

WINTER 2016

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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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## Holiday Season Safety

During the holidays, many of our homes are filled with the smells and colors of greenery and flowering plants. The traditions and pleasures these plants bring to our celebrations also bring a responsibility: to prevent hazards and potential poisonings from these invited guests.

Every winter, we hear the question, "Are poinsettias poisonous?" The general thought is that poinsettias are *not* poisonous. The NC State Horticulture Poisonous Plant website, however, indicates that all parts of the poinsettia plant exhibit very low toxicity and occasionally cause dermatitis (minor skin irritation). Symptoms when poinsettia parts are eaten may include occasional abdominal pain, accompanied by vomiting and diarrhea. Redness, swelling, and blisters can occur after frequent contact with skin. Generally, these symptoms are minor or last only for a few minutes. The Society of American Florists worked with Ohio State University (OSU) to test all parts of the poinsettia. OSU researchers established that rats exhibited no mortality, symptoms of toxicity, nor changes in dietary intake or general behavior patterns when given large amounts of different poinsettia parts. According to the American Medical Association's *Handbook of Poisonous and Injurious Plants*, other than occasional cases of vomiting, ingestion of the poinsettia plant has been found to produce no effect.

Mistletoe is often gathered from the woods and displayed in our homes. The sticky, white berries of mistletoe are poisonous. Symptoms resulting from their ingestion include stomach and intestinal irritation with diarrhea, lowered blood



Nandina or heavenly bamboo  
©NC Cooperative Extension, NC State



Mistletoe (top) and American holly (bottom)  
©NC Cooperative Extension, NC State

pressure, and slow pulse. Large quantities of berries must be eaten to produce these symptoms.

The American holly has male and female trees. It is easy to distinguish the female American holly tree because it is the one with the red berries. Branches of this evergreen often adorn holiday decorations. The berries from the holly are considered to be of low toxicity and can be poisonous only if large quantities are eaten. Symptoms resulting from eating holly berries include nausea, vomiting, and diarrhea.

*Nandina domestica* or "heavenly bamboo" is another evergreen used in home decorating because of its red berries. If eaten, nandina berries are of low toxicity. No cases of human poisoning by ingestion of nandina berries have been reported, but berries are possibly toxic to cats.

Amaryllis and narcissus (daffodil) are two bulb plants seen in homes during the holidays. The bulbs are the toxic part of these two plants. A large quantity of either bulb must be eaten for it to be toxic. Skin irritation can be severe following the handling of bulbs, flowers, and stems of the narcissus plant.

—Richard Rhodes

## Extension Showcase

### Seed to supper

Extension is well-positioned to form effective partnerships with other organizations for successful programs. Inter-Faith Food Shuttle (IFFS) approached our Extension Master Gardener Volunteers to see if they would be willing to teach a six-week program called “Seed to Supper” that was created by Oregon Extension and Food Bank.

The goal was to reach limited income clients who want to grow vegetables for improved access to fresh, healthy foods.

We also partnered with Alliance Medical Ministry to identify interested clients and to use the Ministry’s significant vegetable garden for the hands-on portion of the program.

For six weeks this spring, 12 clients and three Extension Master Gardener Volunteers met weekly to learn about soils and planting, maintaining, and harvesting vegetables. Preparation of the fresh vegetables was addressed by the IFFS and Alliance Medical Ministry partners.

To meet the demand, a second six-week class began in August for a new set of gardeners.

Lessons learned included finding out that “more hands-on time and less class time” and follow-up visits to home gardens would be helpful to ensure successful establishment of the gardens.

We continue looking for ways to partner with other organizations to create educational opportunities for healthy vegetable gardening and better access to fresh foods.

—Jeana Myers

## Smart Gardening: Tool sanitation and storage

Winter may be quiet in the garden, but is an ideal time to prepare for the eventful spring and summer seasons. One of the key components to a successful garden is proper sanitation practices. It is best to wash hand tools after each use to remove mud and potential contamination, and to prevent rusting. Begin by taking a wire bristle brush and rubbing the leftover mud and dirt from your gardening trowels, shovels, pruners, and other tools. For smaller tools that may have a build-up of rust, use steel wool. An oil such as WD 40 should be applied to protect the metal and allow moving mechanisms in the pruner to function properly. It is also important to sharpen your tools to provide the cleanest cut when pruning and working in the garden. If you are not able to sharpen



Clean and oil tools before storing them. @dejanj01, bigstock.com

your tools, contact your local garden store to find services near you. All tools should be stored out of the elements after you perform the above tasks. This is also an opportunity to sanitize pots, containers, and buckets for spring seedlings with a one part bleach to nine parts water solution. These guidelines will ensure a successful garden in the following growing seasons.

—Lauren Duncan

## Food Production: Native plants sustain overwintering birds

Our native plants provide cover, fruits, and seeds to sustain overwintering birds, while also being attractive additions to the landscape and later potential nesting sites. Below is a short list of native shrubs, grasses, vines, conifers, and deciduous trees that provide winter food sources to birds. These food sources provide *soft mast* (fruit with a fleshy exterior like apples or berries) or *hard mast* (fruit with a hard exterior like acorns and other nuts). Some plants you may already have established, and some species may surprise you:

- Mistletoe (*Phoradendron serotinum*): soft mast for waxwings, bluebirds, mourning doves, and robins.
- Sweetgum (*Liquidambar styraciflua*): hard mast for grosbeaks, cardinals, and finches.
- Goldenrod (*Solidago spp.*): hard mast for grosbeaks, cardinals, finches, sparrows, and towhees.
- Big bluestem (*Andropogon gerardii*): hard mast for grosbeaks, cardinals, finches, sparrows, and towhees.
- Eastern red cedar (*Juniperus virginiana*): soft mast for waxwings and others.
- Spruces (*Picea spp.*): seeds for red crossbills and other seed eaters.
- Virginia creeper (*Parthenocissus quinquefolia*): soft mast for robins, bluebirds, cardinals, starlings, warblers, wild turkey, pileated woodpecker, and others.
- Northern bayberry (*Myrica pensylvanica*): soft mast for bluebirds, chickadees, and others.
- Crabapples (*Malus spp.*): soft mast for robins, bluebirds, cardinals, waxwings, pine grosbeaks, finches, and others. Choose varieties with small fruits.
- White oak (*Quercus alba*): hard mast for woodpeckers, jays, wild turkey, wood ducks, and others.



Cedar waxwing @Picpourri, bigstock.com

Another idea is to save garden sunflower seeds and serve them on a platform feeder to attract cardinals, chickadees, grosbeaks, tufted titmice, nuthatches, doves, and woodpeckers. Sunflower seeds contain protein and oil. These ingredients help birds generate heat and put a sheen on their feathers. Sunflower seeds also provide calcium, which is vital for strong bones and eggshells.

—Aimee Colf

## **Pest Alert:** Bring houseplants indoors, not bugs

As late fall temperatures begin to inch ever closer to freezing, many NC piedmont gardeners are reluctant to bring houseplants indoors. Perhaps we dread the inevitable rearranging of furniture required to accommodate our plants, or maybe we just don't want to admit the growing season has come to an end and we must spend the next few months huddled by the fire looking at seed catalogs, dreaming of next year.

Whatever our reasons, an often overlooked step in bringing our plants indoors is checking them for pests and taking steps to insure we don't bring these undesirables indoors with the plants. First, perform a visual examination, remembering to check the underside of leaves and stems. Spider mites are easily detected by placing a white sheet of paper underneath the plant and gently tapping on the main stem. Earwigs, sowbugs, and slugs sometimes hitch a ride indoors. Check the top layers of the soil, removing any spent leaves on the soil surface to reveal these interlopers.

Sometimes all that is needed for control is manual removal. A gentle spray from a water hose can dislodge many pests. If the plant is small enough to handle, removing it completely from the container and gently running water through the soil can flush out soil-dwelling pests. Scale insects often proliferate once the plants come indoors. A few applications of insecticidal soap can usually control them.



Dracaena @motorolka, bigstock.com

— Randy Fulk

## **Lawns:** De-icing damage to turf

The lawn is no longer actively growing. We've raked, chopped, or shredded most of the fallen leaves. The mower is safely in the shed. Nothing to worry about until next spring, right? Hopefully we can take a well-earned rest from lawn care. The many and varied de-icing products used to combat slick drives and sidewalks, however, pose a serious threat to healthy turf.

Active ingredients include rock salt, calcium magnesium acetate, magnesium and potassium chloride, and urea or carbonyl diamide. All are potentially damaging to turf, some are hazardous to pets, and some can even damage concrete!

Symptoms of turf damaged by these products include bare spots, soil that appears to have a white or yellow crusting, a sudden proliferation of weeds, deformed foliage, and stunted growth.

Although the best defense against de-icer damage is to refrain from using these products, the following steps can serve to reduce the risk of turf damage if de-icers are employed:

- Use de-icing products sparingly and never exceed the labeled rate. If a little is good, more is better, right? Wrong! Applying excess amounts can increase the likelihood of turf damage
- Avoid de-icers that contain urea. They are only effective down to about 25°F. Runoff sends excess nitrogen into the water supply, and nitrogen makes an impact on ecosystems.
- Shovel early and as often as needed. Remove the snow before it accumulates or has the chance to thaw, refreeze, and turn to ice. Shovel the drive or walk first, then apply the de-icer. You will use less material, and the smaller amounts are less likely to damage turf.

If, in spite of your best efforts, you still sustain de-icer damage, it is sometimes possible to flush the material out of the soil by applying water. This works in well-drained soils. Compacted or heavy soils may necessitate reworking the area and reseeding.

—Randy Fulk

## **Tips & Tasks**

### **Winter is a busy time for gardeners**

Some gardeners believe winter is a dull time for gardening, but it can be a good time to do routine maintenance of plants, garden, and tools.

- Prevent breakage, the most common winter damage to plants, by using 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 effectively will be more likely to survive severe cold.
- Plant fruit trees, grapes and berries starting in February.
- Start seeds of broccoli, cabbage, lettuce, and cauliflower inside in late January to have transplants ready for March.
- In February plant potatoes, asparagus, and the seeds of root vegetables (radish, turnip, beets), leafy greens (spinach, lettuce), and garden peas.
- Pruning is often done during the dormant winter months and more specifically in January and February. Fruit trees, grapevines, and berries are best pruned during these months.
- As always you can remove the three D's (dead, diseased, or damaged) anytime of the year.
- Practice garden sanitation, if you did not remove the plant debris after the garden season, be sure to remove it before you plant. Leaving the debris can encourage pest and disease pressure to increase.
- When fertilizing cool-season lawns, use 1 pound of nitrogen per 1,000 square feet in February, or follow your soil sample analysis report.

— Danelle Cutting

## Helping You Grow

### Landscaping your septic field for lengthy service

The largest appliance at any modern rural household has no moving parts and may last 50 years if properly cared for, but it can be ruined in far shorter time with improper care. It is your septic system, underground in your yard. Besides having your septic tank pumped by a professional every three to five years, there are other measures that preserve the functioning of your septic system:

- Do not drive or park on your septic field.
- Conserve water in your household.
- Put little or no grease into the system down the drains.
- Do NOT flush cigarette butts, contraceptives, or other such products into the system.
- Minimize use of caustic or sterilizing bleaches, cleaners, paints, or solvents into drains and toilets.
- Do **not** install or use garbage disposals.
- Do **not** use advertised additives that claim to replace the need to pump your tank regularly.
- Landscape your septic field with uniform grass cover and little else.
- Landscape a second area with grass only to act as a reserve septic field in case you need to have a rapid repair or replacement of your existing septic system for any reason.

—Tom Campbell

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## Featured Plant: Pomegranate, *Punica granatum*



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Thought to be native to the eastern Mediterranean, the pomegranate is a small (12- to 16-foot) fruiting tree in the family Punicaceae that thrives in hot temperatures (USDA Zones 7B to 10 in the United States). Large, hibiscus-like flowers of red to orange to pink bloom in late spring, followed by a yellow to red fruit that ripens in fall. Although parts of the fruit are edible, the plant is prized in the landscape for its ornamental features. Because of its shrubby nature, it's often used as a screening plant. Pomegranates prefer full sun and tolerate a wide range of soil types. Few pests attack the tree, and numerous cultivars are available. History indicates the fruit was a delicacy, and its health potentials are still being cultivated today.

—Katy Shook

## Incredible Edibles: Common problems of home gardens

Sometimes understanding what's gone wrong with a particular crop in your garden helps to prevent the problem next year. Cabbage head splits are caused by heavy and frequent rain. If broccoli flowers before its head matures, the plant has been stunted by poor growing conditions. When corn ears do not fill out, this is caused by poor pollination due to hot dry weather. Bitter cucumbers are caused by older plants, low fertility, drought, and high temperatures. When cantaloupes have poor flavor, it is usually caused by excessive water. Poor fruit set of squash and cucumbers is usually caused by poor pollination. Occasionally tomatoes flower without setting fruit. This is due to temperatures being too high or too low, thus keeping the fruit from setting. When tomatoes rot on the blossom end, know as blossom end rot, calcium may be lacking in the soil or nitrogen may be excessive in the soil.

—Cecil Sumner

## Sustainability: How do insects survive winter?

As the days get shorter and cooler in the fall, insects enter into an inactive state of arrested development called *diapause*. During the winter an insect's metabolic rate drops to one-tenth or less, so it can use stored body fat to survive. Many insects also produce alcohols that act like anti-freeze. These insects' bodies can reach below-freezing temperatures without forming cell-damaging ice crystals. In the spring, as temperatures rise, diapause is terminated and insect growth and development return to normal.

Even with all of these adaptations, extreme cold and temperature fluctuations can indeed affect insect survival depending on how low the temperature dropped, how long the cold persisted, and if snow cover was present. Other factors to consider are microclimates and how protected insects are in their hiding places. So where do insects hide during the winter?

Insects spend winter in various life stages. Aphids overwinter as eggs laid in the bud scales of woody plants. Bagworm eggs are safely tucked away inside a bag. Tent caterpillar eggs can be found in a mass on branches. Bean leaf beetles spend winter as adults under loose bark or fallen leaves. Lady bugs congregate under firewood. Japanese beetle grubs hide deep in the soil, and some butterflies overwinter as pupae in a cocoon or chrysalis. Each insect has its own way of dealing with cold weather. As much as we would like to think that a rough winter will take care of those pesky insects, most will survive.



Two soybean aphid eggs laid next to the bud scales of buckthorn.  
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