BUCKEYE YARD AND GARDEN LINE 2014-13
06/26/14

From: Curtis E. Young (Lead editor and contributing author) and Cindy Meyer (Co-editor and contributing author).

Contributing authors: Pam Bennett, Joe Boggs, Jim Chatfield, Julie Crook, Erik Draper, Gary Gao, Denise Johnson, Jacqueline Kowalski, Ashley Kulhanek, Cindy Meyer, Amy Stone, Nancy Taylor, Marne Titchenell, Danae Wolfe, and Curtis E. Young.

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 13th 2014 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.

In This Issue:

1. PLANTS OF THE WEEK: Annual (Tuberous Begonia); Perennial (Yucca); Woody (The Rosaceae); Vegetable (Okra); and Weed (Chicory).
2. HORT SHORTS: Leaves of Three, Let It Be: Poison Ivy and Meet The Educator - Julie Crook.
3. BUGBYTES: Potato Leafhoppers Here in Full Force; Click Beetles; and Windshield Wipes (Japanese Beetles, Asiatic Garden Beetle and Fall Webworm).
5. TURF TIPS: Anthracnose, Dollar Spot and More!
6. INDUSTRY INSIGHTS: The 87th Ohio State University Green Industry Short Course.
7. WEATHERWATCH: Weather Update and Growing Degree Days (GDD).
8. COMING ATTRACTIONS: NW Ohio Green Industry Summer Session; Pesticide Safety Training - August; Pesticide Safety Training - September; and Wood-Destroying Insect Inspection Training.
9. BYGLOSOPHY.

APPENDIX - Additional Website Resources.

1. PLANTS OF THE WEEK.

*ANNUAL - TUBEROUS BEGONIA (Begonia x tuberhybrida). Tuberous begonias are a great addition to the shade flower garden. Colors include, pink, red, yellow, white, orange or a mixture of two colors. Blooms can be single, double, ruffled, or toothed. Begonias are great in containers, hanging baskets, or as bedding plants. These plants bloom continuously throughout the summer and thrive in shade but will do fine with morning and late afternoon sun. Begonias need well-drained soil. Supplemental
watering will need to be applied if rainfall has not been sufficient or if they are sheltered by an overhang, tree, etc. Applying fertilizer will help to keep plants healthy throughout the growing season.

To keep tubers for the next year, end fertilizer applications in August to start to prepare them for dormancy. Dig up tubers when the foliage starts to yellow and store them in a cool, dry place. Start tubers in late winter or early spring by planting them in a flat of peat moss.

*PERENNIAL - YUCCA (Yucca filamentosa). You may notice the hardy yucca blooming throughout Ohio's landscape. This perennial, evergreen shrub has tough, fibrous dagger-shaped leaves and produces tall, large clusters of white, bell-shaped flowers that attract hummingbirds and the Yucca moths (Tegeticula yucasella). Blooms will be present for several weeks. Although Yuccas are native to southeastern US and Mexico, several varieties thrive in Ohio's colder temperatures. A very popular variety of this low maintenance plant are Adam's Needle (Yucca filamentosa) and the variegated 'Bright Edge' Adam's needle yucca. Adam's needle grows in a low cluster with grayish green leaves that are 2.5" long and 1" wide.

Yuccas are in the Agave Family (Agavaceae) and tolerate many soil types, including heavy clay, as long as they are not too wet. They thrive in full sun and dry conditions and provide year-round interest to a variety of landscape settings from parking lots to containers. Beware of planting yucca to close to foot traffic as the leaves are sharp and pointed and can cause injuries. Yuccas grow in clumps and when mature send out small offshoots or pups. In fact, sometimes it is challenging to completely remove yucca because of their hardy root system. Be very careful in your site selection because yucca will persist for a very long time.

Yucca leaves are also very useful and were used by Native Americans for their strong fibers in making rope, baskets and fishing nets. Other parts of the plant were used for food, soap and medicines. Even today, Boy Scouts will use the dried flower stalks as a fire starter.

*WOODY - THE ROSACEAE. For this BYGL let's do a short reminder of plant families. Remember a plant family is a group of related genera (the plural of genus) and a plant genus is a group of related species. An important plant family with many woody plant genera and species is the Rosaceae (all plant families end in "aceae").

Let us start with rose (Rosa) and its many types. Crabapples and apples are in the genus Malus and pears, both ornamental and edible, are in the genus Pyrus. There are shrubs such as Pyracantha and Cotoneaster and Spiraea and Aronia, both black chokeberry (Aronia melanocarpa) and red chokeberry (Aronia arbutifolia). Think of members of the Rosaceae family that are fruit trees (with many ornamental cousins) such as the different species of the genus Prunus alone: cherries, plums, almonds, peaches, nectarines, and apricots.

Many berries are also in the Rosaceae, from the genus Rubus (blackberries and raspberries) to Fragaria (strawberries). Strawberry? What is it doing there with all those woody plants - how can strawberries be related to roses and crabapples? Think of the flower structure and the similarity between apple and strawberry that illustrates evolutionary relationship. As for rose-family trees bearing berries and their "bury-related" monikers, how about the serviceberries (Amelanchier)? Serviceberries were in recent weeks beloved by birds in our landscapes and human foragers quick enough to beat the birds to their breakfasts. "Bury-related" monikers for serviceberries - what does that mean? One
explanation for their name given during colonial days in the New World was that the Amelanchier trees flowered each year about the time that the colonists buried those who perished in the winter, which they could not bury until ground thawed and "services" could be performed.

On and on we could go: the herbaceous genus Alchemilla, hawthorns (Crataegus), mountain-ashes (Sorbus) so different from true ashes in the genus Fraxinus in the olive family (the Oleaceae), Rhododendron or black jetbead, the increasingly popular ninebark (Physocarpus). The list goes on and on for this very important plant family. And knowing relatives matters: fireblight occurs only on genera in the Rosaceae and emerald ash borer occurs only on the genus Fraxinus in the Oleaceae, not on mountain-ashes in the Rosaceae. The nuances of names matter.

*VEGETABLE - OKRA (Abelmoschus esculentus).* Okra is an annual, warm-season crop native to the Middle East and brought to America by African slaves. In the South it is called gumbo which is Swahili for okra. It is a member of the Mallow (Malvaceae) family along with hibiscus, hollyhocks, rose of Sharon, and the cotton plant.

Okra has grown in popularity due to its high nutritional value. It contains both soluble and insoluble dietary fiber to help reduce the risk of heart disease and to maintain a healthy intestinal tract to reduce the risk of some cancers. A half cup of cooked okra is only 25 calories and contains almost 10% of the recommended daily requirements of folic acid and vitamin B6.

Plant okra seeds in full sun directly into the soil in late May or early June 1” deep in hills 12 - 24” apart. Pods will be ready to harvest 46 - 70 days depending on the variety. An early, compact variety producing pods in 46 days is Annie Oakley. Other varieties are Cajun Delight with 70 days to harvest and Clemson Spineless which has pods without spines and is ready in 56 days. It is important to harvest okra often - nearly daily - because the pods mature quickly. For a tender, non-woody crop, harvest pods when they are only 2 - 3” long. Larger pods will be tough and should be removed to encourage further production.

Okra has a flavor similar to eggplant and is used in soups, stews, fried or sautéed and compliments tomatoes, onions, corn, fish and seafood. It is a good thickening agent for soups and stews; however, to avoid preparing okra into a slimy, glutinous side dish, it should be cooked or fried quickly.

*WEED - CHICORY (Cichorium intybus).* Chicory is a perennial that is in bloom in Ohio right now. It can be seen growing abundantly beside roads and highways. It can also be found in lawns, pastures, fields, and waste places. Originating in the Mediterranean, chicory was distributed throughout much of the world where it was grown for centuries as a salad green. It escaped from cultivation in North America and has naturalized and spread throughout southern Canada and the US. Chicory initially grows as a rosette of irregularly-toothed basal leaves and then later produces round, hollow and nearly leafless stems scattered with blue daisy-like flowers along their length. The plants produce a thick, strong taproot containing a bitter and milky sap. Chicory is propagated by seed; the average plant produces about 3000 seeds.
2. HORT SHORTS.

A. LEAVES OF THREE, LET IT BE: POISON IVY. Poison ivy (Toxicodendron radicans) is a native species to the US that can be found in numerous environments from woodlots to urban streets. It is dispersed by birds and other animals that eat the fruit then drop the seeds with their feces in new locations. Thus poison ivy is frequently found growing in places beneath roosting sites and hiding places for animals such as fence rows, at bases of trees, on roadsides, and along the edges of woods. Although poison-ivy grows in many soil types, it prefers soils with high calcium content.

Poison ivy is best known for its reaction that it produces in humans. All parts of the poison ivy plant contain the oil, urushiol that stimulates the rash accompanied by blisters, swelling and itching in sensitized individuals. The severity of the reaction depends on the sensitivity of the individual and the quantity of the oil to which one is exposed. Severe cases can result in hospitalization. The oil is found on the surface of the leaves, but is found in great quantities in stems and roots. The oil is present in the plant year round. Thus, one can acquire a poison ivy rash even in the middle of the winter if one comes in contact with vines, stems or roots. One should never intentionally burn poison ivy plant parts because the oil can be volatilized into the smoke from the fire. If one walks through the smoke and/or breathes the smoke, they may get the oil in their eyes and/or lungs.

Contrary to what some believe, only the oil can produce the skin reaction. Liquid released from the blisters will not spread the reaction. However, if the victim still has oil under their fingernails, scratching at the reaction site will introduce more oil. The oil may also be on clothing, furniture upholstery, gardening gloves and tools, and other items. The oil can also be found on the fur of pets that have walked through a patch of poison ivy and when they come in contact with owners, the oil can be transferred. Surprisingly, only humans react to the oil. Dogs and cats do not. Many animals (e.g. horses, sheep, goats, and cows) even eat poison ivy with no reaction.

One problem that many people have with poison ivy is not being able to identify the plant. Poison ivy is a deciduous woody perennial. Part of the confusion that people have with identifying poison ivy is that it grows in a variety of forms including short shrubby plants that grow on the ground and spread by horizontal underground stems (rhizomes) to vines that climb trees, walls and poles. Poison-ivy produces aerial roots from the sides of its vining stem. These roots attach the vine to other plants and objects such as walls. The aerial roots give the vines a hairy appearance. The most distinguishing characteristic of poison ivy is its leaves of three leaflets. The stalk attached to the middle leaflet is considerably longer than that attached to either of the two outer leaflets. One again, the identification of poison ivy can be confounding and challenging because the leaves of three can have considerable variability in size and shape of the leaflets.

Leaves are produced alternately on the stem (1 leaf per node). Leaflets are 2 - 4" long, glossy, and have a pointed tip. Their shape varies from elliptic to egg-shaped. Their edges also vary from smooth, to toothed or lobed. They appear droopy and reddish green in spring, become level and change to dark green when mature, and turn yellow, orange, or bright-red before falling off in the fall.

Other vining plants that grow in the same habitats as poison ivy can be confused with poison ivy. One common plant that gets misidentified as poison ivy in VIRGINIA CREEPER (Parthenocissus quinquefolia). Virginia creeper also has a compound leaf, but typically its leaves are found in groups of five instead of three. The vines of Virginia creeper produce small forked tendrils tipped with small adhesive pads which allow the plant to climb objects. They produce these tendrils in many fewer numbers than the aerial roots of poison ivy.
Management of poison ivy can be difficult and may take several efforts to fully remove the plant from a garden, hedge, fence row and/or landscape. Hand removal may require several attempts to remove all plant parts that might re-establish the poison ivy. The risk of exposure is great if hand removing. Vines growing up objects can be severed near the ground and allowed to shrivel and die. Afterwards the root and new growth that it will produce can be more easily managed. Broad spectrum, non-selective herbicides such as glyphosate (e.g., Roundup) or triclopyr (e.g., Ortho Poison Ivy & Tough Brush Killer) are used to control poison ivy. One must use these products according to their labeling and with caution for they will kill everything on which they come in contact. Treatments are typically most successful when applied in late summer or early fall. Repeat applications may be necessary. Clean up sprays may also need to be applied again in the spring.

If uncertain of a plant's identification, leave it alone or carefully collect a sample and bring it to an OSU Extension office for identification. To collect a sample, wear chemical resistant gloves and long-sleeved shirt. Be careful not to brush the plant over one's face. If inadvertent contact does occur, wash immediately with soap and water or alcohol to remove any oil on the skin.

Author: Curtis Young

B. MEET THE EDUCATOR - JULIE CROOK. Julie Crook is the Agriculture and Natural Resources Extension Program Coordinator for Hamilton County and BYGL contributor. Julie joined OSU Extension in September, 2008.

In her role in Hamilton County, Julie coordinates the Master Gardener Volunteer program and answers consumer horticulture questions. She also works collaboratively with Extension Educator, Joe Boggs to provide horticulture programming within Hamilton County. Julie chairs the committee for the Tri-State Green Industry Conference. The Tri-State Green Industry Conference is a collaborative effort between Ohio State University Extension, Purdue Extension, Cincinnati State Technical and Community College, and the Cincinnati Zoo and Botanical Garden. It features a variety of high quality education and training for professionals in the areas of Annuals & Perennials, Garden Center & Greenhouse Innovation, Tree & Shrub Care, Turfgrass Management, Green Infrastructure and General Pest & Disease Management.

Recently Julie began assisting Denise Johnson in managing the Ask a Master Gardener Project, the online service which utilizes advanced-trained Master Gardeners to respond to consumers' landscape, yard, and garden questions. Julie is a backyard gardener and enjoys collecting gardening books. She also is an avid tennis player.

Author: Julie S. Crook

3. BUGBYTES.

A. POTATO LEAFHOPPERS HERE IN FULL FORCE. The annual migration and distribution of the potato leafhopper (PLH) (Empoasca fabae) into Ohio has occurred in most areas. According to growing degree day accumulations and the phenological event table, PLH has most likely been in the state for a couple of weeks. Usually the first areas that they move into are forage production fields especially alfalfa fields. As these forage production fields are harvested for the first time in the season, it forces PLH to redistribute to other fields and other types of plants. Curtis Young reported that he has been seeing the little, apple-green menace in the Lima area for a week now with numerous PLH adults congregating around the porch lights of his home. As PLH redistributes to new feeding grounds, it will spread into many landscape plants. In most cases, PLH injury to plants in landscapes may be limited
or go unnoticed, however one should be aware that PLH feeding injury could produce some unexpected injury to these plants. Landscapes near forage production fields could get hit hard by PLH shortly after the fields are cut for harvest.

The other arena where landscape plants could be injured by PLH is in nursery production areas. Plants such as hedge, ‘Red Sunset’ and ‘October Glory’ maples can be severely impacted in their growth form and development which may influence their salability. Leaves on these trees can be cupped and new growth stunted. Growers of nursery stock and landscapers need to be on the lookout for PLH especially on plants still expanding new growth that could be damaged by PLH feeding. Several other tree species that are very susceptible to injury include amur, Norway and sugar maples, birches, apple, chestnut, and Persian walnut.

Insecticide sprays will need to be applied in production areas to prevent reduced plant growth and vigor and to avoid distorted tree shape due to dieback and stunting. Some insecticides that appear to have fairly good activity against the PLH include foliar sprays of imidacloprid, cyfluthrin or a product with a combination of the two (e.g. Discus). Read insecticide labels carefully for application restrictions and potential chemical injury to host plants.

Author: Curtis Young

B. CLICK BEETLES. This week, click beetles (Family: Elateridae) were spotted on a declining maple and wrongly accused of causing damage to the tree. While click beetles may resemble some of our flat-headed borers to some degree, they are not wood feeders or borers at all, though they can be found under bark of rotting logs or firewood.

Click beetles get their name from a distinctive “clicking” noise that is created when the beetle springs away from predators or tries to right itself from its back. The beetle is able to snap a “click mechanism” in a spring like action that literally launches the beetle, often several inches, in order to escape or put itself back on its feet. While startling to some (and entertaining for others), it is a defense mechanism and is harmless. Click beetles range in size up to 0.5” or longer, depending on species. Our most notable of these, the eyed click beetle or eyed elator (Alaus oculatus) is one of our largest and showiest of click beetles. Larvae are mostly grass feeders and the adult beetles generally feed on flower nectar. In summer, click beetle adults are often found at porch lights and may find their way into houses.

Click beetles are harmless and do not require control measures if found indoors or out. The larvae of some species, known as wireworms, may become a nuisance or pest in large quantities in gardens or planted agricultural areas.

Author: Ashley Kulhanek

C. WINDSHIELD WIPES. BYGLers also ran into several other interesting arthropods this week, include the following:

* Curtis Young spotted newly emerged JAPANESE BEETLES (Popillia japonica) in a wheat field in NW Ohio. These early emergers will be the scout beetles that locate prime feeding sites and call in the recruits as additional beetles emerge. Another scarab beetle that was observed in NW Ohio was the ASIATIC GARDEN BEETLE (Maladera castanea). These beetles were discovered in a wheat field near Defiance, Ohio. The Asiatic garden beetle has been in the US for nearly 100 years. It is considered a minor turfgrass pest, but recently has been found to be problematic in field crops growing in sandy soils.
* Last week in BYGL Issue 2014-12, Joe Boggs reported first generation FALL WEBWORM (Hyphantria cunea) nests appearing in SW Ohio. Curtis Young reported the same occurrence in NW Ohio this week. The nests that Curtis observed were on wild mulberry trees beside a road and a railroad. Caterpillars were of the black headed race and were around 0.5“ long.

Author: Curtis E. Young

4. DISEASE DIGEST.

A. WHAT’S GROWING ON MY AZALEA? Reports of a mysterious growth on Azaleas have come in to our BYGL writers. These deformed growths were shaded light-green, white, or yellowish and caused distortion and cupping of the Azalea leaf.

The culprit turned out to be EXOBASIDIUM GALL of Azalea (Exobasidium spp.). The gall is formed as a result of a fungal infection on the plant. Exobasidium gall infection starts out as swollen, puffy portions on newly expanding leaves, buds, or flowers. These eventually turn into the galls. As they age, the gall's surface turns white due to the reproductive fungal spores, eventually hardening and turning brown. As with many diseases reported this season, it is more prevalent this year due to a cool, wet spring.

Though unusual, it is not particularly harmful to the plant. There is no curative control available for this disease. Preventative fungicides early in the season may offer some protection from the fungus but is generally not needed. Because it is not a serious disease of the plants, the best recommendation is to hand pick the galls, preferably before the white spores form. This removes the fungal inoculum that can be spread by wind and water/rain splashing.

Author: Ashley Kulhanek

5. TURF TIPS.

A. ANTHRACNOSE, DOLLAR SPOT AND MORE!

Joe Rimelspach from the Department of Plant Pathology at Ohio State provides a detailed review of anthracnose, which has been popping up at courses throughout the region. Joe also discusses dollar spot as well as some pointers for high cut turf, including home lawns. To view Joe’s video report go to the following URL: [https://www.youtube.com/watch?v=aaPMoUVPoJM&feature=youtu.be ]

6. INDUSTRY INSIGHTS.

A. LATEST FROM THE 87th OHIO STATE UNIVERSITY GREEN INDUSTRY SHORT COURSE. Planning for the 87th OSU Green Industry Short Course, formerly the OSU Nursery Short Course, continues. As reported recently, this year's event will be held in conjunction with the 48th Annual Ohio Turfgrass Foundation Conference and Show on December 9 - 11, 2014 at the Kalahari Resort and Convention Center in Sandusky, Ohio.
Come hear the latest research from Dan Herms on landscape designs that limit pest outbreaks. What is Prescription Organic Matter? Where did the bees go and what are the most bee friendly landscapes? What do arboreta do for you? Learn of case studies in soil preparation for tree health. Get summaries on the BYGL 2014 and what were the high and low lights of the 2014 season and trends for the 2015 season. Get your ODA pesticide applicator credits and other certification hours. From hardscaping topics to organized strategies for weed control, from plants and which places are best for them to edible landscapes. A research forum on the latest discovery and research trends for the future from HRI, OSU researchers and others. More please - its coming.

Also remember that this broad-based OSU green industry program will be coupled with the great Ohio Turgrass Foundation Conference program that covers all aspects of the world of turfgrass and their additional partnerships with the Ohio Landscape Association and the Ohio Lawn Care Association.

Updates will occur throughout the summer and fall as we approach the Conference and Short Course. Look for information on the website at [www.osushortcourse.com] and here in the Buckeye Yard and Garden Line (BYGL).

*Author: Jim Chatfield*

7. WEATHERWATCH.

A. WEATHER UPDATE. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from June 1 - 25, 2014, with the exception of the soil temperatures which are readings from Wednesday, June 25, 2014 at 5:30 p.m.

Summer officially began earlier this week. Jim Chatfield reported that the Chatscape in northeast Ohio has had a rainy June, receiving over 10" of precipitation thus far this month. All but the Ashtabula weather station recorded above normal for rain for the month-to-date. With that said, there are areas that have not been on the receiving end of the rain. Amy Stone reported that recent rains were welcomed in the greater Toledo area as it was getting dry.

As the article was being written, a storm moved over the Stonecape and the plants (and Amy) are grateful!

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

*Author: Amy Stone*
B. GROWING DEGREE DAYS (GDD). GDD is a measure of the daily maximum and minimum temperature and directly relates to growth and development of plants and insects. The GDD of any zip code location in Ohio is estimated using the GDD of ten OARDC weather stations and available on the web at: [http://www.oardc.ohio-state.edu/gdd/].

The range of GDD accumulations in Ohio from north to south is 881 to 1,266. Following is a report of GDD for several locations around Ohio as of end of the day of June 25, 2014: Painesville, 881; Cleveland, 930; Toledo, 1,047; Canfield, 968; Findlay, 1,059; Van Wert, 1,077; Wooster, 1,018; Coshocton, 1,136; Columbus, 1,242; Springfield, 1,210; Dayton, 1,214; Cincinnati, 1,246; Ironton, 1,263; Portsmouth, 1,265; and Piketon, 1,266.

To put these GDD accumulations into perspective, the following is an abbreviated listing of plant and insect species with their respective phenological event and average GDD accumulations at which these events occur. Due to variations in weather, temperature, humidity, etc., these events may occur a few days earlier or later than predicted by the average GDD. By looking at a city, town, or village nearby on the above list, or visiting the above web site, one can see what is approximately taking place in the landscape.

Greater peach tree borer, adult emergence, 775; rhododendron borer, adult emergence, 815; northern catalpa, full bloom, 816; mountain laurel, full bloom, 822; dogwood borer, adult emergence, 830; oakleaf hydrangea, first bloom, 835; cottony maple scale, egg hatch, 851; panicle hydrangea, first bloom, 856; fall webworm, egg hatch (first generation), 867; mimosa webworm, egg hatch (first generation), 874; fuzzy deutzia, full bloom, 884; winged euonymus scale, egg hatch, 892; spruce budscale, egg hatch, 894; winterberry holly, full bloom, 897; paniced goldenraintree, first bloom, 924; June bride littleleaf linden, first bloom, 953; azalea bark scale, egg hatch, 957; Japanese beetle, adult emergence, 970; rosebay rhododendron, first bloom, 1,010; June bride littleleaf linden, full bloom, 1,115; bottlebrush buckeye, first bloom, 1,158; Ural falsespirea, first bloom, 1,170; paniced goldenraintree, full bloom, 1,251; Rose-of-Sharon, first bloom, 1,347; pine needle scale, egg hatch - 2nd generation, 1,349; mimosa webworm, egg hatch - 2nd generation, 1,920; euonymus scale, egg hatch - 2nd generation, 1,923; magnolia scale, egg hatch, 1,938; and banded ash clearwing borer, adult emergence, 2,195.

This will be the last reporting of GDD for this year. Most locations for which GDD is being reported have accumulated enough GDDs to have exceeded most of the pests and flowering plants that are included in the phenology table. Reporting of GDD will return in next year's BYGL. Thanks for following along!

Author: Curtis E. Young

8. COMING ATTRACTIONS.

A. NW OHIO GREEN INDUSTRY SUMMER SESSION. Don't miss this year's NW Ohio Green Industry Summer Session. The program will be held on Wednesday, August 6, 2014 at Owens Community College. The program will include a keynote address by Matt Ross. Matt previously worked for The Toledo Botanical Garden and Owens Community College, and is currently working at Longwood Garden in Pennsylvania. It will be great to have Matt back in NW Ohio for this program. Additionally, there will be 16 concurrent sessions that participants can choose from throughout the afternoon from the plant track, best practices track, diagnostic track, and pest track, and will include credits from both ODA and ISA. Registration will go live next week.
B. PESTICIDE SAFETY TRAINING - New Commercial Applicators and Training Servicepersons, August 27, 2014. Core and Trained Serviceperson trainings are held in the morning, and Categories 8, 5, 2c, and 6c in the afternoon. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about the event, check out the PestED website at [http://pested.osu.edu].

C. PESTICIDE SAFETY TRAINING - New Commercial Applicators and Training Servicepersons, September 24, 2014. Core and Trained Serviceperson trainings are held in the morning, and Categories 8, 5, 2c, and 6c in the afternoon. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about the event, check out the PestED website at [http://pested.osu.edu].

D. WOOD-DESTROYING INSECT INSPECTION TRAINING, October 8, 2014. Mandatory training is required for applicators becoming licensed in commercial Category 12. Recertification credit is available. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about this event, check out the PestED website at [http://pested.osu.edu].

9. BYGLOSOPHY. "The world is mud-licious and puddle-wonderful." - E. E. Cummings

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.npdsn.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/

Ohio State University Department of Horticulture and Crop Science Plantfacts
http://plantfacts.osu.edu/web/

Ohio State University Extension Bee Lab
http://u.osu.edu/beelab/

Ohio State University Extension Master Gardener Volunteer Program
http://mastergardener.osu.edu
Ohio Woodland Stewards Program  
http://woodlandstewards.osu.edu

The C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)  
http://ppdc.osu.edu/

USDA APHIS Beetle Buster Website (Asian Longhorned Beetle)  
http://www.beetlebusters.info/

USDA APHIS Beetle Detective Website (Asian Longhorned Beetle and Emerald Ash Borer)  
http://beetledetectives.com/

Following are the participants in the June 24th conference call:  Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science and Plant Pathology); Julie Crook (Hamilton); Erik Draper (Geauga); Denise Johnson (Master Gardener Volunteer Program); Jacqueline Kowalski (Cuyahoga); Ashley Kulhanek (Medina); Cindy Meyer (Butler); Amy Stone (Lucas); Nancy Taylor (C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)); Danae Wolfe (Stark); 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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Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Gist Chair in Extension Education and Leadership.