



# Ohio Fruit ICM News

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If you have articles for the newsletter that you would like to have considered to be included in upcoming issues, please submit to either Howard Siegrist at [siegrist.1@cfaes.osu.edu](mailto:siegrist.1@cfaes.osu.edu) or Melissa Swearingen at [swearingen.34@cfaes.osu.edu](mailto:swearingen.34@cfaes.osu.edu)

## Grow Great Pumpkins with OSU Extension - Pumpkin Twilight Tour

OSU South Centers at Piketon  
The Ohio State University Extension

Learn the tricks of the trade for growing quality pumpkins during Ohio State University Extension's Pumpkin Twilight Tour in October.



The event will take place Oct. 21 from 6 p.m. until 8 p.m. at OSU South Centers at Piketon, 1864 Shyville Road, Piketon. Registration is \$5 per person. The tour is part of OSU South Centers' Third Thursday Horticulture and Business Training Series.

OSU Extension horticulturist Brad Bergfurd will walk attendees through pumpkin fields and provide tips and techniques for growing and managing pumpkins. The tour will also include discussions on new pumpkin varieties, downy and powdery mildew disease management and control, cucumber beetle identification and control methods, yellow vine decline disease and prevention techniques, growing your own nitrogen, and timing applications of drip irrigation.

The results of the Indian corn trials will also be presented.

Weather permitting, this workshop will be held in the fields, so participants should come prepared to walk and spend the evening outside. Indicate during registration if special accommodations are required.



For more information, contact Julie Strawser-Moose at 740-289-2071, ext. 223 or e-mail [moose.14@osu.edu](mailto:moose.14@osu.edu).



EMPOWERMENT THROUGH EDUCATION

**North Central Ohio Tree Fruit IPM Program**  
**Report Prepared by Cindy Crawford (Erie County Adm. Assoc.)**

**Mike Abfall** – East District IPM Scout  
(Erie and Lorain Counties)

**Date – 9/7/10**

**Apples**

Spotted Tentiform Leafminer – 50.4 (up from 39.1)  
Codling Moth – 1.9 (up from 1.7)  
Apple Maggot – 0.99 (down from 1.7)  
San Jose Scale – 135 (down from 164.4)  
Oriental Fruit Moth – 6.18 (up from 4.1)  
Lesser Appleworm – 0.5 (down from 0.8)  
Dogwood Borer – 11.71 (up from 2.3)

**Peaches**

Redbanded leafroller – 11.7 (up from 7.3)  
Oriental Fruit Moth – 1.5 (up from 0)  
Lesser Peach Tree Borer – 0.5 (down from 2.7)  
Peach Tree Borer – 1.2 (up from 0.7)

**Date – 9/13/10**

**Apples**

Spotted Tentiform Leafminer –  
Codling Moth – 1.4 (down from 1.9)  
Apple Maggot – 0.33 (down from .99)  
San Jose Scale – 675 (up from 135)  
Oriental Fruit Moth – 3.53 (down from 6.18)

**Ted Gastier** – West District IPM Scout  
(Sandusky, Ottawa, Huron and Richland Counties)

**Date – 9/7/10**

**Apples**

Spotted Tentiform Leafminer – 93 (up from 39)  
Codling Moth – 2.5 (up from 1.7)  
Apple Maggot – 0 (same)  
San Jose Scale – 0 (same)  
Oriental Fruit Moth – 38 (up from 25.2)  
Dogwood Borer – 3 (down from 4.6)

**Peaches**

Red Banded Leafroller – 0 (same)  
Oriental Fruit Moth – 3 (up from 2.3)  
Lesser Peach Tree Borer – 0.3 (down from 5)  
Peach Tree Borer – 2 (up from 0)

**Wayne County Insect Trap Reports**  
**Ron Becker** - Program Coordinator

**Codling Moth**

9/7 - 3.89 down from 11.11  
9/13 - 1.11 down from 3.89

**2010 Upcoming Events:**

**November 8-10, 2010. Southeast Strawberry Expo**, Wyndham Hotel, Virginia Beach, VA. Workshops and farm tour on Nov. 8, educational sessions and trade show on Nov. 9-10 For more information, visit [www.ncstrawberry.com](http://www.ncstrawberry.com) or contact the NC Strawberry Association, 919-542-4037, [info@ncstrawberry.com](mailto:info@ncstrawberry.com). Exhibitor inquiries welcome.

**December 7-9, 2010. Great Lakes Fruit Vegetable and Farm Market EXPO**, DeVos Place Convention Center, Grand Rapids, Michigan. For more information: <http://www.glexpo.com>.

### **Vineyard Expansion Assistance Program**

David Scurlock, Viticulture Outreach Specialist, Department of Horticulture and Crop Science  
Ohio Agricultural Research and Development Center  
Ohio State University Extension

**Overview:** The Vineyard Expansion Assistance Program (VEAP) is an incentive program created by the Ohio Grape Industries Committee (OGIC) and funded through the United States Department of Agriculture Specialty Crop Block Grant program, to encourage the establishment of new or expansion of existing grape vineyards in Ohio.

**Purpose:** Due to the small number of grapes produced in Ohio, many wineries, farmers markets', and retailers are forced to purchase grapes of several different varieties from other states in order to meet production needs. In 2008, Ohio's grape and wine industry set a goal of increasing grape acreage by 10 percent (220 acres) over the next five years. The VEAP is designed to provide a more stable source of high-quality, high-value grapes for Ohio's wineries, farmers' markets, and retail outlets. This program will also allow more Ohio wines to qualify for the Ohio Quality Wine (OQW) program and increase consumer awareness of Ohio's premier wines made with Ohio-grown grapes.

**Grant Funding:** The program funding will cover only the cost of the grape vines planted. Each grower may apply for **up to \$2,000** per acre with a maximum of three acres or \$6,000. There is a limited amount of money currently available for this assistance program and the VEAP Working Group will use discretion in order to stimulate as many acres of viable vineyards as possible.

Successful applicants will not be reimbursed under this program until all requirements have been met. Failure to complete all of the requirements set forth in the guidelines will disqualify an applicant from receiving any VEAP funding.

The VEAP Working Group, made up of OGIC members, OSU researchers, and other industry stakeholders, will review the applications and make the final decision regarding which growers receive funding under this program.

**Guidelines:** This program is intended to provide support for those individuals who are serious about making a long-term commitment to grape production. Each grower will have to meet important vineyard management guidelines to qualify for any program funding. This is intended to assure that the grape vines established under this program have the best possible opportunity to reach and maintain full production.

To be eligible for funding through the Vineyard Expansion Assistance Program growers must meet the following guidelines:

1. Only growers located in Ohio may apply for the assistance.
2. It is **mandatory** for an applicant to have a business plan with a clear route for the grapes to be put into the production chain (e.g. have an established winery or pick-your-own table grape operation, a written contract between grower and existing Ohio licensed winery, or business plan for establishing a winery in the future.)
3. Vineyard site selection will be evaluated by the OSU viticulture staff in conjunction with the grower (Appendix C), after the Vineyard Site Evaluation Requirements checklist is completed (Appendix A.) Each vineyard shall be established in a location conducive to growing grapes.
4. For variety selection applicants are encouraged to utilize the recommended list of grape varieties (Appendix B), and consult with OSU viticulture staff.
5. At least one acre of vines (minimum of 200 vines per variety) must be planted to be eligible for reimbursement.
6. The planting must occur in 2011.
7. The grower must agree to a subsequent vineyard assessment by an OSU viticulture staff during the initial growing season (Appendix D). Growers may request reimbursement at this point.
8. All applications must be complete and filed **by Friday, October 22, 2010**. Late applications will not be considered.

**\*\*Growers receiving VEAP funding in 2010 are NOT eligible to apply for 2011 VEAP funds.\*\***

For complete information and application click on the following link: [2011 VEAP Application and Guidelines](#)

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**Central Ohio Poison Control Number**  
**(800) 222-1222**  
**TTY # is (614) 228-2272**

## Bee Pastures May Help Pollinators Prosper

Marcia Wood, ARS News Service, Agricultural Research Service, USDA  
(Article published in the New York Berry News Issue 8 dated August 12, 2010)

August 4, 2010 - Beautiful wildflowers might someday be planted in "bee pastures," floral havens created as an efficient, practical, environmentally friendly, and economically sound way to produce successive generations of healthy young bees.

The pesticide-free pastures could be simple to establish, and—at perhaps only a half-acre each—easy to tend, according to U.S. Department of Agriculture (USDA) entomologist James H. Cane. He's based at the Pollinating Insects Biology, Management, and Systematics Research Unit operated by USDA's Agricultural Research Service (ARS) in Logan, Utah. ARS is USDA's principal intramural scientific research agency.

Bee pasturing isn't a new idea. But studies by Cane and his collaborators, conducted in a research greenhouse and at outdoor sites in Utah and California, are likely the most extensive to date. Right: Entomologist James Cane examines wildflowers in a Logan, Utah, test plot. (Photo courtesy Peggy Greb.)



Two bee businesses are already using the findings to propagate more bees.

The research indicates that species of pastured pollinators could include, for example, the blue orchard bee, *Osmia lignaria*. This gentle bee helps with pollination tasks handled primarily by the nation's premier pollinator, the European honey bee, *Apis mellifera*. Cane estimates that, under good conditions, blue orchard bee populations could increase by as much as four- to fivefold a year in a well-designed, well-managed bee pasture.

Cane and colleagues have studied wildflowers that might be ideal for planting at bee pastures in California. In particular, the team was interested in early-flowering annuals that could help bolster populations of blue orchard bees needed to pollinate California's vast almond orchards. Left: Blue orchard bee on a California five-spot flower, *Nemophila maculata*. (Photo courtesy Jim Cane.)



The research, funded by ARS and the Modesto-based Almond Board of California, resulted in a first-ever list of five top-choice, bee-friendly wildflowers for tomorrow's bee pastures in almond-growing regions. These pasture-perfect native California plants are: Chinese houses (*Collinsia heterophylla*), California five-spot (*Nemophila maculata*), baby blue eyes (*N. menziesii*), lacy or tansy phacelia (*Phacelia tanacetifolia*), and California bluebell (*P. campanularia*).

Cane has presented results of his research to almond growers at workshops.

Read more about the research in the August 2010 issue of Agricultural Research magazine, available online at: <http://www.ars.usda.gov/is/AR/archive/aug10/bee0810.htm>. This pollinator research supports the USDA priority of promoting international food security.

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## Licensing Deal for Hot New Apple Comes Under Fire

Steve Karnowski, Associated Press

HASTINGS, Minn. — A new breed of apple has been a hit with consumers lucky enough to find it. Cindy and Frank Femling, however, are among the growers who fear it could put them out of business.

The SweeTango, with its juicy crunch and intense sweet-tart flavor with a note of spice, just entered its second year of limited release across U.S. It's marketed by a select group of growers under an exclusive licensing deal with the University of Minnesota.

The university chose Minnesota's largest orchard, Pepin Heights, to commercialize its new apple. But 15 other orchards say it's not a sweet deal for them, and they're suing. The school counters that research universities everywhere award exclusive rights to all kinds of intellectual property, and that the royalties are crucial for replacing shrinking public funding for research. It also says the deal is needed to protect the quality of an apple it spent more than a decade developing.

"When Pepin and the university signed this agreement, they had no consideration for what it would do to the Minnesota apple industry," Frank Femling said. "The only thing they considered was their financial interests."

The Femlings grow 13 kinds of apples at Afton Apple Orchard, about 15 miles southeast of downtown St. Paul. Most of their varieties came from the university, including the hugely successful Honeycrisp. They're not growing the SweeTango, and they fear what will happen if it becomes as popular as the Honeycrisp. Cindy Femling said they're already losing sales.

Continued on Page 5



## Licensing Deal for Hot New Apple Comes Under Fire - Continued from Page 4

Mark Rotenberg, the university's general counsel, said the school partners with private industry all the time to bring technology to the marketplace — not just apples but a myriad of other innovations as well, including lifesaving drugs and medical devices.

"This has become, for research universities across the United States, the dominant way in which basic research is made available to benefit the community at large," Rotenberg said.

As an example, Rotenberg pointed to the technology transfer program at the University of Wisconsin-Madison. The 75-year-old Wisconsin Alumni Research Foundation is considered a leader in turning university research into products that benefit society, and using the licensing income to support further scientific investigation.

Emily Bauer, a licensing manager at the foundation who specializes in plant technology, said it generally prefers nonexclusive licensing because it wants the technology to be widely used. She said the foundation doesn't usually award exclusive licenses for agricultural products. But in some cases, she said, exclusive licensing is the only way to get the technology into the marketplace.

Rotenberg said the university believed Pepin Heights could do the best job of quickly getting Sweetango apples into the market.

Dennis Courtier, owner of Pepin Heights in Lake City, said restrictions on who grows it are necessary to protect the quality as it competes with other snack foods, including candy bars and potato chips.

"This is about share of stomach. ... The fact is, sorry, red delicious (apples) just don't compete with Cheetos," Courtier said.

As the university's lucrative patent on the Honeycrisp was about to expire, the school launched the Sweetango — a cross between the Honeycrisp and its Zestar! — to keep revenue flowing to support its cold-climate fruit research.

It also wanted to avoid a repeat of a significant problem with the Honeycrisp. Anybody could plant it anywhere, and the quality suffered in warmer growing areas, hurting its reputation. So it picked Courtier and Pepin Heights, who formed the "Next Big Thing" cooperative to manage and safeguard the Sweetango. It has 45 growers in five states — Washington, Minnesota, Wisconsin, Michigan and New York — plus Quebec and Nova Scotia in Canada.

The university is hoping the deal yields a repeat of the more than \$8 million it earned from the Honeycrisp. Besides a \$1 per tree royalty, Next Big Thing pays the university 4.5 percent of the apple's net wholesale sales.

Orchards outside of Minnesota that don't join the co-op can't grow it. Minnesota growers who aren't in the co-op must sign an agreement with Pepin Heights and accept restrictions that plaintiffs such as the Femlings consider one-sided.

The restrictions let them sell the apples at their own orchards, at farmers markets and to local stores, but they can't pool with other growers to sell in larger volumes. The plaintiffs say that shuts them out of the wholesale market and major grocery chains. And they're limited to no more than 1,000 trees apiece with a cap of 50,000 trees statewide.

Courtier said more than 85 Minnesota growers outside the co-op have signed the agreement, and only a handful have planted the maximum 1,000.

The lawsuit seeks to void the licensing deals, saying they unfairly restrain free trade, plus unspecified financial damages.

"I have every confidence that we are in compliance with state and federal laws," Courtier said.

Fred Wescott, a producer and wholesaler in Elgin who joined the lawsuit after losing out to Pepin Heights to manage the Sweetango, said a settlement that drops restrictions on Minnesota growers would be the best way to end the lawsuit. Rotenberg wouldn't discuss what settlement the university might accept.

Cindy Femling said anything developed at the university should be available to Minnesota growers because its research is still partly taxpayer supported.

"If it wasn't for us Minnesota growers, the Honeycrisp wouldn't have been as popular as what it is. And then now they're insulting us by telling us that we cannot grow a quality apple," Frank Femling said.

Online:

Minnesota Apple Growers for Fair Trade: <http://www.mnapplefairtrade.com>

Sweetango Apples official site: <http://www.sweetango.com>

University of Minnesota Sweetango page: <http://www.apples.umn.edu/sweetango/index.html>

## Reduction of Overwintering Inoculum in Orchards with Apple Scab

George Sundin, Plant Pathology  
Amy Irish-Brown, Extension Educator  
Michigan State University Extension

Apple scab infection was prevalent this year, mostly due to three issues: (1) heavy inoculum carryover from 2009, which was a bad scab year; (2) large number of scab infection periods in 2010; and (3) the inherent difficulties in controlling scab when we are reliant on a protectant fungicide program.

Orchards with existing apple scab infections on leaves will again carry over significant inoculum into next season. Same as last year, much of this inoculum will likely be resistant to strobilurin fungicides. Even though strobilurins have not or should not have been used for scab control in 2010, we have evidence that the strobilurin resistance phenotype is pretty stable in the scab population year-to-year even in the absence of strobilurin use in orchards. Thus, any methods that would be useful in reducing this inoculum load are important to give consideration to.

The apple scab fungus overwinters in fallen leaves. During the following spring, the fungus undergoes a sexual cycle and produces a fruiting body called the pseudothecium that contains the ascospores. These ascospores are the spores that represent the primary inoculum. Development of these spores is timed with the development of the tree, and the spores can begin to be released around green tip.

Inoculum-reduction methods serve to reduce the primary ascospore load by eliminating some of the apple scab-infected leaves. Any reduction of scab-infected leaves directly correlates with a reduction in primary inoculum. Now, it is impossible to completely eliminate this inoculum, but spore-reduction strategies have been effective in reducing spore loads by 50-80 percent.

The two main methods for spore reduction are:

- 1) Application of urea to fallen leaves in fall or spring.
- 2) Shredding of leaf litter with a flail mower.

A five percent solution of urea (spray urea or greenhouse grade) (40 lb urea in 100 gallons of water) is used to increase the breakdown of leaves. Urea will stimulate indigenous microbial breakdown of leaves; urea can also soften leaves, which are then more easily ingested by earthworms. These native organisms will work better as the temperatures rises; thus, urea applied in November may not be as effective if followed relatively quickly by freezing temperatures and snow cover. An application in spring can be highly effective in spore reduction and the urea may also directly inhibit ascospore formation. Another possibility is the direct application of urea to leaves on trees; this method usually is less effective because if the leaves do not drop within seven days after application, the nitrogen present will be taken up into the tree and not be available for leaf degradation. Finally, urea sprayed on the ground beneath the tree canopy will also add to the nitrogen fertilization of trees and subsequent N fertilization rates should be adjusted accordingly.

Shredding leaf litter in the spring increases microbial breakdown of leaves by providing more pieces that can be invaded and consumed. In addition, mowing tends to re-orient most of the leaf pieces on the orchard floor. When the scab fungus is developing pseudothecia, the structures are all oriented in a vertical direction with the opening facing up. The spores are forcibly ejected out of the top of the pseudothecium. If a leaf piece containing a pseudothecium is inverted, the spores are ejected into the soil and not into the air. Thus, re-orientation also decreases inoculum load by preventing the fungus from effectively discharging spores. A few other points: 1) the mower must be set low enough to reach leaves low to the floor; 2) the mower must be offset to reach leaves beneath the trees; 3) if the mowing is done later in the spring, the re-orientation of leaves is also effective. Prior to spring, the pseudothecia structures have not developed yet.

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We gratefully acknowledge the continued help and financial support of our local county commissioners. We appreciate their input and participation in our programming efforts.

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## Specialty Crop and Minor-Use Pesticide Prioritization in the 2010 IR-4 Food Use Workshop

Satoru Miyazaki, IR-4 Regional Field Coordinator

John Wise, Research/Extension Coordinator - Trevor Nichols Research Complex

Bernard Zandstra, Professor, Department of Horticulture

Michigan State University Extension

Since 1963, the IR-4 Project (Interregional Research Project No.4) has been the major resource for providing pest management tools with growers of specialty crops (or formerly known as minor crops) and sometimes, minor uses on major crops by developing registration data to support new EPA tolerances and labeled product uses. Due to the current review of crop protection chemicals under the Food Quality Protection Act and the high cost to industry of product registration, specialty crops are at risk of having few available pest management products or being lost for pest management. To alleviate this problem IR-4, primarily funded by USDA-NIFA, facilitates pesticide registration for specialty crops by conducting field residue trials, and occasionally, efficacy trials. Specialty crop research needs are prioritized each year during a national workshop since resources are limited. The primary objective of this workshop was to have the participants identify the most important research projects for the 2011 IR-4 research program.

Research priorities for the year-2011 field residue program for fruits, vegetables, field crops and herbs grown in the United States and Canada were assigned at the Food Use Workshop held September 14-15 in Summerlin, Nevada. The workshop was attended by Drs. Bernard Zandstra, Mary Hausbeck, Satoru Miyazaki, and John Wise of Michigan State University, along with other specialty crop/ use researchers, extension specialists, representatives of commodity and industry groups across the country, and personnel from EPA, USDA, IR-4 plus the AAFC (Canadian counterpart of minor use program), and PMRA (Canadian counterpart of U.S. EPA) personnel.

More than 160 people attended the two-day meeting for each discipline session. Participants were provided with a complete list of all pesticides “nominated” with desired priority (i.e.; A or B rating) by regions for consideration prior to the meeting. This “nomination” process, introduced four years ago, greatly streamlined project selections and allowed the participants to spend more time reviewing only the worthy projects. As a group they ranked products based on need, performance, safety, availability of alternatives, and compatibility with the IPM program.

### Specialty crop and Minor-use pesticide prioritization in the 2010 IR-4 Food Use Workshop

*Satoru Miyazaki, John Wise, and Bernard Zandstra*

#### Priority A's for fruits

Commodity	Group	Chemical	Pest problem
Cherry	12	Emamectin benzoate	Obliquebanded leafroller
Cherry	12	Spinosad	Spotted wing drosophila, leafrollers, other lep insects, western flower thrips
Peach	12	Metrafenone	Powdery mildew
Plum	12	Spinosad	Spotted wing drosophila, leafrollers, western flower thrips
Caneberry	13-07A	Pendimethalin	Broadleaf & grass weeds
Blueberry	13-07B	Byi 02960	Blueberry maggot, aphids
Blueberry (high bush)	13-07B	Pendimethalin	Annual weeds
Currant	13-07B	Simazine	Weeds
Grape	13-07F	Mesotrione	Annual broadleaves, yellow nutsedge
Cranberry	13-07GH	Rimsulfuron (mana)	Asters, narrow-leaved goldenrod, buttercup, yellow loosestrife, yellow nutsedge

Only a limited number of projects could be assigned “A” (entomology [16], weed science [16], plant pathology [18]). An “A” priority guarantees IR-4 to begin the field residue program immediately the following season, with expectations that a complete data package be submitted to the EPA within 30 months. Ten fruit projects important for Michigan were assigned A priorities. (See the Table to the left). Any “B” priority projects must be upgraded to A priority either by an Priority Upgrade Proposal (PUP) or by regional upgrade. The following new candidate priority “A” projects listed are preliminary until affirmed at the IR-4 national planning meeting on October 26– 27, 2010. A complete listing can be found on the IR-4 web-site (<http://www.ir4.rutgers.edu>).

## Challenges of Growing Fruits and Vegetables in Plastic Tunnels

Hannah Stevens, Extension Educator  
Michigan State University Extension

In cold climates such as Michigan, gardeners and growers have had success with lengthening the growing season in spring and fall by using row covers, low tunnels and various types of greenhouses. More recently, a trend towards buying local has lead some producers to explore on-farm winter storage as well as the production of fresh greens that survive and thrive in these structures during the winter. High-tunnel production can lengthen the growing season and provide producers with a means to enter the market earlier with high value crops. This has the potential to expand the availability of healthy locally grown crops. In addition, in several states, including Michigan, there are incentive dollars available to growers who would like to try high tunnel production systems.

Pest problems and their management in greenhouses and high tunnels are different than field grown fruits and vegetables, and an understanding of those differences is needed to capitalize on early and late season markets. Soil, water and nutrient management are also unique to these systems and markets for these crops need to be developed and well understood. MSU Extension would like to invite interested growers to a webinar series sponsored by the [Great Lakes Vegetable Working Group](#), the [University of Illinois Extension](#), and a Sustainable Agriculture Research and Education Professional Development grant. These programs include five 1-2 hour webinars produced on November 1, 3, 8, 16, and 18. You can view the webinars at home via your computer or at the suggested places set up throughout the state.

Webinar One (November 1, 6:30-8:30 PM) will provide an overview of season extension methods and economics and weed, insect and disease control.

Webinar Two (November 3, 6:30-8:30 PM) will address production systems for tomatoes and related crops, cultural, organic and other pest control methods as well as grafting techniques.

Webinar Three (November 8, 6:30-8:30 PM) will include an overview of winter crop production systems including a discussion of economics, sanitation, plastic management, production sequences, crop selection, sanitation for a simple hoophouse, greenhouse, in-ground, in container, row covers, and low tunnels. Pest management and storage will also be discussed.

Webinar Four is titled "Management of Nutrients, Water, Soil, and Other Production Considerations in High Tunnels" and will be broadcast November 16 at a different time than the previous three webinars. This will be a brown-bag lunch webinar airing from 1:00-2:00 PM. The first 50 participants or organizations to include webinar four as part of their registration, will receive a free copy of the "High Tunnel Production Manual" published by Penn State.

Webinar Five is titled "Interpreting NRCS High Tunnel Project Guidelines." This will also be a brown-bag lunch webinar on November 18 from 1:00-2:00 PM and will clarify the support available through the EQIP program.

Pre-registration for this webinar series is mandatory and can be found at [http://www.surveymonkey.com/s/season\\_ext](http://www.surveymonkey.com/s/season_ext). The cost for the series is \$30 whether you attend one or all five webinars. **(After registering, you will be emailed directions with payment instructions. Once payment is received, the webinar links will be emailed to you.)** Each webinar will be recorded and available on several state IPM or vegetable oriented websites for viewing soon after its original airdate. For people who do not have a broadband connection, we are identifying several places throughout each state to host the webinar series.

For more information, please check out: <http://bit.ly/plastictunnels>

### Season Extension Webinar Series (2010)

The Great Lakes Vegetable Working Group in partnership with the University of Illinois are organizing a Season Extension pest management webinar series to begin this fall. The webinars are intended for growers, educators, and NRCS staff. The topics, speakers and times listed on the next page are preliminary only, and subject to change. Registration and more information about the webinar series will be announced soon.

**Time:** GLVWG webinars 1, 2, 3; 6:30-8:30 pm EST (5:30-7:30 pm CST)

**Time:** U of IL webinars 4 & 5; noon – 1 pm CST (1-2 pm EST)

**Dates:** Nov. 1, 3, 8, 16, 18

**See page 9 for a listing of each webinar series and presenters.**



**Challenges of Growing Fruits and Vegetables in Plastic Tunnels Webinar Series- Continued from Page 8****Webinar 1 - Introduction to Pest Management for Season Extension [GLVWG]****Nov. 1, 2010 6:30-8:30 pm EST (5:30-7:30 pm CST)**

Topic	Speaker	Time + Q&A (min)
Overview of Season Extension Methods, pros and cons of getting into season extension: low tunnels, row covers, high tunnels, greenhouses, extended storage, and basic economics	B. LaMont - Penn State Univ.	25+5
Basic pest management considerations of insects & mites in High Tunnels	J. Reid - Cornell Univ.	25+5
Basic pest management considerations of diseases in High Tunnels	M. McGrath - Cornell Univ.	25+5
Basic pest management considerations of weeds in High Tunnels	B. Bergefurd - Ohio State	25+5

**Webinar 2 - Pest management of Tomatoes in High Tunnels [GLVWG]****Nov. 3, 2010 6:30-8:30 pm EST (5:30-7:30 pm CST)**

Topic	Speaker	Time + Q&A (min)
Overview of tomato and other solanaceous crop production systems: multi-bay 3-season tunnels (ie haygrove), simple hoophouse, greenhouses, in-ground, containers, varieties, and economics	M. Kleinhenz - Ohio State Univ.	35 + 5
Pest and mite management in High Tunnels, including cultural controls, pesticide use, biocontrols, and organic methods	S. Saha - Purdue Univ.	35 + 5
Disease management in High Tunnels, including cultural controls, pesticide use, grafting, and organic methods	S. Miller - Ohio State Univ.	35 + 5

**Webinar 3 - Pest Management in Winter Crops [GLVWG]****Nov. 8, 2010 6:30-8:30 pm EST (5:30-7:30 pm CST)**

Topic	Speaker	Time + Q&A (min)
Overview of winter crops production systems: simple hoophouse, greenhouse, in-ground, in container, row covers, low tunnels, sanitation, plastic management, production sequence, economics, & crop selection	A. Montri - Michigan State Univ.	45 + 5
Pest and mite management in High Tunnels, including cultural controls, pesticide use, biocontrols, and organic methods	J. Reid - Cornell Univ.	20 + 5
Disease management in High Tunnels, including cultural controls, pesticide use, and organic methods	A. Hazelrigg - Univ. of Vermont	20 + 5
Vegetable storage management	M. Kleinhenz - Ohio State Univ.	15 + 5

**Webinar 4 – Nutrition, Water, and Soil Management in High Tunnels [U of IL]****Nov. 16, 2010 noon-1 pm CST (1-2 pm EST) [Note time zone change]**

Topic	Speaker	Time + Q&A (min)
Management of nutrients, water, soil, and other production considerations in high tunnels	M. Orzolek - Penn State Univ.	55 + 5

**Webinar 5 – Interpreting NRCS High Tunnel Project Guidelines [U of IL]****Nov. 18, 2010 noon-1 pm CST (1-2 pm EST) [Note time zone change]**

Topic	Speaker	Time + Q&A (min)
Education of Extension staff, NRCS staff, and growers on guidelines pertaining to high tunnel production pilot project	Ruth Book, State Conservation Engineer, NRCS; Ivan Dozier, Assistant State Conservationist NRCS; Brett Roberts, State Agronomist, NRCS	55 + 5

Please note that some states may host a “local issues” webinar in November in addition to the 5 part webinar series listed above.