

## Eastern NY Commercial Horticulture Program

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# Weekly Vegetable Update

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### **Regional Updates**

North Country - Clinton, Essex, northern Warren and Washington Counties:

The continued warm, sunny weather is helping crops catch up. Most growers report excellent growth, few insect pests and minimal diseases. There is very little, if any, early blight and septoria leaf spot in field grown tomatoes so far this year. The very first signs of powdery mildew are just beginning to show in cucurbits. Powdery mildew prefers humid conditions, rather than rain and wet leaves, so it may take off now that we have a reprieve from the daily rains and humidity is building. Try to catch this early when those first spots begin to show (see photo)



Capital District – Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, southern Warren and Washington Counties:

This much needed heat should really get peppers and eggplant moving along should also be the trigger to make sure you are watering your crops enough, especially if they are on plastic. The rainy weather of the last couple weeks I think has made some crops a little lazy with rooting and with fruit setting and sizing. It's also important to remember that you may have to increase your watering frequency (the number of times you water in a week which is different from the amount of time you let the water run). Remember, it's better for the plant if you water more frequently with less duration instead of only watering once or twice a week all day long! Fall Armyworms have definitely arrived in sweet corn and the second generation of European corn borer has started to emerge. About the only thing we haven't seen yet this season is the arrival of Corn Earworms.

#### Mid-Hudson Valley- Columbia, Dutchess, Greene, Orange, Putnam, and Ulster Counties:

The sample of Late Blight found in Ulster County last week has been confirmed as the US 23 genotype, the same strain found in other parts of the Northeast so far this season. US 23 is sensitive to Ridomil. Growers in the area with tomato and potato plantings should be aggressively treating all fields as they are at high risk to infection if left unprotected. See last week's newsletter for treatment options for both conventional and organic production. No new reports of late blight have come in from the Hudson Valley over the past week. Much of the region received some needed rain over the past week, although more would be welcomed in most areas. Strong storms and quarter-sized hail skirted us to both the north and south, leaving us with some precipitation but little to no damage to crops. Onion harvest of early transplants continues in the black dirt. Tomato harvest is also underway, although the recent high temperatures may have caused a delay in ripening. Removing deformed and/or unmarketable fruit can help speed up the ripening process, especially when temperatures drop back to seasonal norms. Late season Brassicas are still being transplanted for fall harvest. Overall, things are looking pretty good with no major insect or disease issues.

### Catch Squash Bugs Early

Although squash bugs (Anasa tristis) feed on all cucurbits, they are especially fond of summer squash, winter squash (especially Hubbard), and pumpkins. Populations tend to build up as the plants begin to runner. Look for the distinctive feeding damage on the surface of the leaves, then turn the leaves over to find the bugs (see photos below). Nymphs are gray with black legs, adults are dark brown and can be confused with stink bugs.



Turn the leaf over and chances are good you'll find a cluster of gray nymphs that are causing the damage.

Nymphs and adults feed on leaves and can damage large areas, causing the plants to wilt from that point to the tips of the vines. Bacterial wilt may cause similar wilting symptoms at first, but then causes the entire vine to collapse. Adult stink bugs can also feed on the fruit, causing cosmetic damage and may make them unmarketable.

To control squash bugs, target the nymphs. Since they stay on the undersides of the leaves, good spray coverage is essential. Adults continue to feed and lay eggs all summer.

Adults overwinter on plant debris so remove or till under as much as possible. Assail 30SG, Sevin XLR Plus, Asana XL, and Warrior II w/Zeon are listed for this pest.

-ADI

Reference: 2015 Cornell Integrated Crop and Pest Mgt Guidelines Vegetables, pg 197-8.

For further reading: <a href="https://attra.ncat.org/attra-pub/download.php?id=138">https://attra.ncat.org/attra-pub/download.php?id=138</a>



Scan tops of leaves, look for clusters of yellow markings (inside the orange circles) on otherwise green leaves.



On the underside of leaves, look for clusters of the reddish-brown eggs. They usually sit alongside the veins, making it difficult to crush the eggs without damaging the leaves.

### Conventional Fungicide Program for Managing Cucurbit Powdery Mildew Successfully in 2015

Margaret Tuttle McGrath, Cornell University Long Island Horticultural Research and Extension Center

Keys to effectively managing powdery mildew in cucurbit crops:

- 1.Begin applications before or at the start of powdery mildew development. The action threshold is one leaf with symptoms out of 50 older leaves examined. Protectant fungicides (chlorothalonil, sulfur, oil, copper, or biopesticides) can be applied before symptoms are found to slow initial development. Important to examine lower surfaces as symptoms may start there, especially when protectants are being used. Powdery mildew usually begins to develop around the start of fruit production.
- 2. Alternate among targeted fungicides with specific activity for powdery mildew based on their FRAC code. See list below. These do not have curative activity and thus will not affect spots already present, thus starting applications early is

Managing Cucurbit Powdery Mildew, continued from last page

critical to successful management as well as minimizing selection pressure for resistance in the pathogen. Alternation programs have often been more effective than single products in efficacy trials, they are required to comply with label use restrictions, and they are important for managing resistance.

- 3. Apply targeted fungicides with protectant fungicide to manage resistance development and avoid control failure if resistance occurs, and also to comply with label use restrictions (most mobile fungicides are not permitted used exclusively).
- 4. Apply fungicides on a 7-day schedule.

Recommended targeted fungicides (first three are the best choices):

<u>Vivando (FRAC Code U8)</u> is a new fungicide with a new mode of action. Cucurbits are on a supplemental label. It has exhibited excellent control in fungicide evaluations conducted recently. Activity is limited to powdery mildew. Do not mix with horticultural oils. It can be applied three times per year with no more than two consecutive applications. REI is 12 hr. PHI is 0 days. 365 day plant back restriction for non-labeled crops.

<u>Torino</u> (FRAC Code U6) is a new fungicide with a new mode of action. It has exhibited excellent control in fungicide evaluations conducted recently. Activity is limited to powdery mildew. It can only be applied twice to a field in a 12-mo period. Consecutive applications are not recommended. REI is 4 hr. PHI is 0 days.

Quintec (FRAC Code 13) has been consistently effective in fungicide evaluations. Activity is limited to powdery mildew. Labeled crops are pumpkin, winter squash, gourd, and melon. The Quintec label specifies no more than two consecutive applications plus a crop maximum of four applications, and no aerial applications. There is no longer a crop rotational restriction of 12 months for non-labeled crops. Quintec continues to be the only fungicide in this chemical group available in the USA. It is the only mobile fungicide that does not move into leaves: it redistributes to foliage where spray was not directly deposited, including the underside of leaves, through diffusion and a continual process of absorption and desorption in the cuticular waxes of foliage. REI is 12 hr. PHI is 3 days.

<u>DMI fungicides</u> (FRAC Code 3) include Procure, Rally, Tebuzol, Folicur, and Inspire Super. Resistance is quantitative. Highest label rate is recommended because the pathogen has become less sensitive to this chemistry. Efficacy has varied in fungicide evaluations, therefore use sparingly. Procure applied at its highest label rate provides a higher dose of active ingredient than the other Code 3 fungicides. Five applications can be made at this rate. REI is 12 hr. PHI is 0 days. Powdery mildew is the only labeled cucurbit disease for these fungicides, except for Inspire Super, which contains another active ingredient (Code 9) and is labeled for additional diseases. Its PHI is 7 days.

<u>Pristine</u> is the only carboxamide fungicide (FRAC Code 7) registered in NY. Strains of the powdery mildew pathogen resistant to Pristine have been detected and likely are the reason its efficacy has varied. Limit use. REI for Pristine is 12 hr and PHI is 0 days.

<u>No longer recommended</u>. Resistant pathogen strains are sufficiently common to render the following fungicides ineffective: Topsin M (FRAC code 1; MBC fungicide) and QoI fungicides (Code 11), which include Quadris, Cabrio and Flint.

Please Note: The specific directions on fungicide labels must be adhered to -- they supersede these recommendations, if there is a conflict. Note that some products mentioned are not yet registered for use on cucurbits. Check labels for use restrictions. Any reference to commercial products, trade or brand names is for information only; no endorsement is intended.

### More Information on Cucurbit Powdery Mildew

Other then summer squash, I haven't really seen Powdery mildew in the pumpkins and winter squash that I've looked at. However, I did want to add a couple more points to last week's article on PM and the schedule that we included:

- 1. If you use Torino include a Non-Ionic Surfactant (NIS) to the tank for improved control.
- Vivando: please note that there is a 365 plant back restriction on the Vivando label for crops not already on the label. Crops on the label are cucurbits, apricots, cherry subgroup, peach subgroup, hops, fruiting vegetables (tomatoes, peppers, eggplant, etc.) and grapes. BASF has received reports that select apple varieties were injured when tank mix applications of Vivando fungicide were applied. Therefore, BASF advises that growers NOT make applications of Vivando fungicide to these apple varieties: Macoun, Baldwin and SnowSweet®. According to BASF representatives, early spring applications when apple tissues are young and tender is the time for the most concern. However, use caution when spraying cucurbits around apple trees and be sure to clean your sprayer out completely if using the same sprayer for apples.
- 3. If using Procure or Rally, please use the highest rates given on the label for Powdery Mildew.
- 4. The recommended spray interval is 7 days and please be sure to rotate chemical classes!

#### -CB

### **Cucurbit Downy Mildew Forecast for this week**

The reports from around us continue to roll in with new reports this week from Pennsylvania of CDM in butternut and from New Jersey on giant pumpkins. We have been scouting pretty hard for CDM in cucumbers and some other cucurbits and have not found it yet. It appears that Monday of this week could have been a high risk for cucurbits in the southern counties of our program, near the New Jersey and Connecticut borders. The risks later in the week was minimal. If you need assistance in identifying what might be CDM or fungicide recommendations, please do not hesitate to contact one of the vegetable educators in the ENYCHP. Our contact information can be found on the front of this newsletter!

This weeks CDM Outlook summary: On Monday of this week (July 27th) there was a HIGH Risk for DE, eastern MD, southeast PA, and NJ. Low Risk in central AL, southern IN / southeast IL, northern SC, NC, southern and eastern VA, Long Island, southeast NY, and most of CT. Minimal Risk to cucurbits otherwise.

### Risk prediction map for Day 2: Tuesday, July 28: Moderate Risk to cucurbits in central WI, central and northern FL and the eastern panhandle, eastern and northern AL, GA, SC, NC, VA, MD, DE, and southern NJ. Low Risk for southern FL, southeast and eastern LA, southwest AL, the western FL panhandle, central and eastern TN, far southwest VA, KY,

To view the weekly forecasts for yourself or sign up for CDM reports, <u>Click here</u> or visit: http://cdm.ipmpipe.org/

VERMONT Toronto CHIGAN NEW HAMPSHIRE NEW YORK MASSACHUSETT RI OHIO NDIANA MARY Washir VIRGINIA KENTUCKY

Risk prediction map for Day 1: Monday, July 27

Risk prediction map for Day 2: Tuesday, July 28



-CB

wise.

### **Verticillium Wilt in Eggplant**

I'm seeing more verticillium in eggplants this year than in the past. Oftentimes the progression of this disease is slow but still results in significant yield loss because there is little a grower can do to stop the disease once it is in the crop. To make matters worse, it persists in the soil for many years, with limited management options. Because of its wide host range effective rotations are difficult to implement leaving subsequent crops such as tomatoes susceptible to infection, particularly "heirloom" tomatoes that do not carry tresistance that many of the modern tomato varieties do. Below is a compilation of information on this topic.-TR

Verticillium wilt is a common soil-borne fungal caused by either *Verticillium albo-atrium* or *Verticillium dahlia* and has a wide host range (over 200 plant species). Both pathogens can survive (overwinter) as microsclerotia in the soil. Verticillium wilt prefers cooler weather with V. albo-atrum growing best when soil temperatures are between 65 and 75 degrees F. and V. dahliae more active between 75 and 83 degrees F. Both types prefer drier soils and can be more severe in neutral to alkaline soils. Although this disease is retarded by higher temperatures symptoms may appear to be more severe when high temperatures exist, due to restricted water movement in the plant brought about by damage done to the water conducting vessels earlier in the growing season.



Symptoms can vary between hosts, but on eggplant the leaves of infected plants will typically become lopsided where one side of the leaf will wilt and stop expanding while the other side continues to develop. Sometimes symptoms appear on only half the plant. Vascular tissue near the soil line will become discolored. Eventually the entire plant may collapse as the vascular tissue becomes more infected (clogged) and water movement up the plant stops.

#### Management:

- ♦ There is no resistance to verticillium wilt in eggplant. Some cultivars, such as 'Classic' and 'Epic' may maintain yield in infested fields.
- Rotations with broccoli, corn, wheat, barley, sorghum or safflower for a period of at least 2 years (the longer the rotation, the better) can reduce inoculum. These crops are not hosts for the *Verticillium* pathogen, and populations of the pathogen will decline in fields where host plants are not present. In any case, do not replant eggplants in the field for a minimum of 3 years. Solanaceous weeds such as Nightshade may harbor the pathogen.
- ♦ Soil fumigation in greenhouses or with plastic-strip mulch, soil fumigation gives good control and is feasible on high-value crops.
- Whenever practical, remove and destroy infested plant material after harvest.
  Maintain a high level of plant vigor with appropriate fertilization and irrigation, but do not over-irrigate, especially early in the season.

Sources: University of California(http://www.ipm.ucdavis.edu/PMG/r211100111.html); Ohio State (http://ohioline.osu.edu/hyg-fact/3000/3122.html); Andy Wyenandt- Rutgers Cooperative Extension (http://plant-pest-advisory.rutgers.edu/verticillium-wilt-in-eggplant)

### New Fungicide Labeled for Early Blight

I just recently found out that Priaxor, a new fungicide for vegetable crops was labeled in NYS early this year and this is what Cornell Plant Pathologist Margaret McGrath has to say about it:

Priaxor contains fluxapyroxad, a new SDHI (FRAC group 7) fungicide and pyraclostrobin, the QoI (strobilurin; FRAC group 11) fungicide developed by BASF. Priaxor is labeled for disease control and plant health in the following crops: barley, corn (all types), dried shelled peas and beans, edible-podded legume vegetables, fruiting vegetables (including tomato), oats, oilseed crops (flax seed, rapeseed, safflower, and sunflower), peanut, rye, sorghum and millet, soybean, succulent shelled peas and beans, sugar beet, sugarcane, tuberous and corm vegetable (potato), wheat and triticale. New active ingredients in a chemical group typically are intrinsically more active than those developed previously. Thus Priaxor is generally recommended used in place of products containing boscalid (Pristine and Endura). Fluxapyroxad is not only more active than boscalid, it also has broader spectrum of activity. Early blight in tomato and potato is one of the most important uses for Priaxor. QoI fungicides are no longer recommended used alone for this disease because resistance is becoming widespread. Having a QoI component in Priaxor is important for managing Septoria leaf spot, another important disease in NY. While not as active as a QoI, fluxapyroxad does contribute to control of this disease. Surprisingly, fluxapyroxad is not as effective as boscalid for white mold, thus Endura remains the top choice for this disease in edible beans and other susceptible crops.

Priaxor is classified for restricted use in NY. Use is prohibited in Suffolk and Nassau counties on Long Island. REI is 12 hours. PHI is 0 days for tomato. It is as long as 21 days for some other crops.

### Farmers' Markets - End of day weigh-in

You probably know exactly how much product is going to your markets, but you may not know exactly how much comes home with you. In the frenzy of a long and busy line, it is often nearly impossible to record every bunch of basil and head of lettuce that was sold. You may have brought everything in uniform boxes with the number of boxes recorded, in which case it's quite easy to determine how much was sold.

This season, make the effort to find out exactly what you're coming home with. This will not only be helpful for your business, but it also is helpful from a food safety standpoint. There is a major benefit to knowing the weight of product you brought to market and the weight of the product you came home with. If you give end-of-market discounts, freebies to frequent customers, or make other deals, having this information will enable you to calculate your revealed (true) prices per pound. If someone else is running the market for you, this is also a good way to make sure that every dollar is accounted for. If weighing each box is too labor intensive, then counting boxes is a close second. Use uniform containers for each item, and pack them in a uniform manner. This will allow you to tally up your totals in just a few minutes. The product that you sold is your income, and it is also your market liability. You are responsible for the produce that you bring to market, and it is a good practice to know exactly what you have in the market place being consumed at any given point in time. If you are following our recommended traceability program, each box is part of a lot that can be traced back to packing, harvesting, and field of origin. The total system gives you the knowledge of how much of each lot is in the market place. If you were to later determine that there were a problem with a given lot, this information would allow you to put into action a voluntary recall plan to avoid any further consumption of contaminated product.

Standardizing your market packing and labeling, along with counting or weighing at the beginning and end of the market (in addition to your cash ledger) will give you all the information you need to preserve your traceability system and make future business decisions regarding what products to bring and in what quantities.-ES

### Calendar of Events

### Tuesday, August 4th

**IPM Field Meeting:** 1-3:30PM

Join Cornell Vegetable Specialists at Gray's Garden and Greenhouse, 6193 State Hwy 29, St Johnsville, for a walkthrough of a diversified vegetable and blueberry operation. Bring your disease samples in sealed bags! 1.5 DEC credits awarded. For more information contact Crystal Stewart cls263@cornell.edu

#### Thursday, August 6th

#### **High Tunnel Tomato Production Twilight Meeting:** 5–6:30 PM

Join Cornell vegetable specialists along with our gracious host Susan Decker at Blue Star Farm, 545 County Route 26A, Stuyvesant, NY 12173. Topics: Water Quality Considerations and Alkalinity Testing Demonstration\*— Soil Best Management Practices/ Foliar Nutrient Testing- Pruning and Disease Management \*( Bring a 200ml water sample in a clean plastic or glass bottle labeled with your farm name and contact) There is *no charge* for this program which is brought to you by: The New York Farm Viability Institute and Federal Formula Funding, The Cornell Vegetable Program & The Eastern NY Commercial Horticulture Program. For more information contact Teresa Rusinek 845 389-3562 or email tr28@cornell.edu

#### Wednesday, August 19th

Limiting Bird Damage in Fruit: State-of-the-Art Pest Management Tactics

(A Vertebrate Damage Management Workshop)

4H Training Center, 556 Middleline Rd, Ballston Spa, NY 12020.

This comprehensive class will feature results and speakers from a multi-year, multi-state project that looked at several different fruit crops. Registration details to follow.

#### Thursday, August 20th

Save the date for the Tomato Variety and Disease Twilight Meeting at the Hudson Valley Farm Hub, 1875 Hurley Mountain Road, Hurley, NY 12443. Join Eastern NY Commerciale Horticulture Vegetable specialists and Margret McGrath from the Cornell LI Research Extension Center to tour the tomato disease resistance trial at the hub. Help us evaluate 10 new tomato varities being developed by Cornell University plant breeder Dr. Martha Mutschler. We will tour the variety trial taste tomatoes and discuss tomato diseases and management. 1.5 DEC pesticide applicator credits have been applied for. For more information, Please contact Teresa Rusinek at 845-389-3562 or tr28@cornell.edu

### **Eastern NY Commercial Horticulture Website**

For event announcements and registrations, previous issues of our newsletters and more, please visit the Eastern NY Commercial Horticulture Team's website at <a href="http://enych.cce.cornell.edu/">http://enych.cce.cornell.edu/</a>. We hope you bookmark it on your computer and begin using it as your 'go to' website for production and marketing information.

Email or call any of the educators with questions or comments on the website – we want to make it work for YOU!

### Watch out for Heat Stress

All workers should carry plenty of water and have some form of protection from the sun, such as sunscreen and widebrim hats. Take regular breaks in the shade. Monitor your employees and co-workers for symptoms.

#### The most common signs and symptoms of heat exhaustion include:

- ⇒Confusion
- ⇒Dark-colored urine (a sign of dehydration)
- ⇒Dizziness
- ⇒Fainting
- ⇒Fatigue
- ⇒Headache
- ⇒Muscle or abdominal cramps
- ⇒Nausea, vomiting, or diarrhea
- ⇒Pale skin
- ⇒Profuse sweating
- ⇒Rapid heartbeat

### Watch out for Fall Armyworms in Sweetcorn!

I am always concerned when we don't catch anything in our traps and start to second guess if the lures are good, is the trap placement correct etc. But this week I was assured that our traps were working fine! I was very surprised to find what our Fall Armyworm trap almost completely filled and as I scouted nearby corn, I saw a considerable amount of damage from Fall Armyworm. This week we also trapped a fair number of Western Bean Cutworm months in our traps in Columbia County and a few in Albany as well.

#### **Fall Armyworms:**

The damage from FAW is easily distinguished from other sweet corn pest. Their feeding patterns are ragged, leaving large holes in leaves and in particular the whorl. They can quickly defoliate a young corn plant (Figure 1) and move into

the protection of the whorl which can make it difficult to get contact insecticides in there to work. They also leave lots of sawdust looking frass on the plant and in the whorl. The larvae are also much larger then European Corn borer and do not do the classic "window paneing" damage that ECB does.

At this point I would scout your fields for FAW damage and consider an application if damage is found, especially on young plantings. Although they are usually pretty easily controlled with most pyrethroid insecticides, with this weeks high temperatures and humidity and the fact they are moving quickly into the whorls, pyrethroids may not be the best choice. In talking with Cornell Entomologist Peter Jentsch, Coragen (or other chlorantraniliprole containing material) plus a penetrant would be the best choice followed by Belt SC and finally Radiant SC (also with penetrants added).



Figure 1: Note the large feeding holes and sawdust frass on this young corn plant. Inside the whorl was a 1" long Fall Armyworm larvae.

Watch out for Fall Armyworms in Sweetcorn!, continued from last page

As also mentioned, Western Bean Cutworm moths are being caught in traps this week as well which is not surprising as this is the time we would start to see them emerge. This larvae looks similar to Corn earworm and will make their way to the ear zone. They lay their eggs on the top of the leaf and can be easily spotted. The threshold for WBC is 1% infestation which essentially means as soon as you see it, you've hit your threshold. Usually, sprays for second generation ECB and aphids are enough to control WBC, but you need to scout and monitor for this pest.



Figures 2 and 3: Feeding damage on corn leaves and silks caused by adult Japanese Beetles.

There was a lot to find on sweet corn this week as I also found a fair amount of Japanese Beetle feeding on corn leaves (Figure 2) and several making their way to fresh silks (Figure 3). Although usually not a major problem, if in large numbers JB can cause a lot of feeding injury on foliage, but more importantly, they can clip or feed on the silk resulting in poor pollination and kernel development of the ears. Control usually occurs when we are treating for other pests and labeled insecticides include carbaryl, Baythroid XL and Warrior II. -CB

### **Sweet Corn Pest Trap Catches**

(Last Week ending 7/20/15, This Week ending 7/27/15)

Location	ECB-E Last Week	ECB-E This Week	ECB-Z Last Week	ECB-Z This Week	CEW Last Week	CEW This Week	FAW Last Week	FAW This Week	WBC Last Week	WBC This Week
Central Clinton	0	0	0	0	0	0	0	0	0	3
South Clinton	0	0	0	0	0	0	0	0	0	1
Orange County	1	0	3	1	7	5	0	6	2	0
Central Ulster	0	1	0	0	0	0	3	3	N/A	N/A
Northern Ulster	1	4	6	5	1	0	N/A	N/A	N/A	N/A
Northern Washington	0	1	0	0	0	0	N/A	4	N/A	4
Southern Washington	1	16	0	0	0	0	N/A	N/A	N/A	N/A
Albany County	6	0	1	0	0	0	12	30	4	4
<b>Fulton County</b>	1	0	0	0	0	0	N/A	N/A	N/A	N/A
Schoharie County	0	0	0	2	N/A	0	N/A	N/A	N/A	N/A
Northern Columbia	6	0	0	2	0	0	0	127	0	50

**2015 Weather Table**—The weather information contained in this chart is compiled using the data collected by 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.

2015 Weekly and Seasonal Weather Information											
	Growing Deg	gree Informatio	on Base 50° F	Rainfall Accumulations							
Site	2015 Weekly Total 7/19–7/27	2015 Season Total 3/1 - 7/27	<b>2014 Season Total</b> 3/1 - 7/27	2015 Weekly Rainfall 7/19-7/27 (inches)	2015 Season Rainfall 3/1 -7/27 (inches)	2014 Total Rainfall 3/1 - 7/27 (inches)					
Albany	149.1	1665.0	1578.0	0.27	12.99	16.71					
Castleton	173.6	1556.9	1493.8	0.16	15.09	16.6					
Clifton Park	184.6	1594.5	1429.6	0.19	12.04	16.99					
Fishkill	178.2	1599.5	Na <sup>1</sup>	0.03	5.17	Na <sup>1</sup>					
Glens Falls	255.6	1421.3	1418.0	0.58	12.23	19.75					
Griffiss	153.4	1326.3	1324.0	0.87	19.88	20.31					
Guilderland	178.0	1496.0	1436.5	0.16	13.78	Na <sup>2</sup>					
Highland	193.3	1686.8	1582.8	0.21	16.14	21.46					
Hudson	189.0	1679.1	1600.9	0.39	13.15	23.79					
Marlboro	185.0	1611.0	1523.3	0.27	12.5	20.21					
Montgomery	185.0	1653.2	1552.0	0.12	0.55	17.45					
Monticello	153.9	1292.2	1226.0	0.51	8.92	7.27					
Peru	163.9	1335.6	1349.6	1.03	15.19	16.71					
Red Hook	177.6	1593.1	1566.6	0.32	15.11	11.07 <sup>3</sup>					
Wilsboro	156.0	1296.8	1296.3	2.54	20.14	11.0					
South Hero, VT	170.3	1380.3	1384.6	0.91	17.11	17.77					
N. Adams, MA	153.6	1279.8	1271.0	0.32	14.63	16.87					
Danbury, CT	183.7	1513.7	1425.5	0.17	14.96	19.39					

Na<sup>1</sup>: The Fishkill site is new for 2015 so there is no historical data to report.

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

Na<sup>2</sup>: The Guilderland weather station was not properly reporting precipitation data in 2014 so no data will be shown for this site.

<sup>\*:</sup> Precipitation data for this site did not began until May of 2014.