

# VegNet

## The Vegetable and Fruit Crops Teams Newsletter

<http://vegnet.osu.edu>

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## Cicadas on Fruit Crops

*From Celeste Welty, Extension Entomologist*

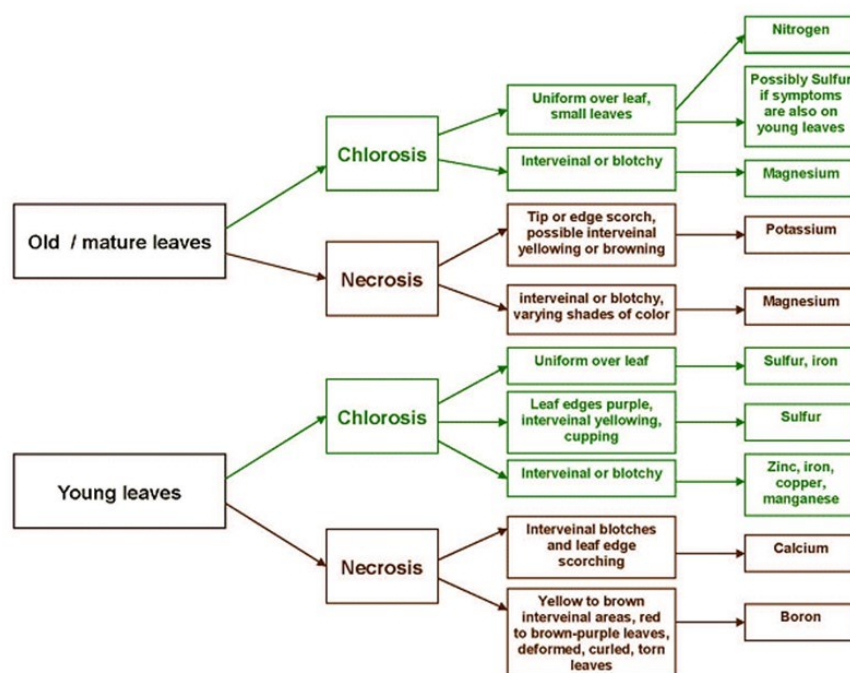
The periodical cicada is emerging in large numbers at some locations in eastern Ohio. Some questions have come up about the use of systemic insecticide for cicada control. As mentioned in previous articles, the label for Admire Pro, which has imidacloprid as the active ingredient, does include treatment to the soil around apple and peach trees, for control of aphids and leafhoppers at a rate of 7.0 to 10.5 fl. oz. per acre, applied by chemigation into the root zone by drip irrigation or similar methods, with a 21-day pre-harvest interval. The label does not include periodical cicada on the list of target pests. However, it has been shown that this chemical is effective for control of periodical cicada on ornamental trees, so it is likely to be effective on fruit trees. Keep in mind that when imidacloprid is applied to the soil, it acts as a true systemic and it taken up by the roots to the stems and leaves of the canopy, where it is active for anywhere from two to four weeks. When imidacloprid is applied as a spray to the leaves, it does NOT act as a true systemic, but it has translaminar movement, which means it can move from the top of the leaf to the bottom of the leaf and inside the leaf, but it will not move down the stem to other branches or to the roots. When applied as a spray, imidacloprid is active for a shorter time, for about 10-14 days, than when applied to soil.

# Three Quick Points About Diagnosing Nutrient Deficiencies

*From Matt Kleinhenz, Department of Horticulture and Crop Science, The Ohio State University*

You may be wondering if your crop(s) are experiencing a nutrient deficiency. Here are three points to consider as you begin to answer that question.

1. A correct, reliable diagnosis is a two-step process. It usually begins with visual inspection. Regardless, it should end with tissue analysis by an accredited lab, followed by comparing data they provide to published values of crop-specific nutrient deficiency, sufficiency, and excess (DSE). You can compare the values or you can rely on a knowledgeable, trusted adviser. Sap analysis – with its own DSE charts – can help. Sap analysis is faster than but not a substitute for tissue analysis. Still, most growers tend to rely on visual inspection only and this may have undesirable consequences.
2. Nutrient deficiency symptoms can resemble damage caused by other abiotic stresses, diseases, and insects. Evaluating other possible causes for symptoms is important and often part of a quality scouting program. Nutrient deficiency may not be the only reason for the symptom, or even the primary or most significant one. That is, nutrient deficiency may be a symptom of a larger problem, not a sign that the crop is under-fertilized.
3. More information strengthens the diagnosis and offers other benefits. Ask a lot of questions. Are the symptoms in all plantings, fields, and varieties? If not, which one(s)? How much of each planting is affected? When did symptoms first appear? What fertilizer program was used? What other applications have been made, including nearby? You and your adviser having more information to work with will help you identify and address the problem more effectively.



Numerous other resources are available to help diagnose nutrient deficiency symptoms. The diagram at left can help start. Note the distinctions between old and young leaves (usually bottom and top of plant, respectively) and between chlorosis (yellowing) and necrosis (darkening, brown-black). These distinctions narrow the range of possible deficiencies. Other specific symptoms (e.g., discoloration of all or part of the leaf and whether leaf veins are affected and how) help to further pinpoint possible explanations for symptoms. A truly reliable diagnosis, however, requires another step – i.e., tissue analysis completed by an accredited lab followed by comparing data they provide with reference values for your crop.

# OSU Muck Crop Report—May 27, 2016

*From Bob Filbrun, Station Manager — Muck Crops ARS*

After a very wet start to the month of May with approximately 2.7" of rainfall through the 16th, the weather has turned hot and breezy with the muck soil drying out rapidly. Over the past week, a tremendous amount of seed has gone in the ground and a number of crops are nearing harvest. Radishes are being harvested today and the muck growers anticipate a nice crop of turnip and mustard greens coming off next week. Cilantro and parsley are also progressing nicely with harvest anticipated for the week of June 6th. Green onion production is running behind schedule, but numerous plantings of sweet corn have been completed and the final parsley plantings are scheduled for next week.

While this week's weather forecast originally predicted fair chances of showers or thunderstorms for late this week and on into the weekend, chances of showers continue to be down-graded and growers are doubtful that any significant rain will develop. Unless showers do develop over the Memorial Day weekend, growers will likely begin to irrigate early next week.

With the commencement of hotter and dryer weather, flea beetle populations are starting to increase and weed germination has

exploded; a nice stand of purslane, smartweed and pigweed are visible around the Muck Crops Station. In addition, growers report that Cressleaf Groundsel has arrived in the muck and will probably be a problem as we look into the future.

Finally, even though the season is still young, growers emphasize that "finding labor" continues to be their #1 problem - with challenges tied to "weather" following in the #2 position.



Picture: Cressleaf Groundsel

# Sweet Corn Insect Pests

*From Celeste Welty, Extension Entomologist*

Following is a summary of recommended scouting procedures and threshold rules for sweet corn in the seedling and early-whorl stages.

**During the seedling stage**, scout once per week for cutworms by looking at 100 consecutive plants in each of 3 areas of the field, up to the 6-leaf stage. Control is justified if at least 3 to 5% of seedlings are cut; use the 3% threshold if larvae are small, or the 5% threshold if larvae are medium to large. Spray treatment is most effective in the evening.

For plantings where systemic insecticide was not used on seed or in soil at planting, then scout 3 times per week during the seedling stage for corn flea beetle. For hybrids that are very susceptible to Stewart's wilt, treat if there are at least 6 corn flea beetles per 100 plants. For hybrids that are tolerant of wilt, treat only when there is an average of at least 2 corn flea beetles per plant and 25% of seedlings are severely damaged. Control of flea beetles is not needed after the 7-leaf stage. A listing of the relative susceptibility of many hybrids can be found at University of Illinois: [sweetcorn.illinois.edu/summary/summary.html](http://sweetcorn.illinois.edu/summary/summary.html)

*Armyworm* (also known as *true armyworm*) is not present most years in Ohio sweet corn. It can infest no-till corn planted into grass, or corn that borders mature wheat. Treat if 35% of plants are infested during seedling or early whorl stages.

**During the whorl stage**, scout once per week for fall armyworm. Examine 50 plants in small plantings (< 2 acres) or 100 plants in large plantings (> 2 acres). Record the number of plants with fresh feeding damage. European corn borers chew small holes in leaves, while fall armyworms chew large ragged holes. Fall armyworm should be treated if at least 15% of whorls are infested. If you are able to apply granular insecticides to whorl stage corn, then also scout for European corn borer's first brood larvae (only in June and early July). Treat with granules if 30% of plants are infested during the whorl stage. If you plan to apply insecticide by airplane, then scout for European corn borer egg masses. Treat when egg masses are found on at least 4% of plants.



# Wayne County IPM Report: May 26<sup>th</sup>

*From Rory Lewandowski, Extension Educator Wayne County*

The week of May 23 has brought some warmer and drier days to our area and growers are taking advantage of the improved weather! Lots of warm-season vegetable transplants have been planted into fields this week. Growers are removing row covers from field plantings of zucchini, summer squash, cucumbers, green snap beans, melons and sweet corn. All of these crops are responding to the warmer weather and showing improved growth. Unfortunately, the weeds are also increasing their growth, and scouts noted the need for improved weed control on several grower scouting reports this past week. Sweet corn that started under plastic and row cover is at stage v-5. Many growers were planting sweet corn this week as well. High-tunnel crops are advancing rapidly. Scouts noted cucumbers in a high tunnel at bloom and fruit set. Green snap beans in a high tunnel are in bloom.

Cole crops, cabbage, cauliflower and broccoli continue to look good in most growers' fields. Scouts did find several fields where flea beetles were over threshold limit and growers were advised to use control measures. Slugs and/or evidence of slug feeding damage continue to be found across a range of crops including onions, peas, cabbage, green snap beans, sweet corn and greens. Scouts found low numbers of cucumber beetles in field planted cucumbers this week and in several potato fields scouts noted Colorado potato beetle adults and eggs.

In fruit, we had a spike in numbers of codling moths caught in our pheromone traps in the northern part of Wayne County, otherwise both tree and small fruit development look good at this point.



Pictures:

- A. Cucumbers flowering and setting fruit in high tunnel. (Photo by Chris Smedley, IPM Scout)
- B. Amish producer taking advantage of the warmer weather. Setting transplants into the field (Photo by Chris Smedley, IPM Scout)

# Southern Ohio Vegetable and Fruit Update May 26<sup>th</sup>

*From Brad Bergefurd, OSU Extension Educator and Horticulture Specialist, OSU Extension Scioto County and OSU South Centers*

With little to no rainfall for the area the past week, field work resumed in full force with farms getting caught up from the extended periods of rain the past few weeks. Field work has included plowing, working ground, spraying, bed shaping, laying plastic, staking and tying tomatoes and peas, dropping twine and training hops, transplanting peppers, tomatoes, cabbage, melons and watermelons, and direct seeding pumpkins, sweet corn, cucumbers, beans, summer squash and winter squash. Apples and peach crops are looking very good and continue to be pruned. Harvest activities include daily asparagus harvest, plasticulture and matted row strawberry harvest, high tunnel tomato harvest, lettuce & spinach harvest. Spraying fungicides on tree fruit, hops, strawberries, brambles, blueberries and grapes, and spraying herbicides. Most areas reported rainfall amounts of less than ½ inch last weekend May 21 and 22. 17 year periodical Cicada damage continues to be reported on blueberries and brambles throughout central and southeastern Ohio.

Hop plantings are being fertigated weekly with Nitrogen and injections of systemic fungicides for Downy Mildew continue. New plantings of hops are being hand planted and new high-trellis hop systems are being installed. Galena hops are beginning to burr or starting to flower in the Fort Recovery area.

Late last week, Downy Mildew was confirmed on field-grown hops in Wooster and this week hop farms throughout Ohio are reporting Downy Mildew symptoms and are sending samples into Dr. Sally Miller's Vegetable Pathology lab for culturing and diagnosis. Hop farms should be scouting yards regularly for possible Downy Mildew infections and should be implementing timely control measures including fungicide injections and foliar applications. Early detection and a tight management and scouting program are the key to managing this disease. A diagnosis of any disease CANNOT be made by a picture! You must submit samples to a Pathology lab for culturing and identification. When submitting plant samples to Dr. Miller's lab at Wooster, send samples early in the week; they cannot arrive late day on Friday or over a weekend or holiday. Information about the vegetable pathology laboratory is available at this link: [http://www.oardc.ohio-state.edu/sallymiller/t08\\_pageview3/Diagnostics\\_Services.htm](http://www.oardc.ohio-state.edu/sallymiller/t08_pageview3/Diagnostics_Services.htm).

This hop scouting resource was shared at many of our workshops and everyone who attended this year's Ohio hop conference received a hard copy of the pest management guide to help with pest ID and scouting: <http://usahops.org/index.cfm?fuseaction=research&pageID=2>.

**(Continued on next page)**

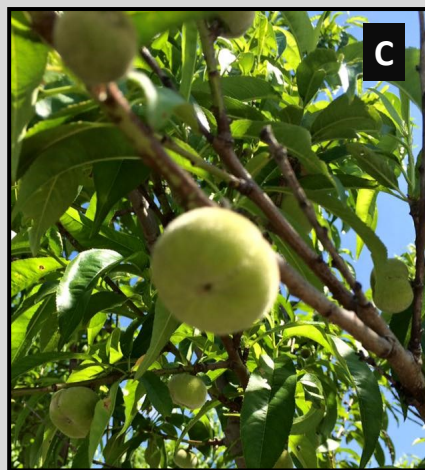


Pictures: Downy Mildew has been diagnosed in Ohio field hops. (photos by Brad Bergefurd and contributed)



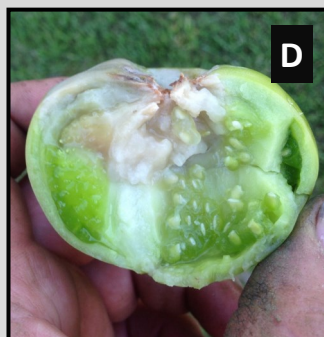
# Southern Ohio Vegetable and Fruit Update May 26<sup>th</sup> Continued

To see past hop variety susceptibility to Downy Mildew in Ohio field trials, go to: <http://southcenters.osu.edu/sites/southc/files/site-library/site-documents/HORT/Hops/2013-Research/Hop.2013.pdf>.



Pictures:

- A. Downy Mildew has been diagnosed in Ohio field hops. (photos by Brad Bergefurd and contributed)
- B. Plasticulture and matted-row strawberry harvest is in full-swing. (photos by Jones Farm, Rhoads Farm and Paige's Produce)
- C. Peach crops, including donut peaches, continue to look good on many farms. (Photos by Rhoads Farm)
- D. Botrytis infection is being reported in high-tunnel tomatoes. (Contributed photos)





OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER  
OHIO STATE UNIVERSITY EXTENSION

# 2016 VEGETABLE WORKSHOP SERIES



2<sup>nd</sup> Thursday, April - October

North Central Agricultural Research Station  
1165 County Road 43  
Fremont, OH 43420

## Topics

**April 14:** New Fungicide Strategies with Orondis™, Sally Miller, Plant Pathology

**May 12:** Scouting Cucurbits with Drones, Jim Jasinski, OSU Extension

**June 9:** Alternative Crop Enterprises – Barley and Hops – Are They an Option for You?, Eric Stockinger, Horticulture and Crop Science

**July 14:** The OSU Food Safety Program – What It Can Do for You, Beth Scheckelhoff, OSU Extension

**August 11:** Sweet Corn Evaluation, Field Walk, and Taste It for Yourself, Mike Gastier, OSU Extension

**September 8:** Pepper Evaluation and Field Walk – Bells, Bananas, Jalapenos, Allen Gahler, OSU Extension

**October 13:** Soil Health and Water Quality – How Does It Affect Me? A Look at Edge of Field Studies and NCARS Water Samples, Libby Dayton, School of Environmental and Natural Resources

**Please** join us at the North Central Agricultural Research Station, Fremont, OH, the second Thursday beginning April 14 through October 13 for breakfast, industry updates, in-depth tips, tricks, and information from researchers to help make your 2016 growing season a profitable one! Attend when the topic suits you or take advantage of each month's program

## Registration

Free and open to the public

Bring your plant disease and insect samples to the OARDC Lab for identification and same day results, free of charge!

**Free** breakfast begins at 7 A.M. followed by the featured speaker, field walk and networking

## For more information

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# SUMMER *& field* tour *day*

June 22, 2016

## REGISTRATION IS NOW OPEN!

### SCHEDULE OF EVENTS

**1:00 PM—5:00 PM**

Tradeshow

**1:00 PM—2:00 PM**

FSMA Update

**2:00 PM—4:00 PM**

Wagon Tours

**2:00 PM**

Practical Food Safety Walk Through

**4:00 PM—7:00 PM**

Food trucks available

**5:00 PM**

OPGMA Business Meeting

**5:15 PM**

Live music on the patio

### FEATURED FOOD TRUCKS

**The Beautiful Flame**

*Known for their*

**BRICK OVEN PIZZA**

**Harvest at Hillcrest**

*Known for their*

**LAKE ERIE PERCH TACOS  
APPLE CHUTNEY & CHEDDAR  
GOURMET HOT DOGS**

### FEATURED MUSIC

**The Smer Brothers Band**



Get out of your business for the day to **network with your peers**, take a **tour of Quarry Hill Orchards'** innovative farm, enjoy **one-on-one time** with industry vendors, get the information you need to **stay current on food safety regulations**, and **HAVE SOME FUN**. *Yes, it's okay to have some fun!* You work hard **every day**. The **OPGMA Summer Tour & Field Day** gives you the opportunity to **combine work and play**.

### QUARRY HILL ORCHARDS

8903 Mason Rd, Berlin Heights, OH



Quarry Hill Orchards is a relationship-driven, family-centric, and quality-focused 130-acre fruit tree farm and retail market that specializes in growing, harvesting, and bringing to market boutique apples, peaches, pears, plums, cherries, and nectarines.

In 2005, Quarry Hill Winery was opened, offering a wide variety of award-winning, estate-grown and bottled wines. The vineyard is planted on the highest point of the farm, so it has added protection from spring frosts and allows longer ripening time in the fall. The rolling land and sandy loam soil provide excellent drainage.

### REGISTRATION INFO

#### OPGMA Members

\$25 1st company attendee  
\$10 each additional attendee

#### Non-Members

\$30 1st company attendee  
\$10 each additional attendee

**No refunds after June 17**

Register online at: [www.opgma.org/summer-tour](http://www.opgma.org/summer-tour)

Ohio Producer Growers & Marketers Association | 17 S. High St, Suite 200, Columbus, OH 43215  
Phone: 614.228.4739 | Fax: 614.221.1989 | [opgma@assnoffices.com](mailto:opgma@assnoffices.com) | [www.opgma.org](http://www.opgma.org)

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER  
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# Ohio State University Direct Marketing Food & Agriculture

## 2016 Webinar Series

One-hour webinars will be offered to bring exceptional speakers to your home, office or local Extension center. If you're interested in finding out more about marketing issues, visit the website for details.



## 2016 Direct Marketing Webinar Series All webinars begin at 12 noon

Date	Topic	Lead Presenter	Connection
Feb. 18	Marketing Trends Learned from the Super Bowl	Eric Barrett & Rob Leeds	<a href="http://carmenconnect.osu.edu/marketingtrends2016/">http://carmenconnect.osu.edu/marketingtrends2016/</a>
Mar. 2	Using All Your Senses in Branding Your Business	Eric Barrett & Rob Leeds	<a href="http://carmenconnect.osu.edu/brandingyourbusiness/">http://carmenconnect.osu.edu/brandingyourbusiness/</a>
Apr. 21	Enhancing Your Web Presence	Melissa Carter	<a href="http://carmenconnect.osu.edu/enhancingwebpresence/">http://carmenconnect.osu.edu/enhancingwebpresence/</a>
May 26	Product Recall & Traceability	Eric Pawlowski	<a href="http://carmenconnect.osu.edu/productrecallandtraceability/">http://carmenconnect.osu.edu/productrecallandtraceability/</a>
June 16	Product Labeling	Emily Adams	<a href="http://carmenconnect.osu.edu/productlabeling/">http://carmenconnect.osu.edu/productlabeling/</a>
July 21	Celebrate Ohio Local Foods Week	Heather Nelkirk & Patricia Barker	<a href="http://carmenconnect.osu.edu/localfoodsweek/">http://carmenconnect.osu.edu/localfoodsweek/</a>
Aug. 18	Produce Auctions	Brad Bergefurd	<a href="http://carmenconnect.osu.edu/auctionsforproduce/">http://carmenconnect.osu.edu/auctionsforproduce/</a>
Sept. 15	Pricing Your Products	Megan Leffew	<a href="http://carmenconnect.osu.edu/pricingproducts/">http://carmenconnect.osu.edu/pricingproducts/</a>
Oct. 20	Cooperatively Marketing Your Products	Hannah Scott	<a href="http://carmenconnect.osu.edu/marketingyourproducts/">http://carmenconnect.osu.edu/marketingyourproducts/</a>
Nov. 17	Using Facebook for Your Business	Duane Rigsby	<a href="http://carmenconnect.osu.edu/facebookforyourbusiness/">http://carmenconnect.osu.edu/facebookforyourbusiness/</a>
Dec. 15	Survey Results for Ohio Produce Marketers	Direct Marketing Team	<a href="http://carmenconnect.osu.edu/surveyresultsformarketers/">http://carmenconnect.osu.edu/surveyresultsformarketers/</a>

For recordings of all webinars go to [go.osu.edu/DirectMarketingWebinars](http://go.osu.edu/DirectMarketingWebinars)



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## VegNet Newsletter

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

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### Submit Articles:

To submit an article to the VegNet newsletter please send the article and any photos to Charissa Gardner at [gardner.1148@osu.edu](mailto:gardner.1148@osu.edu). For questions regarding the newsletter contact **Brad Bergefurd** at [bergefurd.1@osu.edu](mailto:bergefurd.1@osu.edu) or call 740.289.2071 ext.132

## About the editor

### Brad Bergefurd

Bergefurd is an Extension Educator, Agriculture and Horticulture Specialist with Ohio State University Extension, with statewide responsibilities for outreach and research to the agriculture and commercial fruit and vegetable industries Brad has offices at the OSU Piketon Research & Extension Center in Piketon and at OSU Extension Scioto County in Portsmouth.



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