

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: Which apple is right for you?



Apple varieties @Phil Shirley, CC-BY-NC-ND

There are literally hundreds of apple varieties available to the home gardener. But which ones are right for you? Let’s take a look!

Heirloom varieties have been around for generations, and the fact that they have survived for hundreds of years tells us that they have merit. The heirlooms of our ancestors have some wonderful traits. The flavors can’t be beat, and many have good disease resistance. This is why they have lasted throughout the years. Sentimentality keeps them around also. We like growing the trees that our grandparents and great-grandparents grew. These old trees can bring back happy memories of apple pies and homemade jelly.

But some things these old trees don’t have are consistency and guaranteed harvests. Some fruits aren’t attractive, and disease tolerance can often be lacking. That’s where the modern varieties come in. Modern varieties came about because something was lacking in the old trees. Timing of the harvest is a factor in whether or not you’ll even get a harvest or not. Many of the newer trees have disease resistance, resulting in fewer pesticides. The modern rootstocks even make it possible to choose the size of your tree, which is important in the urban landscape.

So it is up to the gardener to decide if he wants that special taste you can only get from an old-fashioned ‘Limbertwig’ or the ‘Virginia Beauty’. Is the taste and the sweet memory worth the quirks of heirlooms? To many, the answer is “yes.” But if you need the predictability of a modern apple, you’re in luck also. Modern choices are endless, and that will give them longevity in the garden world. It’s your choice.

—Donna Teasley

Food Production: Storing apples

Apple harvest time takes place in late summer through late fall in North Carolina. Some varieties will be around for only a very short period of time, while others will be available well into next year if stored properly. It is important to know which varieties do well in storage. Varieties such as ‘Honey Crisp’ and ‘Gala’ usually lose fruit quality within a couple of weeks after harvest, even if stored under ideal conditions. ‘Stayman’ and ‘Arkansas Black’ are two heirloom varieties that can last up to five months, if stored properly. ‘Pink Lady’ and ‘Fuji’ are newer varieties that also store well, and high-quality fruit can still be available into April or May.



@Kelly Garbato, CC-BY-NC-ND

Look for any damaged or bruised fruit prior to storing. Apples with these defects will break down quickly and begin to rot, which can spread to other apples. Apples that are damaged during storage should also be removed. Another key to storing apples is making sure they are placed in an environment that stays cool and with relatively high humidity. People most often think of refrigerators when storing apples, and a refrigerator can be an ideal place. The best temperature for apple storage is around 32°F. Temperatures below 28°F, however, will damage the fruit and cause the apple to ripen more quickly when brought to room temperature.

Apples require a relative humidity of 90 to 95 percent to keep them from shriveling. A great way to store small quantities is to put the apples in a plastic bag that has some holes in it before placing them in the refrigerator to make sure high humidity is maintained. Larger quantities can be stored in cellars and basements as long as the humidity is high and the room is not subject to freezing.

—Bill Hanlin

Pest Alert: Mealybugs on indoor plants

It's winter, and most of us have brought our tropical plants inside to stay warm and toasty through the winter. Although the warm temperatures are excellent for those houseplants, the conditions are also ideal for unwanted plant pests. Mealybugs are one of the most common pests of indoor plants and are most active in warm dry conditions. This means that when we bring those plants in for the winter, we are bringing them into an environment highly conducive to a mealybug outbreak.

You can identify mealybugs without a magnifying glass. Female mealybugs are about 1/8-inch-long and have a soft, oval-shaped body. They can have long tails or be covered in a fluffy, white wax. Male mealybugs are small and gnatlike, with two wings and long tails of wax. While in the nymph stage, they are yellow, flat, and oval-shaped. As they become older, the fluffy, white wax appears. Look for these small critters in crevices, at the base of stems, or on the petioles of your plants.

Mealybugs have threadlike mouth parts that they use to suck sap out of the plant. While feeding, they excrete a sweet, sticky liquid called "honeydew," which may become a host for sooty mold, causing the plant to turn black. Heavily infested plants can become disfigured and unsightly. Treating mealybugs can be difficult because they are protected by a waxy coating. If caught early enough, however, wiping off the mealy bugs with a cotton swab dipped in alcohol may suffice. Treat with insecticidal soap or horticultural oil. Or in cases of heavy infestation, a systemic treatment such as imidacloprid may be necessary.



Mealybugs ©Shawn Banks

— Sarah Scott

Lawns: Winter annual weeds

The lawn is dormant now, but that doesn't mean there aren't things going on out there. Winter weeds are up and growing, just biding their time until it is time to bloom and make seeds in late winter and early spring. Winter weeds are sneaky and they can grow mostly undetected throughout the winter. Until they start flowering, you don't even know they are there. By then, they are ready to disperse seed all over the lawn so the cycle will continue.

Winter annual weeds are what we are talking about this time of year. The seeds lie dormant throughout the summer. When the cooling temps of fall arrive, these winter pests get the signal to germinate. At first the weeds are quite small and inconspicuous. This is when they can be controlled with the most success. The homeowner must be vigilant during the winter to control these weeds. If left to flower and make seeds, the homeowner can expect a repeat performance next year.

Some of our most common weeds are winter annuals: chickweed, henbit, hairy bittercress, and red dead nettle, just to name a few. They can be hand-pulled, or there are numerous selective herbicides available that will do a good job. But you must get the timing right, or you will just be wasting your time and money. Herbicides can be sprayed when the temperature is at least 55°F. Spray winter annuals two to three times from mid fall through late winter before they disperse seeds. Also, make sure you read the label first to make sure you are using the best product for your particular weeds.

When in doubt, check with your county Extension agent. They will be happy to help identify weeds and make herbicide recommendations.

—Donna Teasley

Tips & Tasks

Lawns

- Continue to spray winter annual weeds before seed dispersal when temps are above 55°F.
- 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 lawn mower blades before using in the spring.

Ornamentals

- Prune fruit trees and grape vines 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 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

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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