

Vegetable Garden Round-up

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

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QR to HGIC homepage

Three months of food gardening to go!

Your tomato and squash plants may be on their way out due to stink bugs, diseases, and neglect but that's no reason to give up on your vegetable garden. Yes, it is too late to set out broccoli and cabbage plants but it's a perfect time to plant lettuces, spinach, arugula, radish, and quick growing Asian greens such as komatsuna. Drag a metal rake over some available space in your garden to remove rocks and debris and create a good seedbed. Spread ½ in. to 1 in. of compost over the area and start planting. You'll be harvesting young salad greens in 30-40 days. Cover your plants with [floating row cover](#) to promote more rapid growth and protect plants from frost. You will be rewarded with tender salad greens into December. Leave the floating row cover on as a protective blanket through the winter and watch your plants spring back to life in March and give you weeks of good harvests! A cold frame will provide even more protection to fall/winter greens.

Or...throw in the towel and put it to bed

Ok- I get it. You are completely burned out by the weeds, bugs, and bounty that had to be picked, peeled, chopped, processed, and given away by the basketfuls. You feel you deserve a rest, but two critical tasks remain. So take some calming breaths and dig down deep 'cause you gotta clean it up and protect that precious soil.

Begin by removing all of the tired and ailing annual plants that have given their lives and fruits for your sustenance this summer. Either pull them up and shake off all the soil or cut them at ground level. Chop into small pieces with a machete or other tool, and throw the pieces into your [compost pile](#). Compost



Lettuce that re-grew in Spring after spending the winter under a cold frame



Lettuce kept snug through the fall/winter under floating row cover



Presto- the lettuce happily grows again with the arrival of spring



Low tunnel built by Sabine Harvey at a Kent Co. school. It's perfect for growing salad greens through the fall for a second round of harvesting in April.

well-rotted manure and covering beds with shredded leaves (plenty of those available in MD from Oct.-Dec.) You can also plant a [cover crop](#) up until the end of October to prevent soil erosion, improve soil structure, and increase soil fertility.

Brown marmorated stink bug (BMSB)

As predicted, this gregarious pest was back in full force in 2011. I observed stink bugs in just about every vegetable garden I visited this summer. This is one confounding critter. I personally had fewer in my garden this summer but other gardeners within one mile of me had much higher populations than in 2010.

Feeding observations: We know that BMSB has an impressively large range of host plants—both ornamental and edible. They feed on fruits (e.g., pepper, tomato,



The top of Jane Hayes' tomato stake covered with BMSB. Jane's vegetable garden in Howard Co. was decimated by BMSB in three days time!

piles that reach at least 130° F. throughout the pile should kill most weed seeds and pathogens. If you are worried about diseases and insects you can throw all the plant pieces in a black trash bag and leave it out in the sun for a week—then add to your compost pile.

Improve and protect your garden soil by adding compost or



BMSB nymph killed with direct hit of a soap spray. Sent in by Victor Pellicier.

the reverse. Within individual landscapes and gardens we've seen BMSB populations leave one host plant for another without any apparent reason. Many gardeners have observed high numbers of BMSB on tall plants (sunflower, hibiscus, corn, pole beans) and structures like tomato stakes. Gardeners have reported seeing less damage on unsupported (prostrate) tomato plants compared to staked and caged plants. In some gardens hybrid tomatoes were less damaged than heirloom cultivars. This may be a function of skin thickness.

Organic control tactics: Many gardeners have successfully controlled groups of nymphs by coating them with 1%-2% soap solutions. In the HGIC demonstration garden I sprayed Surround (kaolin clay) mixed at the label rate (1/2 lb. Surround in one gallon of water) on eight tomato plants a total of four times during June and July. I observed about a 50% reduction in feeding injury compared to untreated plants. And if you have the time and inclination you can shake, tap, or drop them into a container with soapy water where they will die.

Chemical control tactics: Acetamiprid, a neonicotinoid insecticide available for home gardeners seems to have been effective in the lab and in the field. We have not yet tested this in the HGIC demo garden.

Brown Marmorated Stink Bug (BMSB) Survey **How are They Treating You and Your Vegetable Garden?**

Help us understand this pest better by [clicking this link](#) and taking a quick 5-question survey. I'll share the results in the next edition of this e-newsletter.

Trapping: A commercial trap (Rescue) relying on a stink bug pheromone to attract BMSB was trialed by HGIC staff and a group of Master Gardeners. Results are still being collected. The traps attracted nymphs and adults to varying degrees. Traps in high locations seemed to be more effective. In most cases the number trapped was very small compared to the total population in the garden. Therefore feeding injury was not appreciably reduced.

There are always challenges to growing food crops and each year brings successes and failures depending on weather, pests, and our own skill and attention. There are no perfect gardens so don't get overly stressed by garden problems. Instead, write down your observations on what worked and did not work for you in 2011 so you can

Watch a beautiful orb weaver spider, *Argiope aurantia*, wrap up a stink bug for a snack. Thanks to Audra Russell for taking this video with her phone and sharing it...



research and plan ways to be more successful next year. And please lean on us to answer your questions and help solve your garden problems. We are just a call or a click away!

Join the “Mow Right” Movement

David L. Clement and Mary Kay Malinoski, UME Extension Specialists

All lawn best management practices hinge on proper mowing. Many university studies have shown that mowing at 3 inches prevents weed problems, reduces fuel costs, puts less stress on the grass, contributes to a healthy root system, increases drought resistance, leads to better resistance to insects and diseases, and helps prevent run-off of soil, fertilizers, chemicals, and pollutants.

Mowing turf to a 3 inch height is the single most important maintenance activity to ensure a healthy lawn. We recently received a grant from the Northeast IPM Center to do a study on encouraging homeowners to mow their turf at 3 inches (or the highest setting.) Our goal is to get as many Maryland homeowners as we can signed up for this 3 inch mowing study.

Please sign up for the Study on the Growing Green Lawns site at: <http://www.growinggreenlawns.org/content/mow-right-mowing-height-field-study-0>

You can request a mowing guide after you sign up. After mowing your lawn, use your mowing guide to measure the height of your cut. Contact information will be kept confidential. Your participation in the study will result in a sustainable lawn and a healthier environment.



Growing Green Lawns



Note: The Quick Response Code (QR) above is a type of barcode designed to be read by smart phones. When scanned by your phone the code may take you to text, a URL, or other data. Look for QR codes in the HGIC newsletter for quick access to publications or websites. For more information on QR's see the Summer 2011 Issue of the HGIC newsletter.

Winning the War on Mile-a-Minute and Kudzu

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

You lounge in the sun on your patio, surrounded by a mix of forest and meadow. Your favorite magazine drops from your fingers as you nod off in the pleasant afternoon warmth. Slowly waking from your nap an hour later, you move to stretch your arms. But something is wrong—you can't move. Startled and now fully awake, you look down and see that leafy vines grew over you while you slept, loosely binding you to your chair. You quickly wrench yourself free and march to the shed for the machete.

Mile-a-minute and kudzu are both exotic invasive vines from Asia that grow extremely quickly. Although neither could actually engulf anyone in an hour, mile-a-minute and kudzu can grow 6 and 12 inches per day, respectively, under optimal conditions. This fast growth and their climbing nature allow these vines to cover trees, houses, and vehicles when left unchecked. In a natural area, they can crowd out most or all native species.

Both of these species have a growing foothold in Maryland, but the viney wastelands they can create are luckily not yet common in our state. Both vines grow best in full sun and often get started in disturbed areas and forest or road edges—all common conditions in Maryland. It is up to the vigilance and quick action of you, the landowner, to keep these virulent pests at bay.

Kudzu was intentionally introduced and promoted in the United States as an ornamental, forage crop, and erosion control measure. It has spread quickly enough in southern states to earn the label, “the vine that ate the South.”

It's a perennial semi-woody vine with alternate, deciduous, compound leaves with three broad leaflets, each up to 4 inches across. Leaflets are hairy and may have lobed edges. Its purple flowers are a half inch long, and grow on upright stalks in the late summer. Flat dry hairy bean pods develop from the flowers.

The plant is probably not spread much by seed, but by rooting of stem nodes. This means that simply dropping a stem in a new site can be enough to start a new infestation. The huge tap root can weigh up to 400 pounds and support as many as 30 vines, each up to 100 feet long. Kudzu has many uses. The vines can be woven into baskets, the roots can be eaten and are said to cure alcoholism, and the plant could produce as much bioethanol per acre as corn. These benefits can be used as an incentive for control, but kudzu should never be planted.

Mile-a-minute is an herbaceous annual vine that was accidentally introduced in Pennsylvania. It favors wet areas and stream banks, and can easily spread downstream by dropping its buoyant seeds into the water. Its triangular leaf and sharp backward-curved barbs give it its other common name—Devil's-tail tearthumb. It also has unique circular leaves that surround the stem at each node. Small white flowers and clusters of berry-like blue fruit emerge from these circular leaves. Birds spread the seeds long distances.



Kudzu
Barry Rice - Sarracenia.com, Bugwood.org



Mile-a-Minute Weed; *Persicaria perfoliata*; Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Both vines can be controlled with a foliar herbicide treatment with glyphosate—like Accord® or Roundup®—or triclopyr—like Garlon® 4 or Element® 4. Kudzu requires a 2% mix, while mile-a-minute only needs 1%. Spray after mid-July so the herbicide is transported into the roots and kills them. Mechanical control with mowing, hand-pulling, or grubbing is also effective. Targeted grazing with goats or sheep also works, especially in locations where access is a problem, or where herbicide use is not preferred.

It's important to understand that when fighting kudzu, you're battling the large energy reserves in its taproot. If you're using mechanical control, you'll need to cut the vines several times over the course of a few years before the plant runs out of energy to resprout.

In battling mile-a-minute, on the other hand, you're fighting the seed bank. Make sure to cut or spray the vines

before they go to seed, and continue to control the new vines as they germinate. Small vines can be easily pulled by hand. Seeds are viable in the soil for up to 6 years, so persistence is required. Sites with a heavy infestation may benefit from treatment with a pre-emergent herbicide.

Promising biological controls are under development for both species. A naturally-occurring fungus shows great promise for the control of kudzu. A weevil that attacks mile-a-minute is being studied through a release and monitoring program, and should be available for sale to the public from the New Jersey Department of Agriculture in 2012.

This article was previously printed in the Delmarva Farmer and UME's Branching Out newsletter. Branching Out is published four times per year and distributed to forest landowners, resource professionals, and others interested in forest stewardship. Visit the [Forest Stewardship Education](#) web page for subscription information.

The Wanders of the Eastern Box Turtle

Ray Bosmans- Professor Emeritus University of Maryland Extension, and President –Mid-Atlantic Turtle and Tortoise Society

Remember the wonder and excitement felt when as a child you discovered your first box turtle wandering through your back yard or in a park? Back then these colorful and peaceful little reptiles were quite common in the mid-Atlantic region. Many box turtles were seen crossing roads after a summer rain, and since there wasn't as much traffic as today they usually made it across. Today, throughout most of our metropolitan areas, seeing a wild Eastern Box Turtle is not very common.



Male Eastern Box turtle

The box turtle gets its name from its ability to close up very tightly, like a small box. This is possible because of a special hinge in its plastron (bottom shell). This tight armor provides good protection against most natural predators. The Eastern Box Turtle (*Terrapene carolina*) is native to most of the states east of the Mississippi River from Maine to Georgia. There are four subspecies found outside of

this region: three-toed, ornate, Gulf-Coast, and the Florida box turtle. They all look very similar in size and overall markings. Box turtles average 5-7 inches in length. The largest is the Gulf-Coast box turtle. It will grow to ten inches in length.

The coloration of the carapace (top shell) of the Eastern Box turtle can be quite varied; no two box turtles are identical. Their markings (on a background of shades of brown and black) may be bright yellow, orange, or rusty red. Because of their beautiful pattern, gentle disposition, and small size they are often collected as pets. Although intentions may be good, most people do not know how to properly house and care for them often causing the turtles to sicken or die in captivity. Taking them from the wild as a pet only adds to their scarcity.

Research on box turtle behavior indicates that whenever a

box turtle is relocated from its home range it will try to go back to its old home and in doing so is often killed crossing roads. Therefore, when you rescue a box turtle from a busy road don't take it home as a pet. Release it in the same vicinity, in a safe place well off the road, in the direction it was originally headed. There are regulations created and enforced by the Maryland Department of Natural Resources (MDA) that regulate the number of wild-caught box turtles that one may possess. Read these regulations on [DNR's website](#).

The Eastern Box Turtle has a defined home range that covers a few acres or less. They wander about their habitat and have definite daily routines looking for shelter, food, water, or a mate. They also have their favorite places to just be comfortable or sleep. They may stay in a cozy spot for several hours or even days until they feel the urge to move on again. Favorite places may be under a log, pile of leaves or mulch, or under a low-hanging shrub. They usually return to these same places at night to sleep.

Box turtles eat earthworms, caterpillars, slugs, mushrooms, fallen fruit, and berries. They do little harm to vegetable or flower gardens. Where box turtles are still plentiful they may visit a garden and take a few bites out of tomato fruit within their reach. Help them by leaving a few tomatoes close to the ground for their enjoyment. Box turtles also enjoy soaking in water on hot days. Shallow containers of water placed in the landscape will be appreciated. Be sure to change the water often to prevent the breeding of mosquitoes. You can also use "Mosquito Dunks" in the water to prevent mosquitoes. The bacterium in them is harmless to wildlife, including turtles. Back yard fish ponds can be a death trap for box turtles if they cannot easily climb out.

Box turtles mate in the spring (April-June) and lay eggs in a sunny spot in a lawn or garden's soil. It takes many hours for the female to dig a nest 3-4 inches deep. Typically 3-5 eggs are laid. Box turtles are not mature enough to lay eggs until they are about ten years old. After laying, the eggs are on their own. The mother does not protect them or assist the hatchlings. The eggs hatch in September and October. It's not an easy beginning. The babies are small,



$\frac{3}{4}$ to 1 inch and brown and lack the hinge in the plastron. (It is developed and functional by the time the young turtle reaches two-three inches in length.) Sometimes the eggs and babies are preyed upon by raccoons and skunks; others that are not eaten may later die from dehydration.

Young box turtles are not totally safe from predators until they are about four inches in length; this takes three years or more. It's easy to see that the reproductive potential for box turtles is very low. While they may live a long time, (50- 100 years which helps offset their low reproduction rate) their longevity is not enough to keep up with the numbers being killed on today's busy roads.

The box turtle stands a good chance of surviving in harmony with man if we can provide a suitable habitat in our landscapes, exercise care when mowing lawns, avoid using too many chemical pesticides, and use caution when driving. If you find a turtle egg nest site in your yard, place a heavy screened box over it to keep raccoons from digging up the eggs. When the eggs hatch release the hatchlings in a well-planted area in or near your yard. Be sure to take plenty of pictures!

To learn more about this special turtle visit the Mid-Atlantic Turtle and Tortoise Society website at: matts-turtles.org.



Summer stingers – Eastern yellowjackets, *Vespula maculifrons*

Dr. Michael Raupp, Professor and Extension Specialist, Ornamental Horticulture, IPM

Recently, while mowing my lawn, I was jumped by a wicked band of furious yellowjackets that swarmed from their subterranean redoubt and delivered a couple of memorable stings to my ankle. As I danced away from the swirling storm, they sought retribution on my unfortunate lawnmower.

Yellowjackets are among the most aggressive of stinging insects found in Maryland. Unlike the European hornets these gals seem to seek vengeance with little provocation. Several species of yellow jackets are found in the mid-Atlantic region. The ones nesting in my backyard were natives, the Eastern yellowjacket, *Vespula maculifrons*.

Females usually spend the winter in protected locations outdoors and start new colonies in the spring. Their colonies can be underground, within wall voids or man-made structures such as sheds or old cars, or in dense shrubs or vegetation. Nests are made of papery chambers that house developing brood and an outer shell of paper that encloses the comb. Unlike the nests of bees, the yellowjacket's nest contains no honey or pollen. Yellowjacket larvae eat meat and carbohydrate rich foods provided by the workers. In this regard, yellow jackets are beneficial because they kill many caterpillars and beetles that are pests in our gardens.

By late summer and early autumn, colonies may contain thousands of workers and are often about the size of a football. Under extraordinary circumstances, some nests may persist for more than one year and reach gigantic proportions. There are reports of monster yellowjacket nests in southern states reaching the size of a "Volkswagen Beetle". Yikes! I sure wouldn't want to bump into one of those with the lawn mower.

In late summer and autumn, new queens are produced in the colony and workers become manic in their attempts to gather enough food for the developing royals. Feisty workers are common around trashcans, fruit trees, and outdoor eateries where they gather protein from sandwiches and sweets from fruit or open cans of soft drinks. Be careful when you picnic. Look at a potential picnic spot and select a table or patch of lawn removed from trashcans that are sure to be buzzing with hungry bees and wasps. Yellowjackets often enter drink cans in search of sweets. These unseen guests can really live up a soft drink, but swallowing one is dangerous. Instead of drinking from cans that may contain yellow jackets, use cups or clear bottles that allow you to see what is in your drink. Drink boxes with straws are a good choice for children to reduce their risk of imbibing a yellow jacket or bee.



A worker drinks carbohydrate rich honeydew from a scale insect.



Yellow jackets sometimes enter soft drink cans and later deliver a nasty surprise.



Applesauce at a picnic makes a great snack for yellowjackets.

If you encounter stinging insects at your picnic table, gently brush them away from your food rather than swatting them or flailing your arms. Quick aggressive movements on your part may be rewarded with the same by a yellowjacket. If you blunder upon a nest in the lawn or in a bush, walk away from the nest as quickly as possible with a minimum of swatting and arm waving. Walking through a bush (no, not one with the nest) may help throw the pursuing workers off your trail and help you escape without stings.

When attacking, a yellowjacket releases a chemical signal called an alarm pheromone into the air. The pheromone signals other yellowjackets to attack and sting. Yellowjackets are capable of multiple stings. However, they have barbs on their stingers and many lose their stingers and internal organs when they attack. They sacrifice their life in defense of the colony.

If you know of a yellowjacket nest and the nest is unlikely to be encountered by humans or pets, you may simply leave it alone. If the nest is in a place that threatens you, children, or pets, you may consider eliminating it. Commercial pest control operators can assist you in this. I have purchased aerosol sprays, applied them according to the instructions on the label, usually at night or in the evening, and had excellent success. Please be careful around these fierce warrior wasps or you might get stung.

To learn more about a variety of insects, visit Mike Raupp's [Bug of the Week](#) website.

Bug of the Week thanks Dr. Nancy Breisch for sharing her expertise and knowledge about stinging insects.

New Asian Fruit Pest Found on Maryland Farms

*Jerry Brust, Agent and Regional Extension Specialist and
Jon Traunfeld, Regional Extension Specialist*

Home gardeners battling brown marmorated stink bug may have a new fruit fly pest to deal with - the Spotted Wing Drosophila (SWD)!

This summer a sample of fruit flies was given to extension by Bob Rouse, a horticultural consultant, from fruit farms he consults for in Central Maryland. These flies were identified by University of Maryland Extension personnel and then verified by the USDA as Spotted Wing Drosophila (SWD), the first find in our state. This pest was first identified in the western US in 2008. In 2009 it was found in California, Florida, Oregon, Utah, and Washington. In the last year it has also been found in the Midwest and Pennsylvania. Long-distance dispersal usually occurs with the movement of infested fruit to new areas.

The SWD is a temperate-zone fruit fly; native to Southeast Asia that prefers temperatures of 67-85° F. Adults are small (2-3 mm) flies with red eyes and a pale brown thorax with black stripes on the abdomen. The most distinctive trait of the adult male is a black spot towards the tip of each wing. The female does not have any wing spots (Fig. 1). Larvae are tiny (up to 3.5 mm), white, cylindrical maggots that are found feeding in fruit.

Common fruit flies often infest overripe or decaying fruit in late summer. They are considered nuisances, not crop damaging pests. However, the spotted wing drosophila female lays her eggs inside healthy unblemished fruit with her saw-like ovipositor (Fig. 1). The adult female can damage fruit when she lays eggs while the larvae contaminate fruit at harvest, causing it to become soft and unmarketable (Fig. 2 & 3). SWD infests thin-skinned fruit such as

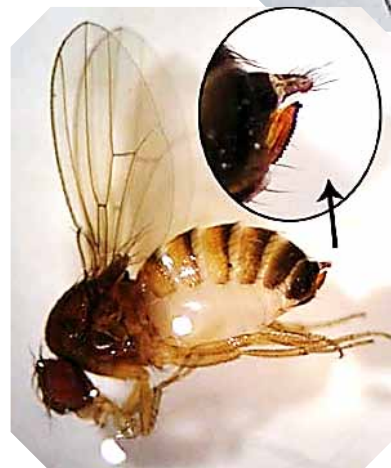
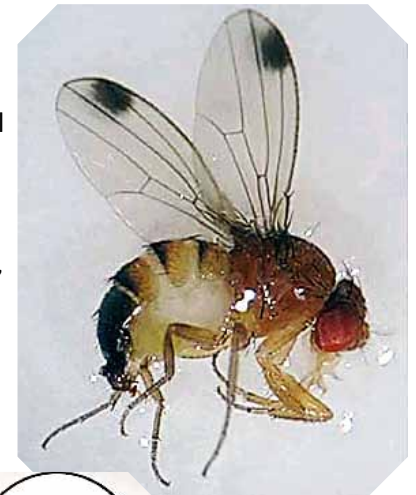


Fig. 1 Male (above) and Female (left) spotted wing drosophila flies



Fig. 2 SWD damage in blackberry

grape, cherry, raspberry, blackberry (raspberries and blackberries appear to be very susceptible fruit), blueberry, and strawberry. SWD

overwinters in the adult stage. The flies become active in spring, mate, and lay eggs in the thin-skinned fruit. Multiple generations develop each year wherever this insect can overwinter. At a constant temperature of about 75°F it takes only nine days to complete the lifecycle from egg to adult. This rapid developmental rate allows it to quickly build large populations and inflict severe damage to a crop.



Fig. 3 Oviposition (egg laying) marks on cherry

The best thing to do is monitor for this pest if you have small fruit. Monitoring can help you time insecticide applications for greatest effectiveness. You can use homemade traps to monitor for

SWD. There are several sites that explain how to make the traps:

- [Spotted Wing Drosophila - What Washington State wine grape growers need to know](#)
- [Washington State University Orchard Pest Management Online](#)
- [University of Florida iFAS Extension - Spotted Wing Drosophila New in Florida Berry Culture](#)

You can buy commercially made traps:

- www.contech-inc.com/products/fruitflytrap/
- ipm.wsu.edu/small/pdf/Spring2011MonitorIDControlSWD.pdf

For any of these traps you will need to add 1 or 2 inches of apple cider vinegar to the bottom of the trap with a

drop of unscented dishwashing soap to break the surface tension so the flies will drown. Hang the trap in the shade near berries preferably before fruit begins to ripen. Check the trap weekly for small flies with dark spots at the tip of their wings floating in the fluid. These will be male SWD. Put fresh apple cider vinegar and a drop of soap in each week or so. You also should observe your fruit regularly as it begins to ripen. On cherries and blueberries start checking fruit for punctures (also called stings) the female creates when she lays eggs as soon as fruit begins to develop any color. The punctures are tiny and can be best seen with a magnifier or hand lens. Pull open suspect fruit to see if there are larvae inside. If you find infested fruit you should spray to prevent the damage from increasing. The infestation level can increase quite rapidly if left untreated. Remove and destroy infested fruit as you monitor. Stings are not readily visible on berries so it is difficult to detect an early infestation by monitoring the fruit alone for damage.

Please contact the Home and Garden Information Center if you are a home gardener and suspect you have SWD in a fruit crop. Call 800-342-2507, Mon-Fri or send us a question and photos by clicking "Send a Question" on our home page- www.hgic.umd.edu.

Pesticide Management: If monitoring indicates a need to spray, the application should be made as soon as possible. In raspberries or strawberries, sprays may need to be repeated to keep SWD populations low during their prolonged fruiting period in summer and fall. Malathion will control SWD and has a short pre-harvest interval (PHI)- you can eat fruit soon after spraying. But it is also very toxic to bees and natural enemies. Other possible alternatives to Malathion with fewer negative environmental effects are chemical pesticides known as neonicotinoids, and organic insecticides containing spinosyns as the active ingredient. To get satisfactory control with these alternatives two sprays may be required; the second applied 5 to 7 days after the first. Additional sprays may be needed for berries with a prolonged fruiting period. Be sure to check the label before applying any chemical as the specific chemicals that can be used.



Join us for our annual Open House!



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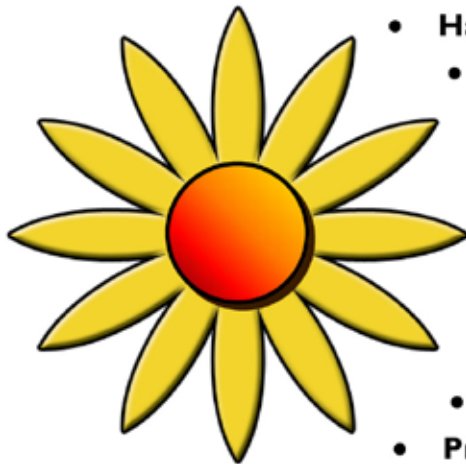
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Saturday ■ October 1, 2011 ■ 10AM-3PM

Central Maryland Research & Education Center - Clarksville Facility
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- Hay wagon farm tours
- AGNR College information
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or call 301-596-9330

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How would we sum up what's been happening in the world of Grow It Eat It Food Gardening? One word: **WOW!**



The Grow It Eat It blog now has 23 authors and has been redesigned to make it easier to find posts in specific subject categories. There were 33 individual blog posts in June, 42 in July, and we're averaging about one post per day in August so far! If the number

of comments is any indication, readers are really enjoying all of the posts. To join in the fun, and learn about real gardeners' successes and frustrations around the state, bookmark the GIEI blog and visit us often!

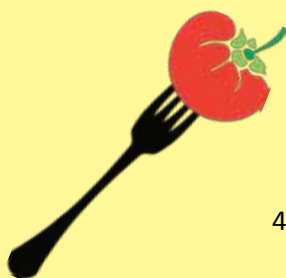
Updated Plant and Pest Problems section features detailed descriptions of the pests, how to identify them and how to control them. We've also included photos and some short videos to help you identify the pests and control them.

If it's summer, it must be video production time at HGIC! Our talented video production team of Emily Heimsoth and Brett Wooldridge has cranked out a whopping 16 new videos this summer for a total of 98 and counting!

- [CSI: Garden Pests](#)
- [Integrated Pest Management \(IPM\)](#)
- [Vermicomposting: using Worms to Make Compost](#)
- [Types of Vermicomposting Containers](#)
- [Row Covers: How to Use a Row Cover in the Vegetable Garden](#)
- [Row covers: How to Build a Low Tunnel](#)
- [Types of Raised Beds](#)



- [How to Build a Raised Bed](#)
- [Composting for your Garden](#)
- [Types of Composting Bins](#)
- [Fencing for your Garden](#)
- [Container Gardening: An easy way to grow your own food](#)
- [Fall Gardening](#)
- [Picking out Produce at the Farmer's Market Part 1: Peaches, Plums, Tomatoes, Cantaloupes, and Watermelons](#)
- [Picking out Produce at the Farmers Market, Part 2: Bell Peppers, Eggplant, Green Beans, Corn, Zucchini, and Summer Squash](#)
- [Brown Marmorated Stink Bug Control](#)



Grow It Eat It Impacts

Over 3,000 subscribers in the Food Gardening Network
 8,963 people actively food gardening in Maryland
 Over 1,400 Facebook 'Likes'
 421 YouTube subscribers with a total of 536,485 total upload views
 488 Twitter followers

Questions and Answers

by Debra Ricigliano, Certified Professional Horticulturist

Question: This spring I moved my houseplants outside where they spent the summer on my deck. I also bought a mandevilla vine which is growing beautifully and is still flowering. Do you have any tips that you can offer so that my plants make a smooth transition back indoors?



Answer: When evening temperatures dip into the fifties begin to prepare your tender tropical plants for their trip back inside. Begin the process by moving them into a shady location a week or so before you move them indoors. This will help them adjust to lower light conditions. Prune excess growth to bring them down to a more manageable size for indoors. While still outside, check for pests and spray with an insecticidal soap to prevent any hitchhikers from coming in on your plants. Once inside for the winter cut back on care, stop fertilizing until early spring and water only when the potting mixture feels dry. Humidity is an important factor during the winter so do not place them near a dry heat source and mist on occasion. For additional information refer to [HG 105, Overwintering Tropical Plants](#)

Question: My tomatoes finally started to produce a nice crop of fruit. I am afraid they will not get the chance to ripen on the vine before the frost. What can I do with all these green tomatoes?

Answer: If a light frost is predicted cover the plants in the late afternoon with a sheet or floating row cover, and then remove it in the morning. Or you can harvest the fruit and bring the tomatoes indoors to ripen. Fruits that have started to show some color will ripen satisfactorily indoors. Wrap the tomatoes individually in paper or place them in a single layer in a paper bag. Keep them in a cool, moist location. Check them on a regular basis and do not place them in the refrigerator. Green tomatoes can be fried, pickled, or turned into salsa or relish. To learn more about floating row cover read [GE 004](#).

Question: We still have herbs like parsley and chives growing in containers on our deck. Yesterday when I went out to pick some parsley I saw these large, green and black striped caterpillars with yellow spots on them. They are chewing the leaves down to the stems. What are these guys and do I need to control them?



Answer: Parsley as well as dill, fennel and other members of the carrot family are host plants for the black swallowtail butterfly. Even though these caterpillars are feeding on your parsley they are good guys and should be left alone. Very shortly they will be pupating, or making a cocoon, in a sheltered location where they will overwinter. Take this opportunity to enjoy their beauty. Next year plant a little extra parsley. This way you will have enough for yourself and some to share with the caterpillars.

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](#))
- Improving the turf's thickness will help combat crabgrass and other types of weeds.
- Cool season grasses, bluegrass and fescue should be fertilized in September and again in October with 1 lb. of nitrogen per 1,000 square feet in each application. Apply lime if indicated by soil test results. [Refer to our website for information on getting your soil tested.](#)

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](#))
- 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.
- Bagworm infestations may be heavy at this time on evergreens ([photo](#)), especially spruces. Remove the bags where possible to prevent overwintering eggs from hatching in the spring.
- Rose diseases will continue to be a problem through most of the fall. Continue spraying black spot susceptible roses with a labeled fungicide.

Herbaceous Ornamental Plants

- Plant hardy mums now so they will become well established prior to cool weather. Pansies, ornamental cabbage and kale can also be planted.
- 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.

- Tropical lilies will continue to bloom until frost. Periodically remove the older yellow leaves and spent flower heads of tropical lilies.
- The three types of slugs found in this area are the spotted garden slug (3-5inches), 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 fruiting raspberries like 'Josephine', 'Caroline' and 'Heritage' can be mowed to the ground in late winter.

Vegetable and Herb Gardening

- Plant cool season vegetable crops that will mature into the later fall months. These include Chinese cabbage, turnips, kale, mustard, spinach, and lettuce. Keep seedlings and transplants well watered and mulched.
- 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 lawnmower, 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](#).

Seasonal and Indoor Plants

- Gradually start to get your houseplants ready to bring back into the house. If the plants have out-grown 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.

Wildlife

- Keep birdbaths cleaned and re-filled frequently with fresh water. Don't remove the large seedheads of black-eyed susans, coneflowers, and other perennials for birds to feed on over the winter.
- Shorter days trigger the hummingbird's migration instinct. Leave your hummingbird feeders up through October.

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)
- Crabgrass has already formed seed heads for next year. After a frost it will die and the old dead plants can be removed by hand raking. If crabgrass was a severe problem this summer, apply a crabgrass preemergent next spring. Over-seed your lawn now to thicken the turf which will also help combat crabgrass.
- 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)
- In the cooler sometimes wetter weather of October harmless toadstools and other mushrooms may [TOP](#)

be plentiful around tree root systems. However, destructive wood rotting organisms produce conks, which resemble fleshy, shelf-like structures, on tree trunks. Affected trees may be suffering from extensive wood decay and should be inspected for trunk soundness by a licensed arborist. ([Read more...](#))

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; no chemical controls are necessary.
- Now is the recommended time to divide and replant overcrowded perennials. Most are easily divided but a few such as Baby's Breath, Gas Plant, Butterfly Weed, and Lenten Rose do not tolerate being divided.
- 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.
- Sweet potato roots will continue to enlarge until frost so check root size to determine when to harvest. Handle harvested roots gently and cure the roots by storing them at 85°F. and high humidity for 4-7 days. Thereafter, your sweet potatoes can be

stored in a cool, dry location.

- 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...](#))

Soil

- Bare soil is prone to erosion especially over the winter and should be covered with mulch, groundcovers or turf.

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.

Compost

- Barrel and tumbler type composters work well in small spaces but need to be closely monitored to insure a proper mix of green and brown materials and adequate moisture levels. A disadvantage of barrels is that they are too small to heat up quickly. Compost piles should be at least one cubic yard in volume to heat up properly. Watch [Compost Bin Varieties](#) for more information.

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. Wash off insect pests or apply a labeled houseplant insecticide to control any 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 of the indoors. 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 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](#))
- Avoid storing pesticides over the winter in sheds and garages. Cold temperatures can cause these materials to become ineffective. If you have questions about the efficacy of your pesticides call the manufacturer, using the phone number listed on the label.

Wildlife

- Squirrels are busy gathering nuts of oaks, hickories, and beech for the winter. They eat what they need and store the rest. Gray squirrels bury nuts at many locations. They find their nuts by sense of smell and memory and may end up eating nuts buried by other squirrels. Often squirrels store nuts in attics, so prevent their entry by securing hardware cloth over openings.
- 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.

NOVEMBER

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.

Woody Ornamentals

- Nursery stock 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.

- 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](#)
- The egg masses of the Eastern tent caterpillar should also be pruned out. They resemble shiny, black styrofoam and can be seen on the ends of wild cherry and crabapple trees. ([photo](#))

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.
- Cover your ornamental pond with a small mesh screen, such as chicken wire or plastic bird netting, to keep the leaves out during the fall and winter. For maximum freeze protection for your pond fish install a stock tank heater for small ponds to prevent them from freezing over completely during the winter.
- Now is the time to cut down and remove all water plant parts that have succumbed to freezing weather. Tropical lilies should be allowed to die outside; they are very difficult to overwinter inside.

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.
- Maintain mulches around small fruit plantings unless field mouse feeding is observed. Mulch [TOP](#)

should be applied only 2-3 inches and kept away from crowns and trunks. Deep mulch makes a favorable home for voles.

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.

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.
- If you notice large quantities of seed missing from your bird feeders, squirrels and raccoons may be the culprits. However, some bird species such as chickadees, titmice, nuthatches, some woodpeckers, and blue jays cache (store) food for later use. Blue jays often bury their seeds and nuts just like squirrels.





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