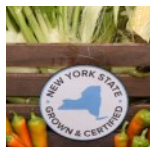




Disease Alert: Downy mildew of spinach has been found in the Northeast. Learn about the symptoms and management of this devastating disease.

PAGE 1



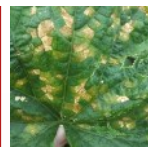
Governor Cuomo announces funding to help farms join New York State Grown & Certified program.

PAGE 2



Producers, Extension agents, crop insurance reps, and garlic handlers are encouraged to provide input on federal crop insurance for garlic.

PAGE 3



The CVP evaluated four downy mildew resistant cucumber varieties and three organic disease management programs this year.

PAGE 5

VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

● Volume 12 | ● Issue 25 | ● December 1, 2016

Multi-colored bee hives contrast against the gray and white of a Seneca County winter farm scene. Photo: Judson Reid

Cornell University
Cooperative Extension
Cornell Vegetable Program

Vegetable Disease Alert: The 'Late Blight' of Spinach Developing Now in the Northeast

Margaret McGrath, Long Island Horticultural Research and Extension Center, Cornell, prepared 11/14/16

Downy mildew has been found recently in spinach at several farms in the northeastern U.S. This devastating disease has not been confirmed in the region for several years, thankfully as it has been a major production constraint in California. Pathogens causing downy mildew are Oomycetes and thus are related to the late blight pathogen. They are similar in ability to produce an abundance of wind-dispersed spores capable of moving long distances and to not need leaves to be wet to infect (high humidity is sufficient), plus ability to devastate crops.

All growers with spinach should inspect their plants for symptoms promptly NOW and also in spring plantings to catch if there is carry over or new outbreaks. If downy mildew is suspected, Cornell Vegetable Program enrollees should contact Robert Hadad at rgh26@cornell.edu, 585-739-4065, or Julie Kikkert at jrk2@cornell.edu, 585-394-3977 x404.



Underside of spinach leaf with downy mildew.
Photo: Teresa Rusinek, Cornell

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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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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Cornell Vegetable Program

Contents

Contact Us

Cornell Vegetable Program 12

Crops

Cucumber: DM Resistant Varieties and Organic Programs Evaluated in 2016 .. 05

Garlic: Federal Crop Insurance for Garlic? Seeking Stakeholder Input 03

Spinach: The 'Late Blight' of Spinach Developing Now in the Northeast 01

General

Funding to Help Farms Join New York State Grown & Certified Program..... 02

Extension Projects Focus on Food Safety, Produce Quality, and Marketing 08

Upcoming Educational Events

EXPO Sessions Descriptions..... 06

Managing Cucurbit Downy Mildew in Organic Systems..... 09

Processing Snap Bean Advisory Meeting..... 09

Farm Food Safety Workshop (Broome County) 09

Table Beet Advisory Meeting 09

Processing Carrot, Sweet Corn, Pea & Lima Bean Advisory 09

Cornell Potato Breeding Line Show & Tell..... 09

Growing Berries Under Cover Workshop 10

WNY Soil Health Alliance: Soil Health Workshop 10

Management Options for Striped Cucumber Beetle in Organic Cucumbers 10

2017 Finger Lakes Produce Auction Growers Meeting 10

2017 Empire State Producers Expo 10

2017 NOFA-NY Winter Conference 11

Farm Food Safety Workshop (Erie County) 11

2017 Pesticide Training and Recertification Series (Ontario County) 11

The next issue of VegEdge will be January 1, 2017.

Governor Cuomo Announces Funding to Help Farms Join New York State Grown & Certified Program

\$1.5 Million Available to Help Farms Implement Environmental Plans

\$1,000 Reimbursement Offered for Required Audit of Food Handling Practices

Released 11/14/16 – Governor Andrew M. Cuomo announced funding to help New York fruit and vegetable farmers join the New York State Grown & Certified program. \$1.5 million is available through the Environmental Protection Fund to help farms implement an Agricultural Environmental Management plan, and a reimbursement of up to \$1,000 is available for growers who participate in a third party audit of safe food handling practices. Farmers must participate in programs supporting good agricultural practices and environmental management to be eligible for New York State Grown & Certified, and this funding will help farms join the certification program.

continued on page 4

It will be CRITICAL that all high tunnel and overwintering spinach crops with downy mildew be destroyed couple weeks before the start of the spring spinach production season in the region to avoid carry over into 2017.

Symptoms. Purplish-gray, fuzzy growth of the pathogen, which is usually on the underside of leaves, is diagnostic. Early morning is the best time to see as the growth (which is spores and the structures holding them) is produced overnight, then during the day the spores are dispersed. On the top side of leaves, opposite where the growth develops, the leaf tissue will be yellow, initially dull becoming brighter and larger with time. Subsequently affected tissue will become dry and tan. If only leaf yellowing is seen, which could occur when humidity is low, put suspect leaves upside down on wet paper towel in a closed ziplock bag for a day. Keep the bag in the dark, such as inside a box, to further promote the pathogen if present to develop.

Management. Resistant varieties have been an important management practice, but the pathogen has proven adept at developing new races able to overcome host resistance. Last year race 16 was discovered.

To maximize success of control with fungicides, start early in disease development (preventive best), and apply weekly. Conventional fungicides for this disease include: Actigard, Aliette, Merivon, Quadris and other QoI fungicides, ProPhyt and other phosphorous acid fungicides, Ranman, Reason, Revus, Ridomil Gold, and Tanos. Downy mildew is difficult to manage with organic fungicides based on experience of researchers and growers in CA. Labeled products include copper, Actinovate, Double Nickel, Regalia, Oxidate, Trilogy, and Zonix. Copper is considered most effective but based on few evaluations of organic products. Check REI and PHI when selecting conventional or organic fungicides to make sure fits production schedule.

Note that while leaves are held in plastic bag after harvest, affected leaves may rot and new symptoms may develop, especially if there is residual moisture from washing.

Promptly destroy infected, abandoned crops to eliminate this source of inoculum for other plantings in the region. The pathogen can survive a few years in soil when both mating types are present together enabling production of oospores.

Other Susceptible Plants. The pathogen, *Peronospora farinosa* f. sp. *spinaciae*, is only known to infect spinach. It is possible some *Chenopodium* weed species are susceptible to some races.

Pathogen Sources. It is possible contaminated seed or infected spinach produce from outside the region was the source of the current outbreak.

Favorable Conditions. Cool with high humidity. Optimal temperature range for this pathogen is 59 – 70°F.

Please Note: Any reference to commercial products, trade or brand names is for information only; no endorsement is intended. The specific directions on fungicide labels must be adhered to -- they supersede these recommendations, if there is a conflict. Check state registrations and labels for use restrictions. ●



Leaf tissue will appear yellow on the top side of leaves opposite where the growth develops on the underside.
Photo: Teresa Rusinek, Cornell

Federal Crop Insurance for Garlic? Government Contractor Seeks Stakeholder Input

Garlic is grown in all 50 states with the bulk of the garlic farming operations located in California, New York, Oregon, and Washington. The Risk Management Agency of the United States Department of Agriculture recently awarded a contract to “gather data and develop a pilot crop insurance policy for producers of garlic” to Watts and Associates, Inc. (W&A) a private economic consulting firm based in Billings, Montana. W&A was contracted to conduct a nationwide study to determine the feasibility of developing a crop insurance product for garlic potentially followed by a development effort based on the feasibility recommendation, and direction from the government. W&A has completed nearly 100 contracts focused on crop insurance over the last 16 years.

Part of the required research is gathering stakeholder input. To that end, W&A is conducting listening sessions in New York and other locations in CA, OR, and WA.

- Geneva, NY on December 8, 2016 (Hampton Inn Geneva, 43 Lake Street, Geneva, NY – 8:30 am)
- Saugerties, NY on December 9, 2016 (Howard Johnson Saugerties, 2764 Route 32, Saugerties, NY – 8:30 am);

W&A is interested in any information on the level of interest in crop insurance the garlic industry holds, risk management techniques the industry currently uses, how pricing for the crop is determined by the industry, and other relevant feedback.

W&A is interested in having a conversation with producers, Extension agents, crop insurance industry representatives, and garlic handlers – the stakeholders. If you are unable to attend, you can provide your input to Richard Allen at W&A by email at rallen@wattsandassociates.com. ●

"New York farms produce world-renowned, high-quality food, and the New York State Grown & Certified program strengthens the link between producers and consumers and promotes environmentally sustainable and safe practices," Governor Cuomo said. "This funding will help more farmers certify their products to these higher standards and access the many opportunities offered by New York State Grown & Certified."

Launched in [August](#), the New York State Grown & Certified program assures consumers that the food they are buying is local and produced to a higher standard by requiring participating producers to adopt good agricultural practices and enroll in an environmental management program.

Reimbursement for Good Agricultural Practices Audits

Administered through the United States Department of Agriculture, the New York State Department of Agriculture and Markets Good Agricultural Practices (GAPs) program verifies that safe food handling practices are being used on farms, from growing and harvesting to packaging and handling. The Good Agricultural Practices program certifies the fresh fruit and vegetable farms that have implemented the necessary steps in their operations to minimize the possibility of product contamination and food-borne illness in accordance with USDA regulations.

The New York State Department of Agriculture and Markets, through a USDA Specialty Crop Block Grant, is providing up to \$1,000 to reimburse farms for Good Agricultural Practices audits. More information about the Good Agricultural Practices certification process and how to apply for the grant is available on the new [web-site](#). The Department has conducted 234 audits in 2016 so far, already exceeding last year's total number of audits.

Cornell University is a key partner in training and education for farmers as part of the program. The university holds online courses and in-person training throughout the year to help producers learn about the program and write their own safe food handling farm plan prior to the third-party audit. More info on Cornell University's training opportunities and how to sign up is available [here](#).

Funding for Agricultural Environmental Management Plans

The Governor today also announced \$1.5 million is available for the implementation of an Agricultural Environmental Management plan to assist fruit, vegetable and other specialty crop growers in producing their products in an environmentally responsible manner.

Funding for the implementation of the Agricultural Environmental Management plan is provided through the Environmental Protection Fund. Assisting specialty crop farms to produce foods with the highest environmental standards will protect and improve New York's natural resources, including water and soil quality.

New York's County Soil and Water Conservation Districts are eligible to apply for the program on behalf of farmers. Maximum award amounts for projects are

\$50,000. Project eligibility information and the Request for Proposals are available [here](#). Applications are due January 20, 2017.

Benefits for Growers, Buyers and Consumers

For growers, participation in Agricultural Environmental Management and Good Agricultural Practices certification allows for greater access to programs, especially New York State Grown & Certified, which includes a major marketing campaign to promote New York producers who meet the program standards. This includes on-product labels and promotional materials, such as a [website](#), [video](#) and sales materials, to encourage program participation among producers and to educate retail, wholesale and institutional buyers on the value of the program. Consumer advertising and retail promotion will begin this fall.

The Good Agricultural Practices certification also provides producers access to the Farm to School procurement pilot program, which requires growers selling to school districts to be certified. The program also helps farms prepare for potential regulation from the Food Safety Modernization Act.

In addition, the GAPs program is significant for buyers. By purchasing products from a farm that is certified, there is a reduction in the potential for future food safety recalls, which can be costly to buyers and also impact consumer confidence and loyalty. Many consumers are looking for reassurance that the items they purchase in the supermarket have been properly handled on the farm. ●

Downy Mildew Resistant Cucumber Varieties and Organic Programs Evaluated in 2016

Darcy Telenko, CCE Cornell Vegetable Program

Downy mildew is an annual issue in cucurbit crops, especially cucumbers in western New York. Downy mildew is most often detected after heavy rains and humid weather downy mildew (*Pseudoperonospora cubensis*) and usually appears in late spring or early summer during under wet and humid conditions.

Four varieties of cucumber and three organic disease management programs were evaluated in field research trials at the Cornell Lake Erie Research and Extension Laboratory in Portland. In 2016, the first detection of cucurbit downy mildew in New York occurred on July 22 and we first detected the disease in our research trial on August 17 in Portland.

The varieties under evaluation included:

- Marketmore 76 a standard long, slender dark green cucumber that has intermediate resistance to downy mildew and powdery mildew (DM/PM)
- Diva – a tender, crisp, sweet seedless cucumber with intermediate resistance to DM/PM
- DMR 264 – a green slicing cucumber recently released from Cornell with excellent DM resistance
- LISBOA- a darcy green, parthenocarpic slicer known to be susceptible to DM

The organic disease management programs included:

1. Untreated
2. Standard copper spray (Badge X2 @ 1 lb/A) 1st application based on forecast 28 Jun, 13 Jul, 27 Jul, 3 Aug, 11 Aug, and 17 Aug
3. Standard copper spray (Badge X2 @1 lb/A) 1st application on 11 Aug when disease first detected, then applied every 7 day 17 Aug
4. Oxidate spray- 1st application on 11 Aug when disease first detected, then applied every 7 days on 17 Aug

Variety DMR 264 showed strong resistance to downy mildew as we detected only a few lesions in the plots, as compared to the other varieties (Marketmore, Diva, and Lisboa) that had an average of 15% diseased tissue with some plots reaching 65% diseased leaf tissue. Even under these disease conditions the three varieties of Marketmore, Diva and Lisboa had approximately twice the total yield compared to DMR 264 (Table 1). We plan to continue evaluations of these varieties in future seasons to determine if the resistance present in

DMR 264 will be beneficial in years when downy mildew is detected earlier in the season causing greater defoliation on susceptible varieties.

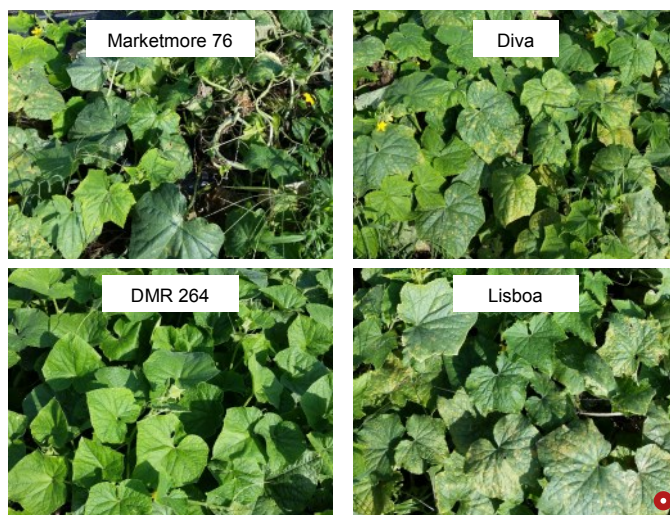
There was no difference in organic management programs on August 17 but on August 24 the copper based programs both based on the forecast and application at first disease detection had significantly less disease than the untreated and Oxidate only plots (Table 2). Oxidate is a bactericide/fungicide that kills bacterial and fungal pathogen spores it comes in contact, but doesn't provide a protective barrier to the pathogen which is provided by the copper sprays. Future trials will look at program containing both Oxidate and copper to determine if the combination will offer superior disease control compared to each individually.

Table 1. Effect of variety on yield of cucumber in Portland.

Variety	Total lb/ plant	% bacteria wilt	% downy mildew	% downy mildew
		3 Aug	17 Aug	24 Aug
Marketmore 76	12.6 a	5.2 ab	1.1 ab	17.3 a
Diva	14.4 a	10.6 a	2.2 a	12.7 a
DMR 264	6.1 b	2.6 b	0.1 b	0.2 b
Lisboa	11.7 a	9.7 a	0.5 ab	15.4 a
P(F)	.0275	.0103	.0066	.0087
Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (P=0.05)				

Table 2. Effect of organic management programs on downy mildew in Portland.

Variety	% downy mildew	
	17 Aug	24 Aug
Untreated	1.0	19.3 a
Copper based on forecast	0.3	1.7 b
Copper applied at 1 st disease detection	1.2	7.5 b
Oxidate applied at 1 st disease detection	1.5	20.6 a
P(F)	.3033	0.0015
Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (P=0.05)		



2017 BECKER FORUM: GAPS/PRODUCE SAFETY ALLIANCE TRAINING

Monday, January 16, 2017 | 9:00 AM - 5:00 PM

Holiday Inn Syracuse-Liverpool, 441 Electronics Parkway, Liverpool, NY 13088

Pre-registration requested as space is limited to 50 on first-come basis

The New York State Vegetable Growers Association in conjunction with the Produce Safety Alliance (a collaboration between Cornell University, FDA and USDA) are pleased to announce that one of the first producer trainings to meet the requirements of Food Safety Modernization Act (FSMA) will be offered during the Becker Forum on January 16, 2017 in Liverpool, NY. This 7-hour training will provide the required training for farms to meet the Produce Safety Rule.

GAPS DAY 2 – WRITING YOUR OWN FOOD SAFETY PLAN WORKSHOP

Tuesday, January 17, 2017 | 8:30 AM - 4:30 PM

Session organized by Elizabeth Bihn, Food Science, Cornell University, Craig Kahlke, CCE Lake Ontario Fruit Team, and Robert Hadad, CCE Cornell Vegetable Program

Pre-registration is required to receive materials as space is limited. It is requested that you have attended Day 1 of a previous GAPs training or the GAPs/Produce Safety Alliance Training offered during the Becker Forum

Growers looking for help in writing up a GAPs/farm safety plan should look to join this workshop.

Goals of the workshop:

- Understand how GAPs (Good Agricultural Practices) impact produce safety.
- Learn what is needed to have a USDA GAP/GHP audit, and the two types (harmonized and basic).
- Begin writing a farm food safety plan that complies with a USDA GAP/GHP audit.

Growers participating in this training will receive:

- A flash drive of templates to use in writing a farm food safety plan including templates of record keeping forms.
- Bag of resources: Farm Worker Training CD, a grower self-assessment for food safety risks, posters and other items.

Bring the following items on day of the workshop:

1. Laptop computer.
2. List of crops that you want to be USDA GAP/GHP certified (if planning to participate in an audit).
3. Farm maps with fields outlined that contain crops to be certified.
4. Packinghouse floor plan that shows product from entry to exit if applicable to your operation.
5. List of services contracted at your operation (pest control, portable toilet rental, trucking, etc.) and any recordkeeping documents they supply.

FARMERS MARKET FEDERATION

Wednesday and Thursday, January 18 and 19, 2017

Session organized by Diane Eggert, Farmers Market Federation of New York

Small family farms are highly dependent on direct marketing to sell the majority of their farm products. But are they reaching their full potential? The Direct Marketing sessions at the NYS Producers Expo will help farmers to increase their customer base, develop their marketing skills and build greater sales with their direct marketing outlets. The sessions will look at building a marketing plan for your farm, effective use of social media to build a loyal customer base, understanding farmers market currencies, understanding the science behind pricing for retail success and understanding and catering to the various ethnic cultures in your markets. These sessions, offered January 18 and 19, will grow direct marketing farmers' ability to reach their full income potential.

BEGINNING FARMER

Thursday, January 19, 2017 | 8:30 - 9:45 AM

Session organized by Megan Burley, CCE Erie County

As a beginning farmer there are many options to explore when it comes to marketing. During this session two farmers will provide information about the challenges and successes in selling through different models. Dan Roleofs, owner of Arden Farm, a certified organic farm in East Aurora, will lead a discussion about his CSA and his expansion of sales to the WNY Food Hub. Mayda Pozentides, the owner of Groundwork Market Garden, a two-acre urban farm on Genesee Street in Buffalo, will discuss why she choose urban farming and her model for marketing including a CSA and restaurant sales.

MARKETING SOCIAL MEDIA/APPS

Thursday, January 19, 2017 | 10:30 - 11:45 AM

Session organized by Megan Burley, CCE Erie County

Are you liked, followed, and reposted? What do these terms mean to you and the success of your business? During this session you will hear from Danielle Fleckenstein, manager of the social media marketing for Beak and Skiff. With 27,000+ likes on Facebook, Danielle will give an overview on how Beak and Skiff connect with consumers utilizing social media. The topic of how social media generates sales for your business will also be covered by Megan Burley, owner of Burley Berries, who has utilized social media as her only source of marketing on their farm.

Expo online registration will be available from the NYS Vegetable Growers Association at <https://nysvga.org/expo>

CLIMATE SMART FARMING: USING CLIMATE-BASED DECISION TOOLS TO PREPARE FOR CLIMATE VARIABILITY AND CHANGE**Thursday, January 19, 2017 | 9:00 - 10:15 AM****Session organized by Allison Chatrchyan, Jonathan Lambert, and Art DeGaetano, Cornell Institute for Climate Smart Solution**

This session will provide an update on the changing climate and its impacts to agriculture, and will focus on the predictions for short and long-term climate change, as well as on the tools available for applying climate information for agricultural purposes. We will provide an overview of the science behind climate change and give the most up to date predictions for short and long term climate conditions in the Northeast. We will also have a detailed look into the Climate Smart Farming (CSF) Decision Tools, aimed at allowing farmers and agricultural stakeholders in the Northeast to deal with the challenges of climate variability and change, while taking advantage of opportunities. Attendees will be able to interact with these tools in a hands-on session, and they will have the opportunity to discuss tool uses and provide their input on the tools with the creators as well as other farmers and ag stakeholders.

This session is organized by the Cornell Climate Smart Farming (CSF) Program and CSF Extension Team, and sponsored by the Cornell Institute for Climate Smart Solutions (CICSS). For more information, please see: <http://climatesmartfarming.org>.

CLIMATE SMART FARMING: EFFICIENT WATER MANAGEMENT ON YOUR FARM IN THE FACE OF DROUGHT**Thursday, January 19, 2017 | 11:00 AM - 12:15 PM****Session organized by Allison Chatrchyan, Jonathan Lambert, and Art DeGaetano, Cornell Institute for Climate Smart Solution**

This session will provide an overview of effective water management strategies that farmers can take advantage of to respond to drought and future climate trends in the Northeast. Farmers will need to manage their water resources more carefully now and in the future due to climate impacts such as short-term drought and more extreme rainfall. We will give farmers a detailed look at different water resource management strategies, including the new Climate Smart Farming (CSF) Irrigation Scheduler. We will also provide an overview of other resources available, and have ample time for interaction with the CSF Irrigation Scheduler and CSF website.

This session is organized by the Cornell Climate Smart Farming (CSF) Program and CSF Extension Team, and sponsored by the Cornell Institute for Climate Smart Solutions (CICSS). For more information, please see: <http://climatesmartfarming.org>.

ONIONS: ENSURING HIGH QUALITY IN SMALL-SCALE PRODUCTION**Thursday, January 19, 2017 | 11:00 AM - 12:15 PM****Session organized by Christy Hoepting, CCE Cornell Vegetable Program**

This year we are taking a break from large-scale onion production and will focus on ensuring high quality onions on a small-scale. The feature presentation will be on producing high quality plug transplants, which will be presented by Kevin Vander Kooi, from the University of Guelph, who has been growing high quality onion plug transplants for the Muck Crops Research Station for over 20 years. The remainder of the program will focus on harvest and post-harvest handling with presentations by CCE Allium Specialists, Crystal Stewart and Christy Hoepting and small-scale onion grower, Jean-Paul Courtens from the Hudson Valley Food Hub. Onion physiology as it relates to onion maturity and storability will be reviewed and many tips on how to achieve high bulb quality during these phases of production will be shared.

COLE CROPS**Thursday, January 19, 2017 | 3:15 - 4:30 PM****Session organized by Christy Hoepting, CCE Cornell Vegetable Program**

New this year is a session dedicated to diversified Cole crops without the main focus being on large-scale cabbage production. In light of the Eastern Broccoli Project whose objective is to develop a year round local supply of high quality broccoli in the Eastern U.S., Project Leader, Dr. Thomas Bjorkman will provide an update on the project including heat tolerant varieties and tips for plant population/fertility and post-harvest handling. Cornell University recently launched a new breeding program for kale and M.Sc. candidate, Hannah Swegarden with Dr. Phil Griffith's breeding program will share how they are breeding diverse quality traits in kale for the emerging Northeast markets. Finally, Christy Hoepting with the CCE Cornell Vegetable Program will give an update on swede midge spread and management as issues of this relatively new pest of brassicas have increased recently in New York.



Research and Extension Projects Focus on Food Safety, Produce Quality, and Marketing in the New Year

Robert Hadad, CCE Cornell Vegetable Program

The Cornell Vegetable Program has been in the forefront of obtaining research and education grants. In the coming year, several newly-funded projects will be undertaken. As usual, the projects carry an educational component where we will be sharing results directly with farmers as we go forward. Some of the projects that I am involved with are summarized below:

Food Safety

Food safety is an area where there still is a great deal of attention needed. Buyers are demanding that growers comply with farm food safety audit programs. Many farm to school and institution initiatives require farmers to meet food safety guidelines. Now, for many growers, the FDA federal regulations will be necessary to comply with over the next few years. Farm food safety covers many areas of production and post-harvest practices.

Two projects will begin this winter that focus on several aspects relating to food safety as well as overall quality of the produce in the process. The first project, in collaboration with the University of Vermont, tackles the problem of water infiltrating certain types of produce during the wash line practice of dunking into tanks or basins. The differential of produce pulp temperature and the temperature of the wash water can easily be large enough to allow the physical phenomenon of infiltration.

When harvested produce that carries a lot of field heat is dunked into cold water the produce can absorb some of the wash water. If the wash water carries pathogens (either food borne illness or storage rot types) these can be absorbed into the produce through the stem cuts (from harvest) or injury to the skin like cuts or nicks. Peppers, cantaloupes, tomatoes, summer squash, and greens are just a few examples of produce that may go through this practice.

The research undertaken will investigate cost effective methods to reduce the temperature differential. Two approaches will consider the development of a design of a portable pre-cooler to reduce field heat prior to the produce going into the wash line. The second is a small scale cost effective portable hydrocooler.



Farm food safety research and demo space loaned to the CVP at the NYSAES, Geneva.
Photo: Robert Hadad, CVP

Another benefit of this research project will be improved shelf quality and storage quality of the produce that goes through either pre-cooling or hydrocooling. If along with reduced microbial risk from human food pathogens, we can reduce spoilage along the way this will be a win-win situation that will make the costs of the techniques less burdensome.

The second project is a multi-year educational effort working with the Univ. of Vermont, and both NOFA-NY and NOFA-VT to increase farm food safety education to a wider audience of growers and second tier buyers. Food safety isn't a one day activity and it isn't just for the larger farms. Food safety needs to be practiced by all food producers and handlers. During the next three years we will be developing additional educational trainings on all aspects of food safety. Fact sheets and videos will also be some of the tools created. Educational programs for distributors, food hubs, and other purchasers will be developed and carried out as well.

Produce Quality

Improving quality is a big deal. In the coming year, we will be investigating the physiology of post-harvest curing practices. Some of the vegetables that require curing after harvest but before storage are garlic, onions, and winter squash. We will be looking to identify specific curing environments and better indicators of how to tell when the process of curing is finished.

Partnering with the CCE Eastern NY Commercial Horticulture Program, a large garlic research trial was planted this fall. Disease issues, mainly Fusarium, plagues garlic in most years. Storage quality is reduced, poor viability of bulbs, and lower yields are some of the problems. From Long Island to Batavia, three planting locations have been established and four plots planted. A dozen treatments will be trialed on garlic that is infected with Fusarium. The project will last for two years and we expect a great deal to be learned about this disease and how farmers can effectively manage it.



One of 4 garlic plots planted this fall across the state to investigate management of Fusarium disease. Photo: Robert Hadad, CVP

Marketing

Through a USDA grant, a marketing feasibility study will begin this winter in collaboration with the ENYHP. With a lot of emphasis from the state and federal governments, opportunities for produce farmers to sell wholesale are being pushed. Many growers have taken the plunge and in a number of cases, find that it wasn't easy making the move profitable.

The study will investigate the hurdles that reduce a smooth transition to wholesale from retail and what educational resources are needed to help prepare farmers for the transition. Training programs that help to overcome identified barriers will help to improve farm profitability. ●

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

Managing Cucurbit Downy Mildew in Organic Systems in the Northeast (webinar)

December 6, 2016 | 2:00 PM

Join eOrganic for a webinar presented by Dr. Christine Smart, Department of Plant Pathology and Plant-Microbe Biology at Cornell, on managing downy mildew in cucumber, pumpkin and other cucurbits. Downy mildew in cucurbits occurs annually in the Northeastern US causing severe losses in yield. This presentation will discuss when the pathogen first arrives in an area and how the pathogen spreads. Additionally, methods for controlling cucurbit downy mildew will be discussed including resistant varieties and cultural controls. Results from studies on the use and effectiveness of organically approved commercially available products for controlling downy mildew will also be presented.

This webinar was organized by members of the NIFA-OREI funded Eastern Sustainable Cucurbit Project, which is a collaboration of growers, researchers and extension agents working to find solutions for the many challenges facing organic cucurbit producers. The webinar is free and open to the public. Advanced registration is required. For more information about system requirements and to register, go to <http://articles.extension.org/pages/73892>

Processing Snap Bean Advisory Meeting

December 6, 2016 | 10:00 AM - 12:00 PM

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



Reports and Discussion of 2016 Snap Bean Research Projects Funded by the Association:

- NYS processing snap bean variety evaluations – *J. Ballerstein, Cornell*
- Weed management research for snap beans – *D. Telenko, CCE Cornell Vegetable Program*
- Evaluating novel approaches for European corn borer control and corn earworm management in sweet corn and snap bean – *B. Nault and Rebecca Schmidt-Jeffris, Cornell*
- Efficacy of fungicides for the management of white mold in snap bean in New York – *S. Pethybridge, Cornell*

Discuss the 2016 growing season and management concerns. Review priorities and the role of the advisory group in applications for state and federal grants. Give your input on the format of future advisory meetings and future educational programs. Contact Julie Kikkert at 585-313-8160 for more information.

Farm Food Safety Workshop (Broome County)

December 6 - 7, 2016 | Tues 8:30 AM - 5:00 PM; Weds 8:30 AM - 3:00 PM

CCE Broome County, 840 Front St, Binghamton, NY 13905



The training covers the basic USDA GAPs and Harmonized GAPs programs, and will help farms implement solid food safety practices that mitigate risks and open new markets with institutions such as school districts, large retailers, and any other buyers that require GAPs Certification. Cost: \$65. [Register online](#). Pre-registration is required by December 2. Questions can be directed to [Amy Willis](#), Market Readiness Educator at 607-772-8953.

Table Beet Advisory Meeting

December 8, 2016 | 10:00 AM - 12:00 PM (complimentary lunch following the meeting)

First United Methodist Church, 8221 Lewiston Rd (Route 63), Batavia, NY 14020



All are invited to discuss table beet production in New York. Hear ideas and concerns from fellow growers and industry members. Your input is needed to set future research priorities. Contact Julie Kikkert at 585-313-8160 for more information.

Processing Carrot, Sweet Corn, Pea & Lima Bean Advisory

December 8, 2016 | 12:45 PM - 3:45 PM (complimentary lunch at noon)

First United Methodist Church, 8221 Lewiston Rd (Rte 63), Batavia, NY 14020



Discuss the 2016 growing season and management concerns. Review priorities and the role of the advisory group in applications for state and federal grants. Give your input on the format of future advisory meetings and future educational programs. Contact Julie Kikkert at 585-313-8160 for more information.

Cornell Potato Breeding Line Show & Tell

December 9, 2016 | 11:30 AM - 3:00 PM

Love Plant Breeding Fieldhouse, Caldwell Rd, Cornell University, Ithaca, NY



Come see and hear the latest on the new Cornell potato breeding lines. Share your experience with Cornell breeding lines and newer varieties you've tried. To preregister for lunch (free) contact Walter DeJong at: walter.dejong@cornell.edu Park at Fieldhouse and ask for a parking permit to put in your vehicle.

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

Growing Berries Under Cover Workshop

December 14, 2016 | Cornell Lake Erie Research and Extension Lab, 6592 West Main Rd, Portland, NY 14769

January 17, 2017 | Empire State Producers Expo, Oncenter Convention Center, Syracuse, NY



The New York Berry Growers Association is hosting day-long workshops with Cornell researchers, Extension educators from PSU and Cornell Cooperative Extension, and experienced berry growers to address advances in growing under cover. These include: day-neutral strawberry cultivars for low tunnels, choosing and recycling tunnel plastic, using technological tools to predict weather events, disease and insect management, growing raspberries in high tunnels, and using exclusion netting to protect against Spotted Wing Drosophila. Attendees will participate in hands-on activities and those that register a week before the workshops will receive a take-home resource guide and supplies. Lunch is included at the Portland location. DEC credits in categories 1A, 10 and 22 and 23 will be available.

To attend the Portland location, download the registration sheet at <http://www.hort.cornell.edu/grower/nybga/pdfs/workshops/Workshop%20Registration%20Form.pdf> or call 646-284-7762 to have the form mailed to you. To attend the Syracuse location, register for the Expo at <https://nysvga.org/expo/information>.

WNY Soil Health Alliance: Soil Health Workshop

December 21, 2016 | 10:00 AM - 4:00 PM

7142 Oak Orchard Rd, Elba, NY 14058



Hear from Keynote Speaker and Cover Crop Coach, Steve Groff, on Making Cover Crops Pay and Strategies for Terminating Cover Crops. Steve and his family farm 225 acres of cash grain crops, pumpkins, squash and 2 acres of heirloom high tunnel tomatoes in Lancaster County, PA. He developed the Tillage Radish and oversees hundreds of replicated cover crop research plots on his farm to devise management strategies and document the profitability of cover crops. Dr. Janice Thies, Associate Professor of Soil Biology, Cornell, will discuss soil biology and its impact on soil health. Attendees will also hear from Paul Salon, Northeast Regional Soil Health Specialist, NRCS Soil Health Division, with a Cover Crop Calculator. There will be a farmer panel to discuss results from this past dry year.

To register for this event, send your name, email address and number of attendees to Orleans County SWCD at 446 W Ave, Albion NY 14411 with checks made payable to *Western New York Soil Health Alliance* enclosed. You may also register by sending your name and number of attendees to wnysoilhealth@gmail.com. Payment will be due in cash at the start of the workshop. \$15/participant with pre-registration, December 16 deadline; \$25 walk-ins. 4.0 DEC pesticide credits and 3.5 CCA credits available.

Management Options for Striped Cucumber Beetle in Organic Cucurbits (webinar)

January 11, 2017 | 2:00 PM

Join eOrganic for a webinar on management options for striped cucumber beetle on organic farms by Abby Seaman and Jeffrey Gardner of Cornell University. Striped cucumber beetle is one of the most challenging insects to control in organic cucurbit production. The presenters will discuss the basics of SCB biology, cultural practices that can minimize damage, the latest on the effectiveness of insecticides allowed for organic production, and a discussion of breeding work underway to help reduce beetle impact.

This webinar was organized by members of the NIFA-OREI funded [Eastern Sustainable Cucurbit Project](http://www.eorganic.org/articles.extension.org/pages/73937), which is a collaboration of growers, researchers and extension agents working to find solutions for the many challenges facing organic cucurbit producers. The webinar is free and open to the public. Advanced registration is required. For more information about system requirements and to register, go to <http://articles.extension.org/pages/73937>

2017 Finger Lakes Produce Auction Growers Meeting

January 12, 2017 | 9:30 AM - 2:30 PM

Finger Lakes Produce Auction, 3691 Rt 14A, Penn Yan, NY 14527



This meeting will feature sessions on insect control in cole crops, disease resistant tomatoes and cucumbers, food safety and insect management in high tunnels. Coffee, registration, DEC sign-up begins at 9:30. This is an opportunity to network with other fresh market vegetable growers, to review the season, look forward and learn about the direction of our auction. Questions? Call Judson Reid at 585-313-8912.

2017 Empire State Producers Expo

January 17-19, 2017

Oncenter Convention Center, Syracuse, NY



This conference combines the major fruit, flower, vegetable, and direct marketing associations of New York State in order to provide a comprehensive trade show and educational conference for the fruit and vegetable growers of this state, as well as the surrounding states and Eastern Canada. The Expo program will be mailed to CVP enrollees soon. The program and online registration will be available on the NYS Vegetable Growers Association website at <http://nysvga.org/expo/information/>.

Many session descriptions are provided on pages 6-7 of this issue of VegEdge. Other session descriptions appeared in the November 1 issue of VegEdge.

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

2017 NOFA-NY Winter Conference – Long Live the Farmer: Diversity & Biodiversity

January 20-22, 2017

Saratoga Hilton and City Center, Saratoga Springs, NY

Join us at the NOFA-NY Organic Farming & Gardening Conference to celebrate the diversity of our farmers and the extensive natural bounty they nurture and cultivate. With 17 different workshop tracks, there is something for everyone. Keynote Speaker, C. R. Lawn of Fedco Seeds will focus on the objectives of creating an ethical, sustainable seed system and strategies for overcoming obstacles. Honor the **2017 Farmers of the Year**, Mike and Gayle Thorpe of [Thorpe's Organic Family Farm](#) in East Aurora!

For the most current information, including presenter and workshop updates and additions, see www.nofany.org/conference. To register, visit the website or call 585-271-1979 or email register@nofany.org. Pre-registration closes January 13. To receive a \$10 discount, register by December 13.

Farm Food Safety Workshop (Erie County)

January 30-31, 2017 | 9:30 AM - 4:00 PM

Roycroft Print Shop, Dard Hunter Hall (2nd floor),
21 S Grove St, East Aurora, NY 14052



Whether you just want to learn more about what farm food safety is all about or if you are being required to have food safety training by your buyers, this training is for you!

This training will provide growers with the information needed to begin implementing food safety into their practices. Day 1 will cover all aspects of what farm food safety is and why it is important for anyone involved in growing fresh produce. Day 2 will help those who want to write a draft food safety implementation plan for their own farm. A food safety plan is required for GAPs/HGAPs audits.

Cost: \$60 per first farm member; \$15 for each additional member from the same farm. Pre-registration is required. For more info, contact Robert Hadad at 585-739-4065 or email rg26@cornell.edu.

2017 Pesticide Training and Recertification Series (Ontario County)

Mondays, January 30, February 6, 13, 20, 2017 | 7:00 - 9:30 PM
CCE Ontario County, 480 N Main St, Canandaigua, NY 14424

Anyone interested in obtaining a pesticide certification and meets the DEC (Department of Environmental Conservation) experience / education requirements OR current applicators seeking pesticide recertification credits should attend. 2.5 recertification core credits will be available for each class.

\$175 for certification which includes the training manuals and all 4 classes. Does not include the exam fee. Recertification is \$25 per class.

For more information or to register, contact Cornell Cooperative Extension-Ontario County, 585-394-3977 x427 or x436 or email nea8@cornell.edu or rw43@cornell.edu. Registration form will be available on the website www.cceontario.org

Exam: Monday, February 27, 2017, 6:30 PM - 11:00 PM. Exam fee: \$100.

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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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