

Fall is the best time to implement Best Management Practices in your high tunnel

to increase the likelihood of a profitable crop next year.

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Two new herbicides are joining the arsenal for weed management in sweet corn in

2016. The CVP evaluated both new herbicides in 2015.

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This was the first year that dry bean pods with Western bean cutworm feeding damage was

seen in New York. Learn more about this threat to dry beans!

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Disaster emergency loan assistance is available from FSA for 5 counties in WNY that

experienced losses between May 1 and July 14, 2015.

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Fall High Tunnel Check List

Judson Reid, CCE Cornell Vegetable Program

High tunnel tomato growers often take a deserved break when fall arrives. If not growing a winter greens crops, the high tunnel may move into the rear-view mirror. But after reviewing soil quality of dozens of high tunnels across New York State, we have observed that Fall is the best time to implement important Best Management Practices. Acting now will increase the likelihood of a profitable crop the following year.



Soil test

Soils are still warm and biologically active in the fall. Sampling now will give a better idea of what nutrient availability will be



Fall is soil management time in tunnels. Photo: Judson Reid, Cornell Vegetable Program



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 11 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.

Parr at aep63@cornell.edu. Total readership varies but

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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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The next issue of VegEdge will be published on December 1, 2015.

<<< BREAKING NEWS >>>

Governor Announces \$1 Million to Support New Farmers

New York State Governor's Office

Governor Cuomo announced \$1 million in funding is available to assist farmers early in their careers. The \$1 million New Farmers Grant Fund will provide grants of a minimum of \$15,000 and maximum of \$50,000 for up to 50% of project costs with the remaining 50% being matched by the recipient. Eligible project costs include the purchase of farm machinery, supplies and equipment, and construction or improvement of farm buildings. Empire State Development, in consultation with the New York State Department of Agriculture and Markets, will administer the Fund, which is open to New York farmers in the first ten years of having a farm operation of 150 acres or less.

The application deadline for the New York State New Farmers Grant Fund is January 22, 2016. Guidelines for the grant are at: http://esd.ny.gov/BusinessPrograms/Data/NewFarmersGrantFund/Final2015ApplicationNewFarmers10-20-15.pdf Questions should be sent to Bonnie Devine at: ny.gov ©

during the following growing season, in particular phosphorus levels. If there needs to be a pH adjustment having this information in the Fall is best, to allow for an application of either lime or sulphur to take effect.



Leaching

Be sure to request a test of soluble salts when submitting this soil sample. Soluble salts (often measured as Electrical Conductivity or EC) can escalate in tunnel soils over the course of several seasons. Polyethylene covers of high tunnels need to be replaced periodically based on weight and wear with most growers needing to replace plastic after 3 growing seasons. By removing the plastic in the fall the soil will benefit from a full winter's precipitation to reduce salts (and alkalinity) problems.



Pest Management

At this time of year the crop is near completion and temperatures are cooling. Less attention is given to pests, and unfortunately late season populations of mites, thrips and caterpillars go unmanaged. These will all overwinter and have a jump start in the spring. Chemical control is still an option, and with harvest over, PHI's are not the concern they were during peak season. This is the time to control, then remove as much crop debris as possible.



Cover Crop

There is still time to sow a cover crop, although the window is closing quickly. A winter grain such as rye can scavenge any leftover nitrogen in the soil and hold it in a vegetative form, which when incorporated in the late winter/early spring will be rereleased. Note that a living crop may provide habitat for pests, so scouting is essential. If growing a cover crop it is still wise to allow the tunnel to cool down completely during the winter. Although this will inhibit cover crop growth, zub-freezing temperatures should eliminate warm climate diseases and pests such as Powdery Mildew and Whiteflies.

Spider mite damage on tunnel tomatoes.

This work is funded by the New York Farm Viability Institute.

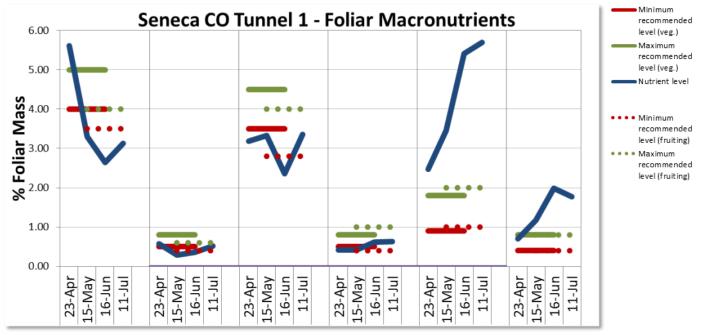


Figure 1. A common problem in tomato tunnels, dropping N and K levels with excess Ca. Fall soil sampling is the first step to a healthier crop next year. 💿

TWITTER UPDATES on High Tunnel, Greenhouse and Fresh Market Field Research For the latest updates on Cornell Vegetable Program high tunnel, greenhouse and field research follow vegetable specialist Judson Reid @Jud_Reid



Evaluation of New Herbicide Programs for Sweet Corn

Darcy Telenko, CCE Cornell Vegetable Program

Two new herbicides are joining the arsenal for weed management in sweet corn for 2016. Revulin Q received NY label on March 2015 and Acuron is expected to receive NY registration around January/February 2016. Both herbicides combine multiple active ingredients with different mechanisms of action for integration into weed resistance management strategies. Revulin combines two active ingredients (nicosulfuron and mesotrione) in a dry flowable formulation for post emergence weed control. Acuron features four active ingredients (bicyclopyrone, mesotrione, Smetolachlor, atrazine) with three complementary, overlapping modes of action as a pre-emergence application.

Both programs were evaluated in 2015 at the CVP Weed Management Demonstration Site, which compared six herbicide treatments for weed control and

yield in two sweet corn varieties (Incredible and a Roundup Ready SV9827). The field site was previously a hay crop for six years and dominant weed species included lambsquarters, shepherds purse, redroot pigweed, foxtail, mallow, common ragweed, velvetleaf, barnyard grass, orchardgrass, quackgrass, and speedwell. Sweet corn was planted on May 15 and hand harvested between August 7 and 12. Pre-emergence treatments of Acuron 3.0 qt/A +Atrazine 1 pt/A, and Prowl H20 3 pt/A +Outlook 18 oz/A + Atrazine 1 qt/A were applied on May 16, and post emergence treatments Round-up 1.4 pt/A and Revulin Q 3.404 oz/A were applied on June 5. The Roundup treatment was broadcast over the Roundup Ready sweet corn variety SV9827 and applied using a hooded sprayer under the non-Roundup Ready variety Incredible. All

herbicide programs performed similarly at the initial weed ratings on June 15, controlling 72.0 to 94 % of grass species and 93 to 98% of broad leaf weed species. By August 12 the Revulin Q, Prowl+Outlook+Atrazine, and Acuron+Atrazine programs continued to provide greater than 72% grass control and over 96% broadleaf weed control. All herbicide programs increase ear size, ear number, and yield (lb/A) in both over the untreated weedy plot. There were no differences in weed management programs in yield in the SV9827 variety, but a yield loss was noted in the Incredible sweet corn variety where the Roundup spray application drifted onto the sweet corn causing a 26.5% injury to plants. Revulin Q and Acuron are new effective weed management tools that can bolster weed resistance management programs in sweet corn.

	% weed control		% weed control		Yield					
	15 .	Jun	12 Aug SV9827			Incredible				
Treatment	Grasses	Broad- leaf	Grasses	Broad- leaf	Ear size (in.)	# ear/A	lb/A	Ear size (in.)	# ear/A	lb/A
Untreated	0.0 b	0.0 d	0.0 c	0.0 c	7.3 b	11253 b	6098 b	7.0 b	14810 c	8857 c
Weed-free	94.0 a	95.0 cb	77.5 ab	96.0 a	7.9 a	15827 a	11688 a	7.8 a	18077 ab	13794ab
Pre Emergence Acuron 3.0 qt/A + Atrazine 1 pt/A	94.3 a	98.0 a	81.5 ab	99.0 a	7.4 b	15174 a	11107 a	7.9 a	18876 a	14448 a
Pre Emergence Prowl H20 3 pt/A + Outlook 18 oz/A + Atrazine 1 qt/A	72.0 a	95.8 ab	72.8 ab	97.5 a	8.0 a	15319 a	11834 a	7.9 a	17715 ab	13794 ab
Post Emergence Round-up 1.4 pt/A	86.3 a	92.5 c	61.3 b	80.0 b	8.0 a	16045 a	11761 a	7.7 a	15754 bc	11761 b
Post Emergence Revulin Q 3.404 oz/A	90.5 a	95.8 ab	87.5 a	99.0 a	8.0 a	14956 a	12051 a	7.8 a	17206 a-c	13141 ab
*Ear size determined from sample of ten ears per plot.										



Weed control in sweet corn plots on June 15. Photos: Darcy Telenko,

Western Bean Cutworm and Dry Beans in 2015

Carol MacNeil and John Gibbons, CCE Cornell Vegetable Program, and Keith Waldron, NYS IPM Field Crops Coordinator, Cornell

Western bean cutworm (WBC) is a Western U.S. bean and corn pest which has moved east, first reaching New York in 2009. It has reduced dry bean yield and quality in Michigan in past years. This is the first year that dry bean pods with WBC feeding damage was seen in New York. In 2014 trace levels of suspected WBC damage occurred on red kidney beans at two elevators in NYS. Trap counts of WBC moths can pinpoint when to scout bean pods for damage, to determine whether an insecticide spray is needed. WBC moth trap counts in NYS from 2011 to 2015 show a steady increase.

Season total average WBC moth catches in dry bean fields, 2011-2015

	2011	2012	2013	2014	2015
Average per trap:	46	48	64	92	178

WBC pheromone traps were set up in late June at 10 dry bean fields in Genesee, Livingston, Monroe, Ontario, Steuben, and Wyoming counties. WBC moth activity was monitored using bucket traps with WBC pheromone lures to attract male moths. CVP and CCE staff, and a consultant, checked the traps for moth counts weekly. Peak WBC moth flights occurred from the end of July to the second week of August, depending on the location of the trap. It is not common for peak emergence to occur over such a wide time range, or for there to be split peaks, which occurred at one location. It's not known why this occurred this year.

The highest season total moth catch in the dry bean fields occurred in Wyoming/Pearl Creek, followed by Attica, with 502 and 384 moths, respectively, well over the threshold of concern of 100 moths. No WBC eggs, larvae or damage could be found in nearby dry beans or corn, but the dry bean fields were sprayed with an insecticide. Riga, Lima, Stafford, Avoca and Geneva also exceeded 100 moths/trap. Dry bean pod damage was only found, to date, in the Lima field. All the dry bean fields with high WBC moth trap counts were scouted for WBC damage a few times. A number of growers applied an insecticide when alerted to the high trap catches. Most moths caught this year were in good condition indicating that they overwintered.

If present, WBC egg masses, larvae and damage can easily be found on corn plants. Only damage will be seen on beans, however, since WBC larvae on beans drop to the soil during the day. Scouting corn can give a good indication of WBC



Figure 1. Western bean cutworm damage on bean pods, Western NY, 2015. Holes are round and extend into the pod cavity. Fresh damage will not be brown. *Photo: Carol MacNeil, Cornell Vegetable Program*



Figure 2. WBC damage on dry bean seed. Holes are round but may include much of the interior of the bean. European corn borers bore smaller, round holes. Photo: C. DiFonzo, MSU

pressure in the area, and should be done if >100 moths/trap are caught. If trap catches are high and/or if egg masses are seen in corn, then dry bean pods should be scouted for WBC damage, beginning 10 days after peak moth catch. If dry beans have pods, and pod feeding is found during 30 minutes of scouting, MI and Ontario entomologists recommend an insecticide spray. Dry bean pods that are beginning to dry down are less susceptible. Insecticides are very effective if applied 7-10 days from peak moth catch. Sprays a few days later are still quite effective. Longer lasting pyrethroids like Warrior are recommended on conventional dry beans. Entrust is recommended on organic dry beans. Note: A few years ago in MI WBC pressure was less due to beneficial insects.

When WBC larvae finish feeding they drop to the ground and burrow into the soil, constructing earthen chambers 5-10 in. deep, for overwintering. (Temperatures below -20°F are needed to affect winter survival of WBC.) Suggested factors contributing to risk of increasing WBC populations: high % of acres in reduced/no-till; lake effect weather — mild fall, deep snow cover; and high summer humidity.

Field corn hybrids with the Cry1F gene (Herculex Xtra, SmartStax, etc.), or the Vip 3A gene (Agrisure Viptera, etc.) are labeled for control of WBC. The only sweet corn variety with WBC resistance (Vip) is Protector. See the Handy Bt Trait Table, 2015, at: http://msuent.com/assets/pdf/28BtTraitTable2015.pdf In 2013 in Ontario, Canada, in some fields with high WBC pressure, damage on hybrids with the Cry1F gene was equal to damage on corn with no resistance genes.

Contact Carol MacNeil at crm6@cornell.edu or 585-313-8796 if you see suspected dry bean pod or seed damage in the field, on the truck, or at the elevator.

Funded by the NYS Dry Bean Industry Committee.
Assisted by WNY Crop Management, and CCE of
Steuben and Wyoming Counties.

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

2015 Annual Cover Crop Workshop and Field Tour

November 6, 2015 | 9:15 AM - 3:30 PM

Town of Big Flats Community Bldg, 476 Maple St, Big Flats, NY 14814 (new starting location!)



The fine points of cover crop establishment, maximizing growth, and use, will be presented by a grower and consultant, and Penn State, Cornell and University of VT speakers. After lunch the group will move to the USDA-NRCS Big Flats Plant Materials Center, 3266 State Route 352, where there will be a tour of cover crop establishment and growth by Paul Salon, NRCS. Lunch is available for \$10. Complete agenda and to preregister: http://events.constantcontact.com/register/event?llr=fzz4ttqab&oeidk=a07eban6peya1a81ef5 Questions or special needs, contact Paul Salon at: paul.salon@ny.usda.gov or 607-562-8404 x103.

Cornell Potato Breeding Line Show & Tell

December 2, 2015 | 11:30 AM - 3:00 PM

Love Plant Breeding Fieldhouse, Caldwell Rd, Cornell University, Ithaca, NY 14853



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. For more info, or to carpool, contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Processing Sweet Corn and Snap Bean Advisory Meeting

December 14, 2014

10:00 AM - 12:00 PM Sweet Corn | 1:00 PM - 3:00 PM Snap Bean

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



Come discuss the 2015 growing season with your industry peers and hear the latest research results. Grower input needed to set future research priorities. FREE and includes lunch. DEC and CCA recertification credits will be available. No need to preregister. The full agendas are available on the <u>Cornell Vegetable Program website</u>. Contact Julie Kikkert at jrk2@cornell.edu with questions.

Processing Pea, Lima Beans, Beet and Carrot Advisory Meeting

December 16, 2015

10:00 - 11:00 AM Pea | 11:15 AM - 12:15 PM Lima Beans | 12:45 - 1:45 PM Beet & Carrot First United Methodist Church, 8221 Lewiston Rd (Route 63), Batavia, NY 14020

PEAS









All are invited to discuss the 2015 processing pea, lima beans, beet and carrot season in New York. Hear ideas and concerns from fellow growers and industry members. Your input is needed to set future research priorities. FREE and includes lunch. DEC and CCA recertification credits will be available. No need to preregister. The full agendas are available on the Cornell Vegetable Program website. Contact Julie Kikkert at jrk2@cornell.edu with questions.

2016 Empire State Producers Expo

January 19-21, 2016

Oncenter Convention Center, Syracuse, NY



This show 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 Cornell Vegetable Program Specialists are involved in organizing sessions on Processing Vegetables, Potatoes, Onions, Cabbage/Cole Crops, Soil Health, Weed Management, Climate Change, Beginning Farmers, High Tunnels, and Specialty Vegetables.

Registration will open later this year on the NYS Vegetable Growers Association website nysvga.org/expo.



NOFA-NY Winter Conference – Good Hard Work: Ecosystems, Economics, Energy & Equity

January 22-24, 2016

Saratoga Hilton and City Center, Saratoga Springs, NY

The full list of workshops, including several with Cornell Vegetable Program staff presentations, is available at http://www.nofany.org/events/winter-conference Register is open online and continues through January 15. Questions about registration, call Stephanie at 585-271-1979 x509 or email register@nofany.org.

Climate Smart Farming Session at the **Empire State Producers Expo**

Darcy Telenko, CCE Cornell Vegetable Program and Climate Smart Farming Extension Team

Have you noticed the increase in extreme rainfall events, the unpredictability of the seasons, or new pests that you've never seen before? If you are interested in learning more about the science behind what's going on with the climate, and what farmers are doing to adapt, then please join the session Climate Smart Farming: New Practices and Tools to Prepare for Climate Variability and Extreme Weather, Thursday, January 21, 2016 9:00-11:00am at the Empire State Producers Expo in Syracuse, NY. This session will provide an introduction to explain the basics of climate science, including the observed increase in temperatures and extreme precipitation, and impacts to agriculture in the Northeast. We will also introduce models and decision support tools developed at Cornell University through NEWA and the Climate Smart Farming program (http://climatesmartfarming.org) to help farmers adapt and take advantage of opportunities. The session will feature a farmer panel with 3 New York State producers who that will discuss the climate impacts they have experienced and practices and tools they are using to increase resiliency.

Session Organizers: Allison Chatrchyan, Laura McDermott, and Darcy Telenko •

Emergency Loan Assistance Available

USDA Farm Services Agency, Canandaigua, NY

Livingston, Monroe, Ontario, Seneca, and Wayne Counties have been declared eligible for Farm Service Agency (FSA) disaster emergency loan assistance effective September 9, 2015 due to excessive rain, high winds, hail, lightning, and a tornado on May 1 through July 14, 2015. Family farmers who have suffered a loss of at least 30% of their production due to excessive rain, high winds, hail, lightning, and a tornado may be eligible for FSA loans. Proceeds from crop insurance and any FSA programs are taken into account when determining eligibility. Losses must be supported with documented records. Under the FSA Emergency Loan Programs, farmers may be eligible for production loss loans of up to 100% of their actual losses, or the operating loan amount needed to continue in business, or a maximum principal balance outstanding of \$500,000, whichever is less. Farmers must be unable to obtain credit from private commercial lenders. Applications for loans under this emergency designation will be accepted until May 9, 2016. The FSA office is located at 3037 County Road 10, Canandaigua, NY 14424. The phone number is 585-394-0525 x2.

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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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