

VEGETABLE CROPS HOTLINE

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

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<<http://www.btny.purdue.edu/pubs/vegcrop>>

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WELCOME TO A NEW YEAR OF THE VEGETABLE CROPS HOTLINE, Purdue Extension's newsletter for people in the business of growing vegetables. Our goal is to provide timely information that will be useful for Indiana vegetable growers. If there is something you'd like to see included, please let us know.

Frequently we include links to web sites or publications available online. If you aren't able to access these resources, please contact us or a local Extension office to request a hard copy of the information.

This first issue of the year is sent to all who subscribed in 2012 as well as new subscribers for 2013. To continue receiving future copies by US mail, renew your *Hotline* subscription or Indiana Vegetable Growers' Association (IVGA) membership for 2013 using one of the forms on pages 4-5 of this issue. IVGA members receive the *Hotline* at no extra charge. IVGA members who do not wish to receive the *Hotline* via US mail should indicate 'email only' on the IVGA membership form. There is no charge to receive email announcements when issues are published.



THE DROUGHT OF 2012 AND DISEASE MANAGEMENT - (Dan Egel) - The summer of 2012 was a difficult time to grow vegetables in Indiana. Before we completely forget the drought of 2012, maybe we can draw a few lessons.

The first lesson might be that dry weather is not all bad for growing vegetables. Leaf wetness is necessary for many foliar diseases and rain/irrigation is needed to

splash spores or bacteria from leaf to leaf. So, if one can get sufficient water for irrigation, dry weather is OK.

The foliar fungal diseases that require leaf wetness for infection include: early blight and Septoria leaf blight of tomato; anthracnose, downy mildew and gummy stem blight of cucurbits (see Figure 1); common rust and northern corn leaf blight of sweet corn.



Figure 1: Gummy stem blight of watermelon is an example of a foliar fungal disease that requires leaf wetness to begin the infection process. (Photo by Dan Egel)

Powdery mildew diseases require only high humidity, not leaf wetness. Therefore a disease such as powdery mildew of pumpkin would not be affected by most droughts.

Soil borne diseases do not require leaf wetness to initiate infection. Examples of these diseases include: Fusarium wilt of watermelon, scab of potato, and root knot nematode of many crops.

Diseases that are vectored (spread) by insects also do not require much moisture. Examples of insect vectored diseases that should remain unaffected by moderate drought include: Stewart's wilt of sweet corn, mosaic diseases of pumpkin (e.g., papaya ringspot virus) and bacterial wilt of cantaloupe.

Bacterial diseases also require leaf wetness for disease initiation and spread. However, my experience is that many bacterial diseases of vegetable diseases require less moisture than the average foliar fungal disease. Whereas many fungal diseases can force their way into a plant cell, most bacteria must count on being blown into a cell via wind or being drawn into plant cells water-soaked from dew. Examples of such bacterial diseases would be bacterial canker and spot of tomato and bacterial leaf spot of pumpkin.

Phytophthora blight requires lots of water. Not only is leaf moisture required for disease initiation, but the spores are motile in water. Phytophthora blight thrives in areas that are poorly drained. This disease combines the foliar aspect of being spread from plant to plant in a rain with the soil borne aspect of long periods of survival in the absence of the host crop. Also, Phytophthora blight has many hosts!

Foliar diseases that require leaf wetness may be managed by foliar applications of fungicides or bactericides. Here are some hints how diseases and fungicide applications are affected by the weather:

- The interval of time between most applications should range from 7 to 14 days. Cucurbit growers may use the **MELCAST** system so that fungicides are applied when they are most needed according to the weather. For more information on **MELCAST** call or email Dan Egel.
- The frequency of rain is more important than the amount, for the most part. That is, constant leaf moisture caused by brief rains is more important than a huge rain followed by days of drought.
- A rain in the evening may be more important than a rain at mid-day. This is because an evening rain often causes leaf wetness into the evening when dews continue the leaf wetness well into morning.
- It is always best to apply fungicides before a rain than after, if possible. So, if one has a scheduled fungicide application and rain threatens, go ahead and spray if the application will dry on the leaves. Since a rain event is the time when many diseases threaten, it is important to have the fungicide on before the rain. Check the label to make sure, but most fungicides require very little time before they are rainfast.
- If there is a poor crop rotation, the fungicide or the interval of the application will make little difference. High disease severity often accompanies crops grown with no or little crop rotation.

The weather this coming season of 2013 is an unknown. One thing for sure, growers should realize that the weather will affect foliar disease severity and the number of fungicide applications.



INDIANA FARM TO SCHOOL NETWORK - (Brittany Dale, Indiana Dept. of Education) - The Indiana Department of Education, Indiana State Department of Agriculture, Indiana State Department of Health, Purdue Extension and several other valuable stakeholders have formed a group called the Indiana Farm to School Network (IFSN). Their mission is to provide vision, leadership and support to connect and strengthen the Farm to School movement across Indiana. The main goal of IFSN is to see Indiana local farms, local markets, and local schools work together to ensure the health of children, farms, the environment, the economy, and communities.

IFSN is taking three approaches to help form a successful Farm to School program in Indiana. The three main areas the group is focusing on are grants, education, and procurement. Grants are essential because funding is necessary for any program to stay afloat. Farm to School also includes nutrition education because children in today's society have lost the concept of where food actually comes from. Procurement guidelines are important for both producers and school Food Service Directors. Food Service Directors can purchase items directly from farmers, but there are regulations that define what and how food can be purchased. All three of these areas play a critical role in running a sustainable Farm to School program.

The first event for IFSN to promote Farm to School was at the Indiana Horticultural Congress in January 2013. The Farm to School program really sparked an interest in numerous growers. IFSN will continue to promote the program throughout Indiana to reach as many producers as possible. To help, IFSN just released a short survey that was created to collect feedback from farmers that are interested in the Farm to School program. The survey will help IFSN identify the top barriers that are preventing farmers from supporting the program. IFSN will use the results from the survey to develop strategies to overcome some of the common obstacles. Here is the link to the survey if you are interested in the Farm to School program: Indiana Farm to School Network: Producer Survey <https://docs.google.com/spreadsheets/viewform?formkey=dFJmQzVic3ZqMF9QajNVel9aeDNSUnc6MQ>. The deadline to complete the survey is March 29, 2013. Producers please take the time to share your input because every response is very valuable.



BIG CHANGES FOR MIDWEST VEGETABLE PRODUCTION GUIDE (ID-56) - (Dan Egel) - The hard copy of *The Midwest Vegetable Production Guide for Commercial Growers 2013* (ID-56) is in stock and the Internet version has been posted. Read on for a short tour of some of the big changes to the ID-56 in 2013.

The biggest change to the ID-56 is that Ohio State University has joined the ID-56 team. Since OSU had an excellent vegetable guide of their own, the ID-56 staff spent last fall deciding how to merge the two guides. Among the changes are:

- The table format of the ID-56 has given way to a text format where information about each pest is presented followed by pesticide recommendations.
- There are many new sections in the ID-56 this year including: handling pesticides, on farm food safety, organic matter and cover crops, petiole sap testing, and Asian vegetables.

- Several sections have been modified:
 - The transplant section now has information about seed treatments.
 - There is now more information about pesticide interactions in the bees and pollination section.
 - The leafy vegetables section has been expanded to include information about herbs.
 - The fruiting vegetable and cucurbit crops sections now have disease management timelines.
 - Several crop sections have tables that summarize pesticide information. These tables are downloadable as single page PDFs in the Internet version.
 - The pepper and tomato chapters are now separate again (we heard you!).

Look for sales of the ID-56 at a vegetable meeting near you or contact the Education Store (888) EXT-INFO. Even with all the new information, the price is the same low \$10! As in past years, the on-line version is free at <http://www.btny.purdue.edu/Pubs/ID/ID-56/>. Remember to check online for revisions to the ID-56. Revisions will also be published here.

Finally, your comments and suggestions are always welcome. Contact Dan Egel at (812) 886-0198 or egel@purdue.edu.



MIDWEST VEGETABLE TRIAL REPORT FOR 2012 - (*Liz Maynard*) - Find reports of vegetable variety trials from eight states in the *Midwest Vegetable Trial Report* for 2012. Hard copies may be purchased from the Education Store <https://the-education-store.com/> (tip: enter 16-18 in the Store Search) or by calling (888) 398-4636. The entire publication or individual reports may be downloaded at no charge from <https://ag.purdue.edu/hla/fruitveg/Pages/MVVTRB.aspx>.

This year's bulletin includes sweet corn trials from three states: Kentucky, Indiana, and Ohio. Information from multiple locations makes it easier to identify varieties that consistently perform well. Other crops with trials from more than one location include bell peppers, pumpkins, and seedless watermelons.

Several trials featured tomatoes. Fresh market tomatoes and commercially grafted tomato seedlings were evaluated in separate trials in Ohio. Tomato trials conducted using organic practices included an evaluation of heirloom tomatoes in Indiana and of late blight-resistant varieties in New York.

Other evaluations focused on disease-resistant varieties included those of downy mildew-resistant cucumbers and powdery mildew-resistant melons, both in New York.

In addition to these more commonly grown vegetables, the bulletin also contains reports on edamame, lettuce in a hoop-house (online only), organic

garlic, specialty potatoes (including early season production with plastic mulch), and turnips. The turnip report even includes results of a taste test!

The reports include much useful information about variety performance, but it is important to recognize that most of them represent results of one year at one location. Consider also results from other years, locations, and sources to improve understanding of varieties.

Previous bulletins in this series are also available online. For some years, CD's or hard copies may be available. Contact Liz Maynard to inquire.



FARM SERVICE AGENCY NEWS AND DEADLINES - (*Liz Maynard*) - **Planting Transferability Pilot Program (PTPP)**. Sign up Feb. 19, 2013 – April 5, 2013. The PTPP permits Indiana producers to plant vegetables for processing (including tomatoes, pickles, and snap beans) on base acres under the Direct and Counter-Cyclical Program (DCP) or Average Crop Revenue Election Program (ACRE). Other approved plantings include green peas, lima beans, pumpkins, and sweet corn, if they are grown for processing under a contract. Base acres on a farm will be temporarily reduced each year on an acre-for-acre basis, for each base acre planted with an approved fruit or vegetable on that farm. Indiana has 9,000 acres approved for PTPP in 2013.

New Microloan Program: This program is designed for new farmers and producers of crops for niche markets. Loans may be used for start-up expenses such as hoop houses, essential tools, irrigation, delivery vehicles, and annual expenses such as seed, fertilizer, utilities, land rents, marketing, and distribution. The maximum loan under this program is \$35,000. Larger loans for operating expenses are available through the FSA's Operating Loan Program or Guaranteed Loan Program.

Farm Storage Facility Loan Program: Loans from this program may be used to build or upgrade cold storage for vegetables and fruit. This type of loan may be useful for producers planning to upgrade storage and handling facilities to meet food safety requirements.

Emergency Loan Program: Due to the 2012 drought emergency farm loans are available for those who own or operate a farm in Indiana. Applications must be received within eight months of the disaster designation date for the county where the farm is located.

Hispanic and Women Farmers: Hispanic and women farmers who allege past discrimination by the USDA must file claims by March 25, 2013. Call center representatives can be reached at (888)-508-4429. More information is available at www.farmerclaims.gov.

For more information about any of these programs, contact your local FSA office or visit FSA online at <http://www.fsa.usda.gov/>.



2013 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 2013 *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 2013 *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 email notification when **Vegetable Crops Hotline Issues AND Bulletins** are published, please give us your email 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.

If you have already renewed for the current year, but haven't provided the information requested below, please check here _____, complete this form, 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.

Current membership expires 12/31/

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; Please include \$5 to cover mailing costs.

☐ 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, Purdue North Central
 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.

To be included in the directory check here _____.

Provide information requested below **OR** if information has not changed since previous year check here _____.

Indicate quantity of items for sale: S=small quantities;
 X=wholesale quantities; T=semi truckload quantities.

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"/>

UPCOMING EVENTS

Indiana Small Farm Conference: March 1 - 2, 2013. Hendricks County Fairgrounds, Danville, IN. <http://www3.ag.purdue.edu/smallfarms/> Contact: Steve Engleking, Indiana Small Farm Coordinator, sengleking@purdue.edu; (888) 398-4636 or (260) 499-6334.

Southwest Indiana Melon and Vegetable Growers Association Annual Meeting: Friday, March 8, 2013, Casino Aztar Conference Center, Evansville, IN. The meeting will be in conjunction with the Illiana Watermelon Association again this year.

Private Applicator Recertification Program credits will be available. For details or to RSVP for this meeting (no later than March 1st) call or email Dan Egel at (812) 886-0198 egel@purdue.edu.

Good Agricultural Practices A to Z: March 9, 2013. Two locations: Washington County Extension Office, Salem, IN and Crawford County Fairgrounds, Marengo, IN. Preregistration required. Registration form at https://ag.purdue.edu/hla/fruitveg/Lists/fruitveg_events/Attachments/21/GAPs%202012-2013.pdf. Contact: Miranda Ulery at (812) 738-4236 or mulery@purdue.edu

Starlight Vegetable Growers Meeting: Thursday, March 14, 2013, 5:30 - 9:00 p.m. Joe Huber Family Farm and Restaurant, Borden, IN. Contact Clark Co. Extension Educator David Hynes at (812) 256-4591 or dhynes@purdue.edu with questions or to register for the event.



EXTENSION SPECIALISTS - Below find a list of Purdue University extension specialists with expertise in vegetable production or marketing. Please keep this list for future reference.

Name	Expertise	Phone	Email	Office Location
Jennifer Dennis	Marketing	(765) 494-1352	jhdennis@purdue.edu	Purdue, W. Lafayette
Dan Egel	Vegetable Diseases	(812) 886-0198	egel@purdue.edu	SWPAC, Vincennes
Rick Foster	Vegetable Insects	(765) 494-9572	rfoster@purdue.edu	Purdue, W. Lafayette
Lyndon Kelley	Irrigation	(269) 467-5511	kelleyl@msu.edu	Centerville, MI
Liz Maynard	Vegetables, Weed Management	(219) 531-4200	emaynard@purdue.edu	Purdue, Valparaiso
Shubin Saha	Vegetables	(812)886-0198	ssaha@purdue.edu	SWPAC, Vincennes
Steve Weller	Weed Management	(765) 494-3333	weller@purdue.edu	Purdue, W. Lafayette
Fred Whitford	Pesticide Education and Regulations	(765) 494-1284	fwhitford@purdue.edu	Purdue, W. Lafayette

Main Purdue Extension Switchboard: (888)-398-4636 (888-EXT-INFO)

Other Useful Phone Numbers and Links

Office of the Indiana State Chemist (765) 494-1587, www.isco.purdue.edu/.

Plant and Pest Diagnostic Laboratory (765) 494-4641 www.ppdl.purdue.edu/PPDL/.

Purdue Fruit and Vegetable Connection ag.purdue.edu/hla/fruitveg/Pages/default.aspx

Vegetable Pathology at Purdue ag.purdue.edu/btny/Extension/Pages/VegetablePathology.aspx

Vegetable Insects and Their Management – Commercial Site extension.entm.purdue.edu/veg/commercial/index.html

Purdue Small Farm and Sustainable Ag www3.ag.purdue.edu/smallfarms/Pages/default.aspx

The Education Store www.the-education-store.com

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