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Buckeye Yard and Garden onLine provides timely information about Ohio growing conditions, pest, disease, and cultural problems. Updated weekly between April and October, this information is useful for those who are managing a commercial nursery, garden center, or landscape business or someone who just wants to keep their yard looking good all summer.

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Welcome to the BYGL Newsletter

June 19, 2008

From: Pam Bennett, Barb Bloetscher, Joe Boggs, Cindy Burskey, Jim Chatfield, Erik Draper, Dave Dyke, Gary Gao, David Goerig, Tim Malinich, Becky McCann, Amy Stone, and Curtis Young.

This is the 12th 2008 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.

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

BYGL is a service of OSU Extension and is aided by major support from the ONLA (Ohio Nursery and Landscape Association) [http://onla.org/] and [http://buckeyegardening.com/] to the OSU Extension Nursery, Landscape and Turf Team (ENLTT). Any materials in this newsletter may be reproduced for educational purposes providing the source is credited.

BYGL is available online at: [http://bygl.osu.edu], a web site 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.

Following are the participants in the June 17th conference call: Pam Bennett (Clark); Barb Bloetscher (Entomology/C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)); Joe Boggs (Hamilton/Piketon); Dave Dyke (Hamilton); Gary Gao (Delaware); David Goerig (Mahoning); Michael Loos (Cuyahoga); Becky McCann (ABE Center); Amy Stone (Lucas); Nancy Taylor (CWEPPDC); Shawn Wright (OSU Piketon Centers); Curtis Young (Allen); and Randy Zondag (Lake).

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WEATHERWATCH - June 19, 2008

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Temperatures have cooled-down since the start of the week, with nighttime temperatures dipping into the 50's across much of the state. Air temperatures, as well as soil temperatures, have fallen since last week.

The following weather information summarizes data collected at various OARDC Weather Stations spanning the dates June 1 - June 18, 2008, with the exception of the soil temperatures, which are readings from Wednesday, June 18 at 6:00 p.m.

Weather Station	Region of Ohio	Ave. High Temp F	Ave. Low Temp F	Total Precip."	Normal Precip. "	Soil Temp F 2"/3"
Ashtabula	NE	80.4	61.1	3.46"	2.8"	66.80 / 66.91
Wooster	NE	82.1	61.2	2.41"	2.4"	67.57 / 66.90
Hoytville	NW	83.9	64.0	3.06"	2.2"	74.92 / 70.68
Columbus	Central	84.3	63.5	4.73"	2.7"	72.76 / 71.93
Piketon	South	84.0	60.0	4.37"	2.3"	74.45 / 73.16

For more information, see:

OARDC Weather Station

GROWING DEGREE DAYS - June 19, 2008





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 the site below.

The range of GDD accumulations in Ohio from north to south is 780 to 1,084. Following is a report of GDD for several locations around Ohio as of June 17, 2008: Painesville, 780; Cleveland, 809; Toledo, 873; Canfield, 821; Lima, 855; Wooster, 841; Coshocton, 874; Columbus, 996; Springfield, 913; Dayton, 920; Cincinnati, 943; Ironton, 1,026; Portsmouth, 1,032; and Piketon, 1,084.

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 near you from the above list, or visiting the above web site, you can see what could be taking place in the landscape around you.

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; panicled 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; and June bride littleleaf linden, full bloom, 1,115.

For more information, see:

- Growing Degree Days and Phenology for Ohio
- · Understanding and Using Degree-Days

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DIVIDING PERENNIALS

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BYGLers received phone calls about dividing perennials. Division is a necessary chore in maintaining most perennials. A few plants never like to be disturbed, and should not be moved or divided; *Aconitum*, *Baptisia*, *Dictamnus*, *Eryngium*, *Helleborus*, *Limonium*, and *Papaver* are good examples. Most others will need division about every three to four years. It's time to divide when a dead center forms in the crown area, with a ring of plants around it; blooms are fewer and smaller; or growth appears crowded.

A general rule is to divide the plant in the non-bloom season. Midsummer bloomers should be divided in spring. In spring (April/early May), divide when plant growth is two to three inches in height. Fall divisions are done in late August or early September; plants should be semi-dormant and temperatures cooling.

Use a spade to dig the clump and cut off divisions. If you don't want to divide an entire clump, divisions can be cut from the edge of a clump using a spade and trowel. Some plants, such as Hosta, Hemerocallis, and

Astilbe, have tough, thick root systems that are a challenge to divide.

For more information, see:

- OSU Fact Sheet on Herbaceous Perennials
- Virginia State University Perennial Tips

POISON IVY CONTROL





Tis' the time of year when poison ivy (*Rhus radicans* or *Toxicodendron radicans*) starts showing up in gardens, hedges, fence rows, trees, telephone poles, and buildings. BYGLers are receiving multiple calls for help to control this persistent, perennial, pain in the neck, skin blotching, blister inducing, itch causing, hard to control weed. Poison ivy produces an oil called urushiol. All parts of the plant, leaves, stems and roots, produce and secrete the rash inducing oil. This oil must be removed from the skin using a strong soap and water. Water alone will not work. It is also not advisable to burn poison ivy because the oil can be carried in the smoke. Inhaling the smoke can result in serious consequences.

Several herbicides can be used to eradicate poison ivy (2,4-D, amitrole, dicamba, dichloroprop, glyphosate, imazapyr, mecoprop and triclopyr). Usually none of these products eradicates poison ivy in a single treatment. Multiple treatments in a single season or back to back seasons are required. Herbicides should be applied

during periods of rapid poison ivy growth to ensure maximum kill. One of the best times to apply herbicides to poison ivy is just before the plants are blooming.

Randy Zondag reported having success with controlling poison ivy vines using the "dip and clip" method. This method involves dipping pruning sheers into glyphosate concentrate then clipping the poison ivy vine. Randy reports that this procedure is more effective than clipping the vine and then painting the severed stump with glyphosate. Apparently the time delay between clipping and painting is great enough to disrupt the flow of materials down through the stump to the root system.

For more information, see:

- OSU Extension Factsheet on Poison Ivy
- Purdue University Factsheet on Poison Ivy



PLANTS OF THE WEEK





Read all about perennials and landscape trees and shrubs in the ONLA publications "Perennial Plants for Ohio" and "Landscape Plants for Ohio." The descriptions and photographs of plants were provided for these publications by the OSU ENLT Team along with other industry plant lovers. These full-color publications are available at [http://Buckeyegardening.com] for \$5.00. Click on "garden store" and then "ONLA plant guides." ONLA members can purchase these in quantities at a reduced price at [http://onla.org].

* PERENNIAL PLANT OF THE WEEK. YARROW (Achillea spp.) - The beautiful bright yellow flat-topped

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blooms of the most common species of yarrow really show up in landscapes across Ohio this week. Yarrow is one of the easiest perennials to grow and is quite drought and heat tolerant. Plants grow to around 3' tall depending upon the cultivar. Most yellow cultivars have flowers that make great cut and dried bouquets; the pastels and rust-colored flowers don't tend to hold up as long. 'Moonshine' is a compact plant that has yellow

blooms and grows about 18" tall and 'Coronation Gold' has large yellow flowers on plants that can get around 3' tall. *A. millefolium* 'Fireland' has flowers that are bright reddish on 2-3'tall plants, while *A. millefolium* 'Summer Pastels' has a blend of apricot, salmon, scarlet, white, rose, and yellow blooms. When yarrow finishes blooming, cut it completely to the ground and watch the new grown come back beautifully in a few weeks. The new growth is compact and produces a few new blooms later in the season.

- * WOODY PLANT OF THE WEEK. LINDEN (*Tilia* spp.) Whether one loves or hates the smell of the linden flowers, they are appearing this week, so be prepared. The heavy fragrance of the linden blooms are a source of "yuck" for some, while others lavish in the sweet scents. Lindens are excellent street trees as they have a very structured pyramidal shape. Their medium-size also makes them a good choice in the landscape. The only drawback is that *T. cordata* cultivars tend to be very attractive to many insects, including Japanese beetles. The Japanese beetles won't kill the trees but they sure do render them ugly by the end of the summer. Anecdotal evidence indicates that the *T. tomentosa* (silver lindens) cultivars tend to tolerate the damage; it doesn't seem to show up as much on these trees. In addition, the silver cultivars have quite a beautiful cast to the underside of the leaves, giving an attractive silver sheen when the wind blows. Both species tend to grow around 40-50' tall.
- * WEED OF THE WEEK. COMMON PURSLANE, *Portulaca oleracea*, is a common annual weed of gardens, horticultural and agronomic crops, and is a member of the family Portulacaceae. Common purslane is a prostrate weed that often forms a dense mat, growing rapidly in spring and summer and commonly reaching up to 12" in diameter. It thrives under hot, dry conditions but also competes well in irrigated situations.

Purslane has a taproot with fibrous secondary roots and is able to tolerate poor compacted soils and drought. The plant branches at the base and along the stems. Leaves are very thick and succulent, often tinged red, wedge-shaped, smooth and shiny, and without petioles, 1/2 to 2" long. Flowers usually open only on sunny mornings, and are 3/8" wide, with five yellow petals in stem axils or at tips of stems. Common purslane is a prolific seeder. A single plant may produce 240,000 seeds, which may germinate even after 5 to 40 years.

Common purslane is edible, with a sweet, yet acid-like flavor. An excellent crunchy salad plant, it is said to blend well with hotter-flavored salad herbs. If you must get rid of purslane, you can, of course, hand-pull it when the soil is wet. You can also use pre-emergent herbicides or a postemergence herbicide applied to the seedlings.

MIMOSA WEBWORMS





Joe Boggs reported spotting newly developing nests of first generation mimosa webworms (*Homadaula anisocentra*) on honeylocusts in southwest Ohio. Despite their common name, mimosa webworms are most often found on honeylocusts in Ohio. The caterpillars feed gregariously as skeletonizers within webs spun over the foliage. Attention is usually drawn to an infestation by clusters of orangish-brown "torched" leaves and leaflets that are tightly encased in webbing.

There are two to three overlapping generations per season in Ohio and female moths often lay eggs on nests from which they developed. Consequently, the nests are expanded by each new crop of caterpillars. Eventually, the nests become so dense that insecticides will fail to penetrate to kill the caterpillars. This means that effective management strategies should focus on targeting the current first generation caterpillars.

Mimosa webworms on honeylocust are generally considered an aesthetic and nuisance pest problem. The nests make trees unsightly and caterpillars will occasionally drop from infested trees to visit backyard gardeners and grillers. There is seldom enough leaf damage in a single season to cause long-term weakening of trees; however, defoliation over multiple successive seasons could present a challenge to tree health.

Standard insecticides labeled for use on honeylocusts are effective in controlling mimosa webworms. However, the numerous predators and parasitoids that naturally deplete the caterpillars can be preserved by using products based on the naturally occurring bacterium *Bacillus thuringiensis* (Bt). Two applications of Bt products spaced 7-10 days apart and targeting the first generation caterpillars is recommended. Preventing first generation nests will reduce the attraction of trees to second and third generation females.

For more information, see:

- · Virginia Tech Fact Sheet
- Penn State Fact Sheet



FALL WEBWORMS NOW?

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Small nests of first generation fall webworms (*Hyphantria cunea*) are also appearing in southwest Ohio. The nests constructed by the first generation of this moth typically appear in southern Ohio in June. These first generation nests are seldom as numerous or as large in size as those produced by the second generation. In fact, first generation nests often involve only a few leaves. However, as with mimosa webworms, female fall webworm moths often lay eggs on or near nests from which they developed. The nests of the second generation caterpillars usually reach their maximum size in the fall, thus the common name.

Fall webworms only feed on leaves that are enveloped by their silk nest. As caterpillars grow in size, they expand their nest by casting silk over more leaves to accommodate their expanding appetites. Although the webworms will feed on almost any shade, ornamental, and fruit tree, except conifers, the first generation seldom produces appreciable defoliation. However, it is recommended that the current nests be destroyed to

prevent the appearance of the much more obvious and damaging second generation.

The same recommendation for controlling mimosa webworms applies to fall webworms. Bt products will preserve the predators and parasitoids that are important in keeping the caterpillar populations in check. However, Bt products are most effective on early instar caterpillars. Standard insecticides labeled for use on the targeted host tree will also provide control and are required if caterpillars are allowed to develop past stages that are controlled with Bt products.

For more information, see:

- · OSU Extension Fact Sheet
- · Penn State Fact Sheet



WINDSHIELD WIPES



Sooty Mold and Lady Beetle Larva



BYGLers also ran into a number of other insects and mites including:

- * Dave Dyke and Joe Boggs observed massive numbers of BROOD XIV PERIODICAL CICADAS (*Magicicada* spp.) in southwest Ohio. The emergence remains in full-swing with the accompanying horror stories of cicadas dive-bombing people running gas-powered landscape maintenance equipment and massive collections of dead cicadas stinking-up the area. Oviposition is also in full-swing so the end of the onslaught should be near. In fact, as this issue of the BYGL was being prepared, Joe reported observing one of the consequences of oviposition ... die-back (flagging) of the ends of branches on trees and shrubs.
- * Gary Gao reported that damage caused by the SPINY WITCHHAZEL GALL APHID (*Hamamelistes spinosus*) on river birch is generating phone calls to his office in central

Ohio. The aphid produces leaf "corrugations" on birch as leaves expand in

the spring. They also produce copious quantities of sugary, sticky honeydew that can become colonized by black sooty molds. Corrugated leaves coupled with blackened leaves can seriously reduce the aesthetics of an infested birch. It is too late to prevent damage this season; however, a fall soil drench application of imidacloprid (e.g. Merit), or a spring topical application of acephate or insecticidal soap will prevent the problem next year.



* Pam Bennett reported that she is receiving phone calls concerning heavy damage caused by BRISTLY ROSESLUG SAWFLY (*Cladius difformis*) larvae on Knock-Out roses in west-central Ohio. While this line of roses

have proven to be remarkably free of most rose problems, they are susceptible to the distinctive "windowpane effect" caused by the feeding activity of this sawfly. Early instar larvae feed as leaf skeletonizers on the lower leaf surface. The upper epidermis remains intact and eventually turns white producing the "windowpane" symptom. Later instars feed between the main veins producing "see-through" leaves. This is a season-long pest with as many as six generations occurring in Ohio. Further damage can be reduced this season by making a soil drench application of imidacloprid (e.g. Merit). Damage can be prevented next season by making a soil drench application in early spring.

* Randy Zondag reports seeing EUROPEAN CHAFER BEETLES (*Rhizotrogus majalis*) feeding in trees in northeast Ohio. These beetles usually emerge in mass during the night, congregate in a few trees, feed, mate and drop back to the ground to lay eggs back into the soil. Currently, the European chafers are limited in their distribution in Ohio to the northeast and north central regions. They are not as widely distributed as their cousins, the Japanese beetles (*Popillia japonica*).

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ANTHRACNOSE LEAF BLIGHT OF TREES





BYGLers have received many phone calls about anthracnose on ash, dogwood, maple, oak, and sycamore. These fungal diseases can cause severe leaf blighting and deformation, but in many cases damage to plant health is not severe. However, the sycamore and dogwood anthracnose fungi regularly move back into stem tissue and cause more significant problems.

White oaks are the most susceptible of many oak species to the leaf blotching disease, oak anthracnose. Twig infections occur but are not significant except as sources of overwintering fungal inoculum from year to year. Leaves and shoots are infected during cool, wet spring conditions, causing leaf blotches that often are strictly delimited by leaf veins. Eventually, lesions become a papery tan color and some leaf shriveling occurs. Multiple cycles of infection can occur. Just as leaves near maturity, lesion size lessens, and once leaves mature they become fully resistant by early to mid summer.

To control anthracnose diseases, employ a comprehensive tree care program. Use proper fertilization, pruning, watering, and pest control

practices to encourage vigorous plant growth. This aids in general tolerance of the effects of disease and in rapid re-foliation in years where disease is severe. If significant damage occurs yearly and controls are justified, properly applied fungicides may reduce damage from these diseases. High pressure spray equipment will be needed for large tree applications. This typically requires hiring a professional tree care service.

Fungicides will not be effective unless they are applied before and during infection periods. Typically, three applications are necessary, beginning in early spring, with the first application made before leaf buds open. Applications in the fall have been shown to be useful for sycamore anthracnose control. Fungicide injections have also shown promise for the control of sycamore anthracnose. These must be applied by professional tree care companies.



For more information, see:

· OSU Fact Sheet on Leaf Blight

FIRE BLIGHT OF APPLE AND CALLERY PEAR





Nancy Taylor reported that the PPDC received samples of apples and callery pears with fire blight. Fire blight is a common and very destructive bacterial disease of apples and pears. The disease is so named because infected leaves on very susceptible trees will suddenly turn brown, appearing as though they had been scorched by fire. As a result of this disease, blight susceptible pear cultivars are no longer grown in many parts in the Midwest. Damage and losses from fire blight on apple result from: death or severe damage to trees in the nursery; death of young trees in the orchard; delay of bearing in young trees due to frequent blighting of shoots and limbs; loss of limbs or entire trees in older plantings as the result of girdling by fire blight cankers; and direct loss of fruit due to blighting of blossoms and young fruit. Fire blight may cause severe damage to many other members of the Rosaceae family. Quince, crabapple, mountain ash, spirea, hawthorn, pyracantha, and cotoneaster are all susceptible. Cultivars within some of these species are resistant.

Fireblight is one of the most difficult diseases of apple to control. No one procedure will give complete control. Though not an easy task, the use of several practices in an integrated manner should result in minimal damage from fire blight.

Plant apple, crabapple, and pear varieties that are less susceptible to fire blight. Fireblight is not as severe a disease problem on most crabapple varieties. A few crabapple varieties which can develop severe fireblight include: Silver Moon, Snowdrift, Red Jade, and Van Esseltine.

To decrease the inoculum level for the following season, prune out blighted twigs and cankers during the dormant season, when there is much less chance of spreading bacteria. Branches that are more than half-girdled by cankers should be removed. Cut off blighted twigs by making cuts at least 4 inches below the visible dead wood. Cankers can be cut out of trunks or large branches by removing dead tissue down to wood that appears healthy. Pruning tools should be disinfested by dipping in a 2:10 solution of household bleach in water after each cut. Commercial growers should do a thorough job of pruning out blighted wood in the dormant season and not in summer

Excessive nitrogen fertilizer and heavy pruning will promote vigorous growth of succulent tissue which is more susceptible to fire blight. Adjust management practices on susceptible varieties to promote moderate growth. Make fertilizer applications in early spring or late fall after growth has ceased.

For more information, see:

• OSU Fact Sheet on Fire Blight

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- · Fire Blight What now?
- · Resistance to Fire Blight

BUCKEYE RUST

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Nancy Taylor reported receiving a sample of Ohio buckeye leaves in the clinic with a different leaf disease then what is normally expected by BYGLers. The sample was spotted, collected, and sent to the Clinic by a new OSU Extension Educator who was not familiar with the usual leaf disease of Ohio buckeye, Guignardia leaf blotch (*Guignardia aesculi*). The leaf disease was identified as buckeye rust (*Puccinia andropogonis*).

Buckeye rust produces distinct circular, yellow spots (lesions) on the leaves of Ohio buckeye. These spots are unlike Guignardia leaf blotch lesions, which are irregular in shape. Initially the leaf blotches are pale green in color, then turn orange-brown. Buckeye rust alternates between its hosts, Buckeye -and possibly one of the native prairie grasses (e.g. big bluestem prairie grass (*Andropogon gerardii*)).

Buckeye rust infection can result in crinkled leaves and heavy infestations can cause some leaf drop. Although most BYGLers were unfamiliar with the disease, it may be more common than most BYGLers realized. With Guignardia leaf blotch being so obvious, the BYGLers may have neglected to look closely at the leaf infections on buckeye. It took a new Extension Educator with a "new" set of eyes to look beyond the usual to discover the unexpected. This is a reminder to us all that one should occasionally reexamine the usual to discover the unusual.

For more information, see:

- Univ. of Mass. Guignardia Leaf Blotch Fact Sheet
- Ohio Buckeye Information

YOUNG SPROUTS IN LAWNS

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Each year, people complain about tree seedlings sprouting in their lawn and request a fast and easy treatment to remove them. Unfortunately, it is rarely that simple. Samaras from maple trees are the most common offender, however oak, apple, elm and other tree and shrub seeds will also sprout if given the opportunity.

Overall, the most effective tactic is to keep the lawn fertilized enough so that the turfgrass is dense. Thick turfgrass will out-compete with seedlings, whether they are lawn weeds or sprouting trees. Although mid-late June is not the preferred time to fertilize turfgrass with the hot, dry season approaching, applying a fertilizer with 25-30% slow release nitrogen may thicken a waning lawn and keep seedlings squelched.

The alternative is to continue mowing at regular intervals, which removes the top portion of the trees. In time, the tree seedling will die without leaves to supply the roots with carbohydrates. Mowing the lawn at the recommended height (2.5-3") will shade out developing seedlings. Treating individual seedlings with a broadleaf herbicide is another option, however it is time consuming and tedious, plus with warmer temperatures, the prospect of the herbicide volatilizing or drifting to desirable ornamentals is greater.

For more information, see:

• Control of Tree Seedlings in Lawns from PlantTalk Colorado



BILLBUGS BACK!





Dr. Shetlar reported that damage from the bluegrass billbug is becoming apparent, and that turfgrass managers should examine sites which historically suffer from billbugs for evidence of activity.

Billbug adults will continue to lay eggs until the end of July. Look for Kentucky bluegrass stands which have patches of browning, wilting turfgrass, indicating that the white, legless larvae are tunneling down the stems. Grab the base of the stems and tug with thumb and forefinger. If the stems break off, examine the broken ends for sawdust and frass. Test a few more wilted stems to determine the extent of the damaged area before deciding whether or not to treat.

At this point, it is too late to treat for adults, as they eat very little grass and have already laid a great deal of eggs. Ideally, adult treatment using a pyrethroid should be made in April, while use of a preventive insecticide

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(imidacloprid (Merit), MACH2 (Halofenozide), Arena (clothianidin), or Meridian (thiamethoxam) is most effective when applied from May through the 3rd week of June. This preventive treatment will also control grubs and at least suppress chinch bug populations. Even preventive applications for the billbug larvae will be less than ideal once the larvae have dropped out of the stems and begun tunneling through the roots, where they are not exposed to the insecticides. Check the turfgrass now and treat affected lawns as soon as possible. Be sure to thoroughly irrigate the area after treating to flush the product into the turfgrass root zone.

For more information, see:

- OSU Fact Sheet on Billbugs in Tufgrass
- · OSU Fact Sheet on Management of Turfgrass Pests



LANDSCAPE STORMWATER MANAGEMENT MANUAL FOR SOUTHWEST OHIO



Dave Dyke is leading a collaboration of representatives from the Metropolitan Sewer District of Greater Cincinnati (MSD); Ohio State University Extension, Hamilton County; Hamilton County Soil & Water Conservation District; U.S. EPA Sustainable Environments Branch of the National Risk Management Research Laboratory; the Cincinnati Zoo and Botanical Garden; members of the ENLTT; NRCS; and the Urban Landscape Ecology Program to develop a best management practices (BMP) manual for mitigating stormwater runoff using small scale green infrastructure as a major component of the MSD Wet Weather Improvement Program (WWIP).

The manual is needed to assist residents, organizations, and landscapers in solving problems associated with the stormwater surges within the Greater Cincinnati area. Cincinnati was the first city in the country to have a sewer system and that system is still in use today. It is a combined sewer system, which means that all rainwater runoff and sewage flow into the sewer system together. During heavy rainfall events, the stormwater volume overflows the system spreading sewage into area streams including the Mill Creek, Little Miami River, Great Miami River, and Ohio River. The area's Metropolitan Sewer District is under a consent decree with the U.S. EPA under which the WWIP was established to mitigate the sewer overflows that release sewage into the streams.

One goal of the WWIP's work is to establish BMPs for existing residential and commercial lots and public land. The BMP's break the contiguous surfaces that facilitate surges of stormwater into the system. Some BMP's are constructed to sequester stormwater on the source lot for water seepage into the ground, while others slow the flow of the stormwater off the lot. A BMP manual specific to the Southwestern Ohio in needed taking into account the region's native soils, climate, and topography. The first draft of the manual, which is expected to be ready for use by the end of June 2008, will focus on methods of rain garden construction, contour infiltration plantings (CIP's), and appropriate plant material and home lawn maintenance practices that increase stormwater penetration into the soil of lawns. In its final version, the manual will contain information on various other methods of on-lot stormwater management including green roofs.

Dave is compiling a list of local plant suppliers (Hamilton and contiguous counties) and landscape companies that are interested in learning about and/or installing stormwater mitigating features in the landscape. Please contact him at dyke.15@cfaes.osu.edu for further information on this project or to get on his plant supplier and/or landscape installation list for eventual inclusion in the manual.

A rain garden workshop based on this manual will be held on June 26. See workshop details in the Coming Attractions section.

WHITE PINE WEEVIL DAMAGE A TOP PROBLEM





Joe Boggs reported that damage caused by white pine weevil (*Pissodes strobi*) larvae to the main leaders of conifers in Christmas tree plantations is becoming evident in northeast Ohio. As tops of infested conifers turn reddish-brown, weevil infestations become easy to spot.

In the spring, overwintered females deposit eggs in the terminals of a wide range of conifers including: Douglas-fir, all spruces, and eastern white, Scotch, jack, red, and pitch pine. The resulting white, legless, slightly curved, grub-like larvae tunnel downward just beneath the bark, feeding on phloem tissue until pupation. The tops of weevil infested trees become wilted, turn brown, and die. Main leaders are often curved into a "shepherd's crook." Removing the paper-thin bark from infested leaders will reveal reddish-brown frass (insect excrement) and weevil larvae.

It is too late to apply insecticides to kill the developing larvae. However, it is not too late to reduce populations by removing infested terminals. Wilted terminals should be pruned from trees and the cut ends closely examined to determine if the entire infestation has been removed. Infested material must be destroyed since the weevils will complete their development in cut tops left on the

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ground. Larval development is typically completed by mid-to-late summer. There is only one generation per year.

For more information, see:

- U.S. Forest Service Fact Sheet
- OSU Extension "Bug Doc" Fact Sheet



HAMILTON COUNTY RAIN GARDEN WORKSHOP



The OSU Extension, Hamilton County; the Cincinnati Zoo and Botanical Garden; the Hamilton County Soil and Water Conservation District, and the Mill Creek Council of Communities will be conducting a raingarden workshop for Master Gardener Volunteers, zoo volunteers, and the general public (space permitting) at the zoo on June 26 based on a manual being collaboratively developed by the Metropolitan Sewer District of Greater Cincinnati (MSD); Ohio State University Extension, Hamilton County; Hamilton County Soil & Water Conservation District; U.S. EPA Sustainable Environments Branch of the National Risk Management Research Laboratory; the Cincinnati Zoo and Botanical Garden; members of the ENLTT; NRCS; and the Urban Landscape Ecology Program. The cost is \$20.00. Registration is limited. Those interested in attending may contact Kim Martini in the Extension office at (513) 946-8989.

NORTHWEST OHIO GREEN INDUSTRY SUMMER SESSION



Remember to save the date for the 11th annual Northwest Ohio Green Industry Summer Session on August 6, 2008. The event will be held once again at Owens Community College. We are especially pleased to have Bill Hendricks, from Klyn Nurseries, Inc., with us once again to speak on Tree Selections for Shade and Partial Shade, and Top Woody Plant Selections. Additionally, this year's great line up of guest speakers includes:

- Dr. Shetlar; Scales and Their Control Options, Pesticide Modes of Action
- Joe Boggs; "Boring" Insects and Their Control Options, Diagnostic Basics
- Dr. Curtis Young, Clues to Insect ID, Bagworms and Their Control Options
- Dr. Laura Deeter; Top Perennial Performers, Perennial Pests and Problems
- Joanne Kick-Raack; Pesticide Updates
- Maumee Valley Growers Discussion Panel

Once again we will have a three hour manager session with Walter Williams working with you as you look at Growing Your Business by Managing Your Business. This session will be both informative and very interactive as you look at your business and where you want to grow.

Continuing education credits will be given for ONLA certified technicians, ISA recertification, OLA, and Master Gardener recertification.

Contact Becky McCann at 419-354-6916, or mccann.52@osu.edu for more information.

BYGLOSOPHY - June 19, 2008



"How fair is a garden amid the toils and passions of existence." - Benjamin Disraeli









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.

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Website designed by Dr. Tim Rhodus. Direct comments or questions to Webmaster

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