



Bad news! Cucurbit downy mildew has been found in Erie County on cucumber.

Recommendations for managing this disease are provided.

**PAGE 1**



Bacterial diseases have been seen on beans in our region. Learn how to tell the

difference between diseases and how to manage them.

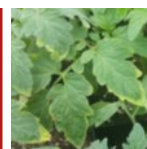
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Got weed escapes in your Cole crops? Read about your post-emergent broadleaf weed

control options.

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Manganese deficiency in HT tomatoes is not caused by a lack of Mn in the soil, instead the pH

prevents its uptake. Don't treat the symptoms; treat the cause.

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# VEGEEdge

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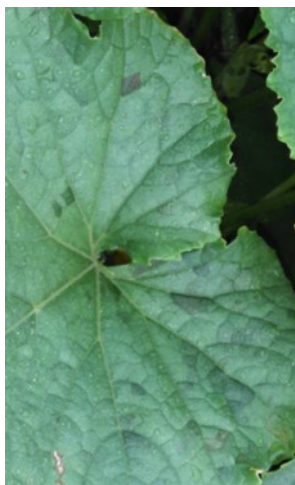
**Cornell University**  
Cooperative Extension  
Cornell Vegetable Program

*Photo: Judson Reid*

## Cucurbit Downy Mildew in New York

*Darcy Telenko, CCE Cornell Vegetable Program*

Cucurbit downy mildew has been found in Erie County, NY on cucumber. This disease quickly moved up the coast with the recent weather systems and is officially here. Characteristic disease symptoms are angular, pale green areas bounded by the leaf veins. They will turn yellow and later necrotic (see photos). Under high humidity conditions sporulation will occur on the lower leaf surface. Apply targeted fungicides tank-mixed with protectant fungicides weekly and alternated among available modes of action (FRAC code), starting when there is a risk for specific crop based on forecasting program.



Downy mildew in cucumber, symptoms on leaf surface – initial water soaked angular lesions (left), yellow angular lesions (middle), and necrotic angular lesions (right). *Photos: Darcy Telenko, 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 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.

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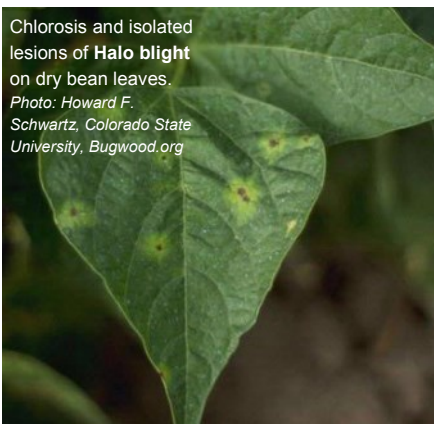
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*The next issue of VegEdge will be produced July 8, 2015.*

## Be on the Watch for Bacterial Diseases of Beans

*Julie Kikkert, CCE Cornell Vegetable Program*

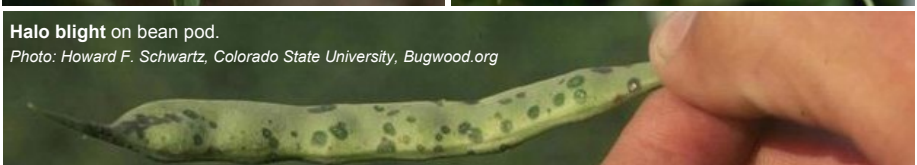
A few cases of bacterial diseases have been seen on beans in our region. Heavy rains are very favorable for the development and spread of these diseases. Severe disease outbreaks typically occur seven to ten days after a period of humid, rainy weather. High winds and hail cause wounds which enable pathogens to enter and infect the tissue. Three different pathogens may be involved (see table). Each may cause lesions (spots) on leaves, stems or pods.



Chlorosis and isolated lesions of **Halo blight** on dry bean leaves.  
Photo: Howard F. Schwartz, Colorado State University, Bugwood.org



**Bacterial brown spot** on dry bean pod.  
Photo: Howard F. Schwartz, Colorado State University, Bugwood.org



**Halo blight** on bean pod.  
Photo: Howard F. Schwartz, Colorado State University, Bugwood.org

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Margaret McGrath, plant pathologist, states that *“this disease has become more difficult to manage due to fungicides (in particular Presidio and Previcur Flex) not performing as well as they have in the past likely because of fungicide resistance.”* She recommends the following list for growers to consider. **All should be used tank-mixed with a protectant fungicide (mancozeb or chlorothalonil) and in an alternating program to manage development of resistance to additional fungicides.**

**Ranman.** Can be applied at most 6 times. Alternate with other fungicides such that no more than 50% of the applications are Ranman. Ranman can be applied 3 times consecutively but these need to be followed by 3 applications of other fungicides. Use with an organosilicone surfactant.

**Curzate or Tanos.** These have some curative activity (up to 2 days under cool temperatures) but limited residual activity (about 3-5 days). They can be a good choice when it was not possible to apply fungicide at the start of a high risk period when temperature is below 80 F. Both must be tank-mixed with a protectant. Apply another targeted fungicide 3-5 days later. Apply no more than 4 times in a season (6-9 for Curzate depending on rate); no consecutive applications of Tanos are permitted. REI is 12 hr. PHI is 3 days.

**Forum.** Apply no more than 3 times in a season with no more than 2 consecutive applications. REI is 12 hr. PHI is 0 day.

**Gavel** (now labeled for use on all cucurbits). This is the only product that consists of a targeted fungicide and a protectant fungicide (mancozeb). Apply no more than 8 times in a season. Some cantaloupe varieties are sensitive to Gavel. Workers must be notified that a dermal sensitizer was applied both orally and by posting at entrance to treated area for 4 days. REI is 48 hr. PHI is 5 days.

Phosphorous acid fungicides are labeled but are not as effective inherently as for other downy mildews.

Note that Ridomil and Qol fungicides have not been recommended for several years because of resistance.

In addition there are a number of OMRI-listed products purported to help control downy mildew in cucurbits: copper, neem, biofungicides (e.g., Serenade®), peroxides (e.g., OxiDate®), and bicarbonates (e.g., Kaligreen®). Copper may be the best organic option, but only on the crops that show little to no symptoms, if the infection is far along spraying wouldn't do much good. Spray early in the morning to avoid phytotoxicity problems caused by spraying in the heat of the day. If the disease is present on the farm, a prophylactic application of a copper product can be made to cucurbit crops that show mild or no symptoms. If the weather does not favor the disease (which likes it warm and wet and humid), then the copper is more likely to suppress the disease. In other words, the copper may help but it may not be enough. ●



Downy mildew in cucumber – sporulation on underside of leaf. Photo: Darcy Telenko, Cornell Vegetable Program

## Colorado Potato Beetle are Active

Darcy Telenko, CCE Cornell Vegetable Program

Colorado Potato Beetle will feed on foliage of potato, tomato, eggplant, and pepper. Scouting programs and thresholds for initiating sprays have been developed for potato and tomato (see Vegetable Guidelines for more details). In general the threshold for potato after sample 50 plants in a field is  $\geq 200$  small larvae,  $\geq 75$  large larvae, and  $\geq 25$  adults. For tomato, thresholds are still in the development stage, but current data recommend a threshold of  $\frac{3}{4}$  adult of  $\geq 10\%$  defoliation in plants up to 10 inches tall; 1 adult or larvae per plant of  $\geq 20\%$  defoliation for plants 10 inches to early fruit set; and  $\geq 10\%$  defoliation or  $\geq 2\%$  plants with one freshly injured fruit. ●



Colorado potato beetle larvae feeding on field tomatoes. Photo: Darcy Telenko, Cornell Vegetable Program

# CROP INSIGHTS

## WET WEATHER

A perfect storm has been brewing with the abundance of moisture many fungal and bacterial diseases continue to appear on numerous crops. In addition, the vast amount of rain has led to nutrient deficiencies, particularly in crops with high nutritional requirements.

## BASIL

Basil downy mildew has been found in a number of location in NY in the field and greenhouse. Margaret McGrath is tracking occurrences, please contact us if you suspect it in your basil.

## DRY BEANS

Planting continues to be held up by rain and wet fields, though some acreage did get planted the end of last week. The largest beans have 1-2 trifoliates.

## ONIONS

Onion growers are beginning another week in need of drying out from the weekend and Monday's rain events. At this point, there is significant stunting from saturated soil conditions in several fields. Fields that were already in rough shape are getting worse, those that had just dried out and were getting going again are set back again, while those that have been weathering all the rain all along continue to look very well. Earliest transplants are now starting to lodge and it looks like these early varieties are going to yield very well this year.

Surprisingly, despite all of the rain and seemingly favorable conditions for leaf diseases, the crop still looks quite clean. Botrytis leaf blight (BLB) counts are similar to last week's counts and all fields are now getting weekly fungicide sprays. This week, there is a lot of pelting rain injury in the onions following the recent rain events, the



**Figure 1.** Pelting rain injury on onion foliage, occurs on all the leaf surfaces exposed to the driving rain. The injury could be confused with Botrytis leaf blight, but BLB occurs in highest density anywhere along the outer 3 leaves. Photo: Christy Hoepting, CVP

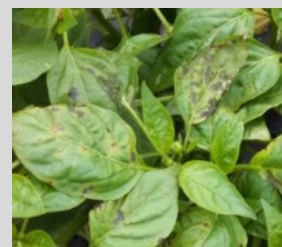


**Figure 2.** A) Botrytis leaf blight lesions, B) pelting rain injury, and C) necrotic spotting from herbicide injury. Photo: Christy Hoepting, Cornell Vegetable Program

bruises of which could be confused with BLB (Fig. 1 & 2). For managing BLB, Bravo has consistently been the best performing product in Cornell trials, and it is recommended to use Bravo 3 pts or Bravo 1.5 pts + mancozeb 3 lbs. Mancozeb does not have much activity against BLB and serves as a protectant against downy mildew (DM). Mancozeb can reduce the initial development of DM, but once this disease gets going, it needs a lot of help from more potent fungicides. Downy mildew usually first shows up in isolated hot spots sometime in July, and since the actual infection occurs about 2 weeks prior to the onset of symptoms, it would be judicious, but not critical, to include mancozeb in the tank mix at this time, especially since the night time temperatures will be dipping into the 50s, which is favorable for development of this disease. Using a combination of Bravo 1.5 to 3 pts + Scala 9 to 18 fl oz is a good tank mix for managing target spot lesion diseases, Purple Blotch and Stemphylium leaf blight, which also begin to show up in July once plants start bulbing. Fortunately, this weather has not been favorable for onion thrips as populations have remained very low even in fields that haven't been sprayed with insecticides. So, for the most part (some direct seeded fields are nearing threshold for their first Movento spray), no need to worry about tank mix incompatibilities with Bravo and Movento (see June 17 issue of VE), and spray all the Bravo you want.

## PEPPER

Bacterial spot has been in a number of pepper fields. Symptoms start as small, irregularly shaped, water-soaked lesions on the underside of the leaves that can grow up to ¼ inch in diameter, turn dark brown, and become raised. These necrotic spots may be found on leaves, stems and fruit and as the disease progresses the lesions may coalesce resulting in large necrotic areas. Copper based sprays should be applied before and during periods of rain and high humidity. Plant surfaces need to be protected since once inside the tissue bacterium cannot be controlled.



Bacterial spot on pepper. Photo: D. Telenko, Cornell Vegetable Program

## POTATO

Growers were planting and re-planting fields, hilling, and spraying this past week, until the significant general rain over the weekend. The fresh market muck potato variety trial was planted 6/24. Thanks to Williams Farms for preparing the field, and to Walter DeJong's Cornell potato breeding program and Don Halseth, Cornell, retired, for planting the trial!

## SWEET CORN

With a little heat the earliest fresh market sweet corn plantings may start to be harvested within a week.

*continued on next page*

## TOMATO

Although no Late Blight has been confirmed in NY this growing season, Early Blight and Septoria Leaf Spot (see pics) are now becoming more common. These diseases can cause yield losses just as well as Late Blight. Humid, wet weather favors their spread. Conventional spray materials include chlorothalonil and copper, whereas organic growers will need to focus on copper and a growing arsenal of biologicals such as Actinovate and Double Nickle.

Before reaching for that fungicide, ask yourself... Have I done all that I could? Have I used new stakes? Have I rotated away from tomatoes and potatoes for 2-3 years? Have I spaced these plants to promote air movement? Have I chosen resistant varieties?

## VINE CROPS

Cucurbit downy mildew is here – see cover article.

Angular leaf spot can be found in many cucurbits including squash, cucumbers and melons. With early infection, brown spots can be seen with light yellow tissue surrounding it. Soon the tissue dies away and holes are left. With many spots on a leaf, loss of productivity can occur. This disease can survive in plant debris for several years. Rotations are critical in keeping this disease at bay. Resistant varieties in cucumbers are available but less so for other cucurbits. Coppers are the best choice for sprays.

Anthraxnose showed up a lot last season due to the wet conditions and I have seen it already on several plantings of melon, watermelon, and cucumber. Most often, leaves show symptoms but all parts of the plant are vulnerable. On leaves, spots are round and begin to have a water-soaked appearance. Soon after the spots turn yellow. For watermelon the spots aren't as circular as with cucumber then turn brownish black. If the lesions form on the stems, it will increase in size and can girdle the stem causing the plants to wilt and die. Fruit will also get lesions. The spots turn into sunken black pits ruining any chance for a marketable harvest.

For more information and pictures go to Veg MD Online [http://vegetablemdonline.ppath.cornell.edu/factsheets/Cucurbit\\_Anthracnose.htm](http://vegetablemdonline.ppath.cornell.edu/factsheets/Cucurbit_Anthracnose.htm)

Apply approved fungicides to the crop at regular intervals, more often if frequent rains occur. Among fungicides available are chlorothalonil (Bravo), Cabrio, and ManKocide among others. Check with the Cornell Vegetable Guidelines for a complete list.

Hot spots of cucumber beetles continue to appear, so keep a close eye.



Early blight on tomato (left). Septoria leaf spot on tomato (right).  
Photos: Judson Reid, Cornell Vegetable Program



Angular leaf spot.



A lesion on a melon leaf (left). Irregular shaped lesions on watermelon (right).

## Post-Emergent Broadleaf Weed Control Options for Cole Crops

Christy Hoepting, CCE Cornell Vegetable Program

### **Goaltender 4F (a.i. oxyflufen):**

Available as a 24(c) Special Local Needs Label available at <http://128.253.223.36/ppds/518814.pdf>

**Crops:** broccoli, cabbage and cauliflower

**Weeds controlled:** Provides excellent control of pigweed, good control of lambsquarters, smartweed, purslane, galingsoga, nightshade, Shepherd's purse, Canada thistle and annual sowthistle, and fair control of ragweed.

**Crop Stage:** Apply to a transplanted crop after a minimum of 2 weeks after planting, and to direct seeded crops with at least 4 true leaves.

**Rates:** 4 to 6 fl oz per acre per application. Do not apply more than 8 fl oz per acre per season. If a pre-transplant treatment has previously been made, the combination of pre-plant and post-transplant treatments must not exceed 16 fl oz per acre per season.

**Pre-harvest interval (PHI):** 35 days

**Notes:** Do not add any adjuvant, liquid fertilizer or pesticides to the spray mixture. Avoid application if heavy rainfall is predicted to occur within 24 hours after planned application.

### **Stinger 3EC (a.i. clopyralid):**

**Crops:** Broccoli, Brussels sprouts, cabbage, cauliflower, cavalo broccoli, Chinese broccoli (gai lon), Chinese cabbage (napa), Chinese mustard cabbage (gai choy) and kohlrabi.

**Weeds controlled:** Provides excellent control of ragweed and galingsoga and good control of nightshade.

**Crop Stage:** not specified

**Rates:** 4 to 8 fl oz per acre per application. Do not apply more than 8 fl oz per acre per season.

**Pre-harvest interval (PHI):** 30 days

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**Notes:** Be aware of crop rotation restrictions – see label.

**Aim EW** (a.i. carfentrazone):

Apply as a directed spray to row middles including between beds covered with plastic mulch with a hooded sprayer **ONLY** –see label for details.

**Crops:** Broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi, greens, mustard greens, mustard spinach.

**Weeds controlled:** Provides excellent control of pigweed and velvetleaf, and good control of lambsquarters, purslane, smartweed, nightshade and Shepherd's purse.

**Crop Stage:** non specified

**Rates:** 0.5 to 2.0 fl oz per acre per application. Do not apply more than 2.0 fl oz during pre-plant timing and no more than 4.1 fl oz in-season. Do not apply more than 6.1 fl oz per crop season.

**Pre-harvest interval (PHI):** 0 days

**Notes:** Must use with an adjuvant – see label

**Post-Emergent Grass Control:**

Poast (a.i. sethoydim) and Select Max (a.i. clethodim) and generic versions of these active ingredients are available to control emerged grasses in Cole crops. ●

## Late Blight Risk

Carol MacNeil and John Gibbons, CCE Cornell Vegetable Program

In WI, where weather has also been very wet, late blight (LB) was confirmed for the first time this year in a commercial potato field at just 40% emergence. No LB has been observed/reported in NYS. Locally, the LB Decision Support System (DSS) indicates that fungicide units (FU) are reaching the threshold to trigger a fungicide spray 1-2 days earlier than blight units (BU) are reaching the threshold at many weather stations, especially where BU accumulations are more moderate. Keep this in mind when looking at the chart below of BUs at weather stations in the area. Spray intervals should not exceed 7 days if it's possible to get in the field. At many locations a 5 day interval or less (rotating fungicides to stay within label) is recommended. (30 BUs is the threshold if fungicides like chlorothalonil or mancozeb were used, and for susceptible varieties.) Use fungicides with longer residual activity to maintain protection in wet weather when it's hard to get in to spray: especially Ranman, Revus Top, Previcur Flex, and Presidio, but also Gavel and Omega (potatoes only). A protectant fungicide mixing partner is needed with all except Revus Top and Gavel.

Alternatives to Bravo/Echo, and limits to mefenoxam control (from W. Kirk and N. Rosenzweig, Michigan State University Extension Veg Newsletter, 6/15) - Growers have a dilemma about what to base their LB control programs on because of shortages of Bravo and Echo fungicides. chlorothalonil is available in mixed products such as Ariston (chlorothalonil plus cymoxanil); Zing! (chlorothalonil plus zoxamide); and Elixir (chlorothalonil plus mancozeb). In 2014 many MI growers used Elixir fungicide as the base control for potato LB. Trials conducted at MSU in 2013 indicated Elixir at the lower rate of 1.5 lbs/acre gave significantly poorer control of LB than at the 1.8 lbs/acre rate, or Bravo WS applied on a seven-day interval at 1.5 pts/acre. The high label rate for Elixir has been increased to 2 lbs/acre, and MSU Extension does not recommend dropping to the low labeled rate of 1.2 lbs/acre under any circumstances. It is important to keep to the highest labeled rate of Elixir, especially in the LB favorable conditions currently being experienced. Mancozeb-based products may also be used as the base product and can be used in combination with translaminar or systemic fungicides. 2014 trials and field observations on Ridomil (mefenoxam)-based products indicated mefenoxam applied pro-actively to crops provided excellent LB control, as the predominant genotype of LB was US-23, mefenoxam-sensitive. Trials in

2013 indicated mefenoxam-based products applied to blighted foliage did NOT successfully prevent further disease development, however.

Organic control of LB (Amanda Gevens, Wisconsin State University) - Fungicides must be present on foliage in order to have a protective, disease-limiting effect. Because new growth is not protected and fungicides can wash off, repeat sprays are necessary. Little disease control can be had when fungicide applications are made only after infection (even just 2 days after disease inoculation, well before any symptoms can be seen!). Results from multiple, replicated trials show that the best organic-approved fungicide for LB control is copper. In the circumstance when LB gets out of control, early harvest and crop destruct options must be considered to limit development of inoculum that could pose heightened risk for area producers.

**New Late Blight Risk Chart, 6/30/15**

Location <sup>1</sup>	Blight Units <sup>2</sup> 6/24-6/30	Blight Units <sup>2</sup> 7/01-7/03	Location <sup>1</sup>	Blight Units <sup>2</sup> 6/24-6/30	Blight Units <sup>2</sup> 7/01-7/03
Appleton	26	18	Kendall	32	18
Arkport	49	19	Lodi	31	18
Baldwinsville	25	17	Lock/Niag F.	37	18
Bergen	23	19	Lyndonville	50	18
Buffalo	14	18	Medina	31	18
Butler	36	19	Penn Yan	24	12
Ceres	37	17	Rochester	12	18
Elba	47	15	Sodus	27	18
Farmington	26	18	Versailles	23	19
Gainesville	49	16	Wellsville	22	18
Geneva	33	19	Williamson	28	18

<sup>1</sup> Past week Simcast Blight Units (BU)

<sup>2</sup> Three day predicted Simcast Blight Units (BUs) ●

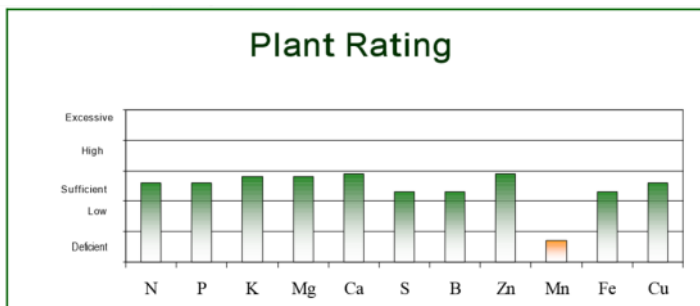
# High Tunnel Tomato Nutrient Update – pH Management

Judson Reid, CCE Cornell Vegetable Program

Working with collaborating farms and extension educators across New York State, the Cornell Vegetable Program is gaining valuable insight into the dynamics of soil and plant nutrient status coupled with on-farm management. Our focus has been on high tunnel tomatoes, due to their high return per square foot. On these farms we conduct pre-season soil tests then work with farmers to fine-tune amendments both to reduce over application of nutrients, and at the same time maximize yield and return. In season we take regular foliar tests to help make decisions for optimal nutrient levels in the plant. We have data from over 40 farms across the state reflecting different management approaches, including both certified organic and conventional.

In this first installment we'll look at a problem common to all types of high tunnel operations-escalation of root zone pH and alkalinity. As most irrigation water in New York is high in pH and bicarbonate, high tunnel soils generally climb the pH scale without precipitation to leach through the profile. The result of is lower nutrient levels in the plant foliage, ultimately decreasing vigor and yield. Manganese (Mn) deficiency is often the first sign of this problem.

Mn deficiency often occurs mid-level in the canopy as bright yellow margins leading to marginal necrosis (see photos). There is no lack of Mn in the soil, but the pH prevents its uptake. Chelated Manganese is available to raise the level in the plant, but this is treating the symptom instead of the underlying cause of pH and alkalinity.



**Figure 1.** All plant nutrients are in optimal range in this high tunnel tomato except manganese. This farm is now injecting citric acid to combat the problem.

What can be done about pH/alkalinity? The first step is to test irrigation water for both pH and bicarbonates. Water pH can be measured with a digital meter, but alkalinity requires a lab test. With these two figures we can then use an online calculator from University of New Hampshire to calculate a quantity of acid to inject into our irrigation water ([https://extension.unh.edu/Agric/AGGHFL/alk\\_calc.cfm](https://extension.unh.edu/Agric/AGGHFL/alk_calc.cfm)). The two common acids are phosphoric and sulfuric.

Organic growers can use citric acid, however there is no tool to calculate the quantity needed. A gradual addition of citric acid to the system while monitoring irrigation water pH is the common approach. Another important step is to acidify the soil profile prior to planting with elemental sulfur. Sulfur is slow to react so fall applications are advised. Rates will vary based on soil levels of calcium and pH.



Manganese deficiency on tomato transplants (above).

Manganese deficiency including marginal necrosis on tomato (right)  
Photos: Judson Reid, Cornell Vegetable Program

*This work is the result of funding from New York Farm Viability Institute, Specialty Crops Research Initiative and Federal Formula Funds. In future installments we will look at macronutrient management in conventional and organic high tunnels.*

## 1 Trick to grow huge tomatoes:



## Why spend money on expensive fertilizers when the REAL answer is in your soil pH?

Test your soil AND water BEFORE you reach for that quick fix!

**RESULTS IN JUST 2 WEEKS!\***



Lowering pH can significantly improve uptake of Mn and other important nutrients. Sulfur applied pre-plant to the soil, and acidification of irrigation water are the REAL solutions to Mn deficiencies!

\* Individual results may vary.

### Management:

- Application of copper at the first sign of infection may help reduce the spread. However, these diseases may be impossible to control in wet weather.
- Resistant varieties where available
- High quality, certified seed (can be seedborne)
- Crop rotation, with beans planted once every fourth year
- Avoid working in fields when they are wet

Common Name	Bacterial Brown Spot	Halo Blight	Common Bacterial Blight
Scientific Name	<i>Pseudomonas syringae</i> pv. <i>syringae</i>	<i>Pseudomonas syringae</i> pv. <i>phaseolica</i>	<i>Xanthomonas campestris</i> pv. <i>phaseoli</i> or <i>X. axonopodis</i> pv. <i>phaseoli</i>
Common Hosts	Snap bean, dry bean, lima bean, pea	Snap bean, dry bean, lima bean, soybean	Snap bean, dry bean, cowpea, soybean
Environment Favoring	High humidity; Moderate temps with daily highs less than 86 F	High humidity; Moderate temps with daily highs less than 77 F	Warm temps with daily highs greater than 86 F
Age of infected leaves	Infect young leaves	Infect young leaves	Middle-aged to older leaves

### For Additional Information and Photos:

[http://vegetablemdonline.ppath.cornell.edu/factsheets/Beans\\_Bacterial.htm](http://vegetablemdonline.ppath.cornell.edu/factsheets/Beans_Bacterial.htm)  
<http://www.ext.colostate.edu/pubs/crops/02913.html> ●

## WNY Sweet Corn Trap Network Report, 6/30/15

Marion Zuefle, NYS IPM Program; <http://sweetcorn.nysipm.cornell.edu>

Eighteen sites reporting this week. European corn borer (ECB)-E was caught at only 2 sites, Hamlin and Lockport. ECB-Z was caught at 5 sites. Corn earworm (CEW) was caught at six sites this week with Eden, Preble, and Waterport numbers high enough to require a 5 or 6 day spray interval. Only Avon caught fall armyworm (FAW) and no site reported western bean cutworm (WBC) this week.

Several sites reporting ECB larvae and feeding damage in emerging tassels while other sites are already reporting CEW larvae in the silks. The thresholds when scouting differ for these two stages of corn. For tassel emergence corn the threshold is 15% infested plants. As the tassels begin to emerge larvae will leave the tassel and move down the plant looking for protected places to feed. Insecticide applications need to be timed to kill larvae before they bore into a new feeding location where they will be protected from sprays. For silking corn the threshold drops to 5% infested plants. Scout the ear zone, two leaves above and one leaf below the ears, for ECB egg masses and ECB or FAW larvae. For more information on how to scout both tassel emerging and silking corn please see the video: [How to Scout Fresh Market Sweet Corn Video](#). ●

### WNY Pheromone Trap Catches: June 30, 2015

Location	ECB-E	ECB-Z	CEW	FAW	WBC	DD to Date
Baldwinsville (Onondaga)	0	0	0	0	0	902
Batavia (Genesee)	0	0	1	0	0	681
Belfast	0	0	0	0	0	829
Bellona (Yates)	NA	NA	NA	NA	NA	989
Eden (Erie)	0	2	5	0	0	846
Farmington (Ontario)	0	0	0	0	0	859
Hamlin (Monroe)	1	2	0	0	0	834
LeRoy (Genesee)	0	3	0	0	0	812
Lockport (Niagara)	2	2	0	0	0	822
Pavilion	NA	NA	NA	NA	NA	812
Penn Yan (Yates)	0	1	0	0	0	947
Seneca Castle (Ontario)	0	0	0	0	0	876
Spencerport (Monroe)	0	0	0	0	0	963
Waterport (Orleans)	0	0	2	0	0	834
Williamson (Wayne)	0	0	0	0	0	790

ECB - European Corn Borer

CEW - Corn Earworm

FAW - Fall Armyworm

WBC - Western Bean Cutworm

NA - not available

DD - Degree Day (modified base 50F) accumulation

### Average corn earworm catch

Per Day	Per Five Days	Per Week	Days Between Sprays
<0.2	<1.0	<1.4	No Spray (for CEW)
0.2-0.5	1.0-2.5	1.4-3.5	6 days
0.5-1.0	2.5-5.0	3.5-7.0	5 days
1-13	5-65	7-91	4 days
over 13	over 65	over 91	3 days

Add one day to the recommended spray interval if daily maximum temperatures are less than 80°F for the previous 2-3 days.

## UPCOMING EVENTS *view all Cornell Vegetable Program upcoming events at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu)*

### Crop Quality Control on Small-Scale Organic Farms & High Tunnels

July 8, 2015 | 3:00 - 6:00 PM

Falkimmer Farms Organic Growers, 8595 E Eden Rd, Eden, NY 14057



Tour several acres of cultivated fields to learn how the Falkowskis produce quality organic produce, and market it through direct-to-consumer opportunities. Cornell Vegetable Program Specialist Judson Reid will lead a demonstration and discussion of tomato pruning and other high tunnel production practices that improve quality, especially in organic systems. There will be time to network and ask questions, and bring a dish to pass for the potluck at the end of the event! To pre-register and pay, shop [online](#) or call Stephanie at 585-271-1979 ext. 509. The fees are \$15/person or \$25 for two or more people/farm. Pre-registration is encouraged and closes at 4pm on 7/6/15. *This event is produced by NOFA-NY, in partnership with Cornell Cooperative Extension, and with support from USDA-Risk Management Agency.*

## Weather Charts

John Gibbons, CCE Cornell Vegetable Program

### Weekly Weather Summary: 6/23 – 6/29/15

Location	Rainfall (inch)		Temp (°F)	
	Week	Month	Max	Min
Albion	1.27	3.92	78	54
Appleton, North	2.46	5.30	77	55
Baldwinsville	1.46	7.14	83	54
Buffalo*	2.31	5.11	79	56
Butler	NA	NA	84	54
Ceres	1.65	5.80	80	49
Elba	1.75	5.56	75	52
Farmington	1.88	7.40	79	53
Gainesville	1.95	4.57	75	49
Geneva	2.00	6.76	80	53
Lockport	NA	NA	80	47
Lodi	1.24	4.95	83	55
Penn Yan*	1.53	6.09	84	55
Rochester*	1.44	6.46	82	56
Romulus	NA	NA	83	55
Silver Creek	1.32	3.81	77	55
Sodus	1.86	7.30	81	51
Versailles	NA	NA	77	51
Williamson	1.69	5.04	80	52

### Accumulated Growing Degree Days (AGDD) Base 50°F: April 1 – June 29, 2015

Location	2015	2014	2013
Albion	878	808	833
Appleton, North	694	651	701
Baldwinsville	902	890	848
Buffalo	899	835	915
Butler	923	865	853
Ceres	794	737	705
Elba	681	654	764
Farmington	859	825	778
Gainesville	708	657	NA
Geneva	876	840	822
Lockport	822	754	NA
Lodi	988	928	953
Penn Yan	947	862	895
Rochester	963	906	943
Romulus	893	850	NA
Silver Creek	812	765	857
Sodus	780	777	NA
Versailles	846	798	873
Williamson	790	766	794

\* Airport stations

\*\* Data from other station/airport sites is at: <http://newa.cornell.edu/> Weather Data, Daily Summary and Degree Days.

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# VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

## VEGEdge

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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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