



Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

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Empowering gardeners. Providing garden solutions.

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We are approaching the time when icy streets and sidewalks can make walking and driving hazardous. Ice melting products can help keep us safe. These products vary, however, in their ice melting abilities and in their safety to nearby plants. Five main materials are used as chemical de-icers: calcium chloride, sodium chloride (salt), potassium chloride, urea and calcium magnesium acetate.

Calcium chloride is the traditional ice melting product. Though it will melt ice to about 25°F, it will form slippery, slimy surfaces on concrete and other hard surfaces. Plants are not likely to be harmed unless excessive amounts are used.

Rock salt is sodium chloride and is the least expensive material available. It is effective to approximately 12°F but can damage soils, plants and metals. Potassium chloride can also cause serious plant injury when washed or splashed on foliage. Both calcium chloride and potassium chloride can damage plant roots.

Urea is a fertilizer that is sometimes used to melt ice. Though it is only about 10 percent as corrosive as sodium chloride, it can contaminate ground and surface water with nitrates. Urea is effective to about 21°F.

Calcium magnesium acetate (CMA), a newer product, is made from dolomitic limestone and acetic acid (the principal compound of vinegar).

CMA works differently than the other materials in that it does not form brine like salt but helps prevent snow particles from sticking to each other or the road surface. It has little effect on plant growth or concrete surfaces. Performance decreases below 20°F.

Limited use of any of these products should cause little injury to plants. Because limited use is recommended, it is best to remove the ice and snow by hand when possible. When the products are applied, practice moderation. Over-application can damage concrete surfaces as well as the plants and grass growing along walks and driveways. Plant and concrete problems usually do not show up until spring or summer.

When salt from puddles sprays onto plants as cars drive by, it may scorch leaves or kill buds and twig tips on deciduous plants, especially during spring. Pines are especially sensitive to roadside deicing salts. When affected, pine needles may turn pale green, yellow or brown in late winter.

The level of damage varies, depending on the concentration of salts in the water running onto plants, the amount of snowfall, the timing of rains that help wash off the foliage, the soil type and the plants' condition. Healthy, mature plants that are not drought-stressed will withstand salts better than newly established, young plants.

—Carl Cantaluppi



JC Raulston Arboretum



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Upcoming Events

Jan. 11 (7 PM)

Henderson County Beekeeper's Short Course

MHREC, Mills River

- For more information, call 828.697.4891.

Jan 12

Pesticide Exam

Burke County Extension center

- All categories will be available. The test starts at 1 PM. You will need a picture ID and a calculator.
- For more details and directions, call 828.439.4460.

Jan. 12 - 16

Green & Grow Conference and Trade Show

Sheraton Greensboro Four Seasons, Greensboro

- For more details, contact Amanda Stone, 828.255.5522.

Jan. 12

Landscape Contractor's Review

Koury Convention Center, Greensboro

- A 6-hour preparation review for the N.C. Registered Landscape Contractor's Exam.
- For more details, call Cliff Ruth, 828.697.4891.

Jan. 13 (9 AM - 12 NOON)

Burke County Master Gardener Class

Burke County Extension center

- Wednesday mornings from 9 AM until noon. The class runs for 13 weeks.
- For more details, call 828.439.4460.

Feb. 10 (8 AM - 4:30 PM)

Winter Apple School

Quality Inn, Hendersonville

- For more information, call 828.697.4891.

Sustainable Gardening — Remaining sustainable

What is sustainable agriculture? In the simplest terms, sustainable agriculture is keeping farmers farming. Sustainable agriculture requires environmentally sound, socially acceptable, economically viable and personally satisfying farm practices.

Almost any farm can be sustainable. Tobacco, organic vegetables and cattle can all be part of sustainable agriculture. Any crop that does not destroy the land, is socially accepted, makes the farmer happy and prosperous, and satisfies consumers with good products at fair prices, is sustainable. In the most basic sense, sustainable agriculture keeps a farm from converting to other uses.

Too often sustainable agriculture conversations focus on crops such as Christmas trees, local vegetables, heirloom apples or direct-market meats. Left out of the discussion is the need for the next generation of farmers. To sustain agriculture we need to sustain farmers. While the discussion revolves around our “food system,”

the “next big crop” or “sustainable production methods,” farmers are getting older or farms are closing.

It is critical that society develops a method to recruit and encourage new farmers. Meanwhile, here is an easy step you can take. Focus on engaging the youth in your community. Invite them into your garden. Volunteer with a youth community garden or with local 4H clubs. Work to pass along your knowledge, love and enthusiasm for all things agriculture.

Less than 2 percent of the population is directly involved in food production. How do we encourage youth to stay on farm? How do we encourage farmers to continue their occupation? How can we connect young interested farmers to landowners or retiring farmers? Here are some further steps you can take. Encourage local leaders to develop and implement policies that support farmers. Support Cooperative Extension efforts to train new farmers.

—Adam Keener

Food Production — Tool care

When the gardening season ends, many people overlook the final chore of cleaning up tools after months of use. Caring for your garden tools is essential to getting the most life out of your investment.

The first and most basic step is to clean your tools. Dirt and debris must be removed prior to any sharpening activities, and certainly before winter storing. Dirt and plant material can hold onto moisture and lead to rusting. Water, wire brushes and elbow grease can take care of stubborn dirt. After cleaning, make sure tools are dried and then lightly oiled. Oil works as a metal preservative and protects against moisture damage. Many products can be used, including WD-40, silicone spray, clean motor oil or machine oil, and even vegetable oil. Oils can be applied as a wipe with a soft cloth.

Also take the time to care for wooden handles. Sandpaper will clean up rough areas



and reduce splinters. Apply several coats of boiled linseed oil to the wood to extend the life of your handles.

Once tools have been cleaned, inspect them to see if they need sharpening. If a cutting edge seems dull, sharpen it using metal files and sharpening

stones. Tool sharpening is a skill that requires attention to detail and cannot be fully covered in this article. Many resources are available online, and you can also consult your local hardware store for assistance.

After your tools have been cleaned and sharpened, store them in a dry area. Never store tools outside! It is also preferable to store tools off the ground. Nails or tool racks are easy solutions for storing tools off the ground.

Take care of your tools so that they can make your garden chores easier and more enjoyable for next season!

—Meghan Baker

Garden Spot — Whippoorwill Village

Would you like to take a step back in time? There was a time when children went to one-room schoolhouses and Tom Dooley and Daniel Boone were neighbors in a small hidden community in Wilkes County. Whippoorwill Village in Ferguson is the site of a collection of authentic buildings dating back to the 1700s. Owner and Director Edith Carter started her collection with Whippoorwill Academy, a schoolhouse so named because some once said that “it is located so far back in the woods that the whippoorwills can’t find it.”



Whippoorwill Village includes a one-room school building and the Dooley (Dula) Art Museum. (Photo courtesy N.C. ECHO)

Through the years, Whippoorwill has grown to include many authentic cabins and a Tom Dooley Museum. The site includes a replica of a cabin that Daniel Boone built in the area. The property recently became part of the N.C. Birding Trail.

Whippoorwill Village is open on Saturday and Sunday from 3 – 5 PM, March through December. It is also open by appointment.

Its open spaces provide wonderful opportunities to view the surrounding mountains and to enjoy the area’s wildlife and wildflowers. Special events occur throughout the year, including a Daniel Boone Day and a Christmas Open House. Visit www.explorewilkes.com/whippoorwill.php for more information about this hidden gem.

—Donna Teasley

Environmental Stewardship — Bird-friendly landscapes

Birds have three main requirements: food, water and shelter. You can meet these needs by properly managing a backyard habitat. The bird species in our area and their food requirements change with the seasons. Primary food sources for migrant and resident birds in the spring are caterpillars and other insects. As we progress through the summer, breeding birds feed on insects and fruits as they become available. As migrant birds and their offspring fly south in the fall, they seek out fruits, which are high in energy and help to offset the energy lost during migration.

As you visit local garden centers this time of year, keep in mind that fall is a great time for planting. Re-evaluate your landscape, and make sure you include early and late fruiting plants that provide food, such as blueberries, the spice-bush or a variety of hollies.

Keep in mind that plant diversity is as important as the fruits and seeds that plants produce. Include native plants, and plant a variety of species that will serve as homes to the leaf-

eating insects that birds devour. Bird feeders can supplement the natural foods in our backyards. Common seeds to consider buying include black oil sunflower, safflower and white millet. If you decide to provide feeders, remember that you should continue to provide this food source throughout the year.

Water is not usually considered a limiting component of bird habitat in western North Carolina. It may become scarce, however, in drought years. Birds normally obtain water from food sources, rain pools or streams and ponds. If you decide to provide a bird bath, remember to keep it shallow (2 – 3 inches deep).

Dense vegetation will provide birds with places to escape from harsh weather and predators. A variety of plant types should cover most of the needs for different bird species. Use grasses, shrubs and trees to provide vegetation in layers. Remember that evergreens are an important component to any wildlife habitat throughout the year.

—Diane Turner

Tips & Tasks

Winter Chores

Lawn Care

- Fertilize cool-season lawns in mid-February with 1 pound of actual nitrogen per 1,000 square feet of turf if a soil sample has not been completed. To determine pounds of fertilizer to apply, divide 100 by the first number on the fertilizer bag.
- Control winter weeds with a broadleaf herbicide on a warm, calm day with temperatures above 55° F.

Ornamentals

- Ran out of time to plant spring-flowering bulbs? You can still plant them now; large healthy bulbs may still bloom.
- Prune limbs and branches injured with snow and ice. Be sure to use a sharp pair of pruners or a sharp saw to make a clean cut.
- In late February, prune plants that bloom on new season’s growth; prune ornamental grasses, such as liriopie, to the new growing point.

Miscellaneous

- When using salt to melt ice on walks and driveways, spread it carefully to avoid damage to nearby shrubs. Consider using sand or sawdust instead.
- Bird feeders serve as a supplement to the natural foods in our backyard. If you decide to provide feeders, remember that you should continue to provide this food source throughout the winter.

—Diane Turner



J.C. Raulston / iStock.com

Showstopper — ‘Kay Parris’ magnolia

Considered to be one of the best evergreen magnolias, ‘Kay Parris’ (*Magnolia grandiflora*) is a relative newcomer. The leaves are a glossy medium-green with wavy leaf margins. Unlike its ‘Little Gem’ parent, this selection has a deep orange-brown, almost velvet-like underside to its leaves. The extremely fragrant flowers are a bit smaller than those of the standard southern magnolia and appear from late May all the way through late September.

‘Kay Parris’ should have a spot in any sunny Carolina landscape. Use it as a living screen or specimen plant, or manage it as a tall hedge. In areas where winter ice storms are common, this cultivar has great limb structure and appears to hold up better than ‘Little Gem’. Don’t let this special selection of a southern native slip by. Plant one today! ‘Kay Parris’ magnolia was introduced by Gilbert’s Nursery, right here in the Carolinas.

—John Vining

Sustainability

Build and Maintain Healthy Soil

The secret to gardening success is in the soil. Many areas where we garden are deficient in nutrients, stripped of topsoil and compacted. Simply digging a hole large enough for your plants results in failure. Gardens that thrive start with good soil preparation. Learn what your soil needs through soil testing. Find out how at your county Cooperative Extension center. The results will tell you if lime or nutrients are needed and in what quantities. No matter what you are growing (flowers, fruit, lawn, shrubs or vegetables), plants will do better grouped in planting beds of well-prepared soil. Dig or till the soil 6 inches deep, add 2 to 3 inches of compost, and work the compost in. Add a couple of inches of organic mulch after planting. When it thins, add more mulch to stabilize soil, prevent weeds, feed the soil and conserve water.

—Danny Lauderdale

Incredible Edibles

Want to eat vegetables all winter? Choose frost-hardy vegetables, and grow them under season extenders. Season extenders also provide longer seasons for tender vegetables. The most common extenders are row covers, hot caps, water containers, tunnels, cold frames and greenhouses. Hot caps modify the climate around small plants. Containers of water will do the same. Gardeners can choose commercial products, such as Wall O’ Water, or use a circle of water-filled 2-liter drink bottles. Row covers of spunbond polyester provide 2 to 8 degrees of protection on tender vegetables. Frost-hardy vegetables love row covers. Lettuce that survives 24°F outside can survive 5° or 10°F under a cover. Tunnels and cold frames are unheated structures supporting plastic or glass. Gardening in them is like adding one USDA zone.

—David Goforth

Pest Alert — Asian lady beetle

The multicolored Asian lady beetle (*Harmonia axyridis*) has become an unwanted houseguest, especially in the winter. During the growing season, the Asian lady beetle is very beneficial because both the larval and adult stages feed on aphids, mealybugs, scale and other soft-bodied insects infesting many crops and plants.

The beetles become a nuisance when they enter homes in search of overwintering sites. They do not sting, carry human diseases or bite. Where there are large numbers of beetles inside the home, some people have reported an increase in respiratory or allergy-like reactions. Asian lady beetles are not known to feed on wood, clothing or human food, and they do not reproduce indoors during the winter.

To reduce home invasion by Asian lady beetles in the winter, seal all outside cracks and crevices around doors, windows, siding, pipes and other openings with a good silicone or silicone-latex caulk. Window screens should not have any tears and should fit snugly inside the window frame. Install insect screening over attic and exhaust vents.

Inside, the beetles can be vacuumed or swept up in a dustpan and released outside, preferably in a spot well away from the house. If vacuuming is not practical, then a household aerosol spray containing pyrethrins or pyrethroids may be used. If you are in doubt about the product to use, contact your county Extension center.

—Will Strader

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Asian lady beetles are fine outside, but they can be a nuisance indoors. (Photo courtesy USDA-ARS)