

Humid, rainy weather is favorable for the development of bacterial diseases in dry

and snap beans. Learn how to manage these diseases.

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this disease now!

PAGE 3

Bacterial spot is appearing in peppers and is one of the most important diseases affecting peppers in NY. Manage



Six sites in our area are reporting catching western bean cutworm moths, with

Eden having the highest count at 117. See the Trap Report.

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Got worms in your cole crops? Find a list of insecticides labeled for use on cole crops in NY.

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Cornell University Cooperative Extension Cornell Vegetable Program

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 snap and dry beans in our region. The heavy rains of this week 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.

Common Name	Bacterial Brown Spot	Halo Blight	Common Bacterial Blight
Scientific Name	Pseudomonas syringae pv. syringae	Pseudomonas syringae pv. phaseolica	Xanthomonas axonopodis pv. phaseoli
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	Young leaves	Young leaves	Middle-aged to older leaves



Bacterial brown spot infections on local snap bean leaves. Photo: Julie Kikkert, Cornell Vegetable Program



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

The newsletter is a service to our enrollees and is intended for educational purposes, strengthening the relationship between our enrollees, the Cornell Vegetable Program team, and Cornell University.

We're interested in your comments. Contact us at: CCE Cornell Vegetable Program 480 North Main Street, Canandaigua, NY 14224 Email: cce-cvp@cornell.edu

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Cornell University **Cooperative Extension Cornell Vegetable Program**

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The next issue of VegEdge will be produced August 6, 2014.

<<< BREAKING NEWS >>>

Western NY Regional Economic Development Council Agriculture Development Fund – Grants Available up to \$50,000 per Farm

Farm Credit East has been awarded \$1,000,000 to be distributed in grants of up to \$50,000 per farm for capital improvements (buildings and equipment, not working capital) for farms in Allegany, Chautauqua, Cattaraugus, Erie, and Niagara counties only, who are engaging in value-added activities, which turn a raw agricultural product into something directly consumable by a customer of the farm, or a direct to market activity like a farm stand or u-pick operation. The grant has to fund a capital investment only. The applicant must demonstrate at least a 10% cash investment in the project, (cash, not land or other tangible asset) and bank financing must be in-place or pending grant award. Multiple farms can apply as one group.

For an application and for more information, contact the grant administrator, Nathan Rudgers, at 800-929-1350 office; 585-993-0395 cell; or email him at Nathan.Rudgers@FarmCreditEast.com

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

For Additional Information and Photos:

http://

vegetablemdonline.ppath.cornell.edu/ factsheets/Beans Bacterial.htm

http://www.ext.colostate.edu/pubs/ crops/02913.html

Bacterial Spot on Pepper

Darcy Telenko, CCE Cornell Vegetable Program

Bacterial spot is appearing and spreading in peppers as high humidity and moisture conditions continue to favor the disease. Bacterial spot is caused by Xanthomonas euvesicatoria and Xanthomonas perforans and one of the most important disease affecting peppers in New York. 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. Severely infected leaves will turn yellow and eventually fall off increasing the chance of sunscald on the fruit. Fruit may also develop raised, scab-like spots generally near the stem end of the fruit where water and water-splashed inoculum collect. Favorable conditions for disease include high relative humidity and free moisture on the



leaves. Symptoms can appear when RH is greater than 85% for a few hours during several days. Splashing rain and movement between wet plants can spread bacteria.

Bacterial Spot Management

- Resistant varieties with tolerance to bacterial leaf spot (BLS) race 1, 2, 3 include Red Knight, Ironsides, Early Sunsation, Lexington, Lafayette, Aristotle, Boynton Bell, X3R Aladdin, X3R Sir Galahad, X3R Camelot, X3R Wizard, Intruder, Legionaire, Karisma, and Commandant.
- Crop rotation a minimum 2-year rotation away from tomato and pepper crops.
- Use only disease-free, certified seed hot water treatment is an option for nontreated seed that could be contaminated - it will kill bacterium inside and outside the seed, but can reduce germination and vigor if done incorrectly. Treat seed with Thiram after hot water treatment.
- Plant only disease-free and certified transplants.
- Infected crop debris should be destroyed as soon as possible after harvest to remove inoculum source for future plantings.
- Keep greenhouse dry and avoid splashing water reduce spread in plant beds and flats.



- 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.

•	Common	FRAC			[
Name	Name	Group	Rate/A	REI	PHI	Notes
Actigard 50WG	acibenzolar-S- methyl	P1	0.33- 0.75 oz	12	14	For use on Chili peppers only.
Champ or OLP	copper compound	M1	1.3-2 pt	48	2	See label for details. Copper compounds may help reduce secondary spread, but effectiveness limited by rainfall and dew formation.
Tanos	famozadone+ cymoxanil	11+27	8-10 oz	12	3	Suppression of bacterial leaf spot. Do not make more than one sequential application of Tanos before alternating with a different MOA (not group 11). Must be tank mixed with contact fungicide such as copper, using least minimal labeled rate.
Agri-mycin 17 or OLP	streptomycin sulfate	25	0.5 lb/50 gal	12	0	Not for use in the field. Begin application in the 2-3 leaf stage and may be applied only prior to transplanting.
OLP =other labe	eled product. MOA=	= modes of a	action. 🧿			

Compounds Available for Management of Bacterial Spot on Pepper

WNY Sweet Corn Trap Network Report

Marion Zeufle, NYS IPM Program

Twenty sites reporting this week. The second flight of European corn borer has started with nine sites reporting ECB-E and six sites reporting ECB-Z. Only three sites reporting corn earworm (CEW), but two of these were over threshold, indicating a need for a spray, please see the chart at the bottom of this page. Ten sites reporting Fall armyworm (FAW) catches with a high of 112 moths caught in Eden. Eleven sites reporting western bean cutworm (WBC) with Eden again having the highest count at 117.

WBC trap catches have increased over the last few weeks. According to data from the University of Nebraska, 50% of WBC emerge when the accumulated degree-days (base 50%) reach 1422 (see chart below). It is also recommended that scouting begins when cumulative trap catches reach 100 moths, however egg masses have been found when trap catches are in the single digits. The threshold for fresh market sweet corn is only 1%. It is important to scout late whorl and early tassel-emergence fields as these are most at risk. See last week's post on how to scout sweet corn for WBC. After hatching larvae will spend a few days feeding on the tassel before moving down to the ear. Most insecticide sprays used to control ECB will also control WBC.

Degree-day accumulations	Percent WB emergence I	
Accumulated Degree-days	accumulation from University	
1319	25%	Nebraska
1422	50%	
1536	75%	

C moth based ay n, data sitv of

WNY Pheromone Trap Catches: July 29, 2014

Location	ECB-E	ECB-Z	CEW	FAW	WBC
Baldwinsville (Onondaga)	3	0	0	0	9
Batavia (Genesee)	5	0	0	1	16
Bellona (Yates)	3	1	0	10	9
Eden (Erie)	0	0	0	112	117
Farmington (Ontario)	4	0	0	0	0
Hamlin (Monroe)	2	2	0	0	0
LeRoy (Genesee)	1	7	2	0	0
Lockport (Niagara)	2	1	0	0	0
Pavilion	0	0	0	44	27
Penn Yan (Yates)	0	0	0	0	0
Seneca Castle (Ontario)	6	1	0	0	5
Spencerport (Monroe)	0	2	7	0	0
Waterport (Orleans)	NA	NA	NA	NA	NA
Williamson (Wayne)	NA	NA	NA	NA	NA
ECB - European Corn Borer	WBC -	Western Bea	an Cutwor	m	
CEW - Corn Earworm	NA -	not available			
FAW - Fall Armyworm					

Average corn earworm catch							
Per Day Per Five Days Per Week Days Between Spray							
<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.

Late Blight Risk

Carol MacNeil, CCE Cornell Vegetable Program

Late blight (LB) has now been confirmed in Erie, Wyoming, Allegany and Columbia Counties, in both potatoes and tomatoes, under both conventional and organic management. It has spread to more fields in the counties where it was confirmed. in NYS. central PA, and other states. Where growers have maintained recommended fungicide protection the disease has generally been controlled. This includes some organic farms spraying of copper. The US-23 LB strain has been found in most, but not all NYS fields. Note: mefenoxam fungicides (Ridomil formulations, etc.) are not recommended unless a sensitive LB strain like US-23 has been identified in your field. It has NO activity against LB strains which are not sensitive. US-24, with intermediate or erratic sensitivity, has been found in two fields in Western NY this year. Keep a close watch for LB in wetter, more humid microclimates on the farm (low spots, near tree rows, where fog forms, etc, and in areas where getting good spray coverage is difficult.

The weather has been favorable for LB. A 4–7 day spray interval was recommended this week, according to the LB Decision Support System (DSS). In many cases the 30 blight unit (BU) threshold was reached. In other cases the trigger to spray was reached a day or two earlier than the BUs in the chart indicate because of high fungicide (loss) units (FU) (not shown). The 30 BU threshold assumes a susceptible variety and the use of most fungicides.

If Ranman, Revus Top, or Previcur Flex were used the spray threshold can be raised to 37 BUs (for Gavel - 34 BUs). Note, however, that the 7 additional BUs has only lengthened the rec-

Late Blight Risk Chart, 7/29/14

Location ¹	Blight Units ²	Blight Units ³	Location ¹	Blight Units ²	Blight Units ³
	7/23-7/29	7/30-8/01		7/23-7/29	7/30/8/01
Albion	NA	NA	Lodi	42	19
Appleton	13	20	Medina	25	19
Baldwinsville	36	19	Penn Yan	41	21
Buffalo	33	19	Ransomville	42	19
Ceres	34	19	Rochester	32	20
Elba	53	10	Romulus	36	20
Farmington	29	19	Silver Creek	18	19
Gainesville	NA	NA	Sodus	31	20
Geneva	19	20	Versailles	17	13
Kendall	44	19	Williamson	32	21

Weather stations. For more sites, and varietal susceptibility to LB: http://newa.cornell.edu Passed Week Simcast Blight Units (BUs)

3 Three days predicted Simcast Blight Units (BUs)

ommended spray interval 1 day, at most 2 days, this year. (Revus Top and Previcur Flex provide better protection because of their translaminar and systemic, respectively, spread within the plant.) For moderately susceptible varieties the spray threshold can be raised 5 BUs. LB susceptibility of varieties can be found at: http:// newa.cornell.edu/index.php?page=potato-simcast Click on Potato or Tomato Cultivar Susceptibility in the left menu.

Contact Carol MacNeil at 585-313-8796 if you think you have LB. O

Control of Worm Pests in Cole Crops

Christy Hoepting, CCE Cornell Vegetable Program

Following is a list of insecticides labeled for use on various cole crops with tentative efficacy ratings for control of <u>imported cabbage worm (ICW)</u>, small and large <u>cabbage looper (CL)</u> and <u>dia-</u> <u>mondback moth (DBM)</u>, which was put together by Cornell researchers in Long Island. Growers and other researchers may have somewhat different opinions and results vary according to rates, application method and frequency, location, etc. so selection of controls should not be made solely based on this chart. Not all materials are labeled for all crops or areas - check labels. For most cole crops, addition of a spreader-sticker is advised.

Material, Formulation and Rate	ICW	Sm CL	Lg CL	DBM ³
Diamides (Group 28) :				
Coragen (3.5 – 5 fl oz)	xxx	XXX	xxx	XXX
Voliam Xpress ⁹ (5-9 fl oz)	XXX	ХХХ	xxx	XXX
Synapse WG (3-5 fl oz) & Belt SC (2-2.4 fl oz) ¹⁰	XXX	XXX	XXX	хх
Spinosyns (Group 5):				
Radiant SC (5-10 fl oz)	XXX	XXX	XXX	ХХ
Entrust SC (1.5 – 4 fl oz)	XXX	XXX	хх	ХХ
Indoxacarb (Group 22):				
Avaunt 30WG ⁶ (0.15 – 0.22 lb)	XXX	XXX	XXX	XXX
Avermectin (Group 6):				
Proclaim 5G (2.4 – 4.8 oz)	XXX	XXX	XX ²	XXX
Pyrethroids (Group 3A):				
Warrior II with Zeon Technology (1.28 – 1.92 fl oz)	ххх	XXX	ХХ	x
Endigo ZC (4 – 4.5 fl oz) ⁸	XXX	XXX	xx	х
Danitol 2.4 EC (10.6 – 16 fl oz)	XXX	XXX	хх	х
Brigade/Capture 2EC (2.1 – 6.4 fl oz)	XXX	XX	xx	x ²
Pounce/Ambush (0.05 – 0.2 lb ai)	XXX	ХХ	х	х
Baythroid 2 (1.6 – 2.4 fl oz)	XXX	ХХ	x ²	х
Perm-Up 3.2 EC (2-4 fl oz)	XXX	XX ²	x ²	-
Mustang Maxx (2.24 - 4 fl oz)	XXX	xx ²	x ²	-
Asana XL 0.66EC (5.8 – 9.6 fl oz)	XXX	x ²	x ²	-
Hero (4-10.3 oz)	?7	?	?	?
Bts (Group 11):				
<i>Bt kurstaki</i> (see labels) (Biobit, Javelin, DiPel, Condor, Crymax)	xxx	xx ²	x ²	x ²
<i>Bt aizawai</i> (see labels) (Xentari, Agree, Ketch)	ххх	х	х	XX ⁴
OPs (Group 1B):				
Orthene 97 (1.0 lb)	XXX	XX	XX	х
Carbamates (Group 1A):				
Lannate LV 2.4L (1.5 – 3 pt)	XXX	x ²	x ²	x ²
Larvin 3.2F (16 – 40 fl oz)	XXX	x ²	x ²	x ²
Sevin 80 Solupak (1.25-2.5 fl oz)	х	-	-	х

Relative	efficacy	v of	products	for worm	control i	in cole	crops
I Clative	enicac	y 01	products	ioi wonni	control i		cropa

xxx = most effective (usually good control expected); x = least effective (fair or poor control); - not labeled or not effective. Not all formulations listed. Rates in amount of formulated product unless otherwise indicated.

¹ 4.5 – 6 oz for CL; ² Higher rates needed; ³ Where insecticide resistance is not a problem better control of DBM with some materials may be expected; ⁴ *Bt aizawai* may provide better control of DBM where populations are resistant to *Bt kurstaki*; ⁶ Some incidental control; ⁶ Avaunt is not labeled for use on Long Island. ⁷ Has not been trialed in University studies. ⁸ A premix of Warrior + Actara/Cruiser. ⁹ A premix of Coragen + Warrior. ¹⁰ Belt is replacing Synapse for all vegetable uses.



COLE CROPS

Although the odd <u>cabbage looper</u> has been around for a couple of weeks now, a lot more damage and loopers were found this week. Cabbage loopers can be more difficult to kill than the other worms – see July 16th issue of VegEdge. Now, all three worm pests including imported cabbage worm, diamondback moth and cabbage looper are part of the worm complex that need to be managed – see chart. Onion thrips remain reportedly low, as they have also been low in onions this season, while flea beetles remain sporadic and are expected to resume activity after the rain.

DRY BEANS

Significant bacterial disease has shown up in both snap and dry beans in the past week due to the frequent rains and dew at night. See the article in this issue, *Be on the Watch for Bacterial Diseases of Beans*. Copper sprays can reduce the spread of bacterial disease, which is spread by windblown rain, and by sprayers, cultivators, etc. driving through the beans when they're wet from rain or dew. Unfortunately copper sprays need to be applied weekly, or before the next rain after a spray. Drive through clean fields, parts of fields, before driving through your infected beans, and wash the equipment to remove bean debris afterwards.

Western bean cutworm (WBC) moth counts are rising rapidly in some locations. The Attica trap already has a cumulative catch of 160 moths, well over the threshold of 100 moths which triggers scouting in the next week in nearby corn for WBC larvae on the upper leaf surface of upper leaves. Beans with pods should also be scouted for feeding damage in the next week, and the following week. WBC larvae only feed on beans during the night, hiding in the soil during the day. If bean pod damage is seen within this time then one insecticide spray should be applied. Materials which are effective against potato leafhopper and Mexican bean beetle will control the WBC.

FRESH MARKET VEGETABLES

High humidity and moisture conditions are favoring many pathogens on fresh market vegetables in both the field and high tunnels (HT). A number of bacterial and fungal diseases are wreaking havoc including gummy blight of melon, white mold (tomato and cucumber), bacterial blight, bacterial spot (HT), powdery mildew, early blight on tomato, and late blight (see Carol's report on where it has been identified). Protectant programs need to be implemented if you know that any of these disease pathogens are problem on your farm.



Bacterial speck on high tunnel tomato. Photo: Darcy Telenko, CVP

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continued - CROP insights

GREENS

Flea beetles just haven't gone away in many areas this summer and after this past period of cool wet weather, seem to have increased in numbers and appetite. Brassica plantings are suffering from FB feeding as much as it was in the spring. Cabbage worms are also showing up. New plantings have to be protected more to reduce the unsightly damage.

Even with some of the protectant insecticidal sprays, the plants grown under row cover have fared the best. The problem with the row cover alone has been wind damage.

Using low tunnel hoops is necessary. With the wet conditions, slugs and snails are also becoming more active.

VSIGHTS

ONIONS

Heavy rainfall of 3 to 5 inches Sunday night through Monday left portions of many onion fields in the region's muck lands under water. Much progress was made on Monday and Tuesday towards pumping and draining the water off. If onions withstand saturated soil conditions for more than a few days, their roots will suffer and the plants will start to shut down showing yellowing, excessive tip burn and outer leaf dieback. Although standing water should not result in stand loss at this stage, it could result in reduced bulb size and quality. Such stressed onions may be more readily invaded by Purple Blotch (PB) and Stemphylium leaf blight (SLB) pathogens. Onions flooded with water contaminated with bacterial pathogens could also lead to higher levels of bacterial diseases. The priority now is water removal followed by resuming spray programs, especially fungicides for PB/SLB and DM once growers can get back out into the fields.

More <u>downy mildew (DM)</u> was reported this week, especially in upland onions. See last week's article for more information. Organically (or, conventionally), Oxidate (a.i. hydrogen dioxide) may help to alleviate the spread of this disease. Once DM is detected, make consecutive applications for 3 days straight and then every 5-7 days for the rest of the season. Oxidate has no residual activity and can only kill the spores that it comes into contact with during a spray, so it needs to be reapplied frequently. When leaf dieback caused by DM is so severe that the plants die standing up, they should be pulled and dried down rather than left in the field, because the necks are not properly sealed and bacterial pathogens could more readily invade the bulbs.

All onions should be protected with fungicides to manage PB/SLB and DM at this time. Mancozeb and Quadris are the most commonly used protectants against DM. There are several fungicide choices for PB/SLB, what is tricky is abiding by the rotation restrictions of Inspire Super, Pristine and Quadris Top: Pristine and Quadris Top cannot be rotated with each other, because they both contain a group 11 fungicide, and Quadris Top and Inspire Super cannot be rotated with each other, because they both contain a group 3 fungicide. One solution has been to rotate these products with Scala (group 9) for PB/SLB. The "Cornell Onion Fungicide Cheat Sheet" is available on the CVP website (http://cvp.cce.cornell.edu/submission.php?id=231&crumb=crops|crops|onions|crop*20).

<u>Onion thrips</u> remain at record lows for this time of year despite last week's hot temperatures, but this week's heavy rains definitely knocked them back by drowning and washing them off of the plants. However, it is expected that pressure will rebound quickly after the rain: **check thrips levels again mid-week before making your spray decisions** as fields that were below threshold on Monday/Tuesday could be at threshold by Thursday/Friday. Agri-Mek is recommended next in sequence following Movento because it has a 30-day PHI and if it is not used, the opportunity to use it later will be lost, because it will be too close to harvest. Following, are other insecticide choice considerations:

- If, it has been 3 weeks since the first and only application of Movento: skip the second app of Movento and skip to the next insecticide in sequence, to avoid exposing multiple generations of onion thrips to the same insecticide class.
- If, after the last Movento spray, there are only 2-3 weeks until it is time to pull the onions, skip to Radiant in sequence, in order to not violate the 30-day PHI restriction of Agri-Mek.
- If, before an Agri-Mek spray (1st or 2nd), the thrips population is above 3.0 thrips per leaf, skip Agri-Mek and move to Radiant in sequence, because Agri-Mek generally cannot handle that much thrips pressure. Ideally, a single app of Radiant should reduce pressure to 1.0 thrips per leaf when Agri-Mek could be used effectively.

The "strategic management of onion thrips" decision chart is available at <u>http://rvpadmin.cce.cornell.edu/pdf/submission/pdf238_pdf.pdf</u> Reminder! Next week is the <u>Annual Elba Muck Onion Twilight Meeting</u> on <u>Thursday, August 7, 2014</u> at Mortellaro's Red Shop, 5:30 pm

to 8:00 pm. Contact Christy for more information.

POTATOES

From Robert Hadad: Late blight is threatening to be bad this season. New reports of LB across Allegany and Cattaraugus Counties have indicated significant losses for tomatoes. Unconfirmed reports of LB in tomato in Monroe and Madison Counties suggest the entire region may be threatened in the next few weeks.

A lot of attention is given to tomatoes but potatoes are vulnerable as well. As the plants near maturity drying leaves is a common site but this makes noticing LB harder. More scouting is needed to find those lesions on stems and leaves. It is critical to make sure LB isn't in the planting if you are growing storage potatoes. LB can move down through stems into tubers and rot during storage.

See the Late Blight Risk section for information about fungicides for late blight control. Spray intervals beyond 7 days are not recommended regardless of the fungicide used. Heavy rain fell in some potato growing areas in recent days. Time will tell if tubers are affected.

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continued - CROP insights

PROCESSING CROPS

Lima Beans – Flooding rains this week bring on concerns of Phytophthora blight in this crop, which is highly susceptible. Watch for rapid collapse of plants (not just those that have stood under water). The disease generally starts at the ground and works its way up the plant, with reddish brown streaking on the stems. A white powdery fungal sporulation may develop on stems and pods. Fields in areas where other susceptible crops (esp. cucurbits, peppers) are grown are most at risk. If you suspect this disease, please contact Julie Kikkert for sample identification. More information about the biology and identification of this disease can be found at the Cornell Phytophthora blight web site http://

Peas – Another harvest season is winding down. Slugs have been an issue this year.

Snap Beans – Harvest continues, but is being made more challenging with some very wet fields. Watch for <u>bacterial blights</u> (see cover article) and Pythium stem



Phytophthora capsici on a lima bean pod. Photo: University of Delaware

and crown rot. Snap beans are susceptible to <u>Phytophthora blight</u> (see lima bean section), but many of the processing varieties seem to be more tolerant. It is still a good idea to keep a watch for this disease in fields with heavy rain and flooding. Please report suspected cases to Julie Kikkert so we can get positive identification. The NYS IPM Field Crops report states that <u>soybean aphids</u> on soybeans were building last week. This insect can transmit <u>Cucumber Mosaic Virus</u> to beans. Tolerant snap bean varieties are the only solution. Tracking aphid populations in soybeans is a predictor of the risk of virus in snap beans. Virus symptoms have been seen in some local beans and is likely bean common mosaic virus, however, no testing has been done.

SWEET CORN

A few European corn borer moths and a large numbers of fall army worm and western bean cutworm moths were caught again this week.

TOMATO

Early blight and Septoria leaf spot continues to be found in a number of locations on tomato. Late blight was identified on tomato in Allegany County and was identified as the US-23 which is aggressive on both tomato and potato. (See the Late Blight section for recommendations.) White mold is also active in the dense foliage of tomatoes where *Sclerotinia sclerotiorum* is present in the soil. Water soaked lesions can be visible on stem joints and leaf axils. As the lesions progress they will appear bleached in color. During periods of high humidity white, cottony growth can be seen on the stems and black, hard sclerotia will form on surface and within the infected stem (see photos). Management options for white mold in tomato are limited, but a biological control is available Contans WG (*Coniothyrium minitans*), it has been found effective in other areas to reduce inoculum levels of sclerotia in soil.



White, cottony mycelium on tomato stem near joint (left) and bleached lesion seen on stem caused by white mold (right). *Photos: Darcy Telenko, CVP*

VINE CROPS

The weather has not been kind for vine crops this season. Leaf diseases continue to spread and powdery mildew is becoming more prevalent. Keeping up with spray protection programs is critical since getting into fields has been tough with all the rain events. Thorough coverage is needed as well.

The warm, rainy weather is favorable for the development of gummy stem blight of watermelon and muskmelon. Infection of the fruit will cause black rot. Fungicides for control need to be applied in a preventative manner. Contact fungicide chlorothalonil (Bravo, or other labelled products) applied on 7-14 day intervals are effective against gummy stem blight – do not tank mix with other material when conditions are conducive for sunburn. Effective systemic fungicides include Switch and Inspire Super applied 7-14 day intervals (see label for seasonal and rotational guidelines for resistance management). Fungicides are not necessary within two to three weeks of final harvest. Do not save seed from fields where gummy stem has been observed.

Keeping weeds from getting tall can also help with reducing a favorable environment for these diseases. A good drying air flow can help reduce leaf wetness. Mowing alleyways can help too.

Downy mildew is still not in the state yet. New outbreaks in MI and NJ have been reported in the past week. The new areas infected in MI is geographically in line with WNY – Erie and Niagara Counties so be advised that several dry days of westerly winds could blow spores our way in the next week or so.

Two spotted spider mites are being found in more plantings of cantaloupe and watermelons. The upper leaves tend to show a rust color and severe feeding will cause the leaves to dry out. Heavy rains will wash off the adults so sometimes spotting them is difficult. The eggs and juveniles are much harder to see and will soon repopulate the plantings. Once established they are hard to get rid of. If you are also growing strawberries or sweet corn, the mites can and will cross over to these crops as well.

Come learn from growers, breeders, and seed companies to better understand organic seed quality topics and how it affects your farm. Up to eight regional seed companies will present their new developments related to the needs of organic producers. A series of moderated group discussion sessions will focus on the issues surrounding organic seed quality and availability - bring your questions on organic seed and talk directly to the experts! Lunch and refreshments will be provided. Pre-registration is appreciated at the website http://goo.gl/ zpR5UG. The \$10 registration fee can be paid at the door. Contact Michael Glos at mag22@cornell.edu or 607-227-7793 with questions.

August 19, 2014 | 3:00 PM - 8:30 PM Donn Branton's Farm, 6536 E Main Rd/Rte 5, Stafford 14143

Five innovative grower speakers, a nationally recognized soil health expert, and local staff will show and describe the benefits of improving the soil health on your farm. There will be equipment and displays to see. DEC and CCA credits will be available. Cost: \$5 (pre-registered) or \$10 at the door. For more information, to see the complete agenda, and mail-in pre-registration form, visit the CVP website at http:// cvp.cce.cornell.edu/event.php?id=237. Questions? Contact Dennis Kirby, Orleans SWCD, at dennis.kirby@ny.nacdnet.net or 585-589-5959. Organized by USDA-NRCS, County SWCD, Cornell Cooperative Extension, and WNY Crop Management.

Bejo Seeds Open House and Demonstration Trials 2014

August 26-27, 2014 | 10:00 AM - 6:00 PM 4188 Pre Emption Rd, Geneva 14456

View a wide variety of vegetable crops at Bejo's Research & Demonstration Farm. FREE! Lunch served August 26. RSVP to 315-789-4155.

UPCOMING EVENTS

Vegetable Pest and Cultural Management Field Meetings

July 31 - Orchardview Farm, 2112 Carlton-Yates Townline Rd, Waterport 14571 | 6:00 - 8:00 PM August 6 - Danny Miller's Farm, 11331 Hodnett Rd, Fillmore 14735 | 6:00 PM - 8:00 PM

This course (offered on several dates and at several different locations) will demonstrate pest management in fresh market vegetables in both field and greenhouse (high tunnel) vegetables; primarily for those growing for wholesale auction. A hands-on demonstration of weed, insect and disease identification in vegetables including management options such as inter-row cover crops, grafting and where appropriate, spray options will be used to educate growers. Judson Reid, Senior Extension Associate with the Cornell Vegetable Program will instruct participants and facilitate peer-based learning. Cooperating farms will be selected as the season progresses. Details on each topic will focus on field observations at these farms. DEC recertification credits have been requested. FREE! For a full agenda, visit the CVP website or call Judson at 585-313-8912.

Muck Donut Hour

8:30 - 9:30 AM August 5 | August 12 Elba muck, corner of Transit and Spoilbank, Elba 14058

Meet with Cornell Vegetable Program Specialist Christy Hoepting every Tuesday morning to ask questions and share your observations.

Vegetable Disease Management - In Field Management Scenarios

August 4, 2014 | 6:00 PM - 7:30 PM Eden Valley Growers Inc, 7502 N Gowanda State Rd, Eden 14057

Join us for field tours to talk about best crop production practices for managing and controlling vegetable diseases. There will be hands on demonstrations on identifying pests and scouting. Info will be provided for conventional and organic growers. 1.5 DEC recertification credits will be available. FREE! For the full agenda and more details, visit the CVP website or contact Darcy Telenko at 716-697-4965 or dep10@cornell.edu.

2014 Elba Muck Onion Twilight Meeting

Mortellaro & Sons, 6550 Transit Rd, Elba 14058 (starting at Mortellaro's Red Shop in the Elba Muck Land)

An in-field meeting with an update on onion research. Main topics will include onion thrips management, onion fungicide demonstration featuring Stemphylium leaf blight, and demonstration of managing perennial sowthistle. 2.0 DEC recertification credits will be available. Contact Christy Hoepting at 585-721-6953 or cah59@cornell.edu for more details.

Organic Seed School

August 7, 2014 | 5:30 PM - 8:30 PM

August 17, 2014 | 8:00 AM - 4:00 PM Cornell University Homer C. Thompson Vegetable Research Farm, 133 Fall Creek Rd, Freeville 13068

Improving Crop Production, Soil Health & the Environment









Weather Charts

John Gibbons, CCE Cornell Vegetable Program

Weekly Weather Summary: 7/22 - 7/28/14

	Rainfa	ull (inch)	Temp	o (°F)
Location	Week	Month	Мах	Min
Albion	NA	NA	NA	NA
Appleton, North	1.38	4.97	85	51
Baldwinsville	1.61	3.17	88	55
Buffalo*	1.05	4.73	85	54
Ceres	0.97	4.81	86	46
Elba	2.86	5.47	84	47
Farmington	2.23	NA	89	50
Gainesville	1.58	4.72	83	44
Geneva	3.60	5.44	87	55
Kendall	1.36	3.32	85	51
Lodi	1.22	3.00	88	49
Penn Yan*	3.27	4.72	87	55
Ransomville	NA	NA	85	51
Rochester*	3.84	7.50	88	52
Romulus	NA	NA	87	51
Silver Creek	2.22	5.63	83	55
Sodus	4.27	7.13	87	50
Versailles	NA	NA	85	48
Williamson	2.90	5.93	85	50

Accumulated Growing Degree Days (AGDD) Base 50°F: April 1 — July 28, 2014

Location	2014	2013	2012
Albion	NA	NA	NA
Appleton, North	1179	1298	1512
Baldwinsville	1492	1532	1677
Buffalo	1405	1527	1745
Ceres	1236	1287	1375
Elba	1110	1341	1458
Farmington	1370	1398	1530
Gainesville	1093	NA	1453
Geneva	1406	1485	1662
Kendall	1366	1558	NA
Lodi	1537	1662	NA
Penn Yan	1494	1514	1679
Ransomville	1264	1237	1595
Rochester	1494	1581	1717
Romulus	1439	1552	NA
Silver Creek	1321	1485	1605
Sodus	1317	1332	1495
Versailles	1320	1481	1572
Williamson	1273	1486	1638

* Airport stations

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





Cornell University Cooperative Extension Cornell Vegetable Program

480 North Main Street Canandaigua, NY 14424





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.

VEGETABLE SPECIALISTS

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Julie Kikkert | 585-313-8160 cell | 585-394-3977 x404 office | jrk2@cornell.edu processing crops (sweet corn, snap beans, lima beans, peas, beets, and carrots)

Carol MacNeil | 585-313-8796 cell | 585-394-3977 x406 office | crm6@cornell.edu potatoes, dry beans, and soil health

Judson Reid | 585-313-8912 cell | 315-536-5123 office | jer11@cornell.edu greenhouse production, small farming operations, and fresh market vegetables

Darcy Telenko | 716-697-4965 cell | 716-652-6400 x178 office | dep10@cornell.edu soil health, weed management, plant pathology

For more information about our program, email cce-cvp@cornell.edu or visit us at CVP.CCE.CORNELL.EDU

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Cornell University Cooperative Extension Cornell Vegetable Program

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.