Fall is THE time to repair a cool-season lawn. Cool-season grasses are the most prevalent grass species used in Maryland. They include Kentucky bluegrass, creeping red fescue, K-31 tall fescue, and turf-type tall fescues. All lawns suffer varying degrees of damage in the summer. Fall is the recommended time to repair a lawn for several reasons: 1) Cooler temperatures allow the grass to recuperate from summer stress, and help young grass seedlings get established. 2) New roots and shoots known as “tillers” naturally develop this time of year. 3) There usually is more rainfall to help a new lawn become established.

Here is a quick check list to help you get the job done:

1. If your lawn’s soil is compacted, aeration is the first step. Lawn aerating machines can be rented at many hardware stores.

2. For the best results when seeding, buy Maryland certified seed and University of MD recommended varieties.

3. A very important step in lawn care and other gardening is to monitor and correct your soil’s fertility. A soil test should be performed once every three years.

4. If broadleaf weeds are a problem (i.e. dandelion, plantain, ground ivy, etc.), control them with spot applications of a selective liquid broadleaf weed herbicide. (HG 101)

5. Whether over-seeding or starting a new lawn from scratch, it’s important to have good seed to soil contact. Prepare a good seed bed by loosening the soil surface prior to sowing grass seed. (video)

6. Apply granular fertilizer and lime according to the soil test recommendation. Remember to sweep fertilizer and lime granules off of paved surfaces back onto the lawn to prevent their washing into storm drains.

7. Cover new seed with peat moss or straw and water daily until it sprouts.

8. Once the new grass has sprouted, reduce the frequency of watering but increase the amount of water applied per watering.

9. After the seed has germinated and it is time to mow, maintain it by mowing at the proper height. Mow frequently enough so that no more than one-third of the grass blade is removed per mowing and keep the grass at a height of 3 inches.
Leaves, Shoots & Roots- Let’s Eat!

Jon Traunfeld, University of Maryland Extension Specialist, Fruits and Vegetables, and State Master Gardener Coordinator

When we teach kids food gardening we usually divide the edible plants by the part we eat- flower, fruit, seed, root, leaf, stem. Children are fascinated to learn they are eating seeds when they eat corn and that you can eat the roots and leaves of sweet potato plants. The Grow It Eat It program took a similar tack by declaring 2012 the “Year of Leafy Greens.” The idea is to introduce new gardeners to some of the many vegetable plants that produce edible leaves. I was especially keen to try out crops that can reliably produce large amounts of leafy greens during our hot summer months. Joyce Prange (Master Gardener, Howard Co.) planted and cared for the following plants in the HGIC demonstration garden:

**Summer Greens planted in June:**

**Red Malabar spinach** (*Basella rubra*)- leaves and shoot tips have a crunchier texture than the other summer greens. This is an excellent addition to salads and sandwiches or used as a garnish. It becomes slimy if over-cooked (good thickener for soups?) The flavor is similar to beet greens and chard. This is an absolutely gorgeous plant- especially the red stem type. The long shoots grow up and out and will nicely fill an area without becoming too pushy. They can easily be pinched and cut back to keep them more tidy. No insect or disease problems.

**Vitamin Green** (*Brassica rapa*)- I’ve tried many types of Asian greens, such as Komatsuna, Tat-soi, and Yukina Savoy. Vitamin Green may be my new favorite. The growth is phenomenal. Leaves grow from the base of the plant and reach 12 inches in length. We spaced the plants about 6 in. apart in each direction creating a thick and healthy planting. The flavor is mild, not hot like mustard, and did not become bitter after reaching mature height. The leaves stay dark green and mild even after they are fully expanded and mature. We observed minor flea beetle and harlequin bug injury- probably because we did not grow any members of this family last year.

**Swiss chard** (*Beta vulgaris*; ‘Bright Lights’ and ‘Rhubarb Chard’)- some-one told me years ago that you either love or hate Swiss chard; most people are not neutral about this easy-to-grow summer green. I’m a lover of this dependable and versatile beet relative. I think all chards are attractive but “Bright Lights” is eye-popping. Stems and leaf veins are yellow, orange, pink, and white. There are many ways to use the leaves and wide mid-ribs. One simple method: harvest and wash large outer leaves; rip the leaves into small pieces and boil for 10-15 minutes in a pot of water; drain the water, squeeze more water from the leaves, then chop finely and dress with fresh lemon juice, a little olive oil, and salt and pepper.

**Sweet potato leaves** (*Ipomea batatas*)- no shortage of biomass here! Sweet potato is a much under-utilized food crop in the mid-Atlantic region. They love our summer heat and humidity, grow well on a variety of soil types with minimal water and fertilizer, and produce edible
roots, leaves, and shoots. By weight, the leaves are actually higher in protein than the roots. The leaves are relatively large, mild in flavor, and easy to harvest. The Japanese red type we planted produced a profusion of light purple flowers. The younger leaves and shoot tips are considered more desirable but I don’t see much difference. I chop leaves and sauté them in olive oil with minced garlic. After five minutes I splash in some broth, wine, vinegar, or water, cover the pan and braise the greens for a few minutes before serving.

We had two low performers but I’m not giving up on them yet. ‘Magenta Spreen’ amaranth (Chenopodium giganteum) had a very low germination rate and those that sprouted just did not grow. This is another member of the Amaranthaceae family, along with amaranth, chard, beets, and spinach. It’s sometimes called giant lambsquarters. It has attractive small leaves tinged with red and is used mostly used raw. Our leafy amaranth plants, also known as callaloo in the Caribbean region, were decimated by striped cucumber beetle. Amaranth is an excellent trap crop for cucumber beetles.

2013 will be the “Year of Root Vegetables.” By the time you read this the following crops should be up and growing in our demonstration garden: ‘Miyashige’ and ‘Amethyst’ radish, ‘Hercules’ carrot, ‘Hakurei’ turnip, and ‘Merlin’ beet. We will also plant lettuce, kale, and mustard greens. In a future newsletter I’ll share observations and photos from our fall garden.

Interesting side-note: for the heck of it we planted radish, carrot, and beet in June and harvested in mid-August. We experienced four heat waves during this time. The ‘Napoli’ carrots were rather small and thin but the ‘Merlin’ beet and ‘Shunkyo’ Japanese-type radish produced nice crops.

Planting garlic this fall in your garden?

Don’t plant cloves from garlic harvested from your garden if you experienced problems with white rot, garlic bloat nematode, or bulb mites this past season. These are serious and persistent disease and pest problems. If you don’t have these problems it’s ok to plant cloves from harvested bulbs. If you buy garlic bulbs for fall planting, be sure they are disease-free and pest-free. Ask the supplier for assurances that their bulbs are clean and healthy. Look for testing information on supplier websites and contact companies if you have questions or concerns.

White rot is probably the most widespread and devastating garlic disease. The pathogen can survive for years in soil without host plants (garlic, onion, leek) to infect. It may become more prevalent in Maryland because of the increase in garlic growing and importation of infected bulbs for planting. This UME newsletter has articles by Jerry Brust, P.h.D. on the garlic bloat nematode and bulb mites.
Beware of mosquitoes and West Nile Virus

Mike Raupp, Professor & University of Maryland Extension Specialist, Ornamental Horticulture, IPM

With many parts of the nation suffering moderate to extreme drought, some folks are wondering why mosquitoes and diseases they carry, such as West Nile Virus (WNV), are such a huge problem this year. In many parts of the nation, especially states bordering the Gulf of Mexico and along the eastern seaboard, rashes of thunderstorms have dumped more than 10 inches of rain during the last 60 days. This is ample water to fill natural vessels like tree holes and artificial containers like birdbaths and wheelbarrows to create perfect nurseries for breeding mosquitoes. A five-gallon pail in my backyard is now home to more than 300 mosquito larvae, called wrigglers, and pupae, called tumblers. Temperature plays a huge role in abetting mosquito outbreaks. One study found that Culex mosquitoes, one of the vectors of WNV, transformed from eggs to adults in about 27 days at a temperature of 59 degrees Fahrenheit. At 93 degrees, mosquitoes went from eggs to adults in only about 7 days. This means that at warmer temperatures, mosquitoes can complete several generations in the amount of time required to complete a single generation when it is cool. With temperatures soaring in this year of record warmth, mosquitoes are completing their life cycle in record time.

Hot wet weather is the recipe for spawning huge numbers of mosquitoes. During the first several days of adulthood, both male and female mosquitoes consume carbohydrate rich food such as plant nectar or aphid honeydew. For male mosquitoes, sweets are the sole source of food, but the gal has a blood lust. Female mosquitoes use animal blood as the source of protein to produce eggs. The pregnant mosquito lays her eggs in a water-filled container such as a pail or birdbath, or in pools of standing water on the ground. Some, like the ferocious Asian tiger, Aedes albopictus, lay eggs near the water line of a container. Hundreds of larvae will hatch from these three egg rafts floating on the surface of the water.

Several species of mosquitoes feed on birds and high numbers of mosquitoes increase the likelihood that WNV will be transmitted from bird to bird. However, many of these bird-feeding mosquitoes bite humans as well. As the incidence of infection increases in the bird population and populations of mosquitoes burgeon in an area, the chances of humans being bitten by an infected mosquito go up. This perfect storm of infected birds, hungry mosquitoes, and vulnerable humans is currently underway in several parts of our country.

WNV has killed more than 1,000 people in the United States since it was first detected in New York more than a decade ago. At the time of this posting, more than 700 human cases of WNV and 26 deaths have occurred this year, mostly in states in the southern and central areas of the US. Fortunately, approximately 80% of infected people shrug off the virus with no symptoms. In 20% of infected individuals, WNV causes minor illness such as fever, headaches, and nausea. The real problem arises in about 1 in 150 people who develop severe symptoms when the virus attacks the brain and the membrane covering it and the spinal cord. This neuroinvasive form of the disease can cause high fevers, headaches, body aches, disorientation, confusion, comas, and in some cases death. Symptoms may arise 3 – 14 days after the bite of an infected mosquito.

Seniors and others with compromised immune systems may be at greatest risk. Recent research helps explain why
this may be so. Our immune system plays a vital role in preventing diseases carried by mosquitoes from infecting our bodies. Cells lining our skin and mucus membranes bear specialized virus-sensing proteins called Toll-Like Receptors, a.k.a. TLRs. TLRs have the critical function of detecting invaders like West Nile virus. If TLRs detect WNV, they release additional proteins that stimulate production of chemical communication compounds called interleukins. Interleukins released into the bloodstream marshal cellular assassins called macrophages and direct them to hunt and kill cells infected with WNV virus before the virus can multiply and make us seriously ill. Researchers suggest that some seniors and people with compromised immune systems may lack sufficient TLRs and related immune system proteins to thwart WNV.

Many species of mosquitoes prefer to feed at dusk and you can avoid being bitten by staying indoors in the evening. Unlike many of our native mosquitoes, the exotic Asian tiger is a daytime biter, adding hours of itching, scratching, and swatting to days in the garden. Protect yourself from aggressive biters by wearing light-weight, long-sleeved shirts and pants when working outdoors. Certain brands of clothing are pretreated with mosquito repellents such as permethrin. I have worn these in tropical rainforests where mosquitoes were ferocious and they really did help. Many topical insect repellents can be applied to exposed skin before you go outdoors. Some will provide many hours of protection, while others provide virtually none. Some repellents should not be applied to children and you should always help kids apply repellents. For safety sake, be sure to read and follow the directions on the label of the repellent before you apply it to people or clothing.

If you dine outdoors, place a small fan on your patio. The light breeze created by the fan will greatly reduce the number of mosquitoes flying and biting. Many traps are also available to capture and kill mosquitoes. Some rely on a light source to attract blood seekers. Many types of moths, flies, and beetles are attracted to light, but mosquitoes, unfortunately, do not use light to find their meals and are not readily attracted to light traps. One study demonstrated that less than 1% of the insects attracted to light traps were biting flies such as mosquitoes. This study estimated that light traps kill billions of harmless and beneficial insects each year. Actually, mosquitoes are attracted to odors emanating from the host. As we move about the earth, we release many odors, including carbon dioxide from our lungs and lactic acid in our sweat that help hungry mosquitoes find us. One recent study found that a nine-carbon aldehyde, nonanal, commonly produced by birds and humans is highly attractive to mosquitoes. This may help explain how WNV so readily moves from one of the common reservoir hosts, birds, to humans.

To reduce the chances of mosquitoes breeding around your home, eliminate standing water by cleaning your gutters, dumping your birdbath twice a week, inverting your wheelbarrow, emptying the wading pool, and getting rid of water-filled containers. If you have an aquatic water garden or standing water on your property that breed mosquitoes, you can use a product containing the naturally occurring soil microbe known as Bacillus thuringiensis israelensis, a.k.a. Bti. Bti comes formulated in doughnut-shaped tablets that can be placed in water to kill mosquito larvae. With plenty of thunderstorms and hot weather forecast for the foreseeable future, battalions of biters are about to make their presence known. Get ready to protect yourself as you work and play outdoors, or prepare to give blood.


To learn more about the mosquitoes and how to defeat them, please visit the following web sites:

- http://www.youtube.com/watch?v=IcfQdQHfwlw
- http://mosquito.ifas.ufl.edu/Mosquito_Management.htm

This this article originally appeared in the August 20, 2012 edition of Bug of the Week.

To learn more about a variety of insects, visit Mike Raupp's Bug of the Week website.
Update on Brown Marmorated Stink Bug
By Stanton Gill, University of Maryland Extension Specialist, Nursery & Greenhouse Management

In 2010 and 2011, brown marmorated stink bugs (BMSB) were seen in extremely high numbers in the Mid-Atlantic region. They were responsible for causing major economic damage to fruit and vegetable crops at a number of orchards and farms. In addition to causing damage to plants and fruit, brown marmorated stink bugs are a major nuisance to people. Adult stink bugs often seek shelter inside houses and other buildings. Once inside, they congregate almost anywhere. These pests will not cause structural damage or reproduce in homes. They do not bite people or pets. Although they are not known to transmit disease or cause physical harm, the insect produces a pungent, malodorous chemical and when handling the bug the odor is transferred readily.

The good news is that the brown marmorated stink bug populations have been significantly lower in 2012. In the late summer of 2011, weather conditions were unfavorable for the BMSB. Heavy rainfall in early September from tropical storms appears to have reduced the population of nymphs in the fall with fewer overwintering adults present in 2011 in the majority of residences in Maryland. The winter of 2011 to 2012 was very mild with warm periods interspersed with cold periods. The overwintering adult stink bugs came out of their overwintering sites during the warm periods using up valuable body food reserves causing a fair amount of mortality in overwintering populations. In the spring of 2012 there were greatly reduced populations of adult BMSB found in home gardens and in fruit plantings. We had reports of nymphs and adults feeding on home planting of blackberries, raspberries and vegetables during the summer of 2012, but in most cases, the populations were not at highly damaging levels. As we move into September of 2012 there are reports of increased activity of adults and nymphs in home gardens. People who turn on outdoor light systems are reporting clustering of adults in the area under the lights. These stink bugs are highly attracted to artificial lights in September.

When the weather turns cool at night, adult brown marmorated stink bugs look for overwintering sites and can be found on the outsides of buildings or inside near doors, windowsills, and other entry points. They can also be found in leaf litter and vegetation outdoors.

Parasites of BMSB
A study conducted in 2005 found less than 5% of BMSB eggs were parasitized. In a preliminary study by the University of Maryland, researchers are reporting an increasing number of BMSB eggs being parasitized by native parasites (12 to 29%). It is very good news that native parasites are adapting to this new food source.

Several nursery and landscape managers report that native bird species have been observed feeding on BMSB. Chickens and Guinea fowl will feed heavily on nymphs and adults. In some counties, residents are allowed to have a limited number of hens but not a rooster. Check with your local county zoning board to see what the situation is in your county.

Two egg masses of BMSB: healthy light green eggs (left) and dark colored eggs with parasitic wasps developing inside them (while feeding on and killing the BMSB) (right). On the left an Anstatus parasitoid has just found the BMSB egg mass. On the right a Scelionid parasitoid has recently emerged from a BMSB egg.
Photos: P.M. Shrewsbury, UMD
Control Options

Physical Control:
Adult brown marmorated stink bugs can enter homes through cracks and crevices. A few simple tips to help keep them from entering homes are:

- Caulk windows inside and out.
- Weather strip entry doors and/or install door sweeps if daylight is visible around the perimeter of the door.
- Rake away all debris and edible vegetation from your home’s foundation to keep from attracting pests.
- Inspect for and seal foundation cracks to block a potential point of entry.
- Secure crawl space entries.
- When insulating exposed plumbing pipes around the foundation or the crawl space of your home, caulk small gaps and fill larger ones with steel wool.
- If your home has a fireplace, cap or screen the top of the chimney to keep out pests.
- Both live and dead brown marmorated stink bugs can be removed from interior areas with the aid of a vacuum cleaner, but the vacuum may smell of stink bugs for a period of time.

Trapping:
Blue or black fluorescent lights attract the brown marmorated stink bug. There are several light traps that use these color spectrums that are available of the market. They will trap adult BMSB but the significance of the reduction in population is still being evaluated.

Read more about Brown Marmorated Stink Bugs on the HGIC website!

Save the Date!
College of Agriculture and Natural Resources
Open House
Saturday, October 6th
10AM - 3PM
4240 Folly Quarter Road, Ellicott City, MD 21042
Color in the Fall Landscape

Just because summer is ending does not mean that it has to be the end of color in your home landscape. Several herbaceous annuals and perennials come into their full glory in the fall. The old faithfuls for fall color are chrysanthemums (mums) and pansies. These colorful plants provide instant beautification. Mums are usually handled as annuals and are removed in the spring because many do not get established enough to survive the winter. Pansies, when planted in the fall, will become established and survive the winter to bloom again in early spring. Pansies are normally removed when they begin to decline in the early summer heat.

What makes some plants wait until fall to bloom? It has to do with their “photoperiod”. Known as “short-day” plants, a fall flowering plant’s bud formation is triggered by the gradual shortening of daylight after the first day of summer.

In addition to mums and pansies some other plants that provide great fall color include the following:

**Aster** – The daisy-like perennial aster is a member of a very large genus of plants native to many parts of the world. Asters flowers come in white, pale blue and pink. There are several species that grow wild along our region’s roads and in abandoned farm fields. Asters are useful for late summer and fall flowering but because many varieties are very tall, (some 4- 6 feet) staking or caging is often required. The recommended way to use asters in the landscape is as a “filler” placed in between other perennials for support. The cultivars typically sold in our region grow 18 -36 inches tall and include these cultivars: Blue Star, Esther, Golden Spray, and Pink Cloud.

**Boltonia** – This is a member of the aster genus that is a native to the Eastern U.S. Its flowers are about 1 inch in diameter and are white or purple. Except for a few cultivars, most Boltonias are even more unkempt-looking than asters and are best used in a wildflower or meadow landscape. However, Snowbank is a recommended cultivar that has a more ‘controlled’ habit of growth.

**“Flowering” Cabbage and Kale** – The word “flowering” is actually a misnomer. The coloration in this plant is not from a flower, but from the red, purple and white color of the foliage. The colors intensify as the weather gets colder. They usually look good through the end of December. For the best visual effect plant in masses. The difference in appearance between the cabbage and kale is in the texture of the leaves. The cabbage leaves are broad and rounded while the kale’s leaves are dissected and frilly (see photo).
**Golden Rod** – There are many species in this genus and most are native to North America. They are well-known for golden yellow flowers that open in late summer and persist through the fall. Golden Rod is commonly found growing along almost any country road or in vacant fields. At first they were slow to be accepted for use in the landscape because everyone considered them roadside weeds that cause allergies. Breeding work has produced several compact, better flowering forms that are perfect for any landscape. These cultivars range in size from 1 to 3 feet tall.

**Joe Pye Weed** – Joe Pye weed is a very large native wild flower that is quite common throughout our region. It grows 6-10 feet tall but there are cultivars that are a little shorter. The flower colors are light pink, dark pink, and reddish purple. Its very large blossoms are a favorite for attracting butterflies. Its name is derived from a Native American medicine man who used the plant for healing.

If you enjoy receiving the HGIC e-newsletter, stay in touch more often by “liking” us on Facebook and following us on Twitter.

Is all this social media technology new to you? Facebook is an online gathering spot where you can connect with friends and people who have similar interests. Go to HGIC’s [facebook page](#) for a preview. Like what you see? Click the Facebook Sign Up button to get started. If you are already on Facebook, enter Home and Garden Information Center in the search field and click on the like button. Once you “like” the HGIC page, you can read posted comments, post questions, and comment on posts by others.

Twitter is another way we are communicating with Marylanders. Tweets are very short messages (140 characters or less) and often include hyperlinks to other web sites or publications. To learn more visit [our twitter page](#) and click the Join today button.
An important new disease on impatiens, both in home landscapes and commercial plantings, has arrived in Maryland this summer. To prevent further problems this coming season it will be very important to follow the right management steps this fall.

At HGIC we received our first questions on impatiens downy mildew in July this year. The disease is caused by the fungus-like microorganism, *Plasmopara obducens*, and is favored by cool, moist conditions. However, we have continued to see symptoms even in hot weather. The disease affects both seed and cutting propagated *Impatiens walleriana*. It appears that New Guinea impatiens plants are resistant or tolerant.

Symptoms can be very subtle, starting as a slight light green mottling or stippling on one or a few leaves. Infected leaves may curl downward. If you look at the undersides of these leaves, the white fuzzy growth of the pathogen is visible. As the disease progresses, infected plants will be stunted, and leaves and flowers will fall off leaving bare, leafless green stems. The leafless stems will eventually turn brown and become soft.

The survival of the disease depends on thick-walled structures called oospores that are formed in the diseased leaves and stems. These oospores can then overwinter in the soil and become a source of the disease next year.

Unfortunately, fungicides do not cure infected plants, so all symptomatic plant material should be bagged and discarded. Don’t compost them in your yard or at your site. We understand that this pathogen has overwintered on infected plants both in Europe and on Long Island, NY. Therefore we are recommending that you should not plant Impatiens next year if you had infected plants this year.

Good substitutes would include cultivars of wax, winged and tuberous begonias, vinca, New Guinea impatiens, coleus, plectranthus, hypoeastes, iresine, torenia, lobelia, and nicotiana. You could even try some grass-like alternatives such as cultivars of isolepis (optic grass) which is a sedge, and juncus and luzula which are rushes, and stipa which is a feather grass.
Tree Care During a Drought

By Nevin Dawson, Forest Stewardship Educator, University of Maryland Extension

According to the National Climatic Data Center, NOAA, as of August 21, most of the Delmarva area continues to be under moderate or severe drought conditions due to a continued deficit in precipitation and high temperatures.

Despite their large root systems, trees are not immune to drought. A large tree uses hundreds of gallons of water in a typical summer day. Only about 10 percent of that water actually stays in the tissues of the tree. Most of it moves in a continuous flow from the soil through the roots, trunk, and leaves to the air, bringing essential nutrients to the leaves on its way. Without this flow, leaves wilt and lose the nutrients they need to produce energy for the tree. If the drought continues, leaves will either, die, drop off, or both.

Other symptoms of drought include branch dieback from the top down and outside in; leaves browning evenly from the edges inward and in between the veins; rolled or misshapen leaves; yellow, red, or purple needles in evergreens; small new branches on the trunk; cracked bark; and increased frost damage in the winter following drought.

Complete leaf drop or browning does not mean that the tree is dead. Most trees that are otherwise healthy will be able to put out at least one more flush of leaves in the growing season if water becomes available again.

Drought stress weakens a tree’s defenses and opens the door to many other pests and pathogens that wouldn’t attack a healthy tree. Pruning dead branches will make the tree less attractive to these secondary pests.

Take a look around at the site in which the tree is growing. Look for signs of soil compaction, herbicide drift, mechanical injury, and over-watering. Oddly enough, over-watering causes some of the same symptoms as drought. Water replaces oxygen gas in the soil, which roots need to live. Roots can die from too much water, just as they can from lack of water.

Trees planted in lawns have a lot to gain or lose from mulch. Mulch has two important functions. It suffocates weeds and grass, which are big competitors for the available moisture in the soil. It also helps to seal water in the soil, slowing down its evaporation into the air. Trees should have a layer of mulch two to three inches thick around their base. The ideal diameter of the mulch circle is the same as the tree’s dripline. This isn’t always possible, but bigger is always better. Use a natural material, and don’t line the ground with anything that might not let water soak through.

Mulching mistakes can cause severe injury to the tree. A tree’s bark is not waterproof, and it is susceptible to rot when it’s kept moist. Mulch mounds and volcanoes both act to hold moisture against the bark, often causing rot that can kill the tree or create a weak structural point at its base. Pull mulch several inches back from the trunk, enough that you can see the root collar or flare, and avoid creating a cup that can hold a pool of water against the trunk in heavy rain.

Water, of course, is the most helpful thing for a tree struggling with drought. Watering a tree is not the same as watering a garden. Instead of just moistening a large area of the visible top layer of soil, it’s best to soak the soil vertically. Do this with a steady trickle of water over 20 minutes to an hour. If you use a garden hose, set the pressure to a trickle that will constantly soak in without running off. You can also punch or drill a few holes in the bottom of a 5-gallon bucket and fill it with water. Rainbarrels are a great source of water. Sprinklers are good at distributing water, but a lot of it evaporates before it hits the ground, and a targeted approach is usually better for trees.

The roots actively absorbing water are located around the dripline, so concentrate your watering there, rather than near the trunk. Occasionally move the water source around, but you don’t need to water every portion of the dripline. Two or three waterings a month should be enough to keep your tree alive through a drought, although recently transplanted trees will need more water than established trees.

Interested in forest stewardship? Subscribe to the Forest Stewardship Education newsletter.
‘The Summer of Crazy Weird Weather’ has generated lots of vegetable production questions to keep our horticulture experts hopping! While July temperatures hit historic highs in Maryland, some areas were dealing with drought, others with downpours, and will anyone forget the derecho? Of course we’ve had a lot of the typical questions about vegetable production, too. Gardening experts are here to answer all of your gardening questions no matter the weather! In Maryland call 1-800-342-2507 (outside Maryland 410-531-1757).

Did you ever wonder who goes out into the community to teach educational programs on food gardening to the public? Maryland Master Gardeners... that’s who! Master Gardeners receive 40-50 hours of basic training from University of Maryland Extension. Then they volunteer in their communities to teach Marylanders how to cultivate garden spaces and manage landscapes sustainably using research based information. Does this sound like something you would like to do? Click HERE to learn more about how to become a Master Gardener in your community. It’s a great way to learn more about your own environment and get involved in your community.

Grow It Eat It blog authors have chronicled the goings on in their summer gardens across Maryland. And, yes, Master Gardeners have problems in their gardens just like the rest of us. They have learned to roll with what nature dishes out and adapt. And, fortunately for us, they are willing to advertise both their successes and their challenges. As an extra added bonus, they delight us with great photos and yummy recipes!

PHOTO CALL!
We’re looking for your photos! 2012 was the Year of Leafy Greens. 2013 has been designated as the Year of Root Vegetables. Are you growing your fall beets in a unique location? Did you harvest a mutant carrot? How did you keep pests off of your kale and cabbage? We would love to see photos of what you’re doing in the garden...especially with root crops. Please send them to groweat@gmail.com.

Basic ingredients for home-made tomato sauce
Photo B. Nixon, Master Gardener

Scarlet runner beans in flower
Photo E. Smith, Master Gardener

Blossom end rot on Big Moma tomatoes
Photo K. Phillips, Master Gardener
**Question**: We have these creepy looking insects living in our laundry room down in our basement. They look somewhat like a cross between a cricket and a spider. I never hear them make any noise but they jump towards me when I turn the light on. Please tell me what they are so that I can take the proper steps to eliminate them as my kids are afraid to go into the basement.

**Answer**: Camel or cave crickets (*Ceuthophilus*) can be quite alarming due to their size and jumping ability. They are however, harmless but unwelcome pests in homes. It is common for them to seek shelter in the fall in basements and other damp areas around a home. Outside, they live in leaf debris, under logs and rocks, in stacked firewood or any damp sheltered location. It is a type of cricket but does not make the classic chirping noise.

Most crickets wander in from outdoors so make sure doors and screens are tight. Replace worn weather-stripping and check thresholds. Caulk, screen or use insulating foam around basement window frames, vents and entrances for plumbing and wiring. Crawl space vents should be properly screened. Most importantly, dehumidify damp basements and fix any leaks to eliminate moisture. Remove hiding places such as wood piles, mulch and groundcovers from next to the foundation of the house. Sticky traps labeled for cricket control can help to reduce the population. These measures will make your basement less attractive to them and help to eliminate your problem.

**Question**: I just love to see mums in a garden in the fall. Several years ago I planted some in an area I thought would be perfect for them and they all died. What did I do wrong and what can I do to help them survive so that I can enjoy them year after year?

**Answer**: Chrysanthemums have been the mainstay of fall gardens for many years. Commonly known as mums the botanical name has changed a few times. Back in the 1700s botanists classified the plant as *Chrysanthemums*. Then in the late 1900s reclassified it as *Dendranthema* and have since then switched the name back to *Chrysanthemum*. As if that is not confusing enough many mums sold, particularly those sold in grocery stores and florist shops, are not cold hardy to our climate. However, there are hardy mums that will return year after year. Buy your plants at a garden center or plant nursery and ask if they are perennials.

Plant them early enough in the fall so they will have time to develop roots before winter weather sets in. Choose a site that receives at least 6 hours of sunlight and has well drained-soil. Amend the planting area with organic matter. Space plants about 18-24 inches apart. Water them if necessary up until the ground freezes. After a hard frost mulch with pine needles or shredded mulch. Do not prune them back after they have finished blooming. Mums survive the winter better when the crown is protected by the older foliage. Prune in early spring; you will begin to see new growth at the base of the plant. To keep the plants compact and to delay flowering, begin pinching them back when they reach about 6 inches tall. Pinch the growing tip and the first set of leaves. Do this about once a month up to the end of July. A light spring application of a general balanced fertilizer (containing N-P-K) is all that is necessary. Following these tips should help ensure your mums return for you next year.
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**MONTHLY TIPS FROM HGIC**

**SEPTEMBER**

**Lawns**
- This is the recommended time to carry out a total lawn renovation. Total renovation is best if your lawn is failing due to poor soil, has over 50% weeds, or is mostly dead. (HG102)
- Fertilize your lawn using the new Fertilizer Use Act of 2011 rates. For details click [HERE](#).

**Woody Ornamentals**
- Trees and shrubs should only be pruned at this time if they have dead, damaged, or hazardous branches. Wait until after all the leaves have dropped for all other corrective and cosmetic pruning. (HG 84) If desired, mark branches now with string or showy tape for pruning after leaves fall.
- The large tents of the fall webworm (photo) may be seen at the ends of tree branches. The caterpillars are done feeding but the large nests on the ends of branches are still visible. It is unsightly but causes little damage. They can be removed with a stick or pruned out if desired.

**Herbaceous Ornamental Plants**
- Plant daffodil bulbs in a sunny spot in well-drained soil. Follow package instructions for planting depth and spacing. Daffodils (narcissus) are not eaten by deer.
- The three types of slugs found in this area are the spotted garden slug (3-5 inches), the tawny garden slug (2-3 inches) and the gray garden slug (2-3 inches). They cause damage (large holes in leaves) to a wide variety of annuals and perennials. Set out shallow saucers of beer or yeast mixed in water and a teaspoon of soap to attract and drown the slugs. (Read more...)

**Fruit**
- Remove and dispose of all rotted or fallen fruits from trees, vines, and bushes. This will help reduce the amount of disease inoculum and number of insect pests that over-winter and attack your plants next spring. Do not compost
- Prune out the dead raspberry and blackberry canes that fruited this past summer. Fall fruited raspberries like ‘Josephine’, ‘Caroline’ and ‘Heritage’ can be mowed to the ground in late winter.

**Vegetable and Herb Gardening**
- When planting fall vegetables, be aware that more time will be required to bring the crop to maturity because of reduced light and ambient temperatures. Add at least 2 weeks to the “days to maturity” number on your seed packets. Cover your fall garden crops in September with a floating row cover or cold frame to further extend the harvest period.
- Dig potatoes you intend to store on a cloudy, warm day after plants begin to die back. Let the potatoes lay on the ground for a few hours before bringing them inside.

**Soil and Mulch**
- Now is a good time to have your soil tested, if you have not had your lawn or garden soil tested for the past 3-4 years. Many growing problems can be solved by correcting soil deficiencies. (HG 110)
- Fall is a good time to start a compost pile by mixing together spent plants, kitchen scraps, fallen leaves, old mulch and grass clippings. Shred your materials with a lawn mower, string trimmer or machete to speed-up the breakdown process. Keep twigs, branches and other woody materials out of the pile. To learn more, watch [Composting for Your Garden](#) video.

**Seasonal and Indoor Plants**
- Gradually start to get your houseplants ready to bring back into the house. If the plants have outgrown their pots, repot them into the next larger size pot or remove them, trim back the roots and repot in the same container.
- Use lightweight, well-drained soil-less potting mixes. Contrary to old established practice, pebbles, stones, and shards from clay pots do not need to be added to the bottom of planting containers. This actually reduces space for root growth and, thus, plant growth.
Indoor and Outdoor Pests

• Its early fall - prepare for the invasion of insects! Crickets, ladybird beetles, boxelder bugs, stink bugs, cluster flies, elm leaf beetles and other innocuous insects will attempt to enter your home this fall for protection. Caulk, weather strip and seal up all cracks and entry points around your house foundation, vent openings, windows and doorways to prevent these critters from coming indoors.

• Box elder bugs (photo) are congregating on box elder trees and may be seen in large numbers on house siding, sheds, shrubs or ground covers. The nymphs are bright red. The box elder tree is a weedy, native species. It has compound leaves with three leaflets and resembles poison ivy. The female tree has large clusters of winged seed pods (photo). The box elder bugs congregate on the female trees from the base to the canopy. Excluding them from entering your home is the recommended control.

October

Lawns

• Leaves that fall onto the lawn can be shredded with a lawnmower and left to decompose naturally. Run over the accumulated leaves several times with the mower to break them into small pieces. The decomposing leaves release nutrients and add organic matter to the soil; they will not hurt the turf. Remove deep piles of leaves or turf crowns may smother and die.

• Broadleaf weeds are growing vigorously with a return to cooler, wetter weather and can be effectively controlled with spot applications of labeled herbicides. Don’t apply herbicides to areas that you will be re-seeding. The herbicide will be harmful to the new seedling grass. If you need to treat the entire lawn with an herbicide, wait about 3 weeks before seeding. (HG 101)

• Mid October is the ‘official’ recommended cut-off for seeding a lawn. However, if the weather does not become too cold you can sometimes sow tall fescues up to the end of this month and still have them survive the winter. The success of the seedlings depends entirely on how late that cold winter weather arrives this year. (HG 102)

Woody Ornamentals

• Now is a good time to plant or transplant trees. However, dogwood, tulip poplar, pin oak and evergreens should not be dug up and moved (transplanted) in the fall; these species will usually fail to establish a root system in the fall.

• Flower buds are forming or are already formed on spring flowering shrubs. To prevent reducing next year’s bloom, don’t prune spring flowering shrubs until after they bloom next spring.

• Poison ivy leaves turn red in the fall. Cut vines to the ground and paint the cut surfaces with a product containing glyshosate or triclopyr as soon as the cut is made. Follow the label instructions. (HG 34)

Herbaceous Ornamental Plants

• Powdery mildew may be observed on plant foliage as a white, powdery coating on upper leaf surfaces. Removed fallen leaves and debris from the garden to reduce inoculum for next year; do not compost. No chemical controls are necessary.

• Early October is a good time to apply glyphosate to bamboo, multiflora rose and other difficult to kill plants. This is when the plants are transferring nutrients to the roots for winter dormancy. The success rate in controlling these weeds is very good when applied in the fall prior to dormancy.

Fruit

• Harvesting fruit before peak ripeness will help to minimize problems with yellow jackets and sap beetles.

• If you experienced poor growth in blueberries this season have your soil tested and amend your soil accordingly. Blueberries grow best in a soil with a pH between 4.5 and 5.2 and one that is high in organic matter.

Vegetable and Herb Gardening

• Pumpkins and winter squashes can be harvested when they are fully colored and you can’t push your fingernail into the rind. You may also leave winter squash and pumpkins on the vine until the first frost (not hard freeze) has killed the vines. Store pumpkins in a cool, dry location with good air circulation.

• Plant garlic now through mid-November for a July 4th harvest. Plant the cloves root end down; space them 4-6 inches apart and cover with 1-2 inches of soil. Mulch the garlic bed with fallen tree leaves after the green leaves emerge. Do not use store
bought garlic for planting because of the significant risk of introducing diseases such as white rot. (Read more...)

Fertilizer
- Keep leftover bags of fertilizer wrapped up securely in heavy plastic bags or solid containers. Rodents will often chew holes in fertilizer bags looking for food.

Seasonal and Indoor Plants
- If you have not already done so, it is time to bring houseplants back into the house. Check plants for ants, earwigs, pillbugs and other nuisance insects and manually remove. If insect pests are present, wash them off or apply a labeled houseplant insecticide to control plant pests such as aphids, scales, spider mites and mealybugs.
- To reduce shock from the change of light, place newly moved plants indoors in a bright location and keep them on the dry side until they have fully acclimated to the lower light intensities. It usually takes a few weeks to get a plant reacclimated to being back indoors.

Outdoor Pests
- Ticks remain active as long as daytime temperatures are above freezing. Keep grass and weeds mowed and move bird feeders to the edges of your yard to minimize tick problems. Check yourself and loved ones closely for ticks after hiking or camping.
- Carpenter ants (photo) tend to nest in wood that has been previously damaged by wood rots or insects. You must locate the nest and replace rotten wood to control this pest. Try using bait stations to control minor infestations of indoor ants. Granular insecticides or bait stations labeled for outdoor use on ants are also available. (HG 115)

Wildlife
- Black rat snakes are still hatching now. These harmless baby snakes are not black at hatching but are a light gray with dark brown rectangular markings down the back. Their length at hatching is around 10 inches.
- House mice may be more noticeable around and in homes due to the onset of cool weather. Keep turf and weeds mowed closely around your house. Seal all cracks.

Lawns
- This is still a good time to control wild garlic, clover, ground ivy, chickweed, and other difficult weeds with an herbicide if daytime temperatures remain in the sixties. Do not spray herbicides around ponds or on breezy days. Always read and closely follow all label instructions. (HG 101)

Woody Ornamentals
- Container grown or balled and burlap trees and shrubs can be planted until the ground freezes.
- Be sure to keep all plants well watered during dry periods this fall, especially those that are newly planted or transplanted. Silver maple, Bradford pear and Norway maple are considered invasive and are not recommended.
- Newly planted evergreens should be watered during dry periods in winter.
- Trees and shrubs can be pruned now. Because the leaves are coming off of deciduous plants you can more easily see the structure of branches and determine what pruning needs to be done. (HG 84)

Herbaceous Ornamental Plants
- It’s time to dig summer bulbous and tuberous plants, such as cannas, dahlia, gladiolus, caladium or tuberous begonia, and store them indoors for the winter. After digging, remove loose soil and cormels, cut the foliage back to just above the bulb and spread them out to cure for one to three weeks. Allow a 4-6” stem to remain above the cannas and dahlia tubers. This will help prevent a rot of the tubers while in storage.
- Spring flowering bulbs can still be planted, for best results place them in a sunny spot in well-drained soil, amended with compost.

Fruit
- Fruit plants can be pruned anytime during dormancy, between November and March. However, it is best to wait until late winter so that the full affects of winter weather can be assessed. This is especially true for peach trees.
- Fruit trees should be sprayed after leaf drop with a dormant oil to help control scales, aphids and mites. Spray all wood thoroughly on a windless day when the temperature is expected to remain above freezing for 24 hours.
Vegetable and Herb Gardening

• Keep garden beds covered with shredded leaves to minimize the risk of soil erosion and nutrient run-off. These can be tilled into the garden in spring or left in place as a mulch between rows of vegetables.

• Herbs brought indoors for fall and winter should be located where they will receive strong direct sunlight. Supplemental fluorescent light (cool white bulbs or grow lights) will probably be necessary as well. Keep lights on for 14-16 hours each day. Keep herb plants away from drafts and heat sources and mist them daily.

Soil

• Avoid the temptation to turn over or dig into wet soil. This can cause long-term damage to the structure of your soil. Poor, compacted soils can be improved through the generous addition of organic matter. Fall is an ideal time to add organic matter to your garden. Spade or till in a 6-8 inch layer of leaf compost or well-rotted manure and then cover with a layer of shredded or mulched leaves.

Mulch

• Mulch perennial beds, trees and shrubs with fallen leaves to help protect crowns and shallow root systems from severe cold weather. Keep mulch away from tree and shrub trunks.

Seasonal and Indoor Plants

• Be careful not to over-water houseplants. Potting soil should be allowed to dry out between watering.

Unless your indoor plants are growing under optimum, high light conditions do not fertilize them during the winter months.

Indoor and Outdoor Pests

• Cluster flies resemble very large, hairy houseflies. They are slow flyers and move into homes in the fall to escape cold weather. They are very active in November but as weather continues to get colder their activity will greatly decrease. Caulk, weather strip and seal up all cracks and entry points around your house foundation, vent openings, windows and doorways to prevent them from coming indoors. (Read more...)

• Miscellaneous beetles, like long-horned beetles and bark beetles may emerge from firewood stored inside the home. These are nuisance pests; they are not a threat to the wood in your home. You can also prevent many pests from coming into the house by storing firewood outside the house.

Wildlife

• Where voles are a problem try using mouse snap traps baited with apples. Fall is a good time to trap. Voles accept the bait readily after the first hard frost when desirable foods are less plentiful. Reduce populations before the winter when woody plant damage is greatest.

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