compaction due to heavy equipment. Protect tree roots during construction by maintaining a construction free zone out to the dripline (minimum) of existing trees. In addition, trees with more extensive root systems were found to resist wind damage better. Deep soils allow trees to grow more extensive root systems. Common barriers to root growth found in our area include high water tables and soil compaction. Avoid planting large maturing trees where the water table or compacted layers are found within 18” of the soil surface, or where the area for root growth is limited by pavement or concrete.

**Proper Pruning Improves Wind Resistance**
Pruning practices have a significant impact on tree strength and health. Poor practices, such as topping or removing large branches, predispose trees to decay and failure, while correct pruning increases tree strength and improves wind resistance. In the Florida study, trees with poor pruning, disease problems, and those near the end of their life span were found to have higher rates of failure during storms. Pruning larger trees and assessing tree health require specialized skills and knowledge. If you are concerned about the health and strength of trees on your property contact a certified arborist to assess the situation. Certified arborists are highly qualified tree professionals who have passed the certified arborist exam offered through the International Society of Arboriculture (ISA). A list of certified arborists practicing in North Carolina can be found on the ISA website, [www.isa-arbor.com](http://www.isa-arbor.com).

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**Learn More!**
To learn more about increasing hurricane resistance in trees, visit the University of Florida’s ‘Trees and Hurricanes’ website, [http://treesandhurricanes.ifas.ufl.edu](http://treesandhurricanes.ifas.ufl.edu), where you will find extensive information on cleaning up and assessing damage after a storm, establishing and caring for new trees, and managing existing trees.

To learn more about protecting trees during construction and hiring tree care professionals, download these great online publications or pick up a copy from your local Cooperative Extension office:

- **How to Hire a Tree Care Professional**: [http://www.cals.ncsu.edu/hort_sci/extension/ag-691.pdf](http://www.cals.ncsu.edu/hort_sci/extension/ag-691.pdf)