



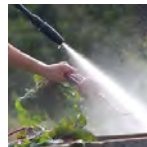
Growers report aphids thriving on high tunnel winter greens. As temps drop, we refrain from the release of biocontrols, with one exception: lady beetles.

PAGE 1



Cucumbers are highly susceptible to downy mildew and were hard hit in recent years. Find information on fungicide sensitivity for conventional and organic control.

PAGE 4



Read about the key points of the Food Safety Modernization Act (FSMA) including requirements, compliance dates and other important information.

PAGE 6



A new video has been created to show you a set of standard operating procedures for using a germicidal bleach in a produce washing station.

PAGE 8

VEGEEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

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Photo: Elizabeth Buck



Cornell University
Cooperative Extension
Cornell Vegetable Program

Aphid Outbreak in Winter Greens? Lady Beetles to the Rescue!

Judson Reid, CCE Cornell Vegetable Program

The opportunity for New York vegetable farmers to market winter greens continues to grow. In a CVP survey 75% of respondents recently experienced an increase in cool season marketing. Over a 5 year period the average respondent increased revenue by \$6,110, over 9.2 weeks of winter. However, aphids and other pests have growers looking for control options.

It is too cold to spray in high tunnels right now, but growers report that aphids are still thriving on greens such as spinach and mizuna. Can we use biocontrols this time of year? As temperatures drop we refrain from the release of biocontrols, with one exception: lady beetles. Under row covers lady beetles have provided excellent control of aphids at farms cooperating with CVP research. For example one cooperating farm released lady beetles on November 24. By December 4 the ladybeetles reduced aphid populations by



Lady beetle. Photo: Judson Reid, Cornell Vegetable Program

continued on page 3



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 12 counties in Western New York.

The newsletter is a service to our enrollees and is intended for educational purposes, strengthening the relationship between our enrollees, the Cornell Vegetable Program team, and Cornell University.

We're interested in your comments. Contact us at:
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Information provided is general and educational in nature. Employees and staff of the Cornell Vegetable Program, Cornell Cooperative Extension, and Cornell University do not endorse or recommend any specific product or service.

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are possible. Some materials may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in NYS must be registered with the NYS Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide usage in NYS should be directed to the appropriate Cornell Cooperative Extension (CCE) specialist or your regional DEC office.

CCE and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products or companies is made or implied. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

Help us serve you better by telling us what you think. Email us at cce-cvp@cornell.edu or write to us at Cornell Vegetable Program, 480 North Main Street, Canandaigua, NY 14424.



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Contents

Contact Us

Cornell Vegetable Program 12

Crops

Cucurbit Downy Mildew Update 2015 04
Cucurbit: Mobile Fungicides for Managing PM, DM, and Phytophthora Blight . 05
Winter Greens: Aphid Outbreak? Lady Beetles to the Rescue! 01

General

2016 Cornell Vegetable Guidelines Available..... 02
Cornell Announces Robin Bellinder Graduate Student Fund 03
Food Safety Modernization Act – The Latest Overview 06
Produce Safety Rule Webinar, Recorded December 17 08
Video Released: Using Produce Washing Stations 08
2015 Excellence in IPM Awards: Pheromone Trap Network Recognized 08

Events

Seneca Produce Auction Greenhouse Growers Meeting 09
2016 Auction Growers Production Meeting (Orleans) 09
Annie's Project: Managing for Today and Tomorrow 09
Irrigation Water Regulations, Traceability, and Recall: FSMA Info for Farmers . 09
2016 Genesee Valley Produce Auction Meeting 09
Erie County Vegetable Growers Meeting 10
Forecasting Potato/Tomato Late Blight Risk for Your Farm 10
Niagara County Vegetable and Small Fruit Grower Meeting 10
Farm Food Safety with GAPs Training 10
2016 Auction Growers Production Meeting (Chautauqua) 11
2016 NYS Dry Bean Meeting 11
Vegetable School 11

The next issue of VegEdge will be published on March 1, 2016.

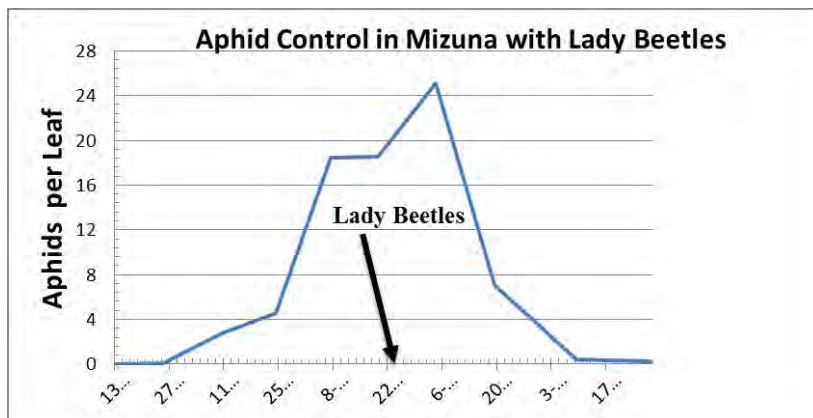
2016 Cornell Vegetable Guidelines Available

The 2016 edition of the Cornell Commercial Vegetable Production Guidelines is now available. This annual publication provides up-to-date vegetable crop production information for New York State. It has been designed as a practical guide for vegetable crop producers, crop consultants, and ag suppliers. In addition to the annually revised pesticide and crop production information, this edition also includes the addition of several new pests of concern (seedcorn maggot in beans, leafminers in lettuce and endive, spider mites in peppers, anthracnose in spinach, and powdery mildew in tomatoes), a new table listing biofungicide options for vegetable production, revised management strategies for striped cucumber beetle in cucurbits and Stewart's wilt in sweet corn, and identification of pesticide active ingredients that meet EPA's criteria for acute toxicity to bees.

NOTE: Vegetable Guidelines are no longer be offered for free online. Instead, you will have the option to purchase just a print copy (\$33 plus shipping), online version (\$33), or a bundle of a print copy plus online access (\$46 plus shipping). You can order this publication, or other Cornell Guidelines from the Cornell Store at Cornell University at 844-688-7620. ●

98.5% in mizuna (Figure 1). This would not be possible with other biocontrols such as parasitic wasps at this time of year. Please note that the use of row covers likely influenced our success rate. Where do we get the lady beetles? Call Judson at 585-313-8912 or email Cordelia at ch776@cornell.edu for information on suppliers. This work was supported by NESARE. ●

Figure 1. Aphid control in mizuna with lady beetles.



Lady beetle larvae. Photo: Judson Reid, Cornell Vegetable Program

Cornell Announces Robin Bellinder Graduate Student Fund

Steve Reiners, Professor and Chair, Horticulture Section, Cornell University

On November 13, 2015, we received the sad news that our friend and colleague, Robin Bellinder, professor of Horticulture at Cornell University for 31 years and an international expert in weed control in vegetable crops, died unexpectedly. She was 70 years old. Robin died of a pulmonary embolism after a brief hospitalization and stay in a physical rehabilitation clinic for an unrelated spinal injury.

At Cornell, Robin's research program focused on weed management for vegetable crops. One of few women in her field at that time, she became a national and international leader. She published research results widely in peer reviewed publications, as well as publications that advised growers about her work's practical applications. She served as president of the Northeastern Weed Science Society and, in 2005, was named the recipient of Cornell's College of Agriculture and Life Sciences award for outstanding accomplishments in applied research. She will be remembered as a weed scientist who ardently and tirelessly supported New York vegetable growers. Robin had a deep concern for people, whether farmers in South Asia, for whom she championed the introduction of more efficient weed control practices, or hungry families in New York's southern tier. She initiated Cornell's efforts to provide fresh fruits and vegetables from the Homer C. Thompson Research Farm to the Food Bank of the Southern Tier. Since 2004, as a result of her initiative, Cornell has donated almost 2 million pounds of produce.

Robin will be remembered as an intense, thoughtful, loyal, generous, creative and loving person who tenaciously advocated for the things she believed were important. Mentoring students and seeing them become leaders around the world provided Robin with great satisfaction. At the urging of her colleagues, Cornell is proud to announce the establishment of the **Robin Bellinder Graduate Student Fund**. The fund will be established **"to provide financial support for graduate students working on vegetable crops, with a preference given to projects with a weed science emphasis. The fund will be distributed at the discretion of the chair of the horticulture section, and may be used to supplement travel or research expenses for the successful candidates"**.



Robin speaking with growers at a bean weed meeting, March 2010 in Batavia, NY.

Photo: Julie Kikkert, Cornell Vegetable Program

Those interested in supporting the fund should make their checks payable to "Cornell University" with "Bellinder Fund, Horticulture" in the memo line. We will be happy to share any notes or messages with Robin's family. Checks can be sent to:

Chair, Horticulture Section
Cornell University
134 Plant Science Building
Ithaca, NY 14853 USA

Thank you for your support of the Robin Bellinder Graduate Student Fund. ●

Cucurbit Downy Mildew Update 2015

Chris Smart and Holly Lange, Plant Pathology and Plant-Microbe Biology Section, Cornell University, Geneva; edited by Darcy Telenko, CCE Cornell Vegetable Program

Cucurbit downy mildew, caused by the water-mold pathogen *Pseudoperonospora cubensis*, continues to be a serious problem for cucurbit growers in New York. While all cucurbits are susceptible, cucumbers are highly susceptible and have been extremely hard hit by downy mildew in recent years. During the 2015 season, we looked at fungicide sensitivity for conventional control products and efficacy in organically approved control products.

For the fungicide sensitivity study, we grew susceptible cucumber plants in small pots in the greenhouse. Treatments (11 fungicides + water control) were applied to plants and they were placed in the field between rows of cucumbers with cucurbit downy mildew symptoms (four reps per treatment). The potted plants were left in the field for 48 hours, then brought into the greenhouse and rated for disease severity after five days. The results can be seen in Table 1.

The second experiment evaluated control products approved for control of cucurbit downy mildew in organic production. A total of eight treatments plus and untreated control were used. The cucurbit downy mildew susceptible cultivar Diva were grown in a field that has been managed using practices allowed for organic production since 2008. The treatments included plant activators and products that act directly on the pathogen. The results can be seen in Table 2. It was interesting to see that Zonix was somewhat effective against downy mildew, as this product (a rhamnolipid biosurfactant) acts by disrupting the cell membrane of the zoospores (swimming spores) of downy mildew and has a very different mode of action from other products tested. While all products were better than the untreated control, all plots were heavily diseased by the final rating. ●

Table 1. Results of fungicide sensitivity assay. Four fungicides had significantly more disease than the other seven, and two of the fungicides were not significantly different from plants treated with water.

Product	Rate	Active Ingredient	FRAC code	Mean % Disease	
water	na	na		65.0 a	Least effective
Previcur Flex 6SL	1.2 pt/A	Propamocarb	28	58.8 a	
Revus 2.08SC	8 fl oz/ A	Mandipropamid	40	55.0 ab	
Quadris 2.08F	15.5 fl oz/A	Azoxystrobin	11	47.5 bc	
Tanos 50DF	8 oz/A	Famoxadone + Cymoxanil 25%	11 27	42.5 c	
Presidio 4SC	4 fl oz/A	Fluopicolide	43	12.5 d	Most effective
Gavel 75DF	2lb/A	Mancozeb + Zoxamide	M3 22	10.5 de	
Bravo Weatherstik	2pt/A	Chlorothalonil	M5	6.3 def	
Manzate ProStik 75DG	2lb/A	Mancozeb	M3	6.3 def	
Omega 500F	1.5pt/A	Fluazinam	29	2.1 ef	
Curzate 60DF	5oz/A	Cymoxanil 60%	27	1.5 ef	
Ranman 400SC	2.75 fl oz/A	Cyazofamid	21	0.1 f	

Table 2. Results of product efficacy study. All treatments had statistically better disease control than the non-treated control. When looking at the final disease rating, two of the treatments (Zonix and Nordox) had better disease control than Actinovate.

Treatment	Active ingredient	Mean AUDPC (disease over time)	Final rating % disease
Champ 30 WG	Copper hydroxide	319.3 b	50.0 bc
Cueva FL	Copper octanoate	232.4 b	47.5 bc
Double Nickel	<i>Bacillus amyloliquefaciens</i>	236.0 b	48.8 bc
Nordox 75 WG	Cuprous oxide	229.3 b	45.0 c
Zonix	Rhamnolipid biosurfactant	257.3 b	43.8 c
Actinovate AG	<i>Streptomyces lydicus</i>	301.3 b	57.5 b
Regalia	<i>Reynoutria sachalinensis</i> extract	257.5 b	51.3 bc
Regalia + Actinovate		236.0 b	48.8 bc
Non-treated control		483.8 a	77.5 a

Mobile Fungicides for Managing Powdery Mildew, Downy Mildew, and Phytophthora Blight in Cucurbits

Margaret Tuttle McGrath, Plant Pathology and Plant-Microbe Biology Section, Cornell University, Long Island Horticultural Research and Extension Center; <http://vegetablemdonline.ppath.cornell.edu>

Fungicide	FRAC Code	Diseases	Recommended Rate/A (labeled)	REI	PHI	Seasonal Limits	Approx.\$/A/spray
Vivando ^g	U6	Powdery mildew	15 fl oz	12 h	0 d	3 sprays	\$33.15
Torino ^a	U8	Powdery mildew	3.4 oz	4 h	0 d	2 sprays	\$24.00
Quintec ^b	13	Powdery mildew (melon, pumpkin, w. squash, gourd)	6 fl oz (4-6)	12 h	3 d	24 fl oz	\$23.60
Proline ^c	3	Powdery mildew	5.7 fl oz	12 h	7 d	2 sprays	
Procure ^c	3	Powdery mildew c	8 fl oz (4-8)	12 h	0 d	40 fl oz	\$36.84
Merivon ^c	7	Powdery mildew	5.5 fl oz (4-5.5)	12 h	0 d	3 sprays	
Pristine ^c	7 + 11	Powdery mildew c	18.5 oz (12.5-18.5)	12 h	0 d	4 sprays (74 oz)	\$70.85
Ranman ^{a, d}	21	Blight, Downy mildew	2.75 fl oz (2.1-2.75)	12 h	0 d	6 sprays	\$25.24
Zampro	40 + 45	Blight, Downy mildew	14 fl oz	12 h	0 d	3 sprays	
Forum	40	Blight, Downy mildew	6 fl oz	12 h	0 d	5 sprays	\$17.86
Revus ^{a, c}	40	Blight, Downy mildew (low efficacy DM cucumber)	8 fl oz	12 h	0 d	4 sprays (32 fl oz)	\$30.31
Phostrol, etc. ^f	33	Blight, Downy mildew	2.5 – 5 pt	4 h	0 d	7 sprays	\$11.44 – \$22.88
Presidio ^{c, g}	43	Blight, Downy mildew c	4 fl oz (3 – 4)	12 h	2 d	4 sprays (12 fl oz)	\$44.94
Tanos ^e	27 + 11	Blight, Downy mildew	8 oz	12 h	3 d	4 sprays	\$25.02
Zing!	22 + M	Downy mildew	36 fl oz	12 h	0 d	8 sprays	\$17.72
Curzate ^e	27	Downy mildew	3.2 oz	12 h	3 d	9 sprays	\$13.26
Previcur Flex ^c	28	Downy mildew c	1.2 pt	12 h	2 d	6 pints	\$18.32

a Organosilicone and/or non-ionic surfactant required (Revus) or recommended.

b Quintec is not labeled for use on edible-peel cucurbits. 10-14 day spray interval.

c Limited use recommended because resistance suspected of affecting efficacy especially when applied often.

d Rate range applies for downy mildew; high rate for blight.

e Short residual; apply another fungicide within 5 days.

f Other phosphorous acid fungicides include ProPhyt and Fosphite. Rate and seasonal limits vary a little among products. Recommended tank mixed with other fungicides. Note that there are also phosphate fertilizers, which are not fungicides.

g Plant-back restriction for non-labeled crops is 365 days for Vivando and 18-month for Presidio.

Tank-mix each of these fungicides with a protectant, with the exception of Zing! (or Gavel), which are formulated with chlorothalonil or mancozeb. Need to tank-mix is specified in use directions on many labels.

Sulfur is a very effective, inexpensive product for powdery mildew, no efficacy for other diseases.

Oils (several botanical and mineral oils available) are also a good choice for powdery mildew only.

Chlorothalonil and copper have broad-spectrum activity. Copper also effective for bacterial diseases.

Mancozeb is recommended when only downy mildew is occurring.

Apply fungicides for a particular disease in alternation to manage resistance (in the use directions on many labels; typically 1 or 2 consecutive spray maximum) and to ensure effective control if resistance develops.

QoI* and Ridomil fungicides are not recommended due to resistance. (*Amistar, Cabrio, Quadris, Flint). ●

Food Safety Modernization Act – The Latest Overview

Robert Hadad, CCE Cornell Vegetable Program

The FDA Food Safety Modernization Act – FSMA- is now the law of the land. The FDA has released a [factsheet with their overview](http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm334114.htm) and this can be found online at: <http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm334114.htm>

Here is a quick look at the key points. One thing to keep in mind is that if your farm is not exempt, you will have to attend an accredited full training program within the next couple of years, depending on the size of your operation (sales).

The Produce Rule:

- Focus on the growing, harvesting, post-harvest, and handling of produce.
- Focus is on the prevention not detection of germs.
- All about reducing RISK of illness from contaminated food

Produce Rule: Areas of Focus:

- Agricultural water – irrigation & wash.
- Manure and compost.
- Livestock, wildlife, and pets.
- Worker training, health and hygiene.
- Equipment, tools, buildings, and sanitation.

Exemptions for Some Products:

- Produce rarely consumed raw – such as - asparagus, dry beans, garden beets (roots and tops) and sugar beets; collards; sweet corn; cranberries; dates; dill (seeds and weed); eggplants; horseradish; okra; peppermint; potatoes; pumpkins; winter squash; and sweet potatoes ... *[Why beets and not turnips, rutabagas and other root crops is odd and why beet greens is very strange!-RH]*
- Produce destined for 'kill-step' processing.
- Produce for personal/on-farm consumption.

Exemptions from Compliance:

Farms that have an average annual value of PRODUCE sold during the previous three-year period of \$25,000 or less.

The rule also provides a qualified exemption and modified requirements for certain farms:

Farms may be exempt if :

The farm has FOOD sales averaging less than \$500,000 per year during the previous three years;

AND

Farm sales to qualified buyers must exceed sales to all non-qualified buyers combined during previous three years.

A qualified buyer is either:

- (a) the consumer of the food or
- (b) restaurants or
- (c) retail food stores located in the same state as the farm or not more than 275 miles away.

There is distinction between PRODUCE and FOOD for these exemptions. Produce is all the fruit and vegetables that you grow under the rule for fresh market sales. Food is all the fruit and vegetables for fresh market sales plus any livestock feedstuffs or processing produce items.

If Exempted:

- Farm will still have to follow food safety guidelines.
- Keep documentation of actions along with real good records of sales that proves exemption.
- Use a label on their produce packages that gives the farm name and farm business address.

Under the Regulations:

Farmers must attend accredited training program (regardless of their attending GHAPs/HGAPs training in the past *(at this point)*). The FDA has postponed the start of these trainings till later this fall.

Same principles followed as in GAPs. Assess all your production and harvesting practices to reduce risk of contamination to produce (production, workers, water, livestock & wildlife, manure, produce washing, packing, & traceability).

Worker Training and Health& Hygiene:

- Workers, including family members who help on the farm with the produce, must understand the basics of food safety.
- Training to help workers understand where contamination comes from, how it spreads, and how to minimize it when handling produce.
- Prevent contamination of produce and food-contact surfaces by ill or infected persons.
- Hand washing – thoroughly before handling harvested produce; after eating; after using bathrooms; after working with livestock; horses, pets...

Manure and Compost:

- Complying with the USDA's National Organic Program standards.
- Call for a 120-day interval between the application of raw manure for crops in contact with the soil and
- 90 days for crops not in contact with the soil.
- Stabilized compost creation that follow set standards.
- Testing for minimum levels of Salmonella, Listeria, and E. coli.

Livestock, Pets, and Wildlife:

- Pre-harvest Assessment: requires farms to visually examine the produce and produce fields be harvested, regardless of the harvest method used.
- Scouting fields for problems during the growing season.

continued on next page

Equipment, Tools, & Buildings:

- Cleaning & Handling Practices used to keep equipment and tools from spreading contamination.
- Buildings/facilities where harvested produce is handled must be set up to reduce the risk of contamination.

Water and Irrigation Water:

- Potable water to be used for washing hands, tools, produce, and cleaning packing areas
- Municipal or well. Municipal water –need to keep yearly copy of company's testing.
- Well – tested 4x year for drinking water standards.
- Methods:
 - ♦ Trickle – when running properly least risk.
 - ♦ Overhead: depends on crop; more risky the closer to harvest.
 - ♦ Surface water: most risky source. Needs to be tested....**A Lot**

Water Testing:

- Ponds, creeks, streams, canals, lakes, rivers, ditches...
- Over 2 years, need to have 20 tests per source during growing season.
- This is to give “a picture” of how clean or contaminated the water is over time.
- Water samples go to accredited labs.
- Tests for quantitative levels of generic E. coli (results will be a number of bacteria present).
- Keep records of results.
- Requires taking the result numbers and using two different math formulas to calculate levels over time.

For surface water:

- <126 CFU/MPN generic E. coli per 100 ml, geometric mean AND a statistical threshold value of <410 CFU/MPN generic E. coli per 100 ml.
- Testing dependent on water quality profile.
- Could mean as often as once a week.
- If water tests remain consistent then less (5) testing for following years.
- Water testing doesn't start for another 2 years.

If Water Has Issues:

- Corrective actions needed.
- Allowing time microbes to die off in the field with time interval between last irrigation and harvest, 1-4days.
- Allowing time microbes to die off between harvest and end of storage, or through washing
- Treating the water (regulated by EPA).

Compliance Dates:

- Very small businesses, between \$25,000 - \$250,000 of average annual produce sales during the previous three year period : 4 years.

- Small businesses, between \$250,000 - \$500,000 average annual produce sales during the previous three year period: 3 years.
- All other farms: two years.
- The compliance dates for the water quality standards, related testing and recordkeeping , have another 2 years.
- FDA will check for compliance – state level agencies might have this task.

Regardless of the status of your farm to the FSMA on exemptions, growers may be exempt from the regulation, but not from the market place.

The FDA FSMA factsheet can be found at <http://www.fda.gov/downloads/Food/GuidanceRegulation/FSMA/UCM472887.pdf> which provides a summary of key requirements, compliance dates, and other information. ●

FOOD SAFETY TRAINING MEETINGS

Irrigation Water Regulations, Traceability, and Recall: Info for Produce Farmers Concerning the Food Safety Modernization Act (FSMA)

February 22, 2016 | 9:30 AM - 3:00 PM

NYS Agricultural Experiment Station, Jordan Hall, 630 W North St, Geneva, NY 14456

This meeting will provide information and answers to questions on several of the more complicated sections of the new FSMA regulations going into effect for produce growers. There will be a focus on irrigation water and what is required for testing your water sources, record keeping, how to set up a meaningful traceability program, and how to conduct a recall.

[More information](http://www.cce.cornell.edu) about this meeting is available at [cvp.cce.cornell.edu](http://www.cce.cornell.edu).

Cost: \$25 for Cornell Vegetable Program enrollees or Lake Ontario Fruit Program enrollees; \$35 all others. Extra attendees from the same farm will only be charged \$15 each to cover lunch. Contact Robert Hadad at 585-739-4065 or rgh26@cornell.edu for more information and to pre-register.

Farm Food Safety with GAPs Training

March 7-8, 2016 | 9:30 AM - 4:00 PM each day

CCE Erie County, Dard Hunter Hall, 21 S Grove St, East Aurora, NY 14052

Attendees will receive detailed instruction about food safety on the farm for Day 1. For those needing or interested in a third party audit for certification, Day 2 will help you write a food safety plan needed for audit. Open to all fresh market produce farmers, especially those who may want to sell through the Eden Valley Food Hub.

Cost: TBD. Pre-registration will be required. For more info, contact Robert Hadad at 585-739-4065 or rgh26@cornell.edu. Updates will be posted at [cvp.cce.cornell.edu/event.php?id=482](http://www.cce.cornell.edu/event.php?id=482) Organized by the Eden Valley Food Hub, Harvest New York, the Cornell Vegetable Program, and Cornell Cooperative Extension.

Produce Safety Rule Webinar, Recorded December 17

From the Produce Safety Alliance at: <http://producesafetyalliance.cornell.edu>

On December 17 the Produce Safety Alliance co-hosted a webinar with the FDA Produce Safety Staff on key provisions within the Produce Safety Rule. Produce Safety Staff participated in a question and answer session afterward. If you were not able to participate in the webinar, the slides and audio recording are available below.

The presentation slides are at:

http://producesafetyalliance.cornell.edu/miscdocs/PSAFDAWebinar12-17-15.pdf?utm_source=PSA+Dec.17th+Webinar+Slides+and+Training+Updates&utm_campaign=PSA+2015+Close+E-mail&utm_medium=email

The audio recording is at:

http://producesafetyalliance.cornell.edu/mp3s/FDA_Webinar_12-17-15.MP3?utm_source=PSA+Dec.17th+Webinar+Slides+and+Training+Updates&utm_campaign=PSA+2015+Close+E-mail&utm_medium=email

The Produce Safety Alliance listserve reaches over 1,500 growers, industry members, regulatory agents, and educators in the United States and around the globe. Signing up for the listserve is the best way to stay in touch with the PSA. To sign up, please visit our website. If you have questions, contact Gretchen Wall at glw53@cornell.edu or 607-255-6806; or Elizabeth Bihn at eab38@cornell.edu or 315-787-2625. ●

Video Released: Using Produce Washing Stations

Angela Parr, CCE Cornell Vegetable Program

A new video has been created to show you a set of standard operating procedures for using a germicidal bleach in a produce washing station. Learn what supplies are required and how to calculate the amount of germicidal bleach needed to sanitize the water. [Watch the video](#) at our YouTube channel: <https://www.youtube.com/user/cccev>

This video was developed by the Cornell Vegetable Program and Harvest New York with support from the USDA and the Northeast Center for Risk Management Education. ●



2015 Excellence in IPM Awards: Pheromone Trap Network Recognized

Jennifer Grant, NYS IPM Program; edited by Angela Parr, CCE Cornell Vegetable Program

Each year we seek nominations for recipients of the New York State Integrated Pest Management (NYS IPM) Program's "Excellence in IPM" awards, which recognize exceptional IPM practitioners who do exceptional work. And when the nominations come in, we're reminded again of the dedication and support of so many whose work truly makes a difference for the people of New York and often well beyond.

Eight individuals and one group were recognized in 2015: **Toni DiTommaso**, Cornell professor, for "unbridled enthusiasm" for innovative IPM approaches to dealing with weeds; **René Fiechter**, assistant district attorney of Nassau County, for his quick development of a task force to

tackle the bed bug invasion that began in 2008; **Lou Lego**, farmer and regular collaborator on Cornell's IPM research projects, has devised disease-pathogen excluders for high tunnel vegetable greenhouses and evaluated the culinary properties of disease-resistant apples; **Sandra Menasha**, CCE vegetable specialists, does it all – biofumigation and slow release fertilizer trials, classic IPM scouting, on-farm twilight meetings, alerts on new pest and disease outbreaks, plus more; **Dale Ila Riggs**, president of the NY Berry Growers Association, for aggressively seeking Cornell research collaborations and the money to support them to combat spotted wing drosophila; **John Sanderson**, Cornell research professor, has kept biological controls for greenhouse pests at the

top of his IPM to-do list for more than 15 years; **Lee Telega**, member of Cornell's Government Affairs office, for his advocacy for the NYS IPM Program; **Peter Ten Eyck** is "legendary" for his support both of Cornell and New York's apple industry; and finally the **Pheromone Trap Network**. Sometimes keeping pests at bay takes a battalion of volunteers with boots on the ground, [including CCE Cornell Vegetable Program staff]. Since 1993, the Pheromone Trap Network has been dedicated to finding hotspots of pests, whether new or established, in cornfields around the state. Over the years, dozens of people have literally walked the talk to bring critical IPM news to thousands of growers on millions of acres of land all across New York. ●

UPCOMING EVENTS *view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu*

Seneca Produce Auction Greenhouse Growers Meeting

February 17, 2016 | 12:15 PM - 3:00 PM

Seneca Produce Auction, 2033 Yerkes Rd, Romulus, NY 14541

This meeting for produce auction growers will include information on making flowers profitable for auction sales, growth regulators, vegetable transplant production, alkalinity and irrigation, and principals of acidification. This will be a fairly informal, discussion oriented meeting. This event is FREE. [The agenda](#) is available on our website cvp.cce.cornell.edu. Contact Judson Reid at 585-313-8912 or jer11@cornell.edu with questions.

2016 Auction Growers Production Meeting (Orleans)

February 18, 2016 | 1:00 PM - 3:45 PM

CCE Orleans County, 12690 Rte 31, Albion, NY 14411



This course will educate growers on disease and pest management, varieties, soil management, and marketing issues in open field and high tunnel vegetables. Topics such as disease resistant varieties, managing pests (weeds, diseases, birds), cultural management and appropriate spray options. There will 3 grower panels during this event. Weed control and Best Management Practices for Auction will be discussed by the first panel. A sweet corn grower panel will discuss varieties, seeding dates, and auction sales. The final grower panel will focus on soil management for Orleans County clay.

This event is FREE. DEC recertification credits will be available. [The agenda](#) is available on our website cvp.cce.cornell.edu. Contact Judson Reid at 585-313-8912 or jer11@cornell.edu with questions.

Annie's Project: Managing for Today and Tomorrow

February 18 & 25, March 3 & 10, 2016 | 10:00 AM - 2:30 PM

CCE Ontario County, 480 N Main St, Canandaigua, NY 14424 or

CCE Genesee County, 420 East Main St, Batavia, NY 14020

[Annie's Project](#) is an educational program dedicated to strengthening women's roles in modern farm enterprises. CCE Genesee County and CCE Ontario County are pleased to offer Annie's Project: Managing for Today and Tomorrow, which will guide participants through the process of succession planning, business planning, estate planning, and retirement planning.

Light lunch will be served at all sessions with March 17 reserved as a snow date. Cost is \$100 per person.

For more information, contact Joan Petzen at 585-786-2251 x 122 jsp10@cornell.edu; or contact Marie Anselm at 585.394.3977 x402 or ma882@cornell.edu. To register, contact Zach Amey at 85-786-2251 x 123, email zta3@cornell.edu.

This program is sponsored by Cornell Cooperative Extension, and supported in part by the Northeast Extension Risk Management Education Center, the USDA National Institute of Food and Agriculture (NIFA) award number 2012-49200-20031, CoBANK, Farm Credit East, New York FarmNet, NYS Agricultural Mediation Center, NYS Workforce Development Institute, and New York Agri-Women, Inc.

Irrigation Water Regulations, Traceability, and Recall: Info for Produce Farmers Concerning the Food Safety Modernization Act (FSMA)

February 22, 2016 | 9:30 AM - 3:00 PM

NYS Agricultural Experiment Station, Jordan Hall, 630 W North St, Geneva, NY 14456



This meeting will provide information and answers to questions on several of the more complicated sections of the new FSMA regulations going into effect for produce growers. There will be a focus on irrigation water and what is required for testing your water sources, record keeping, how to set up a meaningful traceability program, and how to conduct a recall that nation might live. [More information](#) about this meeting is available at cvp.cce.cornell.edu.

Cost: \$25 for Cornell Vegetable Program enrollees or Lake Ontario Fruit Program enrollees; \$35 all others. Extra attendees from the same farm will only be charged \$15 each to cover lunch. Contact Robert Hadad at 585-739-4065 or rgh26@cornell.edu for more information and to pre-register.

2016 Genesee Valley Produce Auction Meeting

February 23, 2016 | 9:30 AM - 2:30 PM

Centerville, NY 14029



Come and learn how to make a profit at produce auctions! Speakers from other New York and Pennsylvania auctions plus Cornell Cooperative Extension and Cornell will provide attendees will information on flower production, small fruit, Food Safety Modernization Act impacts on auctions, nutrient management, high tunnel tomato production, and simplified hoop tomato house production.

The meeting is FREE. [The agenda](#) is available on our website cvp.cce.cornell.edu. Contact Judson Reid at 585-313-8912 or jer11@cornell.edu for more information.

UPCOMING EVENTS *view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu*

Northeast Beginning Farmer Project Online Courses

The [Cornell Small Farms Program](#) is pleased to announce the winter roster of online courses available through its [Northeast Beginning Farmer Project](#). These courses help farmers learn from the latest research-based education.

Winter 2016 Online Course List (February - April)

[BF 121: Veggie Farming - From Season-Long Care to Market](#), Feb 24 - Mar 23. CVP Specialist Darcy Telenko is an instructor.

[BF 150: Farm-Scale Mushroom Production - For Fun and Profit](#), Feb 23 - March 29

[BF 202: Planning to Stay in Business - Writing Your Business Plan](#), Feb 4 - March 10

[BF 103: Taking Care of Business - Understanding the Business, Regulatory, and Tax Implications of Your Farm](#), Mar 7 - Apr 11

[BF 220: Season Extension with High Tunnels - Know Before You Grow](#), Mar 22 - Apr 19. CVP Specialist Judson Reid is an instructor.

Each course is \$200, but up to 4 people from the same farm may participate without paying extra. See the course description page for more on the course learning objectives, instructors, and outline. *Courses often fill very quickly, so don't miss your chance to sign up today!*

For more information contact: <http://www.nebeginningfarmers.org/online-courses/>.

Erie County Vegetable Growers Meeting

February 29, 2016 | 9:00 AM - 12:30 PM

Roycroft Print Shop, Dard Hunter Hall, 21 South Grove St, East Aurora, NY 14052



Cornell Vegetable Program Specialists will present research updates on sweet corn bird and weed management; living mulch; and the final ruling of the Food Safety Modernization Act (FSMA) - what it means for your farm planning, training and timelines. Dr. Elizabeth Lamb, NYS Integrated Pest Management Program, will discuss IPM in greenhouse vegetable transplants; Allen Young, NRCS Erie County, will discuss cover crops; and Megan Burley, CCE Erie County, will lead a marketing roundtable session. Discussions will be led during lunch about fresh market vegetable research priorities and needs, and the Western NY Food Hub.

Cost: \$25 CCE Erie County and Cornell Vegetable Program enrollees; \$35 for all others. CCA and 2.0 DEC credits will be available (1A, 10, 21, 23, & 24). [More info](#) at cvp.cce.cornell.edu. [Register online](#) or contact Eva McKendry at 716-652-5400 x176 or ebm73@cornell.edu.

Forecasting Potato/Tomato Late Blight Risk for Your Farm

February 29, 2016 | 1:00 PM - 4:00 PM

CCE Ontario County, 480 N Main St, Canandaigua, NY 14424

Learn how to use the late blight forecast tool on your farm. Participants will set up their personal farm accounts on the Late Blight Decision Support System (DSS) website, defining the location of their farm/fields, and their varieties. Users can sign up for email/text alerts regarding when fungicide sprays are needed. Once basic farm/crop information is in a user's account, they can access DSS reports and input fungicide sprays by smartphone or tablet. [The agenda](#) is available on our website cvp.cce.cornell.edu. DEC and CCA credits will be available if you have not taken the class before.

This event is FREE but pre-registration is required. Contact Carol MacNeil at 585-313-8796 or crm6@cornell.edu to pre-register or for more information about the workshop or the LB Decision Support System. A laptop computer capable of wireless internet access is needed for the workshop. If you need to borrow a laptop, let Carol MacNeil know.

Niagara County Vegetable and Small Fruit Grower Meeting

March 1, 2016 | 9:00 AM - 12:00 vegetable; 1:00 - 4:30 PM fruit

Niagara County CCE, 4487 Lake Ave, Lockport, NY 14094

The morning vegetable program will include presentations by the Cornell Vegetable Program specialists on research updates on sweet corn bird and weed management; the final ruling of the Food Safety Modernization Act (FSMA) - what it means for your farm planning, training and timelines; new developments for managing insect pests and diseases in Cole crops; and living mulch. The afternoon berry program will include presentations by Cornell faculty addressing current issues in strawberries, blueberries, and raspberries. DEC and CCA credits will be available for both the morning and afternoon sessions. [More information](#) is available on our website cvp.cce.cornell.edu.

Cost: \$20 for Cornell Vegetable Program enrollees or Lake Ontario Fruit Program enrollees; \$35 all others. [Register online](#) or contact Angela Parr at 585-394-3977 x426 or aep63@cornell.edu. Contact Darcy Telenko at 716-697-4965 or dep10@cornell.edu for more info.

Farm Food Safety with GAPs Training

March 7-8, 2016 | 9:30 AM - 4:00 PM each day

CCE Erie County, Dard Hunter Hall, 21 S Grove St, East Aurora, NY 14052



Attendees will receive detailed instruction about food safety on the farm for Day 1. For those needing or interested in a third party audit for certification, Day 2 will help you write a food safety plan needed for audit. Open to all fresh market produce farmers, especially those who may want to sell through the Eden Valley Food Hub.

Cost: TBD. Pre-registration will be required. For more info, contact Robert Hadad at 585-739-4065 or rgh26@cornell.edu. Updates will be posted at cvp.cce.cornell.edu/event.php?id=482. Organized by the Eden Valley Food Hub, Harvest New York, the Cornell Vegetable Program, and Cornell Cooperative Extension.

UPCOMING EVENTS

view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu

2016 Auction Growers Production Meeting (Chautauqua)

March 10, 2016 | 10:00 AM - 2:00 PM

Dutch Village Restaurant, 8729 E Main St, Clymer, NY 14724



Cornell Vegetable Program Specialists will educate growers on disease and pest management, varieties and marketing issues in open field and high tunnel vegetables. Topics include bird control in sweet corn, vine crop pest management, a cover crop and crop rotation discussion, high tunnel tomato disease management, the Food Safety Modernization act and the impact on auction growers, and swede midge management. Disease resistant varieties, cultural management and appropriate spray options will be discussed.

DEC credits will be available. Cost: \$15/person. Pre-registration required. Contact Katelyn Walley-Stoll at CCE Chautauqua County at kaw249@cornell.edu or call 716-664-9502 x202 or [register online through CCE Chautauqua County](#).

2016 NYS Dry Bean Meeting

March 16, 2016 | 9:00 AM - 3:00 PM

LeRoy Country Club, 7759 E Main Rd/Rt 5, LeRoy, NY 14482



This meeting will not only cover recent dry bean research results, but also news on [2016 – The International Year of Pulses!](#) Reports on dry bean breeding and variety evaluation, weed control, white mold and Western bean cutworm management, and the health of WNY soils, but also reports on national efforts to promote dry beans, dry peas, lentils and garbanzos. Progress in increasing dry bean consumption in NY schools will be shared, as will a delicious and healthy dry bean dish.

DEC pesticide and CCA credits will be available. Preregistration is required by March 9 and provides \$5 discount. Cost: \$20 CVP enrollees; \$30 all others. Contact Carol MacNeil at crm6@cornell.edu or 585-394-3977 x406 for more info and to pre-register.

Vegetable School

March 17, 2016 | 12:45 PM - 4:15 PM

CCE Chautauqua County, Frank W. Bratt Agricultural Center, 3542 Turner Rd, Jamestown, NY 14701



Meet the CCE Cornell Vegetable Program Specialists and learn about their programs supporting Western NY vegetable growers: disease and weed management in fresh market vegetables, what does the Food Safety Modernization Act mean for your farm, new developments for managing insect pests and diseases in Cole crops, high tunnel and season extension, improving soil health, and issues affecting processing vegetable crop production. DEC credits will be available.

Cost: \$15 Cornell Vegetable Program enrollees; \$20 all others. [The agenda](#) is posted on our website cvp.cce.cornell.edu. Contact Katelyn Walley-Stoll at CCE Chautauqua County at kaw249@cornell.edu or call 716-664-9502 x202 or [register online through CCE Chautauqua County](#).

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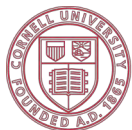
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VegEdge is the award-winning newsletter produced by the Cornell Vegetable Program in Western New York. It provides readers with information on upcoming meetings, pesticide updates, pest management strategies, cultural practices, marketing ideas and research results from Cornell and Cornell Cooperative Extension. VegEdge is produced every few weeks, with frequency increasing leading up to and during the growing season.

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