



Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

Winter 2010

Empowering gardeners. Providing garden solutions.

Melting Point: Practice Moderation

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

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JC Raulston Arboretum



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Upcoming Events

January 10 (2 – 4 PM)

Bring Your Own Vegetable Garden to Life

Darcy Martin and Charles Murphy, Durham County Master Gardener Volunteers

Sarah P. Duke Gardens, 426 Anderson Street, Durham, N.C.

- Free; call 919.668.1707 to register.

January 30 (10 AM – 12 PM)

Fruit tree training and pruning demonstration

Central Crops Research Station, Clayton, N.C.

- Contact Shawn Banks for more information: snbanks@ncsu.edu or 919.989.5380

February 13 (10 AM – 12 PM)

Grapevine workshop

Hinnant Family Vineyards, Pine Level, N.C.

- Contact Shawn Banks for more information: snbanks@ncsu.edu or 919.989.5380

February 28 (2 – 4 PM)

Smart Watering

Michelle Wallace, Consumer Horticulture Agent, Durham County

Sarah P. Duke Gardens, 426 Anderson Street, Durham, N.C.

- Free; call 919.668.1707 to register.

March 5 (8:30 AM – 3:30 PM)

Northern Piedmont Specialty Crops School

Person County Extension Center, 304 S. Morgan St., Roxboro, N.C.

- Contact Carl Cantaluppi for more information: carl_cantaluppi@ncsu.edu

Sustainable Gardening — Protecting trees during construction

Trees are often damaged during construction. Injury can occur directly, as when trees are run into by equipment, or indirectly. Indirect injuries occur from activities such as parking equipment over root zones and piling soil near trees. Although such practices will not result in immediately obvious damage, they can lead to tree death several years later. Trees roots need air. Both soil compaction (from equipment driven or parked under trees) and deposits of soil or debris over root zones (as during grading) restrict air from getting to roots.

If you want to save particular trees, try to strategically locate buildings, driveways and utility trenches to avoid damage to the trees. Check with those who will be doing the construction to see how much clearance they will need around buildings and other areas. Trees that are cut can be chipped and used as mulch, as long as they don't have a disease or insect infestation that might harm other trees.

After deciding which trees to keep, plan for their protection. Extension recommends preventing traffic and other construction activities within a radius of *at least* 1.25 ft for every 1 inch

of tree trunk diameter. For example, if a trunk is 1 foot wide, protect the area within 15 feet of the trunk on all sides. A tree with a trunk that is 3 feet wide would need to be protected to a distance of 45 feet from the trunk! Put up a tall and brightly colored temporary fence around the tree protection zone (TPZ). These fences should be checked during construction to ensure that they remain in place. It is important for all those involved in construction to be informed about the tree protection plans.

Some trees may suffer if larger ones around them are removed, even when their root zones are protected. Dogwoods, for example, are understory trees (they grow in the shade of other trees) and may suffer when suddenly exposed to full sun. Watering and the use of mulch in the TPZ may help preserve understory trees.

For more detailed information about protecting trees during construction, take a look at *Construction and Tree Protection*: www.ces.ncsu.edu/nreos/forest/pdf/ag/ag685.pdf

—Mary Helen Ferguson

Food Production — Sweet onions

The vegetable growing season is over except for the hardiest crops or those being grown in high tunnels or greenhouses. But February is the month that marks the beginning of the new season, and it rolls around quickly after the holidays. One vegetable that we can begin planting in the latter part of February on into March is sweet onions.

If you want to grow sweet onions, start with plants. Onion sets are fine for green onions but will not produce sweet onions. One of the most common varieties is 'Yellow Granex'. Another variety, 'Candy', has become very popular with farmers market growers. It produces a beautiful bulb, but the plants may be hard to find at garden centers. If it's unavailable where you shop, you can obtain it from mail-order firms.

Good soil preparation is helpful for any vegetable that produces a bulb or storage root.

Because few of us are blessed with sandy loam soils, mix some compost with the soil along with your initial fertilizer and lime (if needed). Bulbing onions should be planted shallowly. When the onions mature, a good portion of the bulb will be sticking out of the ground.

You can harvest your sweet onions from the green onion stage through maturity.

Once the tops of the plants begin to fall over, you know the onion has finished growing. Let the onion tops start to dry in the garden. Then harvest them and put them in flats in a carport or other shelter where it is dry and shady. The tops can finish drying there. Most sweet onions don't store for a very long period. 'Candy' does store fairly well, but the taste gets much hotter with storage.

For more information, call your county Cooperative Extension agent.

—Kevin Starr

Garden Spot — Visit your local nursery

One of the best garden spots on a winter day is a local nursery. There you can find great inspiration for your own garden. The books you can bring home filled with pictures and prose can help make your horticulture dreams come true in your own landscape. Garden books make great gifts for the friends in your life who might kill any plant you send their way.

Greenhouses tend to stay warm all winter, like a tropical oasis in your hometown. Plenty of beautiful indoor plants will welcome you inside from the cold. Poinsettias, cyclamens, paperwhites and palms can bring reminders of spring and summer, and the knowledgeable folks at the local garden center can help you select plants.



The bulbs, supplies and information at a nursery can give you the necessary provisions to force these dormant plants into flowering indoors even during the coldest months of the year.

There's always something to see, learn, do and discover at your local nursery, so spend some time there. You'll make friends with fellow horticulture enthusiasts and fuel the local economy when you bring home plants that will work well in your area. You also might discover a great deal on something you've always wanted during these months when fewer gardeners brave the elements.

—Mark Blevins

Environmental Stewardship — Water quality and fertilizer use

Landscape plants, like all living things, need nutrients to survive. Many of the essential elements for plant growth are in the soil, but some elements must be supplied by fertilizer. The main objective in applying fertilizer should be to add necessary nutrients in the required amounts and at the proper time to achieve proper plant growth. Healthy plants are able to recover from insect and disease attacks. Turf will compete better with weeds, thereby reducing the need for herbicides. It is important that the nutrients applied in the landscape stay in place and do not contaminate our streams, lakes and rivers. Follow these guidelines to have a healthy lawn and garden and maintain water quality.

Soil Test. A soil test every 3 to 5 years will determine the exact amounts of nutrients needed. These results will determine the analysis of the fertilizer to use.

Timing. Tall fescue should be fertilized in the fall and winter whereas most landscape plants

are best fertilized in early spring.

Slow Release. Whenever possible, apply fertilizers that are composed of slow-release sources of nitrogen. These sources are made so that the nitrogen is metered out slowly to plants. It is especially important to use slow release fertilizer where sandy soils are prevalent, near surface water or where the water table is shallow. When using water-soluble, quick-release fertilizer such as 10-10-10, apply half the recommended rate in two applications. Organic fertilizers are nature's slow-release products.

Water Slowly. Water with light, frequent applications on slopes after fertilizer application to reduce runoff. This allows water to penetrate soil that is compacted. If this is a turf zone, you may need to aerate the soil. Be sure to have a mulch layer around landscape plants. The mulch holds the water and fertilizer in place until it is absorbed by the soil.

—Carl Matyac

Tips & Tasks

Winter Work

- Study seed and plant catalogs. Don't let all the pictures fool you. No matter how pretty or luscious a plant appears, whether it will survive, thrive and produce in your area is more important. Contact your Extension center for free publications that include varieties with a local track record.
- Start plants indoors from seed. Most vegetables can be transplanted outdoors about 4 to 10 weeks after seeding. Each is different, and how long it takes varies with temperature, sun and water. When to transplant outdoors depends on the weather.
- If you use animal manures in your vegetable garden, plan at least 120 days between application and harvest for food safety. Till manures into the soil to avoid nutrient loss.
- The most common winter damage to plants is breakage. If you get heavy snowfall, use a broom or rake to gently brush snow off plants before it thaws and refreezes. Don't try to remove ice or frozen snow. In a dry winter, plants that are watered well can better handle severe cold.
- Most pruning can wait till February or March. Start by removing dead stems. Remove any swellings or sunken cankers on the stems. For fruit trees, open the canopy for air and light penetration to reduce disease pressure later. Don't prune any winter- or spring-flowering plants now.

—Carl Matyac



JC Raulston Arboretum

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)