

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

JC Raulston Arboretum Plant Focus

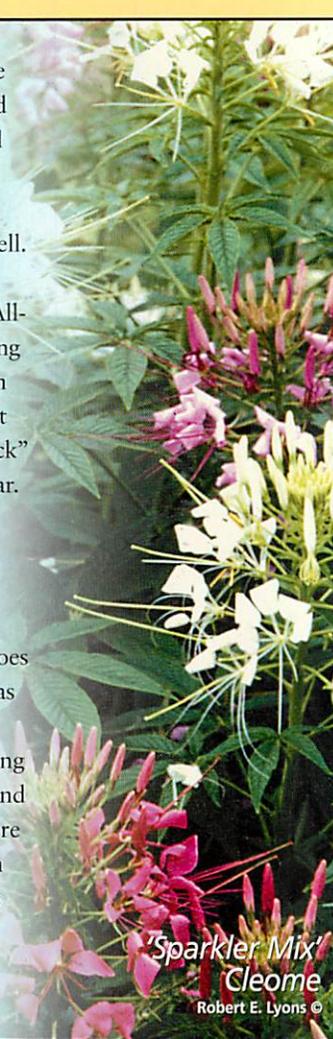
Leaders of the Pack Annuals

**B**edding plants provide a bright splash of color for seasonal accent in the landscape. They are best planted by the dozens with color concentrated in drifts and beds where they will make a big show. They also are good to use as Band-Aid plants to quickly fill in trouble spots where woody ornamentals aren't performing well. Although peak bloom is the highlight, it is a joy to observe new growth, bud development and fading of the blooms as well.

The NC State University Bedding Annual Trial Area at the JC Raulston Arboretum (JCRA) contains more than 500 bedding plant cultivars. It is an All-America Selections test site and display garden to help you select top-performing annuals and tender perennials. The winners, losers and true breakthroughs in landscape color were showcased at the Landscape Bedding Plant Field Day at the end of July. This year's top performers, designated as "Leaders of the Pack" by the JCRA, are plants you will want to put on your garden list for next year.

The top "Leaders of the Pack" for summer 2002 were all petunias. 'Explorer Rose Pink', 'Explorer Lavender', 'Suncatcher Pink Vein' and 'Double Wave Purple' bloom all summer and have outstanding uniformity.

"Leaders of the Pack" in the early season included a much more diverse group. *Cuphea* 'Twinkle Pink' has moderate to good drought tolerance and does well in full sun to light shade. An unusual and hard-to-find *Cuphea llavea* was also displayed with the wonderful common name: Bat-face Cuphea. How could you not love that one? Seven dahlias stood out in the crowd, including 'Melody Dixie' and 'Mick's Peppermint'. Cleome 'Sparkler Blush' stood tall and sturdy. Angelonia 'Angelmist Light Pink' and alyssum 'Wonderland Purple' were among the many variations of pink and purple in the garden. Geraniums such as 'Designer Bright Red' did well, albeit with constant deadheading. Marigolds cannot go unmentioned: 'Perfection Mix' and 'Inca II Gold' were among the best of our smelly, nematode-fighting favorite! Visit the JCRA Web site at [www.ncsu.edu/jcraulstonarboretum](http://www.ncsu.edu/jcraulstonarboretum) for past evaluation reports. *Mike Wilder*



'Sparkler Mix' Cleome  
Robert E. Lyons ©

inside

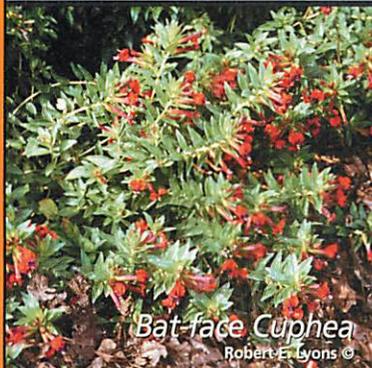
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- National Association of County Agricultural Agents
- Southern Extension Forest Resource Specialists
- N.C. Association of County Agricultural Agents
- Mecklenburg County Priority Awards
- Printing Industry of the Carolinas



'Bat-face Cuphea'  
Robert E. Lyons ©



Angelonia  
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'Suncatcher Pink Vein' Petunia  
Robert E. Lyons ©



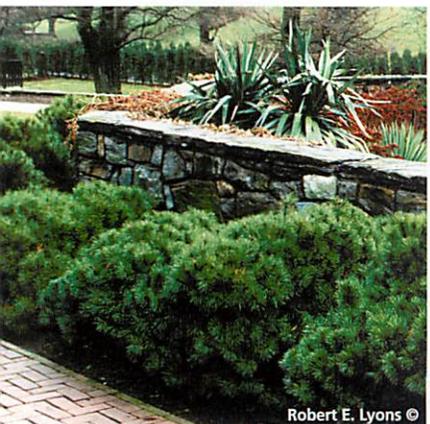
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## Groundwork for a Successful Garden

Successful gardeners understand the connection between happy plants and healthy roots. Roots are the underground network that provide moisture and nutrients as well as anchor plants in the ground. The best soil medium serves as a reservoir for water, oxygen and nutrients. Achieving the essential balance between the soil and the root system may require adding various soil amendments and nutrients to help improve the uptake of nutrients by the roots in order to help improve the health of plants.

A desirable soil consists of 50% solids, 25% air space and 25% water space. One of the easiest ways to convert less-than-desirable soils to productive growing media is to incorporate soil amendments. Soil amendments may be organic materials such as composted leaves, manure or pine bark humus or inorganic materials such as pea gravel. These materials will help to improve soil drainage, aeration and overall soil texture. The regular addition of soil amendments can greatly reduce the need to add synthetic fertilizers.

Next, make sure a soil fertility and pH test is completed at least once every three years to provide information on how to adjust nutrients and pH. Without a soil test, any application of fertilizer could injure the landscape. An over-application of unneeded materials could result in salt injury to plants, cause an imbalance unsuitable for plant growth and is environmentally unsound.

Soil pH is probably the most important factor in soil preparation. The scale of pH in soils ranges from 1 to 14, with 1 being the most acidic and 14 the most alkaline. A correct soil pH is essential for optimum plant growth. The recommended soil pH for bedding plants ranges between 5.5 and 6.5. Change soil pH by adding lime or sulfur to the soil. Lime is commonly used to increase soil pH. Agricultural sulfur may be used to lower or acidify soil pH.

A soil test also lets you know whether to add phosphorus, potassium, calcium or magnesium to the soil. If needed, incorporate phosphorus and calcium into the soil at a depth of 6 to 10 inches for best availability for plant uptake. Most North Carolina soils are deficient in phosphorus, therefore an additional application is normally needed.

Soils with a low pH also may be low in magnesium. Use dolomitic limestone to raise the pH and add the needed magnesium to the soil. To raise the level of magnesium without affecting the soil pH, incorporate Epsom salts into the soil or add as a soil drench. To do this, dissolve one tablespoon of Epsom salts in water and use as a drench, or apply two to three tablespoons of Epsom salts around the base of each plant.

Apply potassium to the soil surface when needed. This nutrient moves through the soil slowly and may be sufficiently applied from the amount in a standard fertilizer you currently use.

Nitrogen is an essential element that most frequently limits plant growth and, conversely, is the only element that is known to encourage plant growth. This nutrient is very hard to manage and it is impossible to determine how much nitrogen is required from a soil test. Gardeners face the challenge of maintaining adequate nitrogen levels. A sure sign of low nitrogen levels and the effect on plants involves pale and slow-growing foliage.

A healthy, beautiful garden begins with developing a properly nourished soil medium. Gardeners can ward off unneeded stresses to their plants by ensuring that the root system is healthy and vigorous. For more information on soil preparation or to pick up a soil test kit, visit your local Cooperative Extension Center.

*Diane Ashburn*

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*"Winter is an etching,  
spring a watercolor,  
summer an oil painting  
and autumn a mosaic  
of them all."*

– Stanley Horowitz



## Should we top our trees?

Absolutely not! Not only is tree topping an assault on the grandeur of a tree, it causes severe stress and increases the risk to a tree's health and long-term survival. Why?

**1** Topping creates undue shock and stress. By removing the crown of a tree, one essentially removes the ability of the tree to manufacture food. The remaining bark that was shaded is subject to sunscald.

**2** The large exposed surface of the stubs are unable to callous over and heal properly. They are very vulnerable to infestation by insects and disease organisms.

**3** Topping often results in many new limbs which are weakly attached and grow rapidly.

As decay and rot set in at the stub, these limbs are even more likely to break away from the main stem.

**4** Other nearby trees also are affected.

Trees that were once in a shady to semi-shady exposure are suddenly in full sun and their health is compromised.

**5** Topping permanently scars the beauty of a tree.

A properly trained and certified arborist will utilize pruning practices that combine thinning out and reducing the size of the crown while maintaining a central leader. A properly pruned tree will exhibit little of the bushy growth resulting from lopping off branch ends. When done correctly, pruning should be virtually unnoticeable. *Royce Hardin*

## Deer-Resistant Landscape Plants

Selecting plants for deer resistance is not an exact science. Just like humans, deer may prefer certain foods but are going to eat other things when their favorites are not available.

Here's a short list of some relatively common landscape plants that are recognized as deer resistant:

**Shrubs** – barberry, boxwood, forsythia, juniper, rose of Sharon, mahonia, Japanese pieris, rhododendron, spirea

**Trees** – dogwood, ginkgo, holly, magnolia, pine, redbud

**Vines** – clematis, English ivy

**Groundcovers** – ajuga, pachysandra

**Perennials** – artemisia, coreopsis, dianthus, echinacea, most herbs, iris, peony, phlox, rudbeckia, salvia

**Annuals** – ageratum, celosia, coleus, geranium, marigold, petunia, zinnia

**Bulbs** – crocus, narcissus

Deer seem to love apples and crabapples (*Malus species*) and cherries, peaches and plums (*Prunus species*). Other plants they seem to enjoy are winged euonymus and roses. Some plants that are listed above as deer resistant are also listed as those on which severe damage has frequently been observed. Redbud and clematis are two such examples. This illustrates that two people may have entirely different experiences in terms of deer resistance.

*Kevin Starr*

## ENVIRO-TIP

### Safe Pesticide Disposal

Pesticide containers that still hold some product, as well as those that are empty, must be handled properly. Pesticides are considered hazardous waste materials and need special attention before disposal.

- Never put potentially hazardous waste, such as pesticides, directly in the garbage.
- Check with your county environmental agency about disposal of pesticides and pesticide containers. Some counties have disposal units set up for pesticide containers.
- Share remaining pesticides with someone who can use them as intended.
- Never pour remaining pesticides down the drain.
- Household pesticide containers may not be recycled in many community recycling programs. Contact ahead of time before taking containers to collection sites.
- Triple rinse empty glass, plastic and metal pesticide containers by filling the containers 1/4 full of water, covering tightly and shaking. Apply the rinse water on the original targeted area. Wrap the container in

newspaper and send to the landfill or dispose as directed on the label.

- Do not reuse empty pesticide containers.
- Wrap aerosol containers in several layers of paper and place in a covered trash container. Do not burn, incinerate or puncture aerosol containers.
- Use up, share or wrap the following in newspaper and save for a hazardous waste collection: pest strips, pet collars, pet shampoos and pet dusting powders.
- Always read the label before using or disposing of any pesticide.

The North Carolina Department of Agriculture in conjunction with Cooperative Extension conducts "Pesticide Pick-Up Days" in many counties throughout North Carolina. For more information, contact your local Cooperative Extension agent in charge of pesticide education. The Web site for upcoming collection dates for your area is located at <http://www.agr.state.nc.us/fooddrug/pesticid/pdischd.htm> or contact the North Carolina Department of Agriculture Pesticide Collection Section at (919) 715-9023. *Darrell Blackwelder*





Garden Spot



## Gardening in October

### Lawns

■ Now is normally the time to complete seeding cool-season lawns, such as fescue or bluegrass. However, in drought-stressed areas, you may want to avoid seeding and fertilizing until water restrictions have been lifted. Contact your county Cooperative Extension Center for the latest updates.

### Ornamentals

■ Many native and garden plants are wonderful for drying for winter craft projects. Collect seed heads of sumac, dock and grasses, okra pods, gourds and pine cones, as well as flowers.

■ Plant trees, shrubs and groundcovers only if water restrictions have been lifted in your area.

■ Summer bulbs and roots such as gladiolus, caladiums, dahlias and cannas are not cold hardy in the mountains and some areas of the Piedmont.

Dig and store before frost.

■ When planting spring-flowering bulbs, remember that a mass planting of one flower type or color will produce a better display than a mixture of different flowers. Plant masses of different types next to each other rather than interplanting.

■ This is a great time to start a compost pile. Dry leaves and spent flower or vegetable plants will break down more quickly if chopped or shredded before composting.

### Edibles

■ When frost threatens, pick mature green tomatoes to ripen indoors.

■ Good sanitation is important for disease and insect control in the fruit orchard. Thoroughly clean up all fallen leaves and fruit, as well as fruit left hanging on trees.

■ Plant garlic and bulbing onions for harvest next summer. *Linda Blue*

**The Gardens at Richmond Hill Inn** embody the Victorian elegance and graciousness of their origins. The beautiful Victorian landscape includes manicured gardens, natural areas and several water features. The waterfall was designed to offer guests a peaceful place to reflect. The formal Parterre Garden in front of the Garden Pavilion is fashioned after the great parterres of the Victorian age. A consistently changing bloom cycle creates year-round beauty in the garden, making any time perfect for a visit. Woven among the buildings are six acres of spectacular English cottage-style gardens. A 40-acre woodland area also features a 3/4-mile walking trail.

Richmond Hill Inn is located at 87 Richmond Hill Drive in Asheville. Even if you are not a guest at the inn, visitors are welcome to tour the gardens, which are well worth a visit. Admission is free for self-guided tours. For more information call (828) 545-9238 or visit [www.richmondhillinn.com](http://www.richmondhillinn.com) to find out about the inn's upcoming garden symposium.

*Karen Neill*



Tune in to "Making It Grow!" – a gardening show featuring Extension agents from the Carolinas. Thursdays, 9:30 p.m., WTVI 42, Charlotte

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