Cornell University
Cornell Cooperative Extension
Eastern New York Commercial Horticulture

Vegetable News

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Cucurbit Downy Mildew Update

Charles Bornt–ENYCHP

For those of you that are signed up for our electronic formatted newsletters, you probably know that we also use that list as an "emergency notification system" if we find something that you need to be aware of ASAP. On Tuesday of this week (July 18th), Cucurbit Downy Mildew was identified in Dutchess County in cucumbers. The following note was sent out that afternoon but the bottom line is you need to be protecting your cucurbits (especially cucumbers), no matter what the stage:

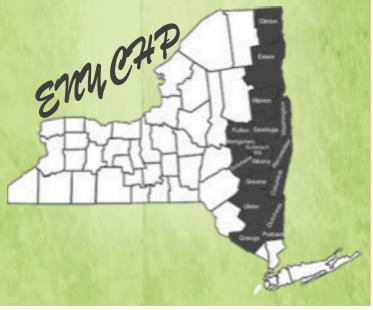
Please be aware that Cucurbit Downy Mildew (CDM) has been identified Tuesday, 7/19/2017 in Dutchess County.

This is a fast moving and very destructive disease as windblown spores from this infection site are a primary source of infection for other cucurbit plantings in the area. Spores are easily dispersed long distances. All cucurbit types may be affected, with cucumbers being the most sensitive followed by melons. According to the CDM forecasting program, southern NY was included in the areas with a "high risk" of spore deposition and infection back on July 7th, 11th and 13th, so with the weather conditions we've had symptom development is pretty much on target (7-10 days). CDM Forecasting model can be accessed at: http://cdm.ipmpipe.org/ Please note that we had a moderate risk yesterday with a low risk for spread today (Tuesday).

If you are in the Hudson Valley or another high risk area, now is the time to apply mobile (systemic, translaminar) fungicides with an active ingredient that specifically targets DM. For conventional growers, I have seen where a tank mix of Curzate plus Ranman or Zampro plus a protectant like chlorothalonil (Bravo, Initiate etc.) has done

Table of Contents

Cucurbit Downy Mildew Update……1-2
General Scouting Report…2
Angular Leaf Spot……3
Fruit Disorders in Summer Squash……4
Feritgation Rates……5-6
Lookalike Bugs……6-7
Parsley and Celery Leaf Blights……7-8
Upcoming Events……8-9
Weather & Pest Charts….10



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a very good job. Curzate provides some kickback or burnout activity but does not have much residual which is why it needs to be tank mixed with a second mobile fungicide or another application needs to be made 3-4 days later. Mobile fungicides are needed to control the disease from developing on the UNDERSIDE of the leaf. Fungicides should be re-applied according to disease severity and label instructions (keep pre harvest intervals in mind, maximum use rates and please rotate chemical classes using the FRAC codes found on all the labels. More information including risks forecasts and fungicide recommendations can also be found in the CCE ENYCHP Weekly Vegetable Updates.

According to Cornell Pathologists Margaret McGrath, one of the better organic products evaluated is Timorex Gold (Tea Tree oil) and is labeled in NYS (click the name to see a copy of the label). See label for the rates and note that there is a 48-hour re-entry interval and do not apply within 48 hours of harvesting. Do not spray during the warm hours of the day and in hot seasons with temperatures above 95ºF (35ºC) and Do not apply this product through any type of irrigation system. Alternate with copper every 5-7 days.

If you suspect CDM please contact your local CCE ENYCHP educator for confirmation and help in establishing a treatment plan.

More information can be found on Cornell Pathologists Margaret McGrath's bulletin on "Effectively Managing Cucurbit Downy Mildew in NY in 2017 "for details. http://vegetablemdonline.ppath.cornell.edu/NewsArticles/Cucurbit%20Downy%20Mildew%20MGT-NY-2017-McGrath.pdf

Growers looking for information on OMRI/organic approved products for downy mildew please see: "Biopesticides for Managing Cucurbit Crop Diseases Organically" also complied by Margaret McGrath. https://blogs.cornell.edu/livegpath/files/2015/04/Biopesticides_Veg-Diseases_2017-cucurbits-McGrath-1hj8dln.pdf

Also see, "Efficacy of Organic Fungicides for Vegetable Diseases." Found at: https://blogs.cornell.edu/livegpath/files/2015/04/Organic-Fungicides-Veg-Crops-Herbs-Efficacy-results_McGrath-27wvlfe.pdf

General Scouting Report

Crystal Stewart, ENYCHP

Variable weather seems to be the theme for this season, with some areas receiving excessive rain and other more unfortunate weather, while other areas are getting a bit dry. The locations which have been consistently wet are seeing some fertility issues due to either nutrients leaching out of the root zone or root rots making it hard for the plants to take up adequate nutrients. Across the region we have seen issues with occasional heat stress, disease pressure is high, but first generations of many pests are over. Here are some of the issues which seem consistent across Eastern NY:

Tomatoes: Bacterial diseases are showing up across the region on farms which have battled this problem in the past. Often this is in spite of careful sanitation measures such as destroying or sanitizing stakes and cleaning the greenhouse. If you have not seen these diseases on your farm yet, stay vigilant. They can arrive by seed. (Image 1: Bacterial Speck)

Late blight has continued to move across the state, with unconfirmed reports as far west as Utica/Rome. We are keeping a close eye on this disease, and will send special alerts when needed!

Early blight is moving quickly on plants with heavy fruit set and on farms which have experienced excessive wetness.

Cucurbits: Powdery mildew has been advancing on older squash plantings, particularly in areas which are humid but not receiving much rain. Remember to kill and disc in old plantings to eliminate disease reservoirs.

We are seeing a lot of fruit abortion in the last few weeks across the entire region. There are minor disease issues, and some squash bug feeding, as well as pollination and heat stress concerns. Generally, it's not one factor that is leading to blossom drop. Numerous negative factors are leading plants to determine energy is better spent elsewhere. Some locations seem to be moving through this issue and setting fruit again. Anything you can do to reduce stress and optimize plant health will help, but there

probably isn't a silver bullet cure for most growers. See the article on page 4 for more information.

Alliums: onions which are coming in now are generally looking pretty good. Weed control was becoming an issue in the last month for many smaller onion and garlic growers and that affected size in some cases. However, disease pressure has been low in most areas. Good drying conditions should mean a nice garlic and first onion crop. Storage onions should continue to receive thrips control and timely weed control to maintain crop quality.

Aborted zucchini with secondary fungal growth. Many squash are aborting prior to the flowers even opening.

If growing onions on plastic, make sure there is still air movement between the bulb and the plastic. Some years as the onions size up they basically plug their holes, and hot weather can then damage the bulbs. If bulbs are tight in the plastic, cut it now.

Angular Leaf Spot: Perennial Problem of Cucurbits

Charles Bornt & Crystal Stewart ENYCHP

Every year one of the first diseases that we see in cucurbits, particularly summer squash under row covers, is Angular Leaf Spot, a bacterial disease caused by *Pseudomonas syringae*. Initially leaf symptoms appear as small, irregularly shaped, water-soaked lesions. The spots expand until they are limited by larger veins, giving them the angular appearance which the disease is named for. Under our current humid conditions, the water-soaked spots can be covered by a bacterial ooze, which can dry and give the leaf area near the spot a crusty appearance. This can also happen on the underside of the leaf. As the spots dry, they shrink and tear away from the healthy tissue leaving large, irregular holes and giving the leaf a ragged appearance. Squash and watermelon leaf lesions are more variable in size than cucumber lesions which are usually smaller. The squash and melon lesions can be surrounded by a yellow halo. Lesions can appear on the fruit as well, but will be more circular and are smaller than on the leaf. If left untreated, the ALS lesions will crack open, allowing secondary fungi and bacteria to invade possibly resulting in a slimy, foul-smelling fruit rot.

The *Pseudomonas* bacterium is a seed-borne pathogen, but it can also overwinter in infested crop residues. The disease is widespread and is especially damaging when there are extended and frequent summer rains when daily temperatures range between 75 and 82° F. The warm, moist conditions under row covers tend to be perfect for disease development. Dry conditions, caused by either dry weather or the removal of row cover, tend to slow or stop the disease, once it's present. Of course, prevention is the best cure.

Plant certified, pathogen-free seed. There are resistant cucumber varieties, but no squash or melons are resistant. A cucurbit rotation should avoid replanting in the same field for at least 2 years as the bacteria can survive for that same duration. Do not over fertilize and avoid overhead irrigation as well as handling plants while they are wet. This includes cultivation, harvesting etc. Harvest clean plantings first and any infected plantings last as this will help slow the pathogen down. Plow under or burn infected crop debris immediately after harvest. Apply copper alone if organic or with a fungicide like mancozeb that can protect from secondary infection. Copper will help slow disease spread during particularly wet periods but can be dropped if dry weather continues for 2 weeks.

Zucchini with lower leaves infected. Right, close-up of disease symptoms.

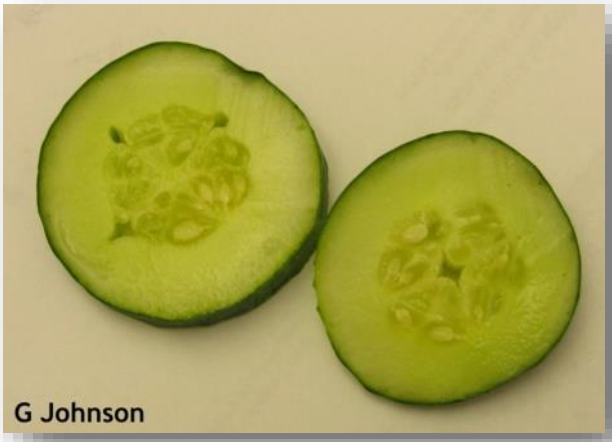
Images: Chuck Bornt

Fruit and Fruiting Disorders in Summer Squash and Cucumbers

Gordon Johnson, University of Delaware

A number of fruit and fruiting disorders have been observed in summer squash and cucumbers over the last two weeks including lack of fruit set, bottlenecking, pinched blossom ends, crooks, nubs, hollow centers or cavities, fruit zippering and scarring.

Lack of fruit set can result from a lack of pollination due to reduced bee activity, reduced pollen viability, or reduced pollen germination in high heat. Water stress will compound this problem. When day temperatures are in the 90s and night temperatures are in the high 70s, plants will commonly abort fruits or produce misshapen fruits. To reduce losses due to heat, apply irrigation so that plants are never under water stress.



Small cavities in cucumber fruit. In a more severe form hollowness and cavities can render the fruits unmarketable or reduce processing (pickling) quality.

Growers should note that some squash (mostly zucchini) varieties will still set fruit without pollination. Steve Reiners at Cornell did a trial in 2013 with 21 varieties of summer squash to determine which were capable of setting fruit without pollination. Female flowers were bagged prior to opening to exclude pollinating insects. After 1 week, bags were removed and fruit rated as to whether it was marketable or not. The results can be found at this web site: http://www.hort.cornell.edu/expo/proceedings/2014/Vine%20crops/Seedless%20squash%20Reiners.pdf. For example Golden Glory and Dunja Zucchini both were able to set a high percentage of fruit without pollination. Selecting varieties with this ability can reduce losses due to poor pollination.

Parthenocarpic varieties of cucumbers and zucchini that set fruit without pollination are also available and can be less susceptible to environmental extremes or conditions that limit bee activity in monoecious or gynoecious varieties. We currently are evaluation 17 parthenocarpic pickle varieties for adaptation to our region.

Lack of fruit set can also be due to harvest management. When summer squash or cucumbers are allowed to progress to an overly mature stage, plants will "shut down" and not reflower for a period of time. To manage this problem, frequent picking (every 2-3 days) is necessary.

Progression from marketable to unmarketable pickle fruits that are crooked, waist pinched, tip pinched or tip pinched with crook.

Misshapen fruits commonly are found in high numbers with high temperatures and water stress in the summer or low night temperatures in the fall. This includes bottle necking, pinched blossom ends, crooked fruits or fruits with "narrow waists". These defects are most commonly due to effects on pollination. Other stresses such as herbicide injury, root pruning in cultivation, or wind damage can increase the number of misshapen and unmarketable fruit. Potassium deficiency can also cause pinching at the stem end.

Hollowness or open cavities in cucumber and summer squash fruit can be caused by inadequate pollination and reduced seed set. Boron deficiency or the combination of boron and calcium deficiency can also result in increased hollowness.

Reminder on Calculating Fertigation Rates for Plastic Mulches

Charles Bornt, ENYCHP

With all the rain so far this season and the fact that I diagnosed some tomatoes with excess nitrogen injury, I thought it might be time to dust off an oldie but a goody article on figuring out the correct amounts of fertilizer we need to be using, especially on our plastic mulched crops. Fertigating, or the injecting of fertilizers into drip irrigation water with crops grown on plastic mulches, is a very common and simple practice these days. However, achieving the right nutrient balance can be tricky. Too much fertility at the wrong time and you could end up with a beautiful plant and no fruit which can happen in tomatoes and peppers or too little and you might not have achieved the optimal yields or quality you were looking for. Below are some general "rule of thumb" reminders when using fertigation:

1. **First, calculating fertilizer needs where plastic mulches and drip irrigation is used:** The key to remember when trying to figure out how much fertilizer to dissolve in your bucket for a crop planted into plastic mulch is, it is **not** the same as a "field acre". You should only calculate the fertilizer needs for what is covered by the mulch.
   A. Determine your bed top width is or the area across that your mulch covers. For example, if you are using a Rain-Flo raised bed maker, a typical bed top width might be 30 inches or about 2.5 feet. There are other machines and other systems that might use a different width so you need to go out and measure it.
   B. Take this value and multiply it by the row length and finally multiply that by the number of rows per section that you irrigate at one time or "zones".
   For example, if my bed width is 2.5 feet, my rows are 345 feet long and I have 5 rows per section then my total acreage would be (2.5 x 345 x 5) divided by 43,560 (number of square feet in an acre) which would be 0.1 acres!

2. **Determining fertilizer needs:** When we talk fertilizers we usually say something like, "I should give that field 7 lbs. of nitrogen". That means 7 lbs. of what we call "actual" nitrogen. If you had a fertilizer that was 100% nitrogen, then you would use 7 lbs. of that fertilizer to treat an acre. However, most of our fertilizers do not have a 100% analysis and may be a blend with an analysis of 20% nitrogen, 20% phosphorous and 10% potassium or a 20-20-10 analysis. The other way to look at it is because these are percentages, there would be 20 lbs. of nitrogen, 20 lbs. of phosphorus and 10 lbs. of potassium in every hundred pounds of the fertilizer product.
   A. If I need to apply 7 pounds of actual nitrogen (per field acre) and the analysis of my nitrogen source is 20% nitrogen, I divide 7 pounds by 0.20. Where did I come up with .20? Again, because fertilizer is usually expressed as a percentage, you need to express it as a decimal in order to do the math. One way I remember this is "what I need" divided by "what I've got" or 7 lbs. nitrogen/0.20 actual in my analysis which is 35lbs of 20-20-10 to get 7 actual lbs. of nitrogen from the fertilizer I've chosen.

3. **STOP! This is where it gets tricky:** That means for one field acre I would need 35 pounds of this fertilizer. **BUT**, because I'm only treating the acreage that is covered by the mulch, I actually only need to dissolve 3.5 pounds of this fertilizer to get my 7 pounds of nitrogen per acre. Why? I only have 0.1 acres to actually treat (the value we determined in step 1) so if you need to multiply your actual acreage (0.1 acres) x the amount of fertilizer needed for an entire acre (35 pounds) = 3.5 pounds of actual 20-20-10 to dissolve in solution**. If you didn't use the 0.1 acres as you treated area, you would be putting on almost 5 times the rate that you needed!**

Putting it all together: Let's do one quick situation that might be the easiest to follow:

A. I have 25 rows, 190 feet long covered with plastic mulch. My top bed width is 2.5' wide. The acreage I want to fertigate then is 25 x 190' x 2.5' = 11,875 square feet. 11,875 sq. feet /43,560 sq. ft. =0.27 acres of mulched beds to be fertigated.

B. My fertilizer is Urea which is 46-0-0 or 46%. I want to supply my tomatoes with 15 pounds of actual nitrogen: 15(what I need) divided by 0.46(what I've got) = 33 lbs. of Urea.

C. What to dissolve in my bucket: Remember 33 lbs. would be if I was treating an entire acre – I'm not – we are only treating what is covered under the plastic or what we determined in

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calculation a: 0.27 acres. So, the total amount of urea I need to dissolve is 33 lbs. per acre x 0.27 acres = 9.0 lbs. of urea!

Some other things to remember:

1. Using liquid fertilizer formulations requires some extra math. First, calculate the liquid density of the fertilizer by dividing the net weight by the net volume. This will give you the total pounds per gallon of the blended fertilizer. You can then divide your calculated total fertilizer poundage requirement using the dry method above by the calculated liquid density in lb/gallon to get your total number of gallons needed per fertigation. Instead of running through an example here, check out this resource from the University of Florida, especially the charts on the bottom: http://edis.ifas.ufl.edu/hs1200
2. Before you go through all the work to plumb in a fertigation unit on your drip system, make sure that the unit you purchase meets the required "gallons per minute" (GPM) needs otherwise it will not operate correctly! For example, if you purchase a Mazzi injector that needs 10 GPM and you are only irrigating a section at a time that is only using 8 GPM, there is not enough flow rate to syphon the fertilizer solution into the main line.
3. Make sure the system has been turned on long enough to pressurize it completely. Failure to do this will result in all of your fertilizer solution getting sucked up all at once and only going to a couple rows.
4. The longer the fertigation event can occur the better the distribution of fertilizer will be. That means if a typical irrigation event for you is 3 hours, then try to have the fertigation happen during the majority of this run time minus the full pressurization and time at the end to make sure the lines are flushed. Minimally I would like to see 15—25 gallons per acre of water used to dissolve your fertilizer to help ensure the best distribution of fertilizer.
5. Know your irrigation water pH: this is something that I know many of us do not do often enough and is a critical factor in nutrient uptake when fertigating. Most crops optimally mine most nutrients (in particular nitrogen and potassium) at a pH of 6.2—6.5. If your irrigation water is above that, you may not be getting the biggest bang for your buck with your fertigations. You can use either sulfuric acid or citric acid to help acidify your water and use the online alkalinity calculator to get your acid concentrations. Be sure to follow all directions on the calculator and pay careful attention to the pull down menus on the input side to get the correct recommendations.
6. Tissue testing: Many of the vegetable crops that we grow have established levels of what the plant should have. I think tissue testing should become a normal routine on many of our farms where we are just doing what we've always done. I know the few growers that have actually got on a tissue testing program have notice the returns very quickly with not just yield, but overall quality of their fruit.

In my opinion, I think weekly fertigation (which some growers are doing) and spoon feeding our plants is a better way to go instead of applying a large dose of fertilizer a couple times a season. This constant feeding and watering may improve not only yield, but also fruit quality as well. Large doses of fertility on certain crops may lead to issues such as fruit cracking (tomatoes) or over vegetative growth. If you need help calculating rates or have questions about these recommendations or need recommendations for other crops, please feel free to contact Chuck Bornt at 518-859-6213.

Lookalike Bugs

Amy Ivy, ENYCHP

Aphids come in many colors and sizes, depending on their age, but they all have one thing in common – cornicles. Cornicles are small horn-like protuberances on the upper abdomen of aphids. You may need a hand lens or reading glasses to be able to see them, but if you find them, you can be pretty confident you're looking at aphids.

Squash bug nymphs go through startling color changes as they mature. When they first hatch they resemble aphids, so take a second look to be sure. At first they stay close to the reddish brown eggs they hatched from, which are on the undersides of cucurbit leaves, which is another clue. After a few days they turn a powdery gray color with long black legs and become more active and mobile.

Squash bug nymphs just hatching
(Jeff Hahn, U Minn Ext)

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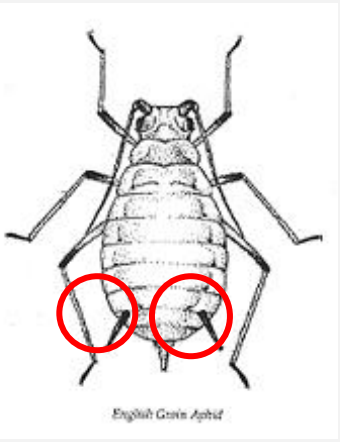
In contrast, aphids move slowly and are almost always grouped together. Some may develop wings but many remain wingless. The surefire way to identify them is to find those cornicles. (http://webipm.ento.vt.edu)

Above Left : Squash bugs nymphs, a few days later (Jeff Hahn, U Minn Ext) *Above Right*: Aphids in a variety of colors. Look closely to see the dark cornicles on this species. The large round tan shapes are bloated dead aphids called 'mummies' that were killed by a beneficial parasitic wasp. (U Mass Ext)

Left: Aphids clustered in the newest growth in peppers. Note the characteristic shine on the leaves from honeydew the aphids exude and the tiny white bits, also diagnostic, that are the shed skins of growing aphids.

Right: Typical aphid shape, note the pair of cornicles on the abdomen inside the red circles



100 years ago the European Corn Borer moth (ECB) was found in the United States!

European corn borers are a primary pest of sweet corn in New York and can cause severe crop damage. The Eastern New York Commercial Horticulture Program helps to monitor the presence of this pest in eastern NY and educate farmers on how ECB can be safely and effectively managed.

"Discovery of the Corn-borer and Area Infested: This borer was first discovered in this country in a field of corn near Boston, Mass., during the summer of 1917. It had probably been imported from Europe in shipments of broom-corn some eight or ten years before. In January of 1919 it was found near Schenectady, N. Y.,and late in the summer of 1919 in some of the lake counties in western New York. *Excerpt from Bulletin by: Illinois Natural History Survey Division (1918)*

Fungal and Bacerial Leaf Blights of Celery and Parsley

Ethan Grundberg, ENYCHP

The wet spring followed by the recent humid conditions and sporadic heavy downpours has led to outbreaks of septoria blight of parsley (*Septoria petroselini*) and bacterial leaf spot of celery (*Pseudomonas syringae* pv. *apii*). Since both these crops, but especially parsley, are sold for their foliage, even minor blemishes can render them completely unmarketable. Both pathogens are seedborne, so starting with clean seed and using hot water treatment are effective strategies to limit disease outbreaks. In the field, avoid irrigating late in the day when leaves won't have a chance to dry down before nighttime since both diseases require an extended period of leaf wetness to spread. Cutting off affected foliage, especially on parsley, and disposing of it can reduce the presence of septoria in the environment enough to allow for healthy regrowth. Applications of labeled copper formulations (Badge X2, Cueva, Champ, etc) on 10 day intervals have also demonstrated some control of both diseases. Double Nickel 55 (*Bacillus amyloliquefaciens* strain D747) is also labeled for both bacterial spot and septoria blight of celery and parsley.

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Bacterial leaf spot of celery

Early stage septoria blight of parsley

Advanced septoria blight of parsley

2017 Weather Table—The weather information contained in this chart is compiled using the data collected by the Network for Environment and Weather Applications (NEWA) weather stations and is available for free for all to use. For more information about NEWA and a list of sites, please visit http://newa.cornell.edu/ This site has information not only on weather, but insect and disease forecasting tools that are free to use.

	2017 GDD Weekly Total 7/11-7/18	2017 GDD Season Total 3/1-7/18	2016 GDD Season Total 3/1-7/18	2017 Weekly Rainfall(inches) 7/11-7/18	2017 Total Rainfall (inches) 3/1-7/18	2016 Total Rainfall (inches) 3/1-7/18
Albany	162.5	1370.5	1399.0	1.63	20.59	13.46
Amsterdam	151.6	1168.6	NA*	1.13	26.58	19.51*
Castleton	142.3	1337.2	1369.1	1.58	19.99	15.54
Eagle Bridge	153.7	1237.1	NA*	1.93	22.34	NA*
Glens Falls	134	1174.5	1242.0	1.56	20.54	13.67
Griffiss	148	1125.5	1146.0	2.6	25.83	20.32
Highland	167.4	1422.1	1479.4	2.27	18.86	14.72
Hudson	164.9	1422.6	1465.6	2.43	20.83	23.73
Marlboro	NA*	NA*	1405.7	1.55	15.91	16.67
Montgomery	177.5	1399.5	1401.0	1.14	14.92	15.87
Peru	121.6	1080.9	1142.4	0.85	16.42	9.18
Red Hook	164.4	1340.7	1393.0	1.26	16.09	12.83
Willsboro	127.4	1088.1	1123.6	0.01	11.47	12.53
N. Adams, MA	140.5	1086.0	1107.5	1.79	19.5	14.83

*NA = data not available

*Amsterdam 2017 rainfall is from 4/1/2017 - 7/18/2017

Cornell University
Cooperative Extension
Eastern New York Commercial Horticulture

Summer Grower Meeting

Tuesday, August 1, 2017

6:30-8:00 pm

Cornell Willsboro Research Farm

48 Sayward Lane, Willsboro, NY

Featured Topics:

- Growing Red Bell Peppers and Cherry Tomatoes in High Tunnels
- High Tunnel tomato fertility management
- Updates on this year's pests and disease challenges
- Group discussion – bring your questions!

Speakers:

Judson Reid, Cornell Vegetable Program

Amy Ivy, Eastern NY Commercial Horticulture

Michael Davis, Cornell Willsboro Research Farm

Free and open to the public.

Light refreshments will be provided.

For more information contact Amy Ivy at adi2@cornell.edu or 518-570-5991.

No formal registration necessary, but it would be helpful to let Amy know by email, text or voice message at the number above if you're coming.

Sponsored in part by the Northern New York Agricultural Development Program. Funding for the Northern New York Agricultural Development Program is supported by the New York State Senate and administered by the New York State Department of Agriculture and Markets.

Learn more at www.nnyagdev.org.

And by the Specialty Crop Block Grant Program at the U.S. Department of Agriculture through a grant from the New York State Department of Agriculture and Markets.

Dinner and a Credit

Speaker:
Brooks Barefoot is a Product Manager for Helena Chemical Company and works directly with the proprietary product line which includes: Adjuvants, Bio-Science, Proprietary Fertilizer, Nutritionals, Seed Treatment, CRN, and VAP. After graduating North Carolina State University in 2009, with a degree in Agriculture Business Management, Brooks began his career working in sales as a Territory Sales Manager. Since April 2015, he has worked in his current role with Helena covering the northeastern territory.

HELENA®

Efficient Use of Adjuvants and other Spray

Thursday, August 3, 2017
6:00 pm – 8:00 pm

DeStefanos Old Erie
7 West Main St. #11, Middletown, NY 10940
Full buffet dinner & dessert included

Dinner will begin promptly at 6:00 pm
and Program at 7:00 pm
The presentation will focus on the selection and use of spray aids that improve spread, stick, efficacy and efficiency of pesticides.

1.0 Core NYSDEC Recertification Credits approved

Fee: Received by July 24: $40/person
Received after July 24/at the door $55/person
Sorry, no refunds. If you cannot attend, please send someone in your place.
Questions?
Call 845-344-1234 or email mru2@cornell.edu

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Efficient Use of Adjuvants and other Spray Aids

Received by July 24: $40/person
Received after July 24 /at the door $55/person
Sorry, no refunds.

Enclosed is a check for $_____

_____
Name of attendee(s)

_____
Business Name

_____
E-mail address

_____
Address

_____
City State Zip

_____
Daytime Phone

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Register online at cceorangecounty.org or call 845-3441234 to pay with credit card.

Return form and fee to:
Cornell Cooperative Extension Orange County
18 Seward Ave., Ste. 300, Middletown, 10940

Sweet Corn Trap Catches 7/11 - 717

County	Corn Ear-worm	European Corn Borer-Z (Iowa)	European Corn Borer-E (New York)	Fall Armyworm	Western Bean Cutworm
Orange	0	0	0	8	4
S. Ulster	0	2	0	0	8
N. Ulster	1	0	2	0	0
N. Dutchess	3	1	1	0	0
Columbia	1	0	1	0	0
Greene	0	0	0	0	1
Albany	2	0	0	0	0
Schoharie	0	0	0	1	1
Fulton	1	0	15	0	0
Saratoga	0	0	1	0	3
S. Washington	0	0	0	0	0
N. Rensselaer	1	0	0	0	0
S. Clinton	0	0	0	0	0
C. Clinton	0	0	1	0	0

Corn earworms- Columbia County, NY

Western bean cutworm -

European corn borer feeding damage & frass

Still unsure about how to scout your sweet corn? Use the video linked below and the scouting form on the following page to identify field damage and decide when treatment is necessary.

NYS IPM "How to Scout Fresh Market Sweet Corn" YouTube video: https://www.youtube.com/watch?v=p6wSrepyuLw&list=UUGSTTbrTmKDc65iMZht1Z7w

To view additional trap info and other NY trap data visit: http://sweetcorn.nysipm.cornell.edu/

For trap catches outside of NY visit: http://www.pestwatch.psu.edu/sweetcorn/tool/index.html

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