BUCKEYE YARD AND GARDEN LINE 2015-22
09/03/15

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Buckeye Yard and Garden Line (BYGL) enhanced with photos and links is available online at: [http://bygl.osu.edu]. Become a fan of the BYGL on Facebook at [http://www.facebook.com/OSUBYGL] or follow the BYGL on Twitter at [http://www.twitter.com/OSUBYGL].

This is the 22nd 2015 edition of the Buckeye Yard and Garden Line (BYGL). BYGL is developed from a Tuesday morning conference call of Extension Educators, Specialists, and other contributors in Ohio.

******HOW TO: BUCKEYE YARD AND GARDEN LINE SUPPORT. The Ohio State University (OSU) Buckeye Yard and Garden Line (BYGL) writers need your support to continue this newsletter. OSU puts a great deal of resources into this project and we do not receive funding necessary for full support. We know you like BYGL, as in the 2014 Reader's Survey respondents indicated BYGL saved them $2.45 million dollars, 96% indicated BYGL was useful in their jobs, and 87% indicated BYGL helped with their diagnostic skills.

Funds will support on-going work of the Ohio State University Extension Nursery Landscape and Turf Team in matters regarding preparation, compilation and travel for the weekly April-October BYGL e-newsletter. Expenditures will include but not be limited to equipment such as cameras, upgrades of computers and related devices, management of the website, editing and webinar costs, and travel reimbursements.

Here's how you show your support:

This is the direct link to the OSU giving site: [http://go.osu.edu/byglsupport].

Or:

Go to [https://www.giveto.osu.edu/makeagift/OnlineGivingDonation.aspx?fund=315145] and click on "search," then enter the fund number into the box. The fund number is 315145 and the name is Buckeye Yard & Garden Support. The fund, its name and description will appear in a new, smaller box. Click "Select this fund."

Then, you can either leave the default $100 in or change it; and fill out the remaining form (name, address, etc.). The form will walk you through. You can either do a one-time gift or recurring (monthly, etc.).

Also, if you would like to make a larger gift, please contact Jennifer Heller ([heller.4@osu.edu]), the Director of Development for the OSU College of Food, Agricultural and Environmental Sciences with your name and contact information. Jennifer's cell phone number 614.975.1317 and she will be more than happy to speak with you.

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1. PLANTS OF THE WEEK.

*ANNUAL - SUNFLOWER (Helianthus annuus). One of the most striking annual flowers in our landscapes and gardens this time of year are sunflowers. There are many sunflower varieties on the market with a vast array of forms, sizes and colors available. Sunflowers can be grown as a cut flower and some varieties, if left to mature, provide yummy seed for snacks. Birds and squirrels also love the seed. There are also types that are grown for oil.

Sunflowers are usually direct seeded as soon as the soil warms. These plants will perform best if planted in full sunlight. Transplants can also be used for quicker blooms. Spacing is determined by the variety used. Smaller non-branching types can be spaced very close (1”) to one another, whereas larger branching types need much more space (3’). Ensure 1” of water per week. Some varieties produce copious amount of pollen, while other varieties such as the ProCut Series are pollen-less. Also available are some fun cut flower types like ‘Teddy Bear’, ‘Joker’ and ‘Coconut Ice’. Of course there are always the giant types such as ‘Mammoth’. Sunflowers mature 28 - 85 days after planting depending on the variety so it is easy to have sunflowers all summer long.

Fortunately, sunflowers are fairly pest and disease-free, although septoria leaf spot, powdery mildew and grasshoppers can be problematic.

If you are growing for seed, harvest when the back of the flower begins to turn yellow. At this point, the flower can be cut and hung up to dry to keep it safe from birds and squirrels. The seeds are ready to harvest when the back of the flower is brown and dried, the leaves have all fallen off and the black and white striped seeds are nice and full. Roast sunflower seeds in a shallow pan at 300F for 30 - 40 minutes or until golden brown.

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*PERENNIAL - GOLDENROD (Solidago spp.). Non-gardeners usually look at avid perennial gardeners who pay money for goldenrod and intentionally plant it in flower beds and just shake their heads. They have a hard time believing that anyone would pay good money for a "weed!" The truth is that gardeners pay good money for any plant if it's different - right! Over the years, several discoveries in the world of goldenrods have led to some really cool cultivars for the landscape.

These native plants grow wonderfully in Ohio gardens and tolerate hot, dry soils. The flowers bloom at or near the same time one might find them in the fields and are bright gold or yellow. They require full sun and have few problems in the landscape. Don't over fertilize as this might cause plants to get tall and lanky and flop. Despite the belief that these are weeds, goldenrods come with some pretty good
characteristics including deer resistant, attractive to butterflies, are easy to grow, are native, and make great cut flowers. And oh, by the way, don't blame goldenrod for hay fever and allergies as it's not the one responsible (that would be ragweed!).

The cultivars of goldenrod generally have an enhanced flower or growth habit and are actually more pleasing than the species in the fields. 'Fireworks' is a cultivar of S. rugosa that looks like it's literally exploding in the garden. It grows around 3 - 4' tall and as wide and is covered with long slender blooms that resemble sparklers. Little Lemon ('Dansolitlem') is a short variety that grows around 3/4 - 1' tall and as wide and has bright lemon-yellow flowers. 'Golden Baby' grows around 1 1/2 - 2' tall and as wide with golden yellow flowers.

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*WOODY - LATE-BLOOMING CLEMATIS (Clematis spp.). Clematis is a woody vine in the Ranunculaceae or buttercup family. This genus has over 250 different species! Several categories exist including: early-flowering clematis, large-flowered clematis, and the late-flowering clematis group. This is the time of year when late-blooming clematis starts its show. Some plants in this category include: C. paniculata, C. flammula, C. virginiana, C. maximowicziana and others.

The late-blooming clematis flowers on the current season's growth first in the spring and then again in late summer or fall making this plant more desirable in the perennial garden. With no buds forming on new wood this allows for easier pruning. To maintain this plant year-to-year, one should prune clematis back to 2 - 3' in February or March.

Clematis thrives in full sun. Soil should be well-drained, moist, and fertile with a pH around 7.0 or close to neutral. Clematis typically requires staking so that plants can climb upward which also allows gardeners to incorporate other plants around the base of the plant. There are a few potential problems that can plague a stressed clematis plant including: wilt, powdery mildew, aphids, slugs, and on occasion rabbits and mice.

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*VEGETABLE - CABBAGE (Brassica oleracea var. capitata). Cabbage can be easy to grow if you choose suitable varieties and carry out good cultural practices and insect management. It is very cold tolerant and will withstand temperatures down to 20F. Cabbage grows best in fertile, well-drained soil with lots of added organic matter. Full sun is needed for the best yield but cabbage will tolerate light shade.

For a fall crop you can plant seeds outdoors 10-12 weeks before the first frost. There are many varieties available; by choosing ones with varying maturity dates you can prolong your harvesting period. Plants can be spaced 12 - 18" apart in rows depending on the variety and the head size desired. The closer the plants, the smaller the cabbage head. A liquid starter fertilizer applied at the time of transplanting is recommended. Adequate soil moisture is necessary throughout the growing season to produce good cabbage. Watering is especially important in fall plantings to help the young plants withstand the heat of summer and to supply the developing heads with ample water to develop quickly. Cabbage has a shallow root system so roots can be easily damaged by cultivation. Adding organic mulch will help to keep the soil cool and moist, protect the roots and help with weed control.

Harvest when the heads become firm, the size will vary with variety and spacing. When heads are mature they are prone to splitting in response to any stress or a sudden heavy rain. To avoid splitting you can space plants closer together, choose varieties that resist splitting or wait until the heads are firm and then twist the plant to break some of the roots. To help reduce disease, practice good crop rotation.
The Hamilton County Extension Office recently found an unwanted guest on the cabbage in their educational garden at the office. Joe Boggs identified it as the imported cabbageworm (*Pieris rapae*). As the common name indicates, it's another non-native; however, it's been with us since the 1800's. A foliar application of insecticides, including a bacterial insecticide like *Bacillus thuringiensis*, is highly effective in killing the imported cabbageworm.

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*WEED - PHRAGMITES (*Phragmites australis*). Phragmites or common reed grass is considered a perennial wetland plant species. The plant is particularly established in the eastern states along the Atlantic Coast, and is increasingly being found across much of the Midwest and in parts of the Pacific Northwest. This invasive species creates tall dense stands that can reach 15' in height. Its habitat crowds out native plants, blocks views, reduces access for water recreation such as swimming, fishing, and hunting, and can even create fire hazards from an accumulation of dried materials.

Phragmites can be spread by seed in the wind or by animals, but also spreads by aggressive above ground stolons and below ground rhizomes. Plants have also been moved by humans who are attracted to the plant and think it would make a nice addition to their landscape, use it for floral arrangements, or camouflage for hunting blinds - WRONG! Once established, it is very difficult to control or eradicate. Mowing, burning, physical removal and herbicide treatments are "tools" in the management tool box. With this plant, there is really no such thing as a one and done, but rather these tools are often used together and it can take many years to be successful.

People should be aware that there is a native phragmites. Michigan State University Extension has a brochure that illustrates the similarities and differences of these species. It can be found on their website at - [http://mnfi.anr.msu.edu/phragmites/phragmites-native-non-native.pdf](http://mnfi.anr.msu.edu/phragmites/phragmites-native-non-native.pdf)

Phragmites is an invasive species that is included on the Great Lakes Early Detection Network (GLEDN) APP and is a species that we are encouraging Ohioans to report to report using the APP. The free APP is available for i-Phones and androids. So download the APP and let the reporting begin.

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2. HORT SHORTS.

POTENTIAL HAZARDS FOR PETS IN THE GARDEN. Thank you to one of our BYGL readers for pointing out that Heliotrope, our annual plant of the week on August 20, 2015 is poisonous to dogs. This prompted a discussion among the BYGLers about what plants may be toxic to our beloved pets. There is no easy way to know which plants are poisonous at a quick glance. Some plants may cause nausea, vomiting, diarrhea, or stomach cramps, while others may be irritating to the skin, mouth, and tongue. Eating a small amount of a plant may not be a problem, but large or repeated amounts could be harmful. Sometimes pets will chew or eat anything, no matter how it tastes. We thought it might be helpful to include websites where readers could check to see if they may have plants in their garden that could cause harm to their pets. Those resources include:

University of California - Safe and Poisonous Garden Plants [http://ucanr.edu/sites/poisonous_safe_plants/](http://ucanr.edu/sites/poisonous_safe_plants/)


B. TEACH YOUR CHILDREN WELL. Curtis Young reported witnessing what could have been an event that could have had a very tragic outcome. While walking his dogs, several young children between the ages of 4 - 7 years of age approached him from a neighbor's gathering wanting to pet his dogs. One of the youngest children caused Curtis to be alarmed when he saw that her hands, cheeks and lips were stained with the juice of purple berries. Curtis knew that the most likely source of the purple staining fruit was from the POKEWEEDS (*Phytolacca americana* = *P. decandra*) growing in a couple of weedy areas bordering the properties where the children were playing. Curtis reported to the parents and grandparents of the child that she had eaten the berries of a potentially poisonous plant and recommended that take precautionary actions to deal with the potential poisoning.

Pokeweed is a native plant of the Eastern US. Pokeweed has numerous common names used in different parts of the US including American cancer, American nightshade, American spinach, bear's grape, cancer-root, coakum, garget, inkberry, inkweed, pigeonberry, poke, pokeberry, pokeroo, red-ink plant, skoke berry, and Virginia poke. The entire plant is known to contain toxic compounds. The primary toxic compounds are thought to be oxalic acid, saponins (phytolaccotoxin and phytolaccigenin) and an alkaloid (phytolaccin). The distribution and concentration of these compounds increase as the plant matures and are unevenly distributed through the plant. Roots are the most poisonous, leaves and stems are intermediate in toxicity, and berries are the least toxic, but still can cause significant problems. However, the most severe poisonings are the result of people consuming the large taproot of the plant when it is mistaken for horseradish or Jerusalem artichoke roots. Still two big concerns in the situation that Curtis had witnessed were that the child who had eaten the berries was very young and small in body size and she had eaten an unknown number of the berries. Although, based on the amount of staining on her hands and face, it suggested that she had handled quite a few of them.

Even if the pokeweed berries are not extremely poisonous, the main take home message here is to teach young children not to eat wild berries without involving an adult in the decision making process before the wild berries are eaten. At this time of the year, numerous wild plants and ornamental plants are displaying ripening fruit that could be very enticing to a young child to eat them. Parents, grandparents, aunts, uncles, and even babysitters need to be aware of what plants might be displaying fruit to young children when they are outside. If a child does eat potentially poisonous fruit, contact your local poison control center or if that is unknown, contact the national poison control center at 1-800-222-1222 for help.

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3. BUGBYTES.

A. SCARLET OAK SAWFLY ON BLADDERNUT? Joe Boggs and Curtis Young showed images of what appeared to be SCARLET OAK SAWFLY (a.k.a. scarlet oak slug sawfly) (*Caliroa quercuscoccineae*) larvae munching on American bladdernut (*Staphylea trifolia*) leaves. Despite this sawfly's common name, larvae may be found feeding on a wide range of oaks including pin, black, red, and white oaks as well as its namesake oak. Although American bladdernut is not included on the reported hosts of this sawfly species, there are images taken elsewhere in the U.S. and posted on the web that purportedly show scarlet oak sawfly on bladdernut. However, BYGLers expressed some doubt that the larvae observed by Joe and Curtis are in fact the scarlet oak sawfly; Joe noted that he failed to find larvae feeding on a nearby oak.

Dave Shetlar speculated that the larvae found on bladdernut may be a previously undescribed species in the same genus as the "true" scarlet oak sawfly; thus, the look-a-like appearances. Of course, as Dave
noted, until larvae are reared to adults and examined by a taxonomist, this explanation for the unusual host range observation remains hypothetical.

The sawfly larvae on bladdernut practice the same feeding behavior and cause the same damage as "true" scarlet oak sawfly larvae. They were feeding gregariously side-by-side on the lower leaf surface consuming everything except the veins and upper leaf epidermis. Initially, the upper epidermis has a faded, whitish appearance. Eventually the epidermis dries out and drops from the leaf leaving behind the veins to produce a skeletonized appearance.

The bladdernut sawfly larvae are currently around 1/4" long; some are slightly longer while others are smaller. Their semi-transparent bodies are flattened towards the front and tapered towards the back. The flattened area is trimmed in yellow with the visible gut contents making it appear a greenish-black line is running down the middle. The tapered area is grayish-black to black. The larvae glisten in the sun and appear slug-like. This matches exactly with the appearance of scarlet oak sawfly larvae which have an interesting habit of covering themselves with their own excrement which helps them stick to leaves and presumably dissuades predators. Their slimy appearance gives rise to the alternative common name of "oak slug sawfly."

If this is truly the scarlet oak sawfly, there are 2 - 3 generations per season in Ohio; consequently damage escalates throughout the season with each succeeding generation. The sawfly spends the winter as late instar larvae inside cocoons in the leaf litter. Development is completed in the spring. Once the black, fly-like females are mated, they use their saw-like ovipositors to insert eggs in rows along major leaf veins to initiate the first generation in mid-to-late spring.

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B. SADDLEBACK CATS. Joe Boggs reported receiving e-mail messages and images from Chad Kellogg (Grasshopper Property Maintenance, Inc., Millersburg, OH) who had observed several SADDLEBACK CATERPILLARS (Acharia stimulea; family Limacodidae), on properties in the northeast part of the state. Chad also noted he received reports of the caterpillars from others in the region. Although saddlebacks are general defoliators, they typically do not occur in numbers high enough to cause significant harm to their host plants. However, a painful encounter with these stinging caterpillars can leave a lasting impression!

Members of a number of lepidoptera (moths and butterflies) families have caterpillars with hairs that are modified for defenses (urticating hairs). The most notorious caterpillar stingers belong to the families Megalopygidae (flannel moths) and Limacodidae (slug caterpillar moths). Urticating hairs may appear as rigid bristles, or as long, flexible, tapering hairs. The hairs may be envenomating, meaning they are hollow and filled with venom, or they may be non-envenomating meaning that they only cause mechanical irritation. Not all hairy caterpillars are hazardous. However, unless the caterpillar is identified as innocuous, don't handle them; it's best to err on the side of caution.

Saddleback caterpillars are brightly colored, rectangular-shaped, and about 1" long at maturity. This is time of the year that saddleback caterpillars reach maturity and they may be found on a wide range of trees and shrubs as well as ornamental grasses and corn. The "saddle" consists of an oval purplish-brown spot in the middle of a green patch on the back. The caterpillars have dark colored envenomating bristles on four large projections (tubercles) and many smaller white bristles that stick out from the sides of its body. The showy coloration of the caterpillars warns predators that saddlebacks pack serious defenses; this is known as aposomatic coloration.

Saddlebacks are capable of launching a two-pronged defense response. Its urticating hairs may break-off to remain embedded in their assailant. On people, the implanted hairs cause constant irritation and may lead to a serious infection. The envenomating bristles contain two types of venoms: vesicating (blistering) and hemolytic which breaks down red blood cells. Stings from these hairs are intensely painful and are described by hapless victims as sharp and burning. The pain may last for a considerable
duration and often spreads over a large area. Although saddleback stings are not generally life-threatening, it is best to seek medical attention. As with bee and wasp stings, some people are particularly sensitive to the saddleback venom.

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C. WINDSHIELD WIPES. BYGLers also ran into a few other arthropods this week including:

* Jaqueline Kowalski reported that she has received a number of complaints about ground-nesting YELLOWJACKETS (Vespula spp.) in northeast Ohio. This is the time of year when yellowjacket colonies begin to rapidly expand to potentially become serious nuisance pests. Although BYGLers located elsewhere in the state also reported increased numbers of stinging encounters, populations of ground-nesting yellowjackets appear to have been affected by heavy rains earlier this season; presumably colonies drowned. However, yellowjackets that nest above ground, as well as BALDFACED HORNETS (Dolichovespula maculata) and PAPER WASPS (Polistes spp.), are reportedly doing well throughout the state.

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4. DISEASE DIGEST.

A. CLUSTERS OF DEAD OAK LEAVES. Curtis Young reported observing NORTHERN RED OAK (Quercus rubra) trees with numerous clusters of dead, brown leaves scattered throughout their canopies. Most of the leaves of their canopies looked perfectly fine with good shape and rich color which really made the dead leaves standout like sore thumbs. Upon closer inspection, it was obvious that an infection had occurred in the tips of each of the stems to which the dead, brown leaves were attached. The dead stem tips were a dark-brown color and the bases of the leaf petioles had a similar discoloration. Nancy Taylor identified the most likely culprit as a BOTRYOSPHAERIA (Botryosphaeria quercuum) infection. The symptoms of this disease can be easily confused with cicada or twig girdler damage from a distance, but the presence of the lesions on the twigs tells a different story. Lesions of botryosphaeria develop in the summer, killing the small twigs, resulting in the water being cut off from the once healthy leaves. The petioles of the leaves collapse and bend downwards and the blades of the leaves lose their green color eventually turning completely brown.

Botryosphaeria can spread deeper into the stems and branches of the oak trees producing a canker disease. When large branches are cankered by botryosphaeria, large sections of the infected tree may be killed and sometimes the entire tree, but this is very uncommon.

Management of the disease would be difficult, especially on large trees. On small trees, dead leaf clusters and infected twig tips could be hand-removed and should be disposed of off-site to limit some of the inoculum for other seasons. Cankered limbs should likewise be removed. NOTE: If you live in an area where oak wilt is present, do not prune until the trees are dormant, i.e. October – March.

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5. TURF TIPS.

A. FALL CARE. The optimum time to seed cool-season turfgrasses for best success is between August 15 and September 15 in central Ohio, a week earlier in northern Ohio, and a week or so later in southern counties.
Here are some great tips from Joe Rimelspach and Todd Hicks, both with the OSU Department of Plant Pathology, to ensure a successful establishment of renovation of a lawn in the buckeye state. The first consideration should be site preparation and includes the following bullet points:

* Control perennial weeds such as undesirable grasses and broadleaf weeds. If herbicide(s) will be used, check the label for any restrictions and guidelines for future seeding.
* Complete the rough grade and then remove any stones or debris.
* Don't Guess - Soil Test! Based upon the results provided, apply corrective fertilizer, lime, and/or sulfur.
* Amend soil with top soil or compost. It is important that this be incorporated into existing soil and not just spread over the top of existing soil.
* Prepare the final grade at the site.
* Apply starter fertilizer to improve the maximum seed germination.

Next you will need to decide what grass seed you will be selecting for the project. There are many grass combinations available to both the professional and the homeowner. A blend in a combination of the same species (i.e. 3 Kentucky bluegrass varieties combined). A mix or mixture is a combination of different species (i.e. a combination of Kentucky bluegrass and ryegrass or tall fescue and Kentucky bluegrass).

Considerations for selection of seed should the following:
* To match already existing grass on the site.
* Find desired features of the grass plant.
* Use quality seed. You do get what you pay for.
* Discussion about seed vs sod - what is best for the situation

Have you ever heard, a "bad" fall seeding is usually better than a "good" spring seeding? It is often very true! Weather conditions are usually more conducive to a fall planting or seeding. Here are some hints from Joe and Todd:
* Apply starter fertilizer with high phosphorous (P) content. P is very important for successful seed germination and establishment of new grass.
* Use can use a drill or slice seeder, seeding in several directions, unless you like the row-look.
* Lightly rake seed into soil if a drill seeder is not used. Seed soil contact is a must. Lightly rolling will also ensure that good seed soil contact.
* Mulching will help maintain soil moisture needed for seed germination.
* And don't forget to irrigate if Mother-Nature does not provide ample precipitation. The surface should be kept moist until seedlings become established.

If you choose to sod, here are a few pointers from the experts. Sodding can be done anytime the soil is not frozen and the site can adequately be watered. Here are some important considerations:
* Select grass appropriate for the site.
* Lay sod without stretch it and keeping it tight together.
* Lightly roll for good root soil contact.
* Irrigate to keep sod moist until well rooted and established.

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6. INDUSTRY INSIGHTS.

A. UN-AMERICAN ELM PROBLEMS. The rise and fall of American elms (Ulmus americana) in urban forests is well-known to arborists. The story is often used as a cautionary tale illustrating the elevated risk posed by plant monocultures to support devastating pest and disease outbreaks; in this case, the over-use of a single tree species in urban plantings. Conversely, the American elm story as well as the fate of North American ash trees is also used to demonstrate the value of plant diversity in urban forests.
The downward spiral of American elms continued for many decades until resistant varieties and cultivars were discovered or developed. Now, American elms are making a rapid comeback. Indeed, several BYGLers noted the comeback may be too zealous with the species once again dominating some urban plantings; particularly in commercial landscapes. However, while these American elm hybrids are now tolerant to the fungus responsible for producing Dutch Elm Disease (DED), the trees are not resistant to other problems; especially, those problems that are totally new for these trees and some that also plagued American elms back in their heyday.

American elms that are resistant to the DED fungus, *Ophiostoma novo-ulmi*, are not resistant to the three species of bark beetles that are responsible for spreading the fungus from tree-to-tree. These include: the native elm bark beetle (*Hylurgopinus rufipes*); the European elm bark beetle (*Scolytus multistriatus*); and the banded elm bark beetle (*S. schevyrewi*). In fact, as with most bark beetles, they are highly attracted to stressed trees. Place an elm that is resistant to DED under extreme stress and the tree may become riddled with bark beetle galleries and exit holes; however, the ultimate death of the tree will be from stress, not from beetles or the DED fungus.

**ELM YELLOWS (EY)** is believed to have been affecting American elms since the late 1800's or early 1900's. The disease is produced by the pathogen *Candidatus Phytoplasma ulmi*, a single-celled organism belonging to a group of plant pathogens called "phytoplasmas". The pathogen is spread from tree-to-tree by various sucking insects as well as natural root-to-root grafts. EY is a rapid tree-killer causing the demise of infected trees the same season they become infected. The name of the disease is very descriptive: foliage becomes deeply chlorotic, usually in late-summer, followed quickly by defoliation and tree death. There is no treatment. EY is not the only vascular disease capable of killing American elms: the fungal disease known as *Verticillium* wilt has long been the nemesis of American elm trees that are under stress.

Chlorotic elm leaves may not always signal an EY infection. Tree leaf chlorosis may be caused by a number of problems or conditions, sometimes working in tandem. Soil pH, both high and low, may prevent essential plant elements from being made available to the tree, or the elements may be deficient in the soil. Vascular flow within trees may be disrupted by any number of problems and never overlook lightning strikes! Dry soils may prevent the movement of elements into the roots (not too likely this season!), or root function may be disrupted by wet soils (root drowning). Roots may have been damaged by soil compaction, excavation, or roots may have failed to grow after planting. Roots may also have been damaged by pests or by root rotting plant pathogens with their destructive work enhanced by wet soils. Of course, leaf chlorosis may be a symptom of chemical exposure, both insecticides (phytotoxicity) as well as herbicides.

A close look at yellowing American elm leaves may reveal black spots, a tell-tale symptom of the descriptively named disease known as **ELM BLACK SPOT**. The disease is produced by the fungus, *Stegophora ulmea*. Symptoms usually develop late in the season with the appearance of slightly raised irregularly shaped dark brown to black spots. The spots are almost always bounded by a yellow halo with the leaf yellowing gradually progressing to envelop the entire leaf. Although the disease can cause significant late-season defoliation, it does not normally cause enough stress to affect the overall health of infected trees. However, elm black spot can certainly reduce the aesthetic value of heavily infected American elm trees.

Finally, the **EUROPEAN ELM FLEA WEEVIL** (*Orchestes alni*) is a recent arrival. While this pest is most strongly associated with making Siberian elm leaves look like they've been blasted by a shotgun, this non-native can do the same to American elm leaves. Indeed, Joe Boggs showed BYGLers images he recently took of American elm leaves that looked like sieves; the blow-through condition caused Joe to quip the tree could handle strong winds!

The dense, dark-green foliage of American elms coupled with fast growth and a stately vase-shaped silhouette were prized characteristics that inspired the journey of this North American native from forests to city streets. However, the take-home message is that although we are seeing a revival of this elm in
urban landscapes, the list of potential problems presented here means too much of a good thing can lead to a lot of bad things. Remember the hard-earned lesson taught by DED and fortified by the emerald ash borer, reinforcing the value of tree diversity in urban forests.

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7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from January 1 - August 31, 2015, with the exception of the soil temperatures which are readings from Wednesday, September 2, 2015 at 11:05 a.m. This week's table provides a look back and summarizes the last 8 months.

Ohio had a recent run of unseasonable, but yet very enjoyable, cooler temperatures both during the day and evenings. While many turned off the air and opened the windows, this week's weather reminds that summer is still here. Windows are being closed and air conditioners turned back on from some relief.

Rainfall amounts have been scattered, and many areas are dry. This is a quite the difference when compared to the spring and summer rains that accumulated earlier this year.

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<td>Ashtabula</td>
<td>NE</td>
<td>56.9</td>
<td>38.0</td>
<td>19.75&quot;</td>
<td>24.3&quot;</td>
<td>85.73/76.13</td>
</tr>
<tr>
<td>Wooster</td>
<td>NE</td>
<td>60.2</td>
<td>39.4</td>
<td>22.55&quot;</td>
<td>27.60&quot;</td>
<td>74.47/73.39</td>
</tr>
<tr>
<td>Hoytville</td>
<td>NW</td>
<td>59.3</td>
<td>39.1</td>
<td>28.17&quot;</td>
<td>22.80&quot;</td>
<td>74.64/72.78</td>
</tr>
<tr>
<td>Columbus</td>
<td>Central</td>
<td>62.7</td>
<td>43.1</td>
<td>30.51&quot;</td>
<td>30.6&quot;</td>
<td>74.10/73.98</td>
</tr>
<tr>
<td>Piketon</td>
<td>South</td>
<td>64.6</td>
<td>42.2</td>
<td>32.10&quot;</td>
<td>27.9&quot;</td>
<td>75.54/73.87</td>
</tr>
</tbody>
</table>

For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm]

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8. COMING ATTRACTIONS.

A. SOUTHWEST OHIO DIAGNOSTIC WALK-ABOUT. The September 2015 Southwest Ohio BYGLive! Diagnostic Walk-About for Green Industry professionals will be held from 12:00 - 3:00 pm. on Monday, September 14, at the Boone County Arboretum at Central Park, 9190 Camp Ernst Road, Union, Kentucky 41090. The program will start at 12:00 pm. and participants will walk-about with Joe Boggs (OSU Extension), Dr. Mike Klahr (Horticulture, UK Extension, Boone County), and Kris Stone (Director, Boone County Arboretum) looking at trees, shrubs, turf, plant pests, diseases, and other points of considerable interest until 3:00 pm. To learn more about the Arboretum, check out their web site: [http://www.bcarboretum.org/].

This monthly hands-on training series for Green Industry professionals provides the following training credits: ISA Certified Arborist CEU's; ONLA OCNT credits, and Landscape Architecture Continuing Education System (LA CES) CEU's for Landscape Architects. Visit the following website for more information: [http://go.osu.edu/zs7].

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B. FARM SCIENCE REVIEW. This year's Farm Science Review takes place September 22 - 24, 2015 at The Ohio State University's Molly Caren Agricultural Center outside London, OH. Participants can peruse 4,000 product lines from 600 commercial exhibitors, and capitalize on educational opportunities
from Ohio State and Purdue University specialists. For in-depth information on natural resources, visit the Gwynne Conservation Area during the review by catching a shuttle on the west end of Friday Avenue or visit [www.gwynne.osu.edu](http://www.gwynne.osu.edu) for more information now. Farm Science Review pre-show tickets are $7.00 at all OSU Extension county offices, many local agribusinesses, and also online at [http://fsr.osu.edu/visitors/tickets](http://fsr.osu.edu/visitors/tickets). Tickets are $10.00 at the gate. Children 5 and younger are admitted free. Hours are 8:00 a.m. to 5:00 p.m., September 22 - 24, 2015 and 8:00 a.m. to 4:00 p.m., September 24, 2015.

C. THE OSU GREEN INDUSTRY SHORT COURSE, THE OHIO TURFGRASS FOUNDATION CONFERENCE AND SHOW, AND TREES ON TAP PROGRAMS. Mark your calendars now, as these shows will be here sooner than you think. The event will be moving back to the Columbus Convention Center in 2015 and will be held on December 8 - 10, 2015, with the addition of a special tree program on Monday, December 7, 2015. Details on over 100 educational programs and a wide array of certification credits will be coming throughout the BYGL season. We are happy to acknowledge the robust support of the Ohio Turfgrass Foundation for their financial and other aid of the educational efforts of the OSU Extension Nursery Landscape and Turf (ENLT) Team, a group of Extension Educators and OSU Specialists that brings to you a range of programs including field diagnostic walkabouts (such as BYGLive! in southwest Ohio) and diagnostic workshops as well as help with horticulture problem troubleshooting, numerous publications, and of course, the BYGL.

A key speaker for both the Trees on Tap program and the tree care track of the Green Industry Short Course will be Dr. Ed Gilman of the University of Florida Environmental Horticulture program. Ed is Professor of Urban Trees and Landscape Plants and his research and educational efforts focus on tree care practices such as the effect of tree pruning on tree biology, production practices and landscape establishment, root pruning, and irrigation and fertilization practices. He is reason enough alone to attend the conference.

9. BYGLOSOPHY. "Summer afternoon - summer afternoon; to me those have always been the two most beautiful words in the English language." - Henry James

APPENDIX
ADDITIONAL WEBSITE RESOURCES:

Ask a Master Gardener Volunteer
http://mastergardener.osu.edu/ask

Buckeye Turf
http://buckeyeturf.osu.edu

Emerald Ash Borer Information
http://ashalert.osu.edu

National Plant Diagnostic Network and First Detector Program
https://www.npdn.org/first_detector

Growing Degree Days and Phenology for Ohio
http://www.oardc.ohio-state.edu/gdd/

Hungry Pests Website
http://www.HungryPests.com

Ohio Pesticide Safety Education Program
http://pested.osu.edu/
Following are the participants in the September 1st conference call: Amanda Bennett (Miami); Pam Bennett (Clark); Joe Boggs (Hamilton); Julie Crook (Hamilton); Denise Johnson (Master Gardener Volunteer program); Jacqueline Kowalski (Cuyahoga); Ashley Kulhanek (Medina); Cindy Meyer (Butler); Dave Shetlar (Entomology); Amy Stone (Lucas); Nancy Taylor (C. Wayne Ellett Plant and Pest Diagnostic Clinic); and Curtis E. Young (Van Wert).

BYGL is available via email, contact Cheryl Fischnich [fischnich.1@osu.edu] to subscribe. Additional fact sheet information on any of these articles may be found through the OSU FactSheet database [http://plantfacts.osu.edu/web].

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BYGL is available online at: [http://bygl.osu.edu], a website sponsored by the Ohio State University Department of Horticulture and Crop Sciences (HCS) as part of the "Horticulture in Virtual Perspective." The online version of BYGL has images associated with the articles and links to additional information.

Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: [http://go.osu.edu/cfaesdiversity].