

VEGETABLE CROPS HOTLINE

A newsletter for commercial vegetable growers prepared by the Purdue University Cooperative Extension Service

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vegcropshotline.org

IN THIS ISSUE

- NOTE FROM THE EDITOR
- TOMATO SEEDS JUMPING THE GUN
- BACTERIAL FRUIT BLOTCH OF WATERMELON
- PESTICIDES AND PHYTOTOXICITY
- THE IMPORTANCE OF TRACEBACK
- COMMENT PERIOD FOR FDA FOOD SAFETY RULES ENDS NOVEMBER 15
- ONLINE PRESENTATIONS ABOUT VEGETABLE PRODUCTION
- UPCOMING EVENTS

NOTE FROM THE EDITOR

This is the last Vegetable Crops Hotline for 2013. Please take a moment to renew your subscription by returning the form included in this issue, or by renewing your membership in the Indiana Vegetable Growers Association.

For most of us winter provides time to catch up on information that we didn't have time for during the season. Whether it is reading, watching webinars, talking to people, or attending trade shows and educational programs, I hope VCH readers will find time and opportunity to access new information that will help them meet their goals for next year. Please get in touch if there is information we might help you find.



TOMATO SEEDS JUMPING THE GUN - (Rosie Lerner)

- Although not very common, we occasionally get calls regarding tomato fruits that have sprouted seeds inside (see Figure 1). Called "vivipary", this premature sprouting of seeds inside the fruit can also happen in peppers and other species.

The "normal" balance of plant growth regulators, notably Absciscic Acid (ABA) inside the fruit should inhibit germination until the seeds have been harvested from the pulp. There may likely be a genetic component, since some commercial canning varieties are more prone to vivipary. However, environmental conditions can also inhibit ABA content. In tomatoes, cool temperatures

coupled with low light conditions is thought to inhibit ABA, thus allowing the seeds to germinate inside the moist, warmer environment inside the fruit. Potassium deficiency, over fertilization with nitrogen, and over maturity are also thought to be factors. Fruit that are allowed to get very vine-ripe may be more prone to this.

(This article originally published at Purdue Plant and Pest Diagnostic Lab Picture of the Week for Sept. 16, 2013. www.ppdl.purdue.edu/ppdl/weektypics/9-16-13.html)



Figure 1. Seeds sprouted in a processing tomato. (Photo by Liz Maynard)



BACTERIAL FRUIT BLOTCH OF WATERMELON - (Dan Egel)

- This disease was observed in the past season in several different locations in southwest Indiana on different cultivars of watermelon. The disease is often not recognized until large, irregularly water soaked areas on the top surface of the watermelon are observed (see Figure 2). Although the initial lesion is limited to the surface of the fruit, infection by secondary organisms may cause the fruit to crack and decay. Leaf lesions are often in-

conspicuous and do not lead to economic damage (see Figure 3). However, the lesions act as reservoirs to the bacterium which then spread to the fruit.

Bacterial fruit blotch is favored by rainy warm weather. My observations have been that even small amounts of rain and dew can lead to severe infections. Fruit infections usually take place when the fruit is about 14 days post pollination. After the fruit becomes covered with waxy excretions from the plant, pores on the fruit are covered and further infections are unlikely.

Transmission of bacterial fruit blotch through the seed has been well documented. Transplants should be inspected upon arrival or during growth. Avoid saving seed from fields where the disease has been documented. Be sure to sanitize the greenhouse and all transplant trays that are re-used so that the bacterium does not survive.

The bacterium that causes bacterial fruit blotch may also affect other cucurbits such as muskmelon and pumpkin. This bacterium, however, does not survive well in the soil. A 2 to 3 year crop rotation should prevent the disease from occurring in the next crop in that field. Applications of a fixed copper product may help to limit the spread of this disease within a field.



Figure 2: Bacterial fruit blotch causes a large water-soaked area on the surface of the watermelon. (Photo by Dan Egel)



Figure 3: Lesions of bacterial fruit blotch on a watermelon leaf. (Photo by Dan Egel)



PESTICIDES AND PHYTOTOXICITY - (Dan Egel) - Pesticides are designed to help growers manage insects, diseases and weeds. However, under some circumstances, pesticides may result in plant damage or phytotoxicity. That is, it is possible that the proper use of a pesticide may result in plant damage. Although it is impossible to anticipate every instance of phytotoxicity, pesticide companies have gone to a lot of trouble to find as much as possible about possible phytotoxic interactions of pesticides and plant. Such phytotoxic interactions of pesticides and plants are placed in the pesticide label so that growers may avoid uses that may cause problems. This article gives some examples of phytotoxic interactions of pesticides that are listed clearly on the label. A thorough reading of the pesticide label will help to avoid possible problems.

Phytotoxicity of pesticides can be roughly grouped into 3 categories. The first is pesticide interactions that occur as a result of mixing particular pesticides. In such cases, proper application of individual pesticides has good results. However, mix these two pesticides together and plant damage can result. Our example is the mixing of Quadris® and Lannate® together for application on cucurbits. The exact language of the Quadris® label is: do not tank mix Quadris® with Malathion®, Kelthane®, Thiodan®, Phaser®, Lannate®, Lorsban®, M-Pede® or Botran®. A recent report of the use of Quadris® and Lannate® causing phytotoxicity on watermelon confirms the wisdom of this language.

A second type of pesticide phytotoxicity is variety specific. The application of the fungicide Gavel® to certain cantaloupe varieties is our example. The exact language of the Gavel® label is: some cantaloupe varieties (i.e., Harvest Queen, Gold Star, Super Star, Sweet and Early, and Saticoy) are sensitive to Gavel®. Again, a close reading of the pesticide label will avoid a lot of trouble.

The third type of phytotoxicity is plant stage specific. Our example comes from the Bravo Weatherstik® label. The label states: Spraying mature fruit may result in sunburn of the upper surface of the fruit. The label then lists several specific conditions under which sunburn may result including 'intense sunlight and heat'. That is, application of Bravo to mature fruit under specific conditions may result in sunburn. Growers will have to decide whether these specific conditions may exist.

Because phytotoxicity doesn't always occur, it may be tempting to think that if no problems were observed in one instance, the instructions on the label are overly cautious. But the warnings on pesticide labels exist for a reason—it is very probable that eventually the damage warned about will occur. Furthermore, pesticide labels are not just friendly reminders. The label is the law. If you have questions about pesticides and possible phytotoxic reactions, please give a Purdue University Extension specialist a call.



THE IMPORTANCE OF TRACEBACK - (Scott Monroe) - I recently had a conversation with an Indiana cantaloupe grower. While names have been withheld to protect identities, the story is as follows:

On the morning of August 5, an Indiana cantaloupe grower received a telephone call from the Food and Drug Administration (FDA). The official informed the grower that cantaloupe from his farm had been sampled in an adjoining state and had tested positive for *Listeria*. The official urged him to do an immediate recall.

Training and preparation prompted the grower to ask for lot numbers of the contaminated product. After comparing the numbers with his records, he convinced the FDA that further investigation was needed because the numbers he had been given did not match any of the numbers in his records. Four and a half hours later, FDA called back and told the grower that he had been cleared of any connection with the positive samples and that the cantaloupe in question did indeed come from another farm, in another state.

This is a true story. It represents a close call for the entire industry. If a recall had occurred and if Indiana cantaloupe had been linked to a positive *Listeria* test, the 2013 season would have ended very abruptly. It also would have made a 2014 season very questionable. This crisis was averted because the grower had made food safety a priority on his farm and had an effective traceback system in place.

There are two lessons that this episode should make

clear to all produce growers. First is the importance of verifying information when contacted by a regulatory agency. People who work for regulatory agencies are just as prone to mistakes as the rest of us. If contacted about an issue with your farm's produce, start asking questions. At a minimum, determine the sampling location, number of samples, and lot numbers for all sampled bins. If possible, try to determine if product from another farm was also in inventory and in proximity to your product.

The second lesson is the importance of having a viable traceback system. Because food safety was part of the culture of his farm and because systems were in place at the beginning of the season, the grower was able to determine within minutes that the bins in question were not his. Without a traceback system, the grower's season would have ended. With the traceback system in place, only 4 ½ hours of production were lost.

Traceback systems do not need to be complicated or complex. They simply need to enable growers to trace products one step forward and one step back. One step forward means that growers should know what bins were shipped to what locations. One step back means that growers should know where the product in each bin originated. At a minimum, systems should permit tracing product back to a specific harvest date and field. More detailed systems may also track from what bed the produce was harvested within the field. The more detail that is built into the system, the easier it is to narrow down where produce came from, should a similar situation arise on your farm.



COMMENT PERIOD FOR FDA FOOD SAFETY RULES

ENDS NOVEMBER 15 - (Liz Maynard) - There are just a couple more weeks to comment on the proposed Produce Safety Rule and Preventive Controls Rule that FDA has published. If you have concerns about these rules, this is your chance for input. The FDA will read and consider every comment. The comments will be taken into account when the final rules are written. The information below was published in a previous issue of this newsletter, but I thought it worth including again at this point.

The produce rule covers most activities on vegetable farms. The preventive controls rule covers processing, holding, and packing, but exempts many activities done as part of normal post-harvest handling for fresh vegetables, so it will not apply to all producers.

For a primer on the rules, check out the FDA fact sheets, available at www.fda.gov/Food/GuidanceRegulation/FSMA/ucm247546.htm. Recordings of Q & A sessions with FDA about the produce safety rule held earlier this year provide additional information about the proposed produce rule and are available from the Produce Safety Alliance (PSA): producesafetyalliance.cornell.edu/news.html.

The PSA offers this advice about commenting on the rule: "The FDA recognizes that there are many situations and practices that they may be unaware of and may affect how the regulation should be revised. Comments that are thoughtful and substantive, containing real examples and data that support your position are encouraged and will have the most impact." A list of specific issues the FDA requests comments on is published in Section IX of the proposed rule www.fda.gov/Food/GuidanceRegulation/FSMA/ucm334114.htm#sectionIX

You may comment electronically at www.regulations.gov/#!docketDetail;D=FDA-2011-N-0921 (Produce Rule)

www.regulations.gov/#!docketDetail;D=FDA-2011-N-0920 (Preventive Controls Rule)

You may fax comments to the FDA at 301-827-6870.

You may mail comments to:

Division of Dockets Management (HFA-305)
Food and Drug Administration
5630 Fishers Lane, Room 1061
Rockville, MD 20852

In any written comments include the Agency name and Docket No.:

Produce Rule: FDA-2011-N-0921, and RIN 0910-AG35
Preventive Controls Rule: FDA-2011-N-0920, and RIN 0910-AG36.

Please contact me if you have questions about how to comment or how to get information about the rules.



ONLINE PRESENTATIONS ABOUT VEGETABLE PRODUCTION - (*Liz Maynard*) - Through the winter many of us will enjoy learning and networking at various educational programs and trade shows here in Indiana and elsewhere. And perhaps just as many will 'travel' to programs on the internet to learn about topics of interest. There are a variety of places to find programs online. Today I want to mention two organizations that have developed libraries of recorded presentations or webinars that vegetable growers might find useful.

The Plant Management Network (PMN) is a not-for-profit, online publishing effort jointly managed by the American Phytopathological Society, American Society of Agronomy, and Crop Science Society of America. PMN has developed 'Focus on Tomato,' a series of recorded slide presentations by scientists at Land Grant Universities and USDA labs. Topics include perennial weed management in tomatoes, (by Purdue's Steve Weller), tomato spotted wilt virus, and many others. See the entire list of recordings at www.plantmanagementnetwork.org/infocenter/topic/focusontomato/Archive.ASP.

eOrganic is a 'community of practice' for the national Cooperative Extension network known as eXtension. eOrganic develops resources for organic producers, including publications and webinars.

Upcoming and archived webinars are listed at www.extension.org/pages/25242/. Topics related to vegetable production range from disease, insect and weed management, to cover crops, mineral nutrition, marketing, transplant production, and more. Presenters include university scientists and educators, farmers, and consultants.

Both of these organizations draw speakers from across the country, bringing lots of talent and knowledge to the offerings. Because environmental conditions (soil, weather, surrounding crops, etc.) and markets can vary so much from place to place, it's important as a viewer to be aware of where the presenter is based, how that might influence the information presented, and what that means for making use of the information on a farm in Indiana. Of course the same is true to some degree for almost any information one might read, or hear at a live presentation. If you find yourself wondering how to apply something you've learned at one of these sites or elsewhere, please get in touch, we're glad to help.



UPCOMING EVENTS

Learn more about many of these events at: ag.purdue.edu/hla/fruitveg/Pages/Events.aspx

USDA's GAP Audit Program and Produce GAPs Harmonization Standard - Webinar from USDA.

November 7, 2013, 2:00–3:00 P.M. Eastern Time. The program will include presentations about the USDA audit programs as well as time for discussion. There is no charge for the program, but you must pre-register online: amsfv.webex.com/mw03071/mywebex/default.do?siteurl=amsfv

Extending the Season for Vegetable Crops with High Tunnels and More.

November 13, 2013. 10:00 A.M. –12:00 and 1:00–5:00 P.M. Central Time in Wanatah, and 2:30–6:00 P.M. Eastern Time in Batesville. Portions of the program will be available for viewing over high-speed internet via Adobe connect. For more information see flyer included with this newsletter or call (219) 531-4200 x4206 or email emaynard@purdue.edu.

Good Agricultural Practices A to Z Workshop, 3-part series.

November 14, 19, and 21, 2013, 1:00-4:00 P.M. Eastern Time. Workshop locations are listed below. Participants must attend all three sessions in order to receive a certificate of attendance. Register by November 5, either online at purdue.qualtrics.com/SE/?SID=SV_brw5RrwGUeSqDI1 or pick up a paper registration form from the host office you plan to attend. For more information, contact Jodee Ellett, jellett@purdue.edu or (765) 494 0349.

Bartholomew County Extension Office, 1971 State Street,

Columbus. Contact: Kris Medic, (812) 379-1665, kmedic@purdue.edu.

Clinton County Extension Office, 1111 South Jackson Street, Frankfort. Contact: Curt Emanuel, (765) 659-6380, cemanuel@purdue.edu.

Delaware County, Minnetrista, 1200 N Minnetrista Pkwy Muncie. Contact: Michael O'Donnell, (765) 747-7732, modonnel@purdue.edu.

Elkhart County 4-H Fairgrounds Purdue Extension Office 11/14, 11/19 and Community Building 11/21, 17746 Co Rd 34, Goshen. Contact: Jeff Burbrink, (574) 533-0554, jburburink@purdue.edu.

Floyd County Extension Office, 3000 Technology Avenue, Ste. L2110, New Albany. Contact: Gina Anderson, (812) 948-5470, gmanders@purdue.edu.

Fountain&Warren Counties, Warren County Learning Center, 28 E 2nd St Williamsport. contacts: Courtney Steirwalt (765) 793-2297, dickerso@purdue.edu or Kelly Pearson, kpearson@purdue.edu.

Hancock County Extension Office, 802 N. Apple St., Greenfield. Contact: Roy Ballard, rballard@purdue.edu, (317) 462-1113.

Hendricks County Extension Office, 1900 East Main Street, Danville. Contact: Jon Cain, (317) 745-9266, joncain@purdue.edu.

Jefferson County Extension Office, 315 Jefferson Street, Madison. Contact: Lonnie Mason, lmason1@purdue.edu, (812) 265-8919.

Kosciusko County Extension Office, 202 W Main Street, Warsaw. Contact: Kelly Heckaman, (574) 372-2340, kheckaman@purdue.edu.

LaGrange County Office, 114 West Michigan Street, Suite 10, LaGrange. Contact: Steve Engleking, (260) 499-6334, sengleking@purdue.edu.

Marshall County Extension Office, 112 W. Jefferson Street Room 304, Plymouth. Contact: Robert Yoder, ryoder@purdue.edu, (574) 935-8545.

Monroe County Extension Office, 3400 S. Walnut St., Bloomington. Contact: Amy Thompson, afthompson@purdue.edu, (812) 349-2575.

Switzerland County Extension office, 708 W. Seminary St, Vevay. Contact: Kyle Weaver, (812) 427-3152, keweaver@purdue.edu.

Tippecanoe County: Purdue University Campus AGAD

121, 615 W. State Street, West Lafayette. Contact: Jodee Ellett, jellett@purdue.edu, (765) 494-0349.

Vanderburgh County Extension Office (Posey County combined), 13301 Darmstadt Rd., Evansville. Contact: John Neufelder, (812) 838-1331, neufelde@purdue.edu (Posey) or Larry Caplan, (812) 435-5287, lcaplan@purdue.edu.

Vermillion County Extension Office, 255 S Main Street - Courthouse, Newport. Contact: Phil Cox, cox119@purdue.edu, (765) 492-5335.

Vigo County, Ivy Tech Workforce Development, 1700 Industrial Drive, Room T-100, Terre Haute. Contact: Jim Luzar, luzar@purdue.edu, (765) 364-6363.

HACCP Training. November 20-21, 2013. Farm Bureau Building, Indianapolis, IN. Katie Clayton, (765) 494-3726 or katie-clayton@purdue.edu. ag.purdue.edu/foodsci/extension

Winter Technical Meeting and Variety Trial Showcase. Thursday, December 5, 2013, 6:00 P.M. Eastern Time. Southwest Purdue Agricultural Center, Vincennes, IN. Dinner will be included in the program. For more information, contact Dan Egel at (812) 886-0198.

Illiana Vegetable Growers Symposium. Tuesday, January 7, 2014. Teibel's Restaurant, Schererville, IN. Program will be available in early December. Contact: Liz Maynard at (219) 531-4200 ext. 4206 or emaynard@purdue.edu.

Indiana Horticultural Congress. January 21 - 23, 2014. Wyndham Indianapolis West, Indianapolis, IN. www.inhortcongress.org. Contact: Tammy Goodale at (765) 494-1296 or tgoodale@purdue.edu.



AUTHOR INFORMATION

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2014 Vegetable Crops Hotline Subscription Form

The *Vegetable Crops Hotline* newsletter provides the commercial vegetable grower with timely information about disease, insect and weed pests, fertility practices, post-harvest problems, pesticide label changes, meetings and much more. Each year, the Hotline is published 12 times during the growing season (April - September) with off-season issues in February, March and November.

Again this year, in addition to receiving the regularly scheduled *Hotline* issues, subscribers may also receive the *Vegetable Crops Hotline - Bulletin* either by e-mail or FAX. This will require that subscribers to the 2014 *Hotline* indicate how they want to receive the bulletins. The *BULLETIN* articles will also appear in the next regularly scheduled *Hotline* issue along with other pertinent articles written by the Purdue staff.

To subscribe, please fill in your name and address below, and send this form and a check for \$15.00 made payable to **Purdue University** to:

Vegetable Crops Hotline Subscription
Southwest Purdue Agricultural Program
4369 N. Purdue Rd.
Vincennes, IN 47591

Indiana Vegetable Growers Association members are automatically signed up for the *Vegetable Crops Hotline* at no additional charge.

____ Yes, I would like to subscribe to the 2014 *Vegetable Crops Hotline*. Enclosed is a \$15 check made payable to **Purdue University**.

Mail to: Vegetable Crops Hotline Subscription,
SWPAP, 4369 North Purdue Road
Vincennes, IN 47591

*******(Please complete the following)*******

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____(home) and/or _____(work)

If you would like to receive e-mail notification when *Vegetable Crops Hotline Issues AND Bulletins* are published, please give us your e-mail address or visit <https://lists.purdue.edu/mailman/listinfo/vch> to sign up:
e-mail address: _____

If you want the occasional *Hotline Bulletins* by fax, please include your FAX number (with area code): _____

Indiana Vegetable Growers Association

Membership Renewal/ Application

Benefits of IVGA Membership

- Midwest Vegetable Production Guide for Commercial Growers, (ID-56) (new edition usually available in Jan.)
- Vegetable Crops Hotline subscription
- Listing in IVGA Directory of Wholesale Vegetable Producers (optional)
- Your web site linked on www.ivga.org
- Corporate members only: free ad on www.ivga.org
- Networking with other vegetable growers

To renew or join, correct or fill out the form below and send in with your check payable to IVGA.

Memberships run January - December. If you have already renewed for the current year, but haven't provided the information requested below, please check here _____, complete this form so we have your current information, and return to the address below.

The information below will be printed in the membership directory that is sent to members only. It will also be used to mail you the Vegetable Crops Hotline, to fax or e-mail the Hotline Bulletin, and for IVGA correspondence. Please complete or correct if necessary. If you would like anything omitted from the directory, please indicate below.

First _____ Last _____
 Company _____
 Address 1 _____
 Address 2 _____
 City, State, Zip _____
 tel. _____ fax _____
 e-mail _____
 website _____

ID-56 Delivery: Please indicate if you will pick up your copy of the ID-56 at one of the following meetings: IHC (Indiana Hort Congress), IVGS (Illiana Veg Growers' School), SW In. Melon Mtg. If you do not pick it up it will be mailed in March.

☐ IHC ☐ IVGS ☐ SW ☐ MAIL ☐ OTHER

Would you like to receive **free subscriptions** to trade magazines that may be offered to IVGA members?

☐ yes ☐ no

How would you like to receive the Vegetable Crops Hotline?

US Mail only ☐ US Mail AND Email ☐
 Email only ☐ CHOOSE ONE

Membership Type

- ☐ Regular, \$40.00/year
☐ Industry/Corporate, \$80.00/year

Make Check Payable to: Indiana Vegetable Growers' Association (IVGA)

Return to:

Indiana Vegetable Growers' Association
 c/o L. Maynard
 600 Vale Park Rd.
 Valparaiso, IN 46383

Office Use Only

Check no. _____ Date Rec'd. _____
 Check Date _____ Rec'd. by _____

The **Indiana Vegetable Growers' Association Directory of Wholesale Vegetable Producers** will be updated periodically. Please review your information below and make any necessary changes or additions. The wholesale directory is available to anyone who requests it and will be posted on the web. Indicate quantity of each item: S=small quantities; X=wholesale quantities; T=semi truckload quantities. Indicate certified organic: O.

Contact information for Wholesale Directory, if different from elsewhere on this form:

contacts _____
 phone1 _____ phone2 _____
 fax _____ phone3 _____
 business/address _____
 e-mail _____
 website _____

asparagus	<input type="checkbox"/>	onions_bulb	<input type="checkbox"/>
beet	<input type="checkbox"/>	onions_green	<input type="checkbox"/>
blackberries_raspberries	<input type="checkbox"/>	peppers_bell	<input type="checkbox"/>
broccoli	<input type="checkbox"/>	peppers_hot	<input type="checkbox"/>
cabbage	<input type="checkbox"/>	potatoes	<input type="checkbox"/>
cantaloupe_muskmelon	<input type="checkbox"/>	pumpkin	<input type="checkbox"/>
cauliflower	<input type="checkbox"/>	radishes	<input type="checkbox"/>
chrysanthemums	<input type="checkbox"/>	snap_bean	<input type="checkbox"/>
collards_mustard_turnipgreens	<input type="checkbox"/>	squash_summer	<input type="checkbox"/>
corn_stalks	<input type="checkbox"/>	squash_winter	<input type="checkbox"/>
corn_ornamental	<input type="checkbox"/>	strawberries	<input type="checkbox"/>
cucumber	<input type="checkbox"/>	sweet_corn_bicolor	<input type="checkbox"/>
eggplant	<input type="checkbox"/>	sweet_corn_yellow	<input type="checkbox"/>
gourds_ornamental	<input type="checkbox"/>	sweet_corn_white	<input type="checkbox"/>
herbs	<input type="checkbox"/>	tomato	<input type="checkbox"/>
other_crops	<input type="checkbox"/>	turnips	<input type="checkbox"/>
kale_1	<input type="checkbox"/>	watermelon	<input type="checkbox"/>
pumpkin_mini_2	<input type="checkbox"/>	daylilies_6	<input type="checkbox"/>
spinach_3	<input type="checkbox"/>	apples_7	<input type="checkbox"/>
straw_4	<input type="checkbox"/>	peaches_8	<input type="checkbox"/>
lettuce_5	<input type="checkbox"/>	tomatillo_9	<input type="checkbox"/>



High Tunnels
Field Day & Program
Wednesday, November 13, 2013
11:00 am – 6:00 pm ET (10-5 CT)

***Extending the Season for Vegetable Crops:
A Field Day and Educational Program for
Vegetable Farmers and Market Gardeners***

This program is a hybrid of a live online webinar and field trip. If you cannot attend the field trip, you are welcome to join us online for the webinars. If attending from home, there is no need to register and no cost. If attending at a host site, please register with the person listed (below).

*11:15	<i>Tunnels: High, Low, and In Between – Matt Kleinhenz, The Ohio State University</i>
*11:45	<i>Getting Started with a High Tunnel – Valerie and Doug Kinsman, Kinsman Farm, NW Ohio</i>
*12:30	<i>Discussion</i>
2:00	<i>Tour High Tunnels, Wanatah, IN</i>
2:30	<i>Tour Michaela Gardens, Batesville, IN</i>
*3:30	<i>Opening the Fall-to-Spring Production and Marketing Window using Tunnels – Matt Kleinhenz, OSU</i>
*4:15	<i>Managing Winter Vegetable Varieties and Growth in Fourth Season High Tunnels – Valerie and Doug Kinsman, Kinsman Farm</i>
*5:15	<i>Discussion</i>
*6:00	<i>Adjourn</i>

*These webinar portions of the program will be available to distance participants via Adobe connect. Connect at <https://gomeet.itap.purdue.edu/htct/>. Times listed above are Eastern.

Locations and Registration

Pinney Purdue Ag Center, 11402 S. County Line Rd., Wanatah, IN. Just north of US 30 between LaPorte and Porter Counties. **Contact: Dr. Liz Maynard**, 219-531-4200 X4206 emaynard@purdue.edu.

Michaela Farm, 3127 Indiana 229, Batesville, IN 47006 2:30-6:00 pm. **Contact: Anna Morrow**, 765-647-3511, annamorrow@purdue.edu.

In addition to this program, Purdue Extension has some excellent resources for high tunnels online, including recorded webinars and paper handouts on the following topics: *Intro to Hoophouses and High Tunnels, Types of Hoophouses, Considerations before Purchasing, Installation, Maximizing Production to Meet Market Needs, Using High Tunnels to Meet Market Needs, Introduction to Pest Management for Season Extension, Pest Management of Tomatoes in High Tunnels, Pest Management in Winter Crops and Nutrition, Water, and Soil Management in High Tunnels*. Please visit the website below to link to these valuable resources!

<https://ag.purdue.edu/hla/fruitveg/Pages/ExtensionTechniques.aspx>