



Varieties of the 2016 specialty pepper trial were rated on flavor, color, shape, yield, long term

harvest of fruit, and performance. See our top choices!

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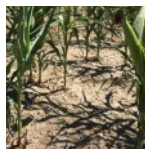


2017
Cornell Integrated Crop and
Pest Management Guidelines for
Commercial Vegetable Production

The 2017 Cornell Veg Guidelines are now available. If you haven't already ordered your

copy, read about your options and updates to the publication.

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227 farmers from nearly every county in NYS responded to a Drought Survey conducted last

year. Read the survey findings and impacts across the state.

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It's meeting season! We're offering many meetings in our region to share the latest research

results and production considerations with you.

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VEGEEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

● Volume 13 | ● Issue 2 | ● February 1, 2017



Cornell University
Cooperative Extension
Cornell Vegetable Program

Photo: Judson Reid

2016 Specialty Pepper Trial Results

Robert Hadad, CCE Cornell Vegetable Program

This season wasn't the greatest year to be trialing vegetables. With that said, anything that did produce decently must have something going for it. For this crop trial there were 24 entries. The goals were to find flavorful peppers that would stand out over and above typical bell pepper types. Along with flavor, other traits considered important were color, shape, yield, long term harvest of fruit, and performance. Right out of the gate, heat pressure required substantial irrigation. The plants were on black plastic with trickle irrigation. Pre-plant incorporation of fertilizer was applied at the lowest rate and additional N was used twice through the irrigation lines at 40lbs/A.

Transplants were set out the second week of June. The heat stress kept growth slow and flowering was delayed to mid-August. Towards the end of August several rain events kick started the plants which really took off. Regular fruit set began during the first week of September and fruit kept coming on till frost in late October.

The varieties with traits of great or interesting flavor, color, and shape were selected to be evaluated by several chefs. We also selected several other varieties that we personally liked as well. Here are the top choices.



Photo: Judson Reid, CCE Cornell Vegetable Program

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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:
CCE Cornell Vegetable Program
480 North Main Street, Canandaigua, NY 14224
Email: cce-cvp@cornell.edu

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

2017 Cornell Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production NOW AVAILABLE

The 2017 edition of the Cornell Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production is now available. This annual publication provides up-to-date vegetable crop production information for New York State. It is designed as a practical guide for vegetable crop producers, crop consultants, ag chemical dealers, and others who advise vegetable crop producers.

In addition to the annually revised pesticide and crop production information, highlighted changes in this edition of the Vegetable Guidelines include:

- Addition of *Dickeya* blackleg on potato as a disease of concern.
- Updated regulatory considerations for organic vegetable production.
- Revised European corn borer management strategies for beans and potatoes.

The Cornell Guidelines are available as a print copy, online-only access, or a package that combines print and online access. The print edition of the 2017 Vegetable Crops Guide costs \$41 plus shipping. Online-only access is \$41. A combination of print and online access costs \$57.50 plus shipping costs for the printed book.

Cornell Guidelines can be purchased through your local Cornell Cooperative Extension office or from the Cornell Store at Cornell University. To order from the Cornell Store, call 844-688-7620 or order online at <http://store.cornell.edu/c-875-pmep-guidelines.aspx>.

Georgescu Chocolate



Georgescu Chocolate is Romanian brownish red pepper that will turn a deep chocolate color when fully ripened. Yields were on the low side, averaging 7 fruit per plant. The shape was a crinkled bell type with long stems. The fruit shape was striking along with the color and the fruit size was decent, consistently 4"+ long and close to 2" at the shoulders. The flesh texture was crunchy and a stronger flavor than a green bell (which became sweeter when fully brown). The chefs didn't find it overly interesting in flavor but liked the color for its presence on the plate. They would pay \$4lb for 5lbs per week.

Chimayo



Chimayo is a chile type from the highlands of Northern Mexico with mild heat but very sweet with fruitiness to the flavor. The yield average was 12 – 3" fruit per plant. Few seeds and crunchy. The plants did start producing fruit in mid-July but took off later in the season. The chefs liked this one and would purchase 10/lbs/wk @ \$5lb.

Corbaci



Corbaci is a Turkish variety that was a huge favorite. This consistent producer had an averaging a yield of 22 fruit per plant 11" long. Several plants had more than 30 peppers. The colors were vivid. Imagine a customer seeing a basket of these peppers with a variety of these striking colors? The flavor was strong but not sugary sweet with an almost smoky taste. Many of the fruit were seedless and the rest had few seeds and they were close to the top of the fruit near the shoulders. The chefs ranked this as one of their best tasting and would purchase up to 15lbs/wk @ \$7lb. This pepper was our favorite.

Kalmans Hungarian Tomato



Kalmans Hungarian Tomato pepper has a great shape similar to a Genovese Ruffled tomato. It has thick flesh with thin skin like a pimento pepper type. The flesh is juicy and sweet with 8 fruits per plant of various sizes. The uniqueness of the shape could have farmers market appeal. The chefs like this and the color but weren't interested enough to purchase it.

Ostra Cyklon



Ostra Cyklon is a Polish paprika pepper. It has medium heat with a lot of flavor. When eating, the full smoky pepper flavor stands out then the heat fades in that becomes surprisingly hot. The skin and walls are thin for easy drying or can be used fresh. When dried, the aroma is outstanding. The shape is uniform throughout the season averaging 4" fruit and has good yield of 14 fruit. This pepper also ranked high for flavor with the chefs who would purchase 4-5lbs/wk @ \$8.

Habanada



Habanada is a Caribbean style habanero type with no heat. This variety was developed by Michael Mazourek, a Cornell plant breeder. The fruit came on late in the summer on tall multi-branched plants. The colors start off as a yellowish green then for a short time an almost solid pink before becoming orange to red. The variety of color would be a great attraction at markets. There are few seeds and 17 fruit per plant (from others who have grown this under better conditions, the fruit number can go higher than this easily). The flavor has a strong flowery or fruity taste. Because of the crinkled shape, the chefs thought the pepper was hard to deseed quickly but raved about the flavor and color. They ranked the flavor high and would purchase 5lbs/wk @ \$7lb.

Peppers of Merit

The next several varieties we thought had a place at the table. With better weather conditions, these peppers may have ranked higher. They weren't included in our chef test mainly because yields were low. We will trial these again under, hopefully, more optimal conditions. The flavors were good, the shapes and colors were sharp.

Hungarian Paprika



Hungarian paprika is a sweet paprika with thin walls and easy to dry.

Zia Pueblo



Zia Pueblo is a chili from Northern Mexico. It has a spicy sweet flavor and the heat wasn't overpowering. There were several of these native varieties that we will trial again in hopes to see higher yields. We also hope to grow out enough of these to have seed available for farmers to trial themselves.

Dolca di Bergam



Dolca di Bergam and Pepperoncini types had great flavor. Bergam was a hot Italian frying or pickling type that ripened to a great reddish brown color. Pepperoncini were similar in shape but had stubby fruit ends. These had great flavor, an off-green color that was terrific fresh or pickled.

We are hoping that more growers will try these peppers. If so, please provide us feedback on how they sell at the market. This season we will have two growers trialing several of these varieties and bringing them to market. We will gather the economic information from the sales along with a new season's worth of production information.

Seed Sources:

Fruition Seeds, Naples, NY

Baker Creek Heirloom Seeds, Mansfield, MO

Seeds from Italy, Lawrence, KS

Seed Savers Exchange, Decorah, IA ●

New York State Seed Testing: Send All Samples to Albany

Julie Kikkert, CCE Cornell Vegetable Program

The NY State Seed Testing Laboratory has completed its relocation from the NYS Agricultural Experiment Station in Geneva to its new location in Albany. All samples should be sent to the new address:

New York State Seed Testing Laboratory
6 Harriman Campus Rd., Albany, NY 12206

Sample submission forms and pricing can be found at the NYS Ag website: <http://www.agriculture.ny.gov/PI/PISeedTestingLab.html>.

Questions can be directed Kyle Arvin, Seed Lab Director, (518) 457-4035, Kyle.Arvin@agriculture.ny.gov ●

Sweet Corn Pheromone Trap Network Survey

Marion Zuefle, NYS IPM Program, Cornell

The Integrated Pest Management Program of Cornell University coordinates a network of sweet corn pheromone traps for five major sweet corn pests. This information is collected weekly throughout the growing season and made available through newsletters and weekly blog postings.

Please take a few minutes to fill out a **survey on how the trap network has impacted your pest management decisions**. The survey is for growers, consultants and extension personnel. It is voluntary and com-

pletely confidential. No personal information will be collected.

To access the survey online, go to <http://tinyurl.com/hmaggadp>. You can also request a paper copy of the survey be sent to you, by contacting Marion Zuefle at mez4@cornell.edu or calling 315-787-2379. Thank you for your participation. ●

Extension Hosts New York Fruit and Vegetable Growers

R. J. Anderson, Writer/Communications Specialist, Cornell Cooperative Extension; from [Cornell News](#) 1/25/17

For commercial fruit and vegetable growers in New York State, winter is a time of reflection, preparation and guarded optimism. It's also a time to hone one's craft through continuing education and consumption of research-based analysis.

A buffet of that insight drew more than 800 attendees to the 2017 Empire State Producers Expo, January 17-19 in Syracuse, NY. Co-hosted by the New York State Vegetable Growers Association and Cornell Cooperative Extension (CCE), the event featured Cornell scientists, CCE educators and experts from across the country presenting on topics including weed, wildlife and pest management; food safety; best growing practices; and business development tactics.

"The Expo provides a great opportunity to network with growers, educators and scientists from throughout New York and beyond," said CCE Director Chris Watkins. "The single goal is that attendees drive home feeling that they have invested their time, energy and resources well, and hopefully with thoughts of how they can make changes in their operation to improve profitability."

Highlighting the three-day event was a presentation by New York State Department of Agriculture and Markets Commissioner Richard Ball covering Gov. Andrew Cuomo's recently unveiled New York Certified and Grown Program. Identifying and promoting New York producers who adhere to the state's food safety and environmental sustainability programs, the certification assures consumers that the food they are buying is local and produced at a high standard.

"Many of the attendees indicated that they left the session with a clearer definition of the program," said CCE's Darcy Telenko, Extension Vegetable Specialist with the Cornell Vegetable Program. "As a vegetable farmer himself, Commissioner Ball is able to connect our growers and has a great understanding of food safety and the need to promote New York agriculture through concise messaging."

Watkins agreed: "Commissioner Ball is a wonderful advocate for New York state farmers, and his willingness to attend EXPO and update the



CVP Specialist Darcy Telenko, left, speaks with Richard Ball, center, commissioner of the New York State Department of Agriculture and Markets, and an attendee at the 2017 Empire State Producers Expo in Syracuse, NY.

Photo: R. J. Anderson, Cornell Cooperative Extension

industry firsthand is priceless. It is in keeping with his often-spoken comments about our state being one based on partnerships, relationships and friendships."

With many of the sessions packed and attendance numbers significantly higher than in recent years, and an on-site trade show buzzing with activity, Telenko said the 2017 event was one to build on. "We had a number of very interesting and current topics and we brought in great speakers," she said. "I think anyone that attended an educational session – myself included – learned something new that we can take and implement on the farm to improve vegetable and fruit production in New York."

Proceedings from the 2017 Expo can be found online at <http://www.hort.cornell.edu/expo/2017proceedings.php>, ed. A. Parr, CCE CVP. ●



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STUDENT RESEARCH INTERNSHIPS with the CVP

The Cornell Vegetable Program is looking to hire two student research interns this summer to assist in scouting fresh market vegetables in WNY. The internship will start in May, working alongside Darcy Telenko, as part of the iPIPE CAP (Integrated Pest Information Platform for Extension and Education, Cooperative Agricultural Project) internship program. iPIPE is committed to investing in the coaching and development of future agricultural scientists/extension educators through a limited term internship experience in an applied environment. The purpose of the program is to learn how to scout for pests in the field and contribute observations to the iPIPE platform. These positions are 5-month appointments (39 hours/week) and will be located in the CCE Erie County office (East Aurora, NY).

More information and application instructions for these positions are posted on our website at <http://cvp.cce.cornell.edu> under Announcements on the home page.

Anatomy of a Rare Drought: Insights from New York Farmers

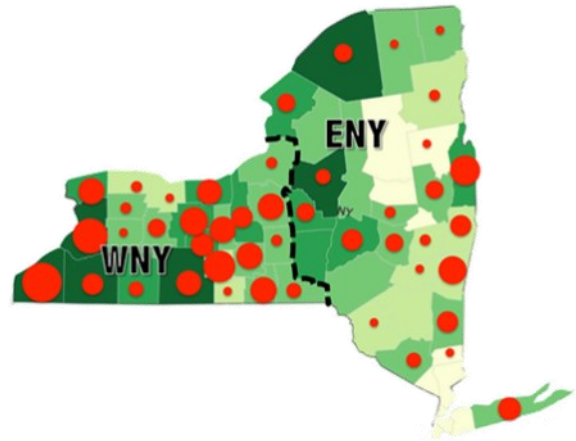
Shannan Sweet and David Wolfe, School of Integrative Plant Science, Cornell University

An unusually low winter snow pack, followed by lower than average rainfall and higher than average temperatures during the 2016 growing season ([NRCC](#)) led to continuously worsening drought conditions throughout New York State, and record-breaking low stream flows in Western and Central NY by late July and August ([Drought Monitor](#)).

NY farmers have asked if they should expect more dry summers like the one we had in 2016. The answer to that is we don't entirely know. Climate scientists are fairly certain that the number of frost-free days will continue to increase and summers will be getting warmer, which will increase crop water demand (Horton et al. 2011; Walsh et al. 2014). Climate models are less reliable for predicting rainfall and snow, but most projections suggest that total annual precipitation will remain relatively stable in New York, with small decreases in summer months and possible increases in winter. Also, the recent trend of the rainfall we do get coming in heavy rainfall events (e.g. more than 2 inches in 48 hours) is likely to continue. This would suggest both flooding and drought will continue to challenge New York farmers, and it is possible that more severe short-term droughts in summer could increase in frequency.

Given this, and to better understand how farmers were impacted by the 2016 drought, and if they are able to cope with drought risk, we surveyed NY farmers throughout August and September 2016 ([Drought Survey](#)). 227 farmers responded from nearly every county (Fig. 1). Though a majority of responses came from field crop farms, vegetable and fruit crops were also well represented (Table 1).

Figure 1. Drought survey responses by county.



New York State number of farms map ([Source: 2012 USDA NASS, ESRI – 12-M249](#)), where darker green colors indicate a greater number of farms. Red dots indicate counties that responded to the survey; larger dots indicate a greater number of respondents. The dotted line delineates two regions, Western NY (WNY) and Eastern NY (ENY). Counties in WNY were those designated as “national disaster areas” due to the drought.

Key Findings

- ✓ The record-breaking 2016 drought affected farmers across New York State with the impact being more severe in Western and Central New York.
- ✓ Crop loss estimates from a late summer survey of over 200 farmers suggests that more than 70% of rainfed field crop and pasture acreage had losses greater than 30%, with some reporting nearly complete crop failure.
- ✓ Most fruit and vegetable growers who irrigate lacked the irrigation capacity and water supplies to keep up with the drought, and estimated crop losses of up to 35% were reported.
- ✓ Common suggestions from farmers on help they could use in dealing with future drought included better long-range weather forecasts, financial assistance to expand irrigation capacity, and more information on drought resistant crops.

Drought Impact

Across the state, farmer-estimated crop losses for rainfed field crops, pasture, fruit crops and vegetable crops were 31%, 42%, 47%, and 46%, respectively (Table 1). Among fruit crops, rainfed grapes, known for relatively deep root systems, were markedly less affected by drought than fruit trees (primarily apples) and berries (Table 1). Figure 2 illustrates that estimated crop losses of more than 30% were reported for rainfed field, pasture and vegetable crops, and some farmers reported losses above 90%. Significant crop losses were reported even for the irrigated acreage of fruit and vegetable crops (averaging 6 and 27%, respectively, Table 1). This reflects an inability to keep up with crop water demand on irrigated acres in 2016 in this severe and long-term drought. When asked what most limited their ability to maintain yields, 38% said limited water supply, 31% said inadequate irrigation equipment, and 18% said poor soil water holding capacity (data not shown). Of the 16% who reported that other

factors most limited their ability to maintain yields, several mentioned: lack of time, labor costs, water costs, the need to rotate irrigation equipment through crops, excessively hot temperatures, damaged and malfunctioning equipment, and being unprepared in every way for needing to irrigate.

Additional comments from farmers related to the effect of the drought included statements about: extra costs associated with buying hay; having to sell cattle due to an inability to keep them watered and fed; and concern about the effect of the drought on next year's crops (e.g. perennial fruit crops). Several farmers indicated factors that helped them get through the drought, including: cover cropping, no-till farming, increased soil health, and improved grazing management.

Table 1. Survey data depicting the number of farms that responded to the survey in Western New York (WNY) and Eastern New York (ENY), and the total acres and mean estimated percent crop yield loss per farm within each region for (a) rainfed and (b) irrigated crops.

(a) CROP RAINFED	NO. OF FARMS		TOTAL ACRES		MEAN % LOSS		(b) CROP IRRIGATED	NO. OF FARMS		TOTAL ACRES		MEAN % LOSS	
	WNY	ENY	WNY	ENY	WNY	ENY		WNY	ENY	WNY	ENY	WNY	ENY
Field	115	78	17,056	12,788	39	22							
corn	38	17	7,095	4,719	40	21							
forages	59	46	7,540	5,665	48	35							
soybeans	13	8	1,787	1,519	45	20							
small grains	5	7	635	885	21	13							
Pasture	22	13	6,991	625	49	35							
Fruit	50	12	4,005	196	52	41	Fruit	28	17	601	515	10	2
fruit trees	16	5	813	177	34	35	fruit trees	10	11	519	407	9	1
grapes	25	2	3179	15	26	13	grapes	6	2	52	90	4	0
berries	9	5	12	4	96	75	berries	12	4	30	18	18	5
Vegetable	49	30	1,834	1,102	53	39	Vegetable	55	31	2,517	166	27	26
beans & peas	8	5	449	1,003	47	37	beans & peas	3	1	102	1	43	0
potatoes	6	3	612	4	52	33	potatoes	5	4	387	45	21	38
sweet corn	9	4	138	39	42	36	sweet corn	9	4	1,362	49	18	23
other veg	26	18	635	56	70	49	other veg	38	22	667	71	25	44
Other	7	5	226	10	44	19	Other	6	6	94	6	22	12

The drought impact was so severe in Western NY (WNY) that the USDA-Farm Service Agency (FSA) declared most counties in this region “natural disaster areas” in 2016, and eligible for some financial relief in the form of low-cost loans (FSA). The more severely drought stricken farms in WNY reported higher crop loss for both rainfed and irrigated crops compared to Eastern NY (ENY) (Table 1). In WNY nearly 80% of farmers estimated the overall economic impact “moderate” to “severe”, and less than 20% considered in “minor” or just a “nuisance”. Many farmers in ENY also felt a substantial economic blow, but only about half categorized the impacts as “moderate” to “severe”, and the other half referred to it as “minor” or a “nuisance”.

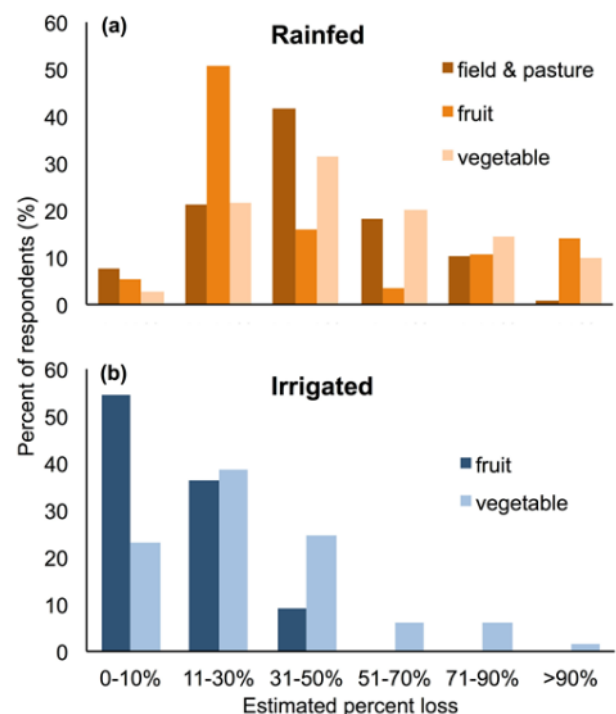
Adaptive Capacity

The majority of fruit farmers who irrigated reported using drip irrigation (data not shown). Most vegetable crop farmers who irrigated used moveable sprinkler pipes and big gun sprinklers. In this extreme year, several farmers who lacked irrigation equipment reported using anything from hoses and hand watering to sprayers and garden sprinklers.

Sixty-five percent of farmers reported using well and pond water for irrigation, 15% used city water, and 14% used streams, lakes, or canals. Other water sources used for irrigation included hydrants, cisterns and springs. Most farmers said ponds (45%), wells (24%), and streams (22%) proved to be inadequate sources of water this year. The 6% who claimed that city water was inadequate said it was the cost that was prohibitive.

When asked what criteria farmers used to prioritize *which* fields to irrigate 34% said crop value, 29% said crop sensitivity to stress, 21% said location to water source, and 8% said soil water holding capacity. Other factors used to prioritize *where* to irrigate included: which crops had a better chance of sur-

vival (e.g. mulched or weed fabric covered crops, crops in hoop houses or high tunnels), the maximum amount they could irrigate, the ease of irrigation (e.g. planting in plasticulture), the amount of water remaining in their irrigation source (i.e. how low was the pond), age of perennial crops, or soil moisture sensor readings.

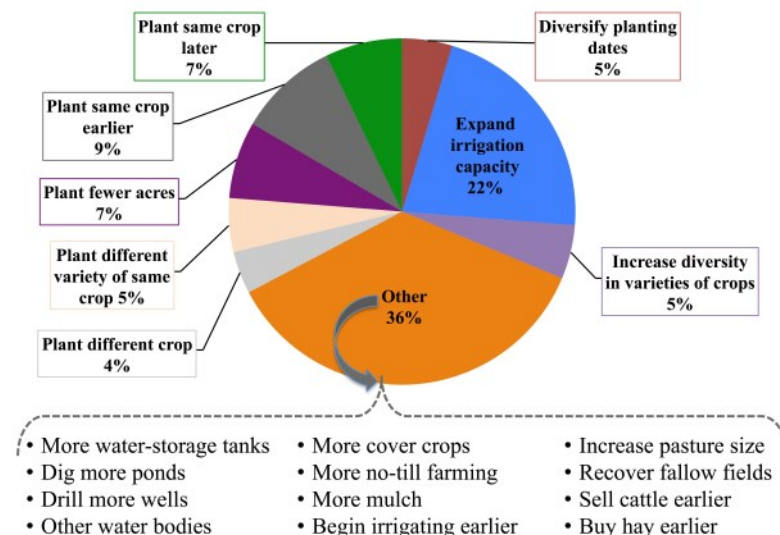
Figure 2. Percent of respondents* that estimated crop yield losses within certain percent ranges for (a) rainfed and (b) irrigated crops.

* Data averaged across New York State.

When asked what criteria farmers used to prioritize *when* to irrigate 38% said crop sensitivity to stress, 25% said weather forecast, 22% said crop value, and 11% said soil water holding capacity. Other criteria used to decide *when* to irrigate included soil moisture sensors and online tools (e.g. CFS).

Farmers' responses varied when asked what they might have done differently if they had known in advance how dry this summer would be (Fig. 3). A common response (22%) was expand irrigation capacity, but many (36%) selected the "other" category and wrote in options that included suggestions related to increasing water availability (e.g. more ponds or wells), building soil organic matter and water holding capacity (e.g. cover crops and no-till), and many others.

Figure 3. Production changes if drought could have been anticipated.



Insights for Extension Educators, Researchers and Policy Makers

When asked how organizations such as Cornell Cooperative Extension, university researchers or government and non-government agencies could help them cope with future drought risk, farmers expressed interest in knowing more about:



- Drought resistant crop varieties
- Irrigation development and planning, irrigation options for perennial fruit crops, and gravity-fed irrigation
- Improving soil quality and water retention, and water saving ideas
- When and how to irrigate specific crops, and how soil moisture affects nutrient uptake
- Pasture rotation, silvopasture, rotational grazing, and stockpiling forage
- How to minimize the effect of drought (e.g. weed control and mulching)
- What pests are more (or less) prevalent during a drought
- Dealing with mental stress related to drought and climate issues

In response to that same question, farmers said they wanted more:

- Development of online tools and better long-range forecasting
- On-farm courses and training, and educational materials about agriculture and drought
- Financial assistance to cover drought losses
- Inventory of vacant farmlands for potential use
- Financial assistance for irrigation equipment and ponds, and for soil improvement and water management
- Crop-specific crop insurance or discontinue crop insurance that encourage growing ill-suited crops
- Rentable and leasable irrigation equipment, and cheaper county water for agricultural use
- Cost sharing for: cover crops and no-till supplies, and for multi-purpose ponds

This project was funded by Cornell University's Atkinson Center for a Sustainable Future and The Nature Conservancy. For more information contact Shannan Sweet: 126 Plant Science Bldg., Ithaca, NY 14853; 607 255 8641, sks289@cornell.edu

References and hyperlinks

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

2017 WNY Fresh Market Winter Vegetable Meetings

Southern Region | February 9, 2017 | 8:30 AM - 3:30 PM
CCE Cattaraugus County, 28 Parkside Dr, Ellicottville, NY 14731



Western Region | February 15, 2017 | 8:30 AM - 4:00 PM
CCE Erie County, 21 S. Grove St, East Aurora, NY 14052

Eastern Region | March 7, 2017 | 8:30 AM - 3:30 PM
CCE Wayne County, 1581 NY-88, Newark, NY 14513

Regional Fresh Market Winter Vegetable Meetings will be hosted by the Cornell Vegetable Program to discuss results from 2016 research trials and present information on pest management. Program topics will include an update on wildlife management, high tunnel nutrient management update, vegetable disease update including the new iPIPE Program in vegetables, new Climate Smart Farming Tools, cover crops and soil health, an update on Food Safety and Modernization Act and what you need to do for your farm, and other regional research and program updates. DEC credits will be available.

\$20 CVP enrollees; \$25 all others. More information and online registration available at <http://cvp.cce.cornell.edu/events.php> or call Darcy Telenko at 716-652-5400 x178.

2017 Precision Ag Workshop: Knowledge is Profit

February 14, 2017 | 9:00 AM - 4:00 PM
SUNY GCC Batavia Campus, The BEST Center, Room T119 A&B, Batavia, NY 14020

This workshop will address intermediate precision-agriculture management topics. Speakers will give tips on being more accurate in your data collection, how to interpret the information and what to do with it. Learn to manage challenges and best practices for pesticide and herbicide application. Participants will walk away learning to decrease waste, increase yields and improve the profitability of your operation. Keynote speaker: David Grusenmeyer, New York Farm Viability Institute. Agenda topics, speakers, and more details can be found at <http://tinyurl.com/GCC2017PrecisionAg>.

Cost: \$49 includes lunch & materials. Space is limited. Register by February 7. Call The BEST Center, GCC at 585-345-6868.

Respirator Fit Test and Training

February 14-16, 2017 | appointments available starting at 8:00 AM each day (4 per hour; 24 openings per day)
CCE Ontario County, 480 N Main St, Canandaigua, NY 14424



For your convenience, Cornell Cooperative Extension of Ontario County has made arrangements with the New York Center for Agricultural Medicine and Health (NYCAMH) to provide the required yearly respirator training for pesticide applicators along with the required respirator test fitting. The cost is \$25.00 per person and will be invoiced by NYCAMH after the event for payment. If you will be purchasing a respirator, filters, or cartridges, you will need to pay for them the day of the event with cash or check made payable to NYCAMH.

Registration is mandatory and participants must complete a health questionnaire prior to coming. The downloadable form is available at www.cceontario.org. There are 24 openings per day, 4 per hour starting at 8:00 am each day. To register or for additional information contact, 585-394-3977 x 427 or 436.

Using Greenhouses to Grow Vegetables (L.E.A.F. Workshop Series)

February 16, 2017 | 6:00 PM - 8:00 PM
Frank W. Bratt Agricultural Center, 3542 Turner Rd, Jamestown, NY 14701



Eat (or sell) home grown produce 12 months of the year! Participants will learn about different season extension structures such as greenhouses, high tunnels and row covers used to grow vegetables. Site selection, structures, crop nutrition and pest management will be covered. Judson Reid, CVP Vegetable Specialist, will be the leader of this interactive workshop. Bring your ideas and questions!

This event is part of the 2016-2017 L.E.A.F. (Learn. Empower. Achieve. Farm.) Workshop Series by CCE Chautauqua County. Series is open to beginning farmers, established farms looking to diversify and grow, agriculture enthusiasts, homesteaders, and EVERYONE in between!

Cost: \$5/family. Register at https://pub.cce.cornell.edu/event_registration/main/events_landing.cfm?event=leaf1617_206 at least 3 days before the event. Contact Katelyn Walley-Stoll, 716-664-9502 x202 for more information.

2017 Produce Auction Growers Meeting (Genesee Valley Produce Auction)

February 21, 2017 | 9:00 AM - 2:00 PM
Centerville Fire Hall, Centerville, NY 14029

Come and learn how to make a profit at produce auctions! Speakers from other New York auctions (sellers and buyers) and Cornell Cooperative Extension will provide attendees will information on produce production for profit, diversifying your product line, high tunnel organic fertility approaches, disease resistance in tomatoes and cucumbers, and Food Safety Modernization Act and what it means for the auction. This event is FREE! For [more info](#), contact Judson Reid at 585-313-8912.

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

Farmers Market Workshop

February 22, 2017 | 1:00 PM - 4:00 PM

CCE Niagara County, 4877 Lake Ave, 4H Training Center Small Room, Lockport, NY 14094

All farmers market vendors are welcome to attend the Farmers Market Workshop hosted by CCE Niagara County. Cornell Vegetable Program Specialist Robert Hadad will provide information on cost of production and marketing considerations. Bree Bacon from NCCC Small Business Development Center will provide social media and online marketing tips.

Cost: \$10 includes training materials and refreshments. RSVP by February 15 to Amanda Henning at 716-433-8839 or app27@cornell.edu.

Western NY Food Hub Grower Meeting

February 23, 2016 ****NEW DATE**** | 11:00 AM - 1:00 PM

CCE Erie County, The Roycroft Campus, The Power House, Assembly Room, 31 S Grove St, East Aurora, NY 14052

Eden Valley Growers (EVG), a farmer-owned cooperative and the owner/operator of the Western NY Food Hub, invites you to attend an information session on how they provide technical assistance and support for farmers interested in selling to the Western NY Food Hub. The Western NY Food Hub sources fruits and vegetables from growers around Buffalo and in twelve counties of Western New York – Erie, Niagara, Orleans, Genesee and Wyoming, Chautauqua, Cattaraugus, Monroe, Livingston, Allegany, Wayne and Ontario. Products are sold and distributed predominantly to wholesale buyers in Buffalo, and to buyers across the entire state of New York, as well as the Northeast and Mid-Atlantic.

The agenda will include: information and background on EVG and the development of the food hub; what EVG can offer/what EVG is looking for (includes specific criteria); how the project team can help growers that want to sell to the hub through training and technical assistance with regards to GAP certification, post harvest handling, packing, sorting, etc.; and Q&A.

Lunch will be provided for all attendees. For more information and to reserve your spot at this free meeting, **please RSVP to Dave Walczak by February 21, 2017** at 716-992-9721 or email dnwedenvally@roadrunner.com

Meeting hosted by Eden Valley Growers, along with their project partners Cornell Cooperative Extension and Field & Fork Network.

Growing Berries Under Cover Workshop

February 28, 2017 ****NEW DATE**** | 8:30 AM - 4:00 PM

Cornell Lake Erie Research and Extension Lab, 6592 West Main Rd, Portland, NY 14769



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.

Veggie Farming, Part 2 Webinar Series: From Season-Long Care to Harvest

March 1 - March 29, 2017 Wednesdays evenings | 7:00 PM - 8:30 PM

Webinar Series

This five-week course online (BF 121) covers vegetable production from transplanting to harvest, including information on in-season fertility, integrated pest management, weed control options, harvesting strategies, and tips for marketing your products.

Designed for aspiring farmers and those with at least one growing season of vegetable farming experience. You should already have basic understanding of how to select crops, manage bed prep, seeding, and transplanting.

During the course you will create an in-season fertility and pest/weed control plan and weekly homework will focus on preparing you to make good decisions in the coming growing season. (*Note: You don't need to have taken Part 1 to enroll in this course*)

Join **Amy Ivy**, regional production specialist for the CCE Eastern New York Commercial Horticulture Program, and **Darcy Telenko**, regional vegetable specialist with the CCE Cornell Vegetable Program for this informative course.

Fee for this course is \$250. *Sign up a month or more in advance of the start date and receive \$25 off. Sign up for three or more courses and received \$50 off your total.*

LEARN MORE AND REGISTER: www.nebeginningfarmers.org/online-courses/all-courses/bf-121-veggie-farming-part-2/

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

2017 NYS Dry Bean Meeting

March 6, 2017 | 9:30 AM - 2:30 PM
First United Methodist Church, 8221
Lewiston Rd (Rt 63), Batavia, NY 14020



Join us for research and production updates on dry bean varieties and bean breeding, weed management, Western bean cutworm, and white mold disease. There will also be an update on food safety practices and documentation required by buyers. We will also review research priorities and gather suggestions for future educational programs. DEC and CCA credits have been applied for. *Sponsored by New York Bean LLC.*

Cost: \$25 CVP enrollees; \$35 all others, includes lunch with tasty dry bean dishes from the New York Coalition for Healthy School Food. You must **register by March 1** to guarantee lunch. Agenda and registration available at <http://cvp.cce.cornell.edu/event.php?id=665> or contact Julie Kikkert at 585-394-3977 x404, jrk2@cornell.edu.

Onion School and Advisory Meetings

Elba Muck Region | March 8, 2017 | 9:30 AM - 4:00 PM
CCE Orleans County, 12690 St Rt 31, Albion, NY 14411



Oswego Region | March 16, 2017 | 10:00 AM - 4:00 PM
Vona's Restaurant, 9 Willow St, Oswego, NY 13126



A regional meeting for muck onion growers on the latest research results generated from our 2016 research trials in weed management, bacterial diseases, onion insect management, and onion leaf disease management. We will also be looking for guidance from regional growers on the direction of onion research and programming in New York. DEC recertification credits and CCA credits will be available. Meeting agendas available at <http://cvp.cce.cornell.edu/events.php>

Cost: TBD. For more information and to RSVP, contact Christy Hoepting at 585-721-6953 or cah59@cornell.edu.

WNY Garlic School

March 22, 2017 | 10:30 AM - 4:00 PM
Irondequoit Public Library, 1290 Titus Ave,
Rochester, NY 14617



This grower meeting will cover production issues, insect pests, disease problems, garlic testing, developing a clean-garlic program, and plenty of discussion.

Cost: \$20 CVP enrollees; \$25 all others. [Register online](http://cvp.cce.cornell.edu/events.php) at <http://cvp.cce.cornell.edu/events.php>. For more info, contact Robert Hadad at 585-739-4065 or rgh26@cornell.edu.

Hosted by the Cornell Vegetable Program, ENY Commercial Horticulture Program, and CCE Monroe County.

USDA Provides New Cost Share Opportunities for Organic Producers

The U.S. Department of Agriculture (USDA) announced December 21, 2016 that starting March 20, 2017, organic producers and handlers will be able to visit USDA Farm Service Agency (FSA) offices to apply for federal reimbursement to assist with the cost of receiving and maintaining organic or transitional certification.

To learn more about organic certification cost share, please visit www.fsa.usda.gov/organic or contact a local FSA office by visiting <http://offices.usda.gov>.

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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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For more information about our program, email
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