# VegNet

# The Vegetable and Fruit Crops Teams Newsletter

http://vegnet.osu.edu

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Vol. 23 Number 16, August 2, 2016

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#### **Lab Closed for Short Time**

From Brad Bergefurd, Extension Educator, Agriculture and Natural Resources, The Ohio State University, Scioto County & South Centers

Dr. Sally Miller's Vegetable Pathology Lab will be presenting at a Conference until August 8th. It would be best to submit your plant disease samples to her lab for diagnosis after that date. By doing so your samples will not go bad before she returns to the lab for diagnosis on August 8th. Thank you.

### Wayne County IPM Report: July 28th

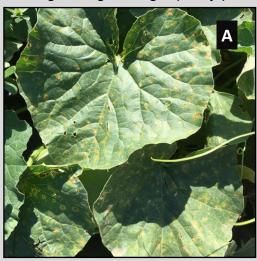
From Rory Lewandowski, Extension Educator Wayne County

According to the USDA drought monitor web site, Wayne County (along with all of northeastern Ohio) is in a moderate drought. This is certainly reflected in crop conditions and in comments scouts are making on grower field report sheets. Irrigation systems and water sources are being stretched. Today one of the scouts made a comment to the effect that they didn't see how growers could keep up with moisture needs. Another scout replied, "They can't; that's why we are seeing so much blossom end rot." Indeed, uneven watering does trigger blossom end rot (BER) and scouts are noting BER in tomatoes, fall squash, summer squash, zucchini, eggplants, and peppers. Another result of all the sunny skies and high temperatures is sunscald being noted on tomatoes and peppers.

Disease-wise, scouts continue to note early blight in tomatoes, downy mildew in cucumbers and melons, powdery mildew in fall squash, pumpkins, summer squash, zucchini and melons, and anthracnose in fall squash, pumpkins and melons. Leaf mold continued to be a problem on tomatoes in one high tunnel and some bacterial spot and speck symptoms were noted in some field tomatoes. Some rust was found in one field of sweet corn that was beginning to be harvested.

Insects are doing well in the heat and dry conditions. This week, scouts found hornworms in both field and high tunnel tomatoes for the first time this season. Stink bugs are becoming more prevalent and scouts found both the insects and the stinkbug feeding damage in tomatoes, pumpkins and eggplant. Cucumber beetles continue to be present, typically this past week at light levels although scouts did note cucumber beetles doing some chewing damage on the rinds of watermelons. Japanese beetles are still being noted on a variety of crops including cauliflower, fall squash, pumpkins, eggplant, green snap beans and sweet corn. In one field of sweet corn, Japanese beetles were doing enough silk feeding and clipping in one area of the field that scouts recommended some spot treatment. Pheromone trap counts for corn earworm moths remained at 0 for the week. Five European corn borer (ECB) moths were caught at 3 trapping locations in the past week and in one sweet corn field ECB damage was at 14% for corn in tassel, over the treatment threshold. Colorado potato beetles (CPB) were noted in both potatoes and eggplant. Additionally, scouts noted some biological control when they found a beneficial insect, the spined soldier bug attacking CPB larvae in eggplant. Finally, in an oddity that scouts find occasionally, millipedes were found chewing on the underside of some cantaloupe.

Still, despite the dry conditions, growers are reaping a bountiful harvest of vegetables and the produce auctions at Mount Hope and West Salem (County Line Produce Auction) are offering a range of high quality produce. (**Pictures continued on next page**)





- A. Downy mildew symptoms on melon leaves. Photo by Chris Smedley, IPM program scout.
- B. Hornworms on tomatoes. Photo by Levi Myers, ACRE program intern.

#### Wayne County IPM Report: July 28th Continued

From Rory Lewandowski, Extension Educator Wayne County









- A. Twice-stabbed stink bugs. Photo by Chris Smedley IPM program scout.
- B. Spined soldier bug attacking CPB larva. Photo by Chris Smedley, IPM program scout.
- C. Japanese beetles feeding on and clipping corn silks. Photo by Levi Myers, ACRE program intern.
- D. Millipedes on bottom of cantaloupe. Photo by Chris Smedley, IPM program scout
- E. Extension specialists Celeste Welty, Matt Kleinhenz, and Sally Miller working on vegetable diagnostics at Mount Hope Produce Auction crop walk. Photo by Rory Lewandowski, Extension educator Wayne County.



#### Spider Mite Control on Vegetable Crops

From From Celeste Welty, Extension Entomologist

Infestations of the two-spotted spider mite have been showing up in many crops during the recent droughty conditions in Ohio. Because mites are tiny, they are often overlooked or misdiagnosed as a disease. Infested leaves have fine webbing on the leaf undersides. Tomato leaves damaged by spider mites usually have yellow blotches, while bean leaves show white stipples or pin-prick markings from mite feeding. Pumpkins can tolerate moderate levels of mites, but watermelons are more sensitive to injury from mite feeding. Mites can be noticeable on sweet corn on the flag leaf. A simple method of diagnosing spider mites is to shake leaves over a piece of paper and look for moving specks that are visible to the naked eye. A closer look with a magnifier can show the tiny mites that are white marked with two large dark spots.

In some fields, the mite infestation is worst on a field edge by a dusty road, and effects can be suppressed by overhead irrigation. Mites have many natural enemies that kill them, such as specialized predatory mites or generalist lacewings, ladybugs, and pirate bugs, but these helpful predators are often killed by pesticides. Chemical intervention can be needed to keep the crop alive if spider mites are abundant. When a mite infestation is limited to field edges, infested fields should be scouted, and a miticide applied as a spot treatment to isolated infestations. Mite control is better when higher volumes of water are used; 25 gallons of water per acre is better than 10 gal/A. Several pesticides are registered for spider mite control; some are restricted use and some are for general use, as shown for vegetable crops in Table 1 and for hops and fruit crops in Table 2. (Continued on next page)

Product name Use Pre-harvest interval, by crop									
(common name)		Beans	Melons	Cucum-bers	Squash, pumpkin	Tomato	Pepper	Egg-plant	Sweet corn
Acramite 50WS or 4SC (bifenazate)	general	3 days	3 days	3 days	3 days	3 days	3 days	3 days	not registered
Dimethoate 4EC (dimethoate)	general	0 days	3 days <sup>a</sup>	not registered	not registered	7 days <sup>a</sup>	0 days <sup>a</sup>	not registered	not registered
Dicofol 4E (dicofol)	general	21 days	not registered	2 days	2 days	2 days	2 days	not registered	not registered
Oberon 2SC (spiromesifen)	general	not registered	7 days	7 days	7 days	1 day	1 day	1 day	5 days
Onager (hexythiazox)	general	not registered	not registered	not registered	not registered	1 day (greenho use)	1 day	1 day	not registered
Portal 0.4EC or FujiMite 5EC (fenpyroximate)	general	1 day	3 days	1 day	not registered	1 day	1 day	1 day	not registered
Zeal 72WDG or 72WSP (etoxazole)	general	not registered	7 days	7 days	7 days	not registered	not registered	not registered	not registered
Agri-Mek 0.7 SC or 0.15EC (abamectin)	restricted	7 days	7 days	7 days	7 days	7 days <sup>b</sup>	7 days	7 days	7 days
MSR (Meta-systox-R) 2EC (oxydemeton-methyl)	restricted	not registered	14 days	14 days	14 days	not registered	not registered	not registered	not registered
Vydate L 2WSL (oxamyl)	restricted	not registered	1 day <sup>a</sup>	1 day <sup>a</sup>	1 day <sup>a</sup>	3 days <sup>a</sup>	7 days <sup>a</sup>	1 day	not registered

Table 1. Products for spider mite control on specified vegetable crops.

<sup>&</sup>lt;sup>a</sup> Product registered for use on this crop but mites not on list of target pests for this crop, however mites listed as target pest on other crops.

b 7 days outdoors, or 1 day for commercial greenhouse tomatoes.

#### **Spider Mite Control on Vegetable Crops Continued**

From From Celeste Welty, Extension Entomologist

At some locations, organophosphates are still effective for mite control, with Dimethoate being the best bet and MSR as another choice. Dimethoate is an option for melons but is not allowed on squash or cucumbers; it has been a preferred product for mite control on soybeans. Dimethoate is prohibited from use on ornamental crops in high tunnels and greenhouses but is not prohibited from vegetable crops in high tunnels and greenhouses.

Where organophosphates are not effective, Agri-Mek is generally the most effective product for mite control, while Acramite and Oberon are nearly as good. Although Brigade (bifenthrin) and Danitol (fenpropathrin) are labeled for spider mite control when used at the high end of the rate range, they are generally not very effective for mite control. Dicofol is an old miticide that is still effective at some sites, but does not perform well at sites where resistant populations have developed. Vydate is registered for use on eggplant for mite control, but on cucurbits it is registered only for aphid control. On organic farms, insecticidal soap can be used for mite control but thorough coverage of the undersides of leaves is needed for good control.

Product name	Use	Pre-harvest interval, by crop						
(common name)		Hops	Straw-berry	Brambles	Blueberry	Grape	Apple	Peach
Acramite 50WS or 4SC (bifenazate)	general	14 days	1 day	1 day	not registered	14 days	7 days	3 days
Apollo (clofentezine)	general	not registered	not registered	not registered	not registered	21 days	45 days	21 days
Envidor (spirodiclofen)	general	14 days	not registered	not registered	not registered	14 days	7 days	7 days
Kanemite (acequinocyl)	general	7 days	not registered	not registered	not registered	not registered	14 days	not registered
Nealta (cyflumetofen)	general	not registered	1 day	not registered	not registered	14 days	7 days	not registered
Nexter (pyridaben)	general	not registered	not registered	not registered	not registered	7 days	25 days	7 days
Onager (hexythiazox)	general	not registered	not registered	not registered	not registered	7 days	28 days	7 days
Portal 0.4EC or FujiMite 5EC (fenpyroximate)	general	15 days	1 day	not registered	not registered	14 days	14 days	7 days
Savey (hexythiazox)	general	up to burr	3 days	3 days	not registered	not registered	28 days	28 days
Zeal 72WDG or 72WSP (etoxazole)	general	7 days	1 day	0 days	not registered	14 days	14 days	7 days
Agri-Mek 0.7 SC or 0.15EC (abamectin)	restricted	28 days	3 days	7 days	not registered	28 days	28 days	
MSR (Metasystox-R) 2EC (oxydemeton-methyl)	restricted	not registered	not registered	not registered	not registered	non- bearing only	non- bearing only	non-bearing only
Vydate L 2WSL (oxamyl)	restricted	not registered	not registered	not registered	not registered	not registered	14 days	non-bearing only

Table 2. Products for spider mite control on hops and specified fruit crops

# Southern Ohio Vegetable and Fruit Update—IPM Report July 28th

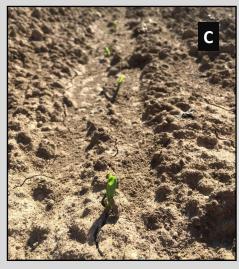
From Zach Charville, OSU Extension IPM Crop Scout

Across much of Southern Ohio, harvest of onions, cabbage, lettuce, greens, and early cucumbers has dwindled down. However, tomatoes, peppers, cantaloupe, watermelon, zucchini, squash, beans, sweet corn, blackberries, and peaches are in the peak of harvest and are producing decent yields. As pumpkin plants continue to form lateral plant structures and set fruit, problems with disease have become a problem in certain areas. Bacterial wilt and sclerotinia stem rot have been found in a few instances on pumpkin farms. Bacterial wilt is most easily preventable by early control of the cucumber beetle. The only way bacterial wilt can survive the cold winters is in the digestive system of cucumber beetles. The bacteria is transmitted to the plant through the insect damage on the leaves. As for sclerotinia, the best prevention method is crop rotation and the removal of diseased plants. The fungus can overwinter in plant matter and soil, so it is recommended to burn the affected plants to ensure that the fungus does not return in the future. These diseases are erratic, as most pumpkin producers have not experienced many problems with their pumpkins so far this season. Many of the pumpkin fields are thriving in the heat and recent rains of Southern Ohio. Spotted Wing Drosophila have been observed in blueberry farms in Pike and Ross counties. Trap observations over the past two weeks have revealed the insects, and traps will continue to be monitored weekly for population counts.





- A. Bacterial wilt on a pumpkin plant.
- B. Sclerotinia stem rot at the base of a pumpkin plant.
- C. Supersweet varieties starting to emerge expected to be ready for Labor Day.
- D. Peaches awaiting to be picked.





# Southern Ohio Vegetable and Fruit Update July 18-28, 2016

From Brad Bergefurd, OSU Extension Educator Agriculture and Natural Resources, OSU Extension Scioto County and OSU South Centers

Field work and harvest remains in full force. Some pockets throughout the region have been irrigating due to dry conditions. Most areas have been experiencing abnormally high rainfall patterns with some areas of Brown and Adams counties receiving over 5 inches of rain the past 10 days (7/23-7/28) making it difficult to perform harvest and field work. Harvest of all produce is in full swing with daily harvests being made and excellent quality, yields and market demand being reported. Harvests include sweet corn, peaches, day-neutral strawberries, green beans, half-runner beans, red beets, radishes, high tunnel tomatoes, peppers, cucumbers, pickles, field tomatoes, cucumbers, cabbage, sugar peas, zucchini and summer squash, lettuce, sweet onion, new potatoes, bell and hot peppers, blueberries and blackberries. The first orange pumpkins have been harvested with full harvest estimated to begin 8/15. Hops are maturing about 2 weeks ahead of normal, with harvest to begin in early August.

Field work between rains has included plowing, working ground, spraying, bed shaping for hops and plasticulture strawberry planting, laying plastic for plasticulture strawberries, staking and tying tomatoes and staking and tying peppers. The last direct seedings of sweet corn, cucumbers, beans, summer squash, cucumbers, pickles, pumpkins, pie pumpkins, gourds and winter squash were finished the week of 7/11-7/17. Transplanting of cauliflower and broccoli continues. Spraying fungicides on tree fruit, hops, brambles, blueberries, grapes, and all vegetable crops continues. New plantings of hops continue to be hand-planted and new high trellis hop systems are being installed.

Leafhopppers and spider mites are reaching threshold levels in some hop plantings requiring a tight insecticide and miticide program. Cucumber beetles continue to reach threshold levels in melons, cucumbers and squash. Flea beetles continue to cause damage to eggplants. Tomato hornworms continue to be reported in tomato plantings. With the recent excessive rainfall and saturated field conditions, along with high humidity and high temperatures, vegetable crops are showing more pronounced fungal and bacterial disease symptoms. Bacterial wilt is being reported in cucumbers, melons, and pumpkins. (Photos continued on next page)





Photos: Some areas are irrigating. Photos by Brad Bergefurd

# Southern Ohio Vegetable and Fruit Update July 18-28, 2016 Continued

From Brad Bergefurd, OSU Extension Educator Agriculture and Natural Resources, OSU Extension Scioto County and OSU South Centers















- A. Pumpkin crops are looking very good with a few orange fruit harvested 7.26, main harvest is estimated to begin week of 8/15. Photos by Brad Bergefurd
- B. Hops are maturing nicely but about 2 weeks ahead of normal with main harvest estimated to begin early August. Photos by Brad Bergefurd
- C. Fungicides are being applied weekly by ground sprayers or air. Photo by Brad Bergefurd

#### OHIO STATE UNIVERSITY EXTENSION



#### OSU EXTENSION



# What's New in Fruit & Vegetable Production?

Presented by OSU Extension Greene County



Join Extension specialists for an update on the latest news in fruit and vegetable production! Topics include:

- 10:00 -11:00 What's eating my produce?

  Keep up to date on high impact insect pests and how to better control them in fruits and vegetables.
- 11:00-12:00 Hydroponics 101

  Learn why cultivating plants in water is gaining popularity, and how to get started using these systems!
- 12:00-12:30: Lunch
- 12:30 2:00 Agritourism and Marketing Local Foods

  Get an update on the new agritourism bill, and an

  overview of alternative marketing opportunities
- 2:00 2:30: Tour Caesar Creek Vineyard

  Learn about Xenia's local vineyard and winery!



FRIDAY

**AUG 12** 

10 A.M. - 2:30 P.M.

Caesar Creek Vineyard 962 Long Rd, Xenia, OH 45385

Cost: \$20 includes lunch

Registration Required by August 8:

#### Register online:

https://www.regonline.c om/osuccfruitandvegeta

Contact hiatt.32@osu.edu or 937-372.9971x123

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OHIO STATE UNIVERSITY EXTENSION

# Orchard Sprayer Technology Field Day

THURSDAY, AUGUST 18 • 3:00 - 7:30 pm



Moreland Fruit Farm • 1558 Moreland Rd, Wooster OH 44691

#### Featuring:

- Sprayer demonstrations with new and current sprayer technology
- Education and discussion on how sprayers can be used more effectively and efficiently
- A glimpse of the future: Introducing the Intelligent Sprayer technology
  - Prototype sprayer designed by USDA-ARS/OSU using laser guidance to automatically adjust spray volume and nozzle pattern based upon tree size, leaf density and plant spacing.
  - Trials have shown reductions in pesticide use of 47-70% compared to conventional orchard air blast sprayers
  - Annual chemical savings can amount to \$140 to \$280 per acre
- Resource people: Heping Zhu USDA-ARS, Lead Scientist of the Intelligent sprayer and Erdal Ozkan - OSU Extension Sprayer Technology Specialist
- Sponsor displays, orchard equipment and supply exhibits

<u>Registration:</u> includes handout materials, refreshments, and a light supper for only \$5.00 per person, pre-register by **Thursday August 11** 

#### For more information:

Rory Lewandowski, 330-264-8722, Lewandowski.11@osu.edu, wayne.osu.edu

# Moreland Fruit Farm to USDA Agricultural Bervice THE OHIO STATE UNIVERSITY COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

#### Orchard Sprayer Technology Field Day

Registration cost is only \$5/person. Pre-registration requested to the Wayne County Extension Office at 330-264-8722 or email Lewandowski.11@osu.edu by **Thursday, August 11**. Make checks payable to Ohio State University Extension and mail to Ohio State University Extension – Wayne County, 428 W. Liberty St. Wooster, OH 44691. Please detach and return this form with payment. Thank you.

Name:	
Address:	
Phone Number:	E-mail:





**United States Department of Agriculture** 

# **Attention Specialty Crop Producers!**Free NAP Workshop

Non-Insured Crop Disaster Assistance Program (NAP)



August 18, 2016

6:30pm - 8:00pm Madison County USDA Service Center 829 US Highway 42 NE London, Ohio 43140



#### What is NAP?

The Farm Service Agency administers NAP which provides financial assistance to producers of non-insurable crops when low yields, loss of inventory, or prevented planting occur due to damaging weather.

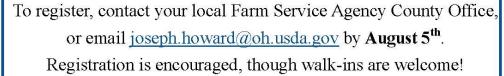
To read more about NAP coverage visit www.fsa.usda.gov/nap.



## **Workshop Highlights**

Workshop highlights include:

- Explanation of NAP requirements, benefits, coverage levels, application, & payment processes.
- Discussion of reporting requirements and presentation by loss adjustor
- Overview of other FSA programs

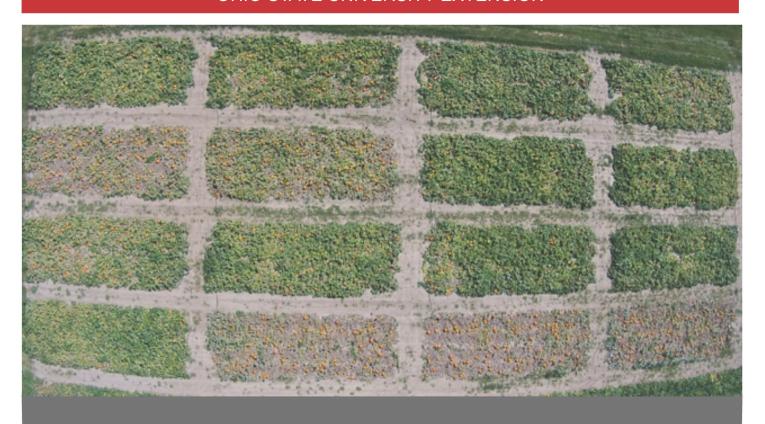


Persons with disabilities who require accommodations to attend or participate in this meeting should contact Joe Howard at 740-852-4003 or Federal Relay Service at 1-800-877-8339 by August 5, 2016.



USDA is an equal opportunity provider, employer and lender.

#### OHIO STATE UNIVERSITY EXTENSION



# PUMPKIN / UAV FIELD DAY

#### TOPICS:

**UAV** and imagery basics

Update on UAV / Downy & Powdery mildew project

**UAV flight & mapping demonstration** 

Insect update

Disease update

8 Powdery mildew fungicide demonstration plots

12 Powdery mildew tolerant/resistant hybrids variety trial

#### PRESENTERS:

Logan Dyer Lisa Fiorentini John Fulton Jim Jasinski

Sally Miller Wladimiro Villarroel

Claudio Vrisman Celeste Welty



#### THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

THURSDAY

AUG. 18<sup>TH</sup>

6 - 8 P.M.

Western Ag Research Station

7721 South Charleston Pike,

South Charleston, OH 45368

Cost: \$5 / person

Pre-register by August 15<sup>th</sup>

send email to:

Jasinski.4@osu.edu

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## OHIO STATE UNIVERSITY EXTENSION, SANDUSKY COUNTY NORTH CENTRAL AGRICULTURAL RESEARCH STATION



Join the staff at the North Central Ag Research Station near Fremont and OSU Extension on the 2<sup>nd</sup> Thursday of each month, April through October for catered breakfast, industry updates, and 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 come each month and stick around after the speaker to view the OARDC field trials or network with peers and industry reps.

#### 2<sup>nd</sup> Thursday: April – Oct.

\*Bring your plant disease and insect samples for identification and same day delivery to the OARDC lab, free of charge!

7:00 a.m Breakfast

with OSU and industry updates

7:30 a.m. Featured speaker

8:00 a.m. Field walk / networking

Held at NCARS office, No rsvp, No cost!

For more information contact

Allen Gahler, OSU Extension Sandusky County 419-334-6340 gahler.2@osu.edu Matt Hofelich, North Central Ag Research Station 419-332-5142 hofelich.4@osu.edu

Aug. 4: Sweet Corn Evaluation/tasting and insect management
Mike Gastier, Extension Educator – Huron County
Celeste Welty, Extension Entomologist

Sept. 8: **Pepper Evaluation and field walk**Allen Gahler, Extension Educator – Sandusky County **Non-Insured Crop Disaster Assistance Program Briefing**Brenda Turley, CED – Henry County Farm Service Agency

Oct. 13: Soil Health and Water Quality - How does it affect me?

A look at edge of field studies and NCARS water samples
Libby Dayton, OSU Soil Scientist



OHIO AGRICUTURAL RESEARCH AND DEVELOPMENT CENTER OHIO STATE UNIVERSITY EXTENSION

# **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

Apr. 21 Enhancing Your Web Presence

May 26 Product Recall & Traceability

June 16 Product Labeling

July 21 Celebrate Ohio Local Foods Week

Aug. 18 Produce Auctions

Sept. 15Pricing Your Products

Oct. 20 Cooperatively Marketing Your Products

Nov. 17 Using Facebook for Your Business

Dec. 15 Survey Results for Ohio Produce Marketers

Melissa Carter

Eric Pawlowski Emily Adams

Brad Bergefurd Megan Leffew

Hannah Scott Duane Rigsby

Direct Marketing Team

http://carmenconnect.osu.edu/marketingtrends2016/

http://carmenconnect.osu.edu/brandingyourbusiness/

http://carmenconnect.osu.edu/enhancingwebpresence/ http://carmenconnect.osu.edu/productrecallandtracibility/

http://carmenconnect.osu.edu/productlabeling/

Heather Neikirk & Patricia Barker <a href="http://carmenconnect.osu.edu/localfoodsweek/">http://carmenconnect.osu.edu/localfoodsweek/</a>

http://carmenconnect.osu.edu/auctionsforproduce/

http://carmenconnect.osu.edu/pricingproducts/

http://carmenconnect.osu.edu/marketingyourproducts/

http://carmenconnect.osu.edu/facebookforyourbusiness/

http://carmenconnect.osu.edu/surveyresultsformarketers/

For recordings of all webinars go to go.osu.edu/DirectMarketingWebinars



#### http://directmarketing.osu.edu

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#### The Ohio State University Extension





**Bayer CropScience** 





Solutions for the Growing World













#### **VegNet Newsletter**

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

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offices at the OSU Piketon Research &
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Extension Scioto County in Portsmouth.



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