NC STATE

Extension Gardener

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Extension Gardener provides timely, research-based horticultural information. We publish four issues per year. Send comments about *Extension Gardener* to:

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Tried-and-True: The Chaste Tree

Vitex or chaste tree (*Vitex agnus-castus*) is the perfect shrub or small tree for gardeners who are looking for something that thrives in unforgiving conditions, particularly in sandy soils in full sun. Chaste tree originated in China and India and was first introduced into North America in 1670. Today this tree is still cultivated—mainly because of its wide range of medicinal and herbal uses. Interestingly, the "chaste" part of the common name comes from the medieval belief that the potions made from the berries helped monks maintain their vows of chastity. Chaste tree has also served as a replacement tree or shrub for gardeners who yearn for the lilacs they had to leave behind when they moved south of the Mason Dixon line.

Growing conditions for vitex are clear: well-drained soil, full sun, and plenty of room. If your site meets those conditions, simply plant vitex and watch it thrive. Vitex can even be grown in partly shaded areas, but flower production and growth will not be as prolific as in full sun. Once established, chaste tree makes an excellent specimen plant for your xeric garden. Chaste tree is also salt-tolerant, so it is a great addition in areas near the ocean that receive salt spray.

In the past, gardeners without a lot of space could not grow chaste tree. Some cultivars, such as 'Cooke's Blue', 'Cooke's Pink', or 'Cooke's Purple', could grow as tall as 25 to 30 feet with the same spread. But recent introductions are appealing to gardeners with smaller spaces. A new variety introduced in 2015, 'Blue Diddley,' is a Proven Winners cultivar with lavender-blue flowers. This cultivar spreads from 3 feet to 6 feet high and just as wide.

Vitex requires well-drained soil, full sun, and plenty of room to thrive. *©Elizabeth, CC BY-NC-ND–4.0*

'Blue Diddley' offers lavender-blue flowers and a 3-foot to 6-foot spread.
Courtesy of Proven Winners, www.provenwinners.com.

'Blushing Spires' has soft-pink flowers and reaches small tree size. *©Dawe's Arboretum, Newark, Ohio.*

'Blue Puffball', a 2016 introduction, is a compact, densely-branched shrub with a maximum height and spread of 3 feet. The spot-resistant leaves are shiny and bluish-green. 'Delta Blues' is a larger cultivar from First Editions that has more compact flower spikes and a smaller profile of 8 to 10 feet high at maturity. This variety works well as a container tree for summer color. If you want something other than purple or blue flowers, try 'Blushing Spires', a cultivar with soft-pink flowers and the potential to reach 15 feet by 15 feet at maturity. Its variety of growth habits and flower colors, as well as its tried-and-true ease of care, pleasant aroma, and benefit to pollinators, means that chaste tree deserves a spot in your garden.

—Sam Marshall

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Mountains Extension Gardener

Extension Showcase

Western North Carolina Gardening Symposium

Join us on Wednesday, October 25, 2017, at the DoubleTree Hotel Asheville Biltmore for the Western NC Gardening Symposium.

This year we will be focusing on what's new and trending in the gardening world.

Although we have not finalized all our speakers for this year's program, we can tell you that Dr. Tom Ranney and Craig Mauney, both from the Mountain Horticultural Crops Research Station, will be joining us.

The day will include continental breakfast, lunch, and afternoon dessert, and of course, wonderful door prizes and great vendors.

Attendance for the full day is valid for 5 hours of continuing education credit. Watch your email for further information from your county representatives, or visit our website: **www.buncombemastergardener.org**.

—Alison Arnold

Backyard chickens can be fun and productive. *©Terry Spivey, USDA Forest Service, Bugwood.org*

Smart Gardening: Sow a beautiful annual display

Pelargonium 'Serita Dark Red'.
©JC Raulston Arboretum, NC State University

Warm days inspire us to brighten up our entryways with beautiful annual displays. Save some money and try your hand at starting annuals from seed indoors. Now is the perfect time to sow geraniums, pansies, snapdragons, and several other annuals. Geranium and pansy seeds need to be sown 12 weeks prior to the last frost, while snapdragons should be sown 10 weeks prior. Start with clean flats, cell packs, or peat pots, and fill containers about three-fourths full with moistened planting medium. Vermiculite is an excellent choice for small seeds, whereas a sterile soil mix works well for large seeds. Some seeds, like geranium seeds, have hard coats and will need to be "scarified"—scratched to break the seed coat and enable water to enter. Once planted, spray containers with a fine mist of water or water them from the bottom by placing them into a tray or saucer with an inch of water. During germination, seeds must be kept moist, but be careful not to overwater.

Place your seeds in an area that stays between 65°F to 70°F and receives bright light, perhaps a south-facing window. If you do not have a sunny window, you can supplement with fluorescent light or growth lamps. When seedlings have grown and produced true leaves, transplant them into larger containers to allow more room for growth and root development. Continue to water transplants until they become sturdy and the outside temperatures are optimal for growth. Remember to harden off your young plants before planting them outdoors by exposing them gradually to outside conditions for increasingly longer periods over a two-week period. Once plants are hardened off, plant them in your favorite spot and enjoy!

—Sarah Scott

Food Production: Backyard chickens

Raising backyard chickens can provide families with eggs, meat, compost, an educational experience for children, and hours of entertainment. Before jumping into backyard poultry production, be sure to check the local laws and homeowners' association covenants. Some areas have restrictions because backyard chickens may carry bacteria that can be passed on to people, such as salmonella and campylobacter. Many towns do not allow chickens simply because roosters can be noisy. Other municipalities may restrict free-range chickens. Some rules allow fowl species that are kept as pets.

NC Cooperative Extension Service has received questions from homeowners about using chickens for weed and insect management in the garden. Chickens will certainly eat insects and weeds—along with your garden plants. Chickens placed among garden plants will cause extensive damage, and fresh manure from these birds can cause a food safety issue. Manure should be composted before being applied to the garden.

Chickens enclosed in a structure are easier to protect from predators and produce a significant amount of compost. Enclosed chickens will destroy all nonwoody vegetation as chickens are voracious feeders of fresh leaf growth. An enclosed chicken coop can create undesirable odors and attract flies. This repelling smell is actually ammonia gas and represents a loss of nitrogen, a valuable component of fertilizers. To avoid this nitrogen loss (and unpleasant odor), simply add a regular layer of leaves to your chicken coop area. Bagged leaves, lawn clippings, (assuming no pesticides have been applied), leaf compost, or other carbon-rich materials can be added. As microbes decompose, the manure and carbon material in your chicken coop will slowly fill with high-quality compost without producing strong odors.

For more information on garden chickens, see *Keeping Garden Chickens in North Carolina*: **content.ces.ncsu.edu/keeping-garden-chickens-in-north-carolina.**

—George Place

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Pest Alert: Make your garden less inviting to slugs

Five slug species occur in North Carolina. Like snails, slugs are mollusks, not insects, meaning they are more closely related to clams than they are to beetles or caterpillars. Slugs prefer feeding on tender young foliage, and can wreak havoc on seedlings and our prized garden treats, such as strawberries.

Slugs create irregular holes from feeding and leave behind a silver trail of slime. Slugs thrive in cool, dark, and humid environments—such as underneath heavy mulch and other residues in the garden. Fortunately, important slug predators like ground beetles (Carabidae) also prefer these habitats.

Dusky slug (*Arion subfuscus*).
©Gary Bernon, USDA APHIS, Bugwood.org

Slugs are most active at night in spring and fall. Monitor for slugs by looking under pots or wood in the garden, or place a flat 6-inch by 6-inch cardboard "trap" on the soil surface. Check under these locations in the early morning, and remove slugs.

Make your garden less inviting to slugs by watering in the morning and by keeping your seedlings weed-free. Iron phosphate and other baits can be used for slug control, but be cautious about baits around pets. Always read the label for repellents and pesticides to ensure the product is labeled for slug control and to ensure safe use.

— Eli Snyder

Lawns: Spring lawn care

With spring on the way, we're all itching to get out in our yards. So what can we do in late winter and early spring for proper lawn care? Now is a good time to work on weed control for those pesky winter weeds. Winter weeds include the bright-purple-flowered henbit, burrweed, and chickweed. You can apply your lawn herbicides with active ingredients of 2,4-D, mecoprop, and dicamba from February to March. No matter what products you use, remember to read the label on the container to ensure that you use the product properly and avoid any unintended consequences. Be aware that preemergent herbicides are only effective on annual grasses and so will not have any serious effects on the perennial weeds in your yard.

If your yard has any serious pest or disease damage or any environmental issues (such as our drought this past summer and fall), using preemergent herbicides can result in an even slower recovery period for your desired grass stand. If you are attempting to manage your turf with organic practices but still keep the weed pressure down, building up a dense and healthy stand of the desired grass species is the best approach.

As always, best management practices and a combined technique of mowing at the proper height and proper frequency, fertilizing at the correct times of year and at the proper rates for your grass, and controlling thatch and soil compaction are some of the most effective tools in your lawn care tool belt. To know how to best care for your specific soil, have a soil test done. Testing will provide you with recommendations for nutrients and amendments to add to your soil for optimal care of your turf.

— Hannah Bundy

Tips & Tasks

Lawns

- Once temps are above 55°F, spray winter annual weeds before seed dispersal.
- Apply crabgrass preventer on cool-season lawns in late winter before crabgrass starts to germinate.
- Fertilize cool-season lawns with a slow-release lawn fertilizer in February.
- Sharpen mower blades before using your mower in the spring.

Ornamentals

- Prune fruit trees and grapevines for optimum fruit production.
- Prune established blueberries by taking out a third of the oldest canes at ground level.
- Prune summer-flowering shrubs such as crape myrtle, rose of Sharon, and butterfly bush.
- Prune roses before bud break.
- Deadhead pansies to prolong their flowering.

Edibles

- Plant asparagus crowns when the soil is dry enough to work.
- Plant early season vegetables—such as English peas, onions, Irish potatoes, and spinach—in late winter.
- Order garden seeds such as beans, corn, and okra.
- Make sure all debris is cleared out of the vegetable garden.
- Draw your garden plan to include crop rotation of sensitive vegetables such as tomatoes.

—Donna Teasley

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Helping You Grow

NC Planting Calendars

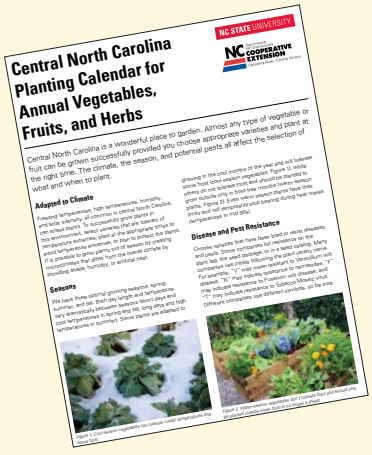
With the welcome arrival of warmer months, gardeners begin to plan and plant spring gardens! Don't know where to start? These resources can help! Successful gardening is a proactive hobby that takes planning. The tables linked below list recommended fruit, herb, and vegetables, the method of planting, and start dates for the three growing regions in North Carolina.

Central North Carolina:
content.ces.ncsu.edu/central-north-carolina-planting-calendar-for-annual-vegetables-fruits-and-herbs

Eastern North Carolina:
content.ces.ncsu.edu/eastern-north-carolina-planting-calendar-for-annual-vegetables-fruits-and-herbs

Western North Carolina:
content.ces.ncsu.edu/western-north-carolina-planting-calendar-for-annual-vegetables-fruits-and-herbs

—Eric Derstine


Central North Carolina Planting Calendar for Annual Vegetables, Fruits, and Herbs

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Central North Carolina is a wonderful place to garden. Almost any type of vegetable or fruit can be grown successfully provided you choose appropriates varieties and plant at the right time. The climate, the season, and potential pests all affect the selection of what and when to plant.

Adapted to Climate

Seasons

Disease and Pest Resistance

Plant Watch: Loofah sponge gourd


Loofah sponge gourd.
©Forest and Kim Starr, CC -BY-2.0.

Loofah sponge gourd, *Luffa aegyptiaca*, is commonly used as a bath sponge, but young fruits less than 7 inches long can also be eaten as a squash or fresh cucumber substitute. As common as loofah sponges are, most people don't realize that they are the fruits of a vine that can be grown right here in North Carolina! These cucurbit vegetables need at least 6 hours of full sun, well-drained soil, good air circulation, and a good, sturdy trellis to thrive. Mature looahs can be harvested in the fall when the gourds are brown, light, and dry, and the seeds shake inside when rattled. To make your own "loofah," simply soak the fruit in warm water for 5 to 20 minutes until the skin can be easily stripped off. When the skin is off, remove the seeds and excess pulp and rinse in a 10% chlorine bleach solution to lighten the sponges.

—Hanna Smith

Incredible Edibles: Spring into action to prevent tomato wilt

The issue for many tomatoes in North Carolina is southern bacterial wilt (***Ralstonia solanacearum***). The first symptom is wilted leaves. Then the plant wilts completely, dying in a matter of days. The vascular system shows brown discoloration, and the root system will reveal several black or decayed roots. The disease shows up in mature plants in midsummer. It spreads quickly through the soil during heavy rains or watering. Infected plants will not survive; however, the soilborne bacteria will survive for years without a host. One of the best practices to combat this disease is sanitation. Remove infected plants, including roots, immediately. Use a three-year rotation schedule for solanaceous crops to prevent disease buildup. Some disease protection is available when you grow resistant varieties of tomatoes and also traditional varieties grafted onto a resistant rootstock. Grafted plants can be purchased at many garden stores.

—Andrea Gibbs

Sustainability: Organic matter matters!


©Steve Pettis

Organic matter provides plant nutrients and food and habitat for beneficial soil organisms, and it improves soil structure. Organic matter is simply carbon, which consists of plant or animal material that has begun to decompose. These broken down organisms form humus, which holds together soil particles to give soil the crumbly texture that gardeners love. Organic matter also slowly releases minerals that plants need to survive, and it feeds beneficial microbes that improve plant health. Many microbes live in a beneficial relationship with plants by sharing water and nutrients. Organic matter helps to facilitate this arrangement. Also, the microbes that break down organic matter moderate soil pH, reducing the need for lime to battle soil acidity. To build organic matter in garden soil and promote beneficial soil organisms, till in compost when the garden is first created, but do not till in subsequent years. Instead, apply thin layers (1 inch to 3 inches) of organic mulch or compost to the soil surface each year. As this material breaks down, the organic matter levels in the soil will gradually increase. Making your own compost is a great way to know exactly what is going into your garden. For more information about making compost, including what to use and what *not* to use, see these links: **content.ces.ncsu.edu/extension-gardener-handbook/2-composting** and **composting.ces.ncsu.edu.**

—Steve Pettis