October 2007

EXTENSION'S Successful Gardener®

NC STATE UNIVERSITY NORTH CAROLINA COOPERATIVE EXTENSION

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

inside

JC Raulston Arboretum Plant Focus

Top-Performing Annual Bedding Plants

The JC Raulston Arboretum (JCRA) participates yearly in an evaluation program called the All-America Selections, a nationwide program designed to test and promote new cultivars of annual bedding plants with superior garden performance. The plants are judged in impartial trials.

Among the hundreds of entries at the JCRA this summer, the top group consisted of nine hybrid petunia cultivars. Long after many of the other species succumbed to disease, extreme heat, drought or old age, these petunia hybrids maintained superior vigor and color with countless blooms filling the beds.

Continued hybridization and selection by flower breeders has transformed petunias, yielding a wide range of winning petunia colors and patterns. Top-rated petunia cultivars are Surfinia® 'Mini-Mini White', Surfinia® 'Baby Pink Ice', Surfinia® 'White Improved', Supertunia® 'Bordeaux', Supertunia® 'Vista Fuchsia', Supertunia® 'Vista Bubblegum', Suncatcher® 'Pink Vein', 'Sweet Surprise Lavender' and Supertunia® 'Cotton Candy'.

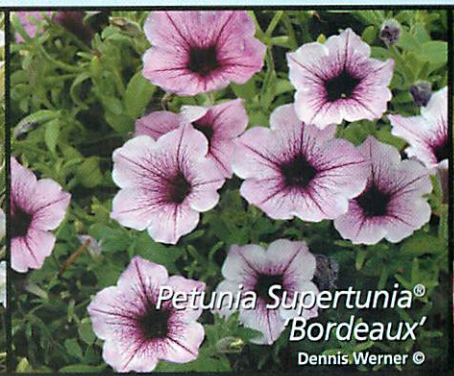
Another top performer is *Salvia splendens*. This tender tropical perennial is native to Brazil and is being cultivated as an annual in the U.S. 'Red Sparkler' and 'Sparkler Purple' are cultivars that perform well and bloom reliably over an extended period.

Cleome hassleriana is a new compact, thornless cleome. Cultivars 'Señorita Rosalita', 'Spirit Appleblossom' and 'Spirit Violeta' demonstrate extended flowering through much of the summer. Their tolerance to shade or sunny exposure confers added value to this plant for the patio as well as the garden.

Other entries that can provide dramatic accents in the garden are *Euphorbia* 'Diamond Frost', providing a mound of tiny white flowers throughout the entire season; *Capsicum annuum* 'Black Pearl' with black foliage and red fruit; *Dahlia* 'Mystic Illusion' with dark purple foliage and yellow flowers; and *Cyperus papyrus* 'King Tut', a stunning architectural plant producing 3-foot-long stems with sprays of spike-like foliage at the top. **Carl Matyac**


Dahlia 'Mystic Illusion' Dennis Werner ©


Petunia Superfinia® 'Mini-Mini White' Dennis Werner ©


Petunia Supertunia® 'Bordeaux' Dennis Werner ©


Petunia Surfinia® 'Baby Pink Ice' Dennis Werner ©

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www.ces.ncsu.edu

Variegated Japanese Solomon's Seal

Japanese Painted Fern

Alleghany Pachysandra

Hosta 'Blue Cadet'

gardentalk

"Today's mighty oak is just yesterday's nut that held its ground."
Anonymous

Perennials for Dry Shade Areas

Dry shade conditions can provide a challenge when it comes to selecting plants. Here are some examples of dry shade conditions:

- Sandy soil with overshadowing tree canopies
- Clay or loamy soil on high ridges
- Soil confined to planters or raised beds
- Perennials on a northern exposure
- Plants under an overhanging roof without regular irrigation or rain
- Native plant areas where tree and ornamental roots create competition for light and moisture

Perennials that will perform best in these dry shade to partial dry shade areas are toad lily, astilbe, spiderwort, woodland phlox, pachysandra, Lenten rose, coralbells, hardy ferns, Japanese forest grass and liriope. Other flowers for specific use can be found at www.ces.ncsu.edu/depts/hort/hil/hil-552.

Shaded sites pose additional problems if tree roots are nearby. Maples and other shallow-rooted trees will present constant root growth, even in the most well-prepared site. A barrier between the perennial bed and tree roots can be constructed. Arborists suggest copper flashing between the two, as roots will not encroach beyond copper. Furthermore, there is no danger of this technique killing the tree.

Preparing the Site

Preparing the site for planting perennials is no different from other plants in regards to site and soil preparation, although a rototiller within the drip line of an established tree can be fatal. A soil test is recommended for checking and adjusting the site's pH for lime and fertilizer. Soil pH requirements vary among perennials, but most prefer a range between 5.5 and 6.5. Apply lime to select groups of plants needing a higher pH. Apply fertilizer in accordance to soil tests and incorporate into the top five to six inches before planting. Test the soil about every three years. The N.C. Department of Agriculture (NCDA) Agronomic Division provides the routine analysis for lime and fertilizer at no cost. Pick up soil sample boxes at your county Cooperative Extension Center.

On new sites, the area should be as weed free as possible to start. Control weeds – nutsedge and Bermuda grass in particular – before soil preparation begins. This may take six months to a year in planning.

Selecting Plants

Select perennials for a specific purpose such as edging, accent for evergreens, masses of color or specimens for rock gardens. There are a variety of sources for plants. If possible, buy named varieties for their known characteristics of disease resistance, growth habit, temperature tolerance and color. When these plants are in flower stages, planting or transplanting is not highly recommended. If relocating perennials by transplanting, try to take a large enough root ball to reduce shock and reduce the time of site acclimation. The new location should be two to three times the diameter of the root core from an old location. Many perennials left in the same place for more than three years are likely to become overcrowded and will need dividing. The best time to divide most plants is from late winter through early spring, when the new shoots are two to three inches, or in the fall when the foliage starts to die back.

Some perennials, however, are best left in place and not divided. This is true of baby's breath, wild indigo, gas plant, goat's beard, globe thistle, peony and sea holly.

Mulching, Fertilizing, Deadheading

A mulched area has an orderly look, requires less weeding and better maintains uniform soil moisture. Apply mulches after plants are well established or up and starting to grow. Pine bark, pine needles or shredded leaves work well with a maximum of three inches over the area. Perennials have an advantage over bedding plants in that more preemergent herbicides are available to manage weeds in perennial beds.

Fertilization, deadhead pinching and occasional staking are part of the maintenance involved. Most are light feeders and generally require an application of fertilizer as they start to grow in the spring and a second dose in mid summer. After the flowers are spent, remove them so the plants won't waste energy producing seeds. This will help extend blooming. On shady and windy sites, staking is often necessary to prevent top-heavy plants from falling over.

Don Breedlove

Q&A

What are the caterpillars in my landscape this fall?

There are a few possibilities.

One caterpillar, known as the fall cankerworm, plagues maple and oak trees in the Charlotte area. Control strategies for fall cankerworms involve mostly trunk banding for female moth trapping in the fall, and possible pesticide sprays in the spring with *Bacillus thuringiensis* (Bt) or other foliage protectors. See banding photo at www.forestryimages.org/images/768x512/4723057.jpg.

Another caterpillar that affects oaks is the orange-striped oakworm. They start as tiny green caterpillars and eventually grow into black caterpillars with yellow or orange stripes running lengthwise along their bodies. These caterpillars have a prominent pair of spines or slender horns sticking up behind the head. Small trees are sometimes defoliated completely by mid summer. Control is complicated by the size of many of the infested trees. Fortunately, late summer defoliations are much less damaging to the health of trees than early spring defoliations. In most cases it is probably better to rely on birds, diseases and parasites to lower the population next year.

Fall webworms are yet another caterpillar that will show up in landscape trees. They start building their web at the branch tips and become enlarged to encompass fresh, green leaves until the web may become two to three feet long. Fall webworms are best managed by pulling down the webs and destroying the caterpillars, if the webs are within reach by a pole. If the webs are within reach of a sprayer, use a Bt product when caterpillars are small.

Karen Neill

ENVIRO-TIP

Value of Leaves in the Landscape

If you read last month's Enviro-Tip, you learned about mowing leaves to add nutrients back into the soil. The article also mentioned composting, which is another way of recycling the nitrogen, phosphorus, potassium and other elements found in leaves. Leaves can be composted with other yard waste, like grass clippings (if they are too plentiful to leave on the lawn) and pruning waste, fruit and vegetable scraps, coffee grounds, egg shells and manure from herbivorous animals, like rabbits, chickens, cattle and horses. If you compost leaves alone or with other low nitrogen materials like sawdust or wood chips, you may need to add nitrogen fertilizer so that the microbes that break down the materials will have a decent ratio of carbon to nitrogen in their diet and be able to work more efficiently.

The recycling of nutrients is one of the main ways that leaves contribute to the landscape. Another important function of leaves is mulch. When gathered and applied to tree and shrub beds, flowerbeds and vegetable gardens, leaves can help to suppress weed growth and limit the need for hand weeding or herbicide use. Between two and four inches of mulch are generally recommended. Other materials can be used for mulch, like pine bark which is typically purchased, but why buy mulch if you can get it from your yard?

A note of caution regarding the use of leaves for mulch: some trees produce chemicals that are allelopathic, meaning that they affect the growth of plants around them. Black walnut is a prime example of a tree that does this. Using uncomposted black walnut leaves as mulch can cause some plants to wilt and die. Regardless of the type of mulch you use, avoid direct contact between mulch and tree trunks.

Mary Helen Ferguson

Fall Color in Containers

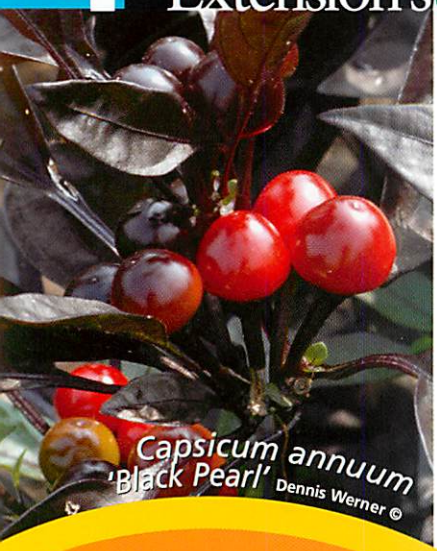
Cold hardiness is a prime factor in plant selections for fall. The plants you put in containers now should last through the fall season.

Before you do anything else, think about what you are trying to do with your containers. Will they be the centerpieces of your garden or serve as complements to the garden as a whole? Do you want a burst of color at a particular time, such as Thanksgiving? Or are you looking for consistent color all season? Each will call for different plants.

Use fresh potting soil, which inhibits the spread of disease. The reuse of potting mix several times increases the chances that diseases will be carried from one plant to another.

Blend in a slow-release fertilizer during potting. Slow-release fertilizers will feed the plants over a longer period of time than the soluble types you mix with water. Wet your mix thoroughly before you plant.

Arrange your plants on the surface of the potting mix to make sure the arrangement is pleasing to the eye. Place taller plants in the center of the container. Arrange medium-height plants around the taller plants, and the edging plants around the rim of the pot. Once you've established the arrangement, set all the plants aside and begin planting. Everyone has his or her own methods, but it seems easier to begin in the center and work your way to the rim of the pot. Water everything in. Fill in low spots with potting mix. ***Jeff Rieves***



Gardening in October

Lawns

- Seed cool-season grasses such as fescue and bluegrass. Use a core aerator to remove plugs of soil to improve soil structure and promote root growth.
- Remove fallen leaves from newly seeded lawns to prevent smothering of young plants; mow and mulch leaves into soil on existing lawns.
- Control winter weeds with preemergent herbicides, only if you are not planning to reseed your lawn.

Ornamentals

- Do not prune or fertilize your trees and shrubs. This will disrupt their internal process of preparing for winter dormancy.
- Think about purchasing and planting spring bulbs as the cooler weather arrives.
- Fall is for planting trees and shrubs. Find *Extension's Successful Gardener* Tree Planting Guide at www.successfulgardener.org for proper planting techniques.
- Set out cool-weather annuals such as pansies and dusty miller for winter color.
- Cut back herbaceous perennials after frost has killed the tops.
- Plan to bring houseplants and tropical plants inside when temperatures dip below 50°F. Move plants into shade for a week to condition them to lower light levels indoors.

Edibles

- Till garden soil and add organic material and nutrients; the bed will have plenty of time to mellow before spring.
- Remove spent vegetable plants that are finished producing. Leaving these on the ground will promote insect and disease problems next year.
- If you do not have a fall vegetable garden, plant a cover crop like rye or clover.

Diane Turner

Garden Spot

Sarah P. Duke Gardens are located on Duke University's west campus in Durham. It's hard to believe that areas of this beautiful garden were once a dumping ground of the University. The gardens are a testimony to how one person can make a difference. In the early 1930s, Dr. Frederic M. Hanes passed the site on his walk to and from work at Duke Medical School. An avid gardener, he convinced the University to convert the site into a garden. It has taken many more people to turn the site into a real jewel and a premier public garden.

There are 55 acres that include the original terraces, the H.L. Blomquist Garden of Native Plants, the Page White Garden and Culberson Asiatic Arboretum. The Doris Duke Educational Center offers garden enthusiasts a variety of horticultural related classes and workshops, including six *Extension's Successful Gardener* Seminars offered annually. While there is a nominal parking fee, entrance to the gardens is free. Visit www.hr.duke.edu/dukegardens/.

Michelle Wallace

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- International Association of Business Communicators
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- Southern Extension Forest Resource Specialists
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