

Cornell University Cooperative Extension

Eastern NY Commercial Horticulture Program

Vol. 2, Issue 11 June 26, 2014

Weekly Vegetable Update

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Regional Updates:

North Country—Clinton, Essex, northern Warren and Washington counties

The warm, dry, sunny weather has been ideal for plant growth this week – both crops and weeds. The two inches of rain most growers had the week before went to all that plant growth and crops are looking great. Strawberries are in full harvest now, making up for a slow start to the season. Warm loving crops have surged and recently transplanted sweet potatoes are taking hold and thickening up. Cucumber beetles are easy to find in clusters on younger leaves and most brassicas have outgrown the threat from flea beetles. The first high tunnel tomatoes are ripening up and sweet corn is finally putting on good growth with the warm, sunny weather. Summer has arrived in the north!

The mulch in this picture, silver with a stripe of black down the center, isn't a factory mishap. It's an interesting way to get the best of both types of mulches. Temperatures are much warmer under the black stripe, getting plants off to an early start, while the silver mulch helps to repel thrips and then keeps the soil from getting too hot in July. We'd be interested to hear of growers' experiences using this type of mulch, compared to all black or all silver. Here in the north, onions



definitely get off to a slower start on all silver mulch. For maximum bulb size of daylength sensitive onions it is critical to get the most leaf growth possible before June 21 when the days are at their longest.

Capital District—Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, southern Warren and Washington counties

Heat and sun moved into the capital district together this last week, which really helped to push things along. Most growers have removed the last row covers from early crops due to heat and the formation of female flowers, which leads to the need for increased vigilance for insect

pressure on these crops. Disease pressure is still moderately low, though we are seeing bacterial issues on tomatoes and peppers, some angular leaf spot on zucchini coming out from under row cover, and the start of early blight and septoria on field tomatoes with heavier fruit sets.



Mid-Hudson Valley—Columbia, Dutchess, Greene, Orange and Ulster counties

This past week we've seen lots of growth put on especially in sweet corn and cucurbits. We have sweet corn fields in silk now. So far I have not seen much ECB damage and trap counts remain moderate to low. So far, we have not caught any Corn Ear Worms in traps. Bacterial speck and canker in tomatoes have been found on more farms this week. See last week's newsletter for more information and images of bacterial diseases. Peas, greens and cabbages are being harvested, as well as a few very early plantings of summer squash.

Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

More Tomato Pruning Tips

Last week I wrote about suckering and removing lower leaves on tomatoes. There is one caution: use a gentle touch, especially right at ground level or where mulch creates a moist environment at the base of the stem. These 2 pictures show botrytis (gray mold) colonizing the stems of high tunnel tomatoes. This occurs rarely but it is something to be mindful of. It's easy to be a little too rough when snapping off leaves and suckers from the lowest parts of the plants, since you have to bend over the farthest to reach them. The plant on the left may be okay but the plant on the right should be removed. It is already sporulating, producing spores that can infect other plants, and the lesion is so large that it will compromise the plant's growth for the rest of the season.

When pinching out suckers, the earlier you can remove them, the better. Once the suckers are as thick as a pencil they will leave a large wound behind when removed. It can still be done, but it is less than ideal. The smaller suckers are easy to break off with your fingers using a sideways motion. Larger suckers are best removed with a sharp knife.

When snapping off lower leaves I like to first bend the leaf upwards and then downwards. I usually hear a soft 'snap' with each movement. If the leaves only bend and do not snap, use a sharp knife to cut them off close to the stem. I prefer to snap so the leaf can separate at its natural point of attachment. Do not tear off the leaves, they are apt to leave a ragged stump that will be slow to heal over or else tear down the stem, leaving a much larger wound than necessary. A clean snap will seal off quickly. *-ADI*



Figure 1. A small patch of botrytis starting where the plant was roughly pruned, in the moist zone near the soil and ground cloth. *Photo by ADI*



Figure 2. Here botrytis that started in the pruning wound has advanced and this plant should be removed since the stem is now so compromised. *Photo by ADI*

Bacterial Speck and Spot of Peppers

Last week Teresa highlighted bacterial issues on tomatoes, and I wanted to give a reminder that tomatoes are not the only crop that is susceptible to bacterial issues. Bacterial speck and spot are also showing up on peppers, and left unchecked can cause equally serious problems in this crop.

Generally bacterial diseases come with the seed on peppers, though like with tomatoes you can spread disease to uninfected plants in the greenhouse and through handling any time during the season. In the field, bacterial diseases are also spread by splashing from one plant to another. Of course, if you are staking your peppers, you can also bring in bacterial diseases from last year, so make sure you are sanitizing your stakes for all crops.

If you have bacterial diseases on your peppers, you can slow the

spread on the plant and between plants with copper sprays. Copper is a protectant, so will need to be sprayed whenever plants are at risk. Generally this means spraying between each rain.

Note which varieties have bacterial issues this year, and make a plan to either change seed sources or to do a hot water treatment of your seed. -CLS



Bacterial diseases can cause significant damage to pepper foliage and also cause lesions on the fruit, which make them unmarketable and susceptible to rot. In this field, one variety was affected and all others were clean. *Images by CLS*

Increase in Downey Mildew Threat

This week saw the presence of Downey Mildew on several crops in our region, mostly brassicas but also basil and impatiens. We expect to be seeing it on cucurbits shortly. If temperatures rise, likelihood will decrease but current moisture and cooler temperatures favor its development.

The worst part is that it is a fast-moving and highly destructive disease. The common name Downey Mildew covers several species of disease. Different crops are infected by different species but all are devastating.

Chemical controls are only preventative, not curative. Protection needs to be out there early for good

management. Good coverage to both leaf surfaces is also critical. Also, picking the appropriate chemicals is vital to getting successful suppression. Not just "any fungicide" will work against Downey Mildew. Be sure to consult the Cornell Guidelines for Vegetables http://vegguidelines.cce.cornell.edu/ to research which chemicals, recommended rates and combinations will be helpful for each crop. Remember to use only two different fungicide classes (FRAC codes) per spray and rotate classes according to guidelines to manage resistance. -MRU

Is this a Problem? Questions from the Field.....

Yellow summer squash are popular with customers but often loathed by growers. Scouters know to start looking at yellow squash since that's where problems usually show up first. But the yellow discoloration of the lower leaves (Photo 1) is nothing to worry about, it's just something that happens to yellow squash, not unlike the white patches that often form on zucchini leaves that resemble powdery mildew (Photo 2). The yellow lower leaves on yellow squash and white patches on zucchini leaves do not indicate a nutrient problem or disease, it's just what they do.

This year many vegetable transplants had to be held longer than planned due to the extended cool weather. If plants become crowded in their pots before planting out they can become stunted and will be less productive. This pepper (Photo 3) probably began to flower before being transplanted and has now spent too much energy ripening the fruit. Ideally, transplants should be vegetative (no flowers) so they can spend the first weeks developing strong root systems to support a big crop and plant through the growing season. This plant will probably not produce any more flowers or fruit this season. -ADI



Photo 1. Yellow summer squash with typical lower leaf discoloration - not a problem!



Photo 2. Zucchini leaves with white patches - not a problem either!



Photo 3. This pepper put too much energy into the fruit when it should have been growing roots and shoots.

European corn borer trap catches have pretty much declined across the entire area possibly indicating that we have finished our first flight of moths. Late last week I saw our first larvae in sweet corn that was just about ready to break tassel. Remember that whorl applications of insecticides aren't very effective for ECB control-your focus needs to be on corn that is starting to tassel. Larvae are quite protected in the whorl and it is difficult to get insecticides down in there to contact them unless you are using one of the translaminar materials like Coragen. Insecticide applications need to be timed to kill larvae

Sweet Corn

before they bore into a new feeding location where again they will be protected from sprays. Examine 10 plants in a row, 5 or 6 times through out a field and record the number of plants with feeding damage or those found with live larvae. The threshold for early tassel and tasseling sweet corn is 15% infestation. Once this threshold is obtained, it is recommended that two applications may be necessary: one when approximately 25-50% of the tassels have emerged, and again after 75-100% of the tassels have emerged, if the field is still over threshold. -CDB



Late blight lesions on a tomato plant. Note the white sporulation around the edges of the lesions.

I guess I was hoping that either we wouldn't have to report this at all or at the least, not have to report about Late Blight until later in the season. However, here we are in late June and the first report of Late Blight has been brought to our attention! On Sunday, June 22, 2014 Dr. Meg McGrath sent out this report:

"Late blight was found in a potato crop on Friday here on Long Island. There were very few scattered symptoms in a small area in the center of the field. Two adjacent plants had more leaf symptoms plus stem symptoms, but not the extent of symptoms I would expect if this was where an infected seed was planted, which raises the concern that this is not the only occurrence of Late Blight here. Also, Thursday was a rainy day thus spread may have occurred beyond this crop. The grower had been applying protectant fungicides; applied targeted fungicides Sat am. Fortunately we are in a period of sunny weather with very low potential for rain."

What does this mean for us? First it means that you (and us) need to get out and aggressively start scouting for any signs of the disease in both our tomatoes and potatoes. Usually late blight likes to move into young tissue, but not always. If there is a dense canopy where moisture levels stay high, late blight can easily start there. Lesions on leaves begin as small flecks that can quickly expand into large lesions. Infected tissue is initially water-soaked then becomes brown or black. Lesions are often surrounded by a halo of lighter green tissue. Under high humidity, sporulation is visible as a delicate, white mold surrounding the lesion primarily on the lower leaf surface. If you suspect late blight in either tomatoes or potatoes, please contact one of the educators on the front of this publication for confirmation.

Second, it means that we should be applying at the minimum protective fungicides on potatoes and tomatoes such as chlorothalonil (Bravo or OLF), mancozeb (Dithane or OLF). For organic production a low rate of copper tank mixed with Regalia or Double Nickel LC can be applied as a preventative approach until the pathogen is found closer to us. *-CDB*

Palestriped Flea Beetles

The other day while walking through a field of snap beans, we noticed a fair amount of feeding damage on several different plantings. When we flipped over some of the leaves we found what looked to be a small beetle. It turned out to actually be a fairly large flea beetle with two pale stripes down the back of the shell. We collected a few specimens and did some research and determined them to be Palestriped flea beetles (*Systena blanda*). They have a wide host range and can be a pest of potato, corn, eggplant, tomato, pea, bean, watermelon, pumpkin, sweet potato, peanut, oat, cotton, grape, pear, and strawberry (See Figure 1). We rarely see it here however, it can cause plant stunting and even death if populations are high enough. Older plants can usually withstand moderate feeding damage without much impact. The damage from feeding appears as small circular holes on the leaves (See Figure 2). They are fairly easily controlled with most insecticides labeled for flea beetles. *-CDB*



Figure 1: Palestriped flea beetle (*Systena blanda*). Photo from Whitney Cranshaw, Colorado State, <u>www.insectimages.org</u>



Figure 2: Feeding damage from Palestriped flea beetles on young bean seedlings.

Photo by Cara Fraver, CCE ENYCHP

2014 New York Weed Science Field Day Wed. July 16 at the H. C. Thompson Research Farm

Freeville, NY (10 miles Northeast of Ithaca, Fall Creek Road, Rt. 366 extension)

The NY Weed Science Field Days will cover Vegetable Crop Weed Control on the morning of July 16th at the Thompson Research Farm in Freeville, NY and Field Crop Weed Control

on the afternoon of July 16th at the Musgrave Research Farm in Aurora, NY.

For further information contact Maxine Welcome: 607/255-5439, mw45@cornell.edu (Vegetables) or Russ Hahn: 607/255-1759, rrh4@cornell.edu (Field Crops).

8:00 am **Registration** Coffee (beverage), doughnuts, + informational trial packet (\$8)

Vegetable Crop Weed Control (Bellinder) 8:30-11:30 am

12:00–1:30 pm NYSABA BBO lunch at Musgrave Research Farm (see registration form at bottom, separate form for BBQ)

1:30 pm Registration

2:00-5:00 pm Field Crop Weed Control (Hahn)

CCA and DEC Credits have been granted for field crop and vegetable crop field days.

Registration Form for NY Weed Science Field Day (see at bottom, separate registration for BBQ)

DEADLINE - JULY 11, 2014 - Registration is \$8 per person - this includes: coffee (beverage), doughnuts, and informational trial packet. You may also phone--607-255-5439; Fax--607-255-0599; or e-mail Maxine Welcomemw45@cornell.edu to pre-register. Cornell Weed Science T-shirts available--cost to be determined.

Please mail the form below with payment (checks made out to Cornell University) to: Maxine Welcome - NY Weed Science Field Day, Dept. of Horticulture, Room 134A Plant Science Building, Cornell University, Ithaca, NY 14853

NAME: _____ COMPANY: _____

ADDRESS:

E-MAIL: _____ PHONE #: _____ FAX #: _____

Registration Form for NYSABA Annual Summer Barbecue

Wed. July 16, 2014 from 12 pm – Until it's gone!

Musgrave Research Farm Aurora, NY (1256 Poplar Ridge Road, connects 90 and 34B)

Cost: \$12.00. pre-sale before July 10th or \$15.00 at the door.

I would like BBQ dinners at \$12 per dinner, total of \$

Send this form with Check payable to: NYSABA, PO Box 268, Macedon, NY 14502.

Name:_____

Company: _____

Telephone:

Email:

For more information: Jeanette Marvin (315) 986-9320, email jmarvin@rochester.rr.com.

Veg Grower Twilight Meeting July 10 from 5:30 - 7:30 pm Save the Date!

Location: Hudson Valley Farm Hub (formally Gill Farm), 1875 Hurley Mountain Road, Hurley, New York 12443*

Topics: Guest Speaker, Thomas Bjorkman of Cornell University will cover use of cover crops for soil health & weed control. Updates from ENYCHP educators on insect and diseases in vegetables this season.

DEC Pesticide Applicator Credits have been applied for.

*Hurley Bridge on Wynkoop Road is closed. Use alternate route to access Hurley Mountain Road from 28 West (Kenco is on corner) or Tongore Road off Route 209 in Stone Ridge.

For more information: Teresa 845-389-3562 or email tr28@cornell.edu

2014 Weather Table—This chart is compiled using the data collected by Northeast Weather Association (NEWA) weather stations. 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.

2014 Weekly and Seasonal Weather Information							
	Growing Degree Information Base 50 ⁰ F			Rainfall Accumulations			
Site	2014 Weekly Total 6/16 -6/22	2014 Season Total 3/1 - 6/22	2013 Season Total 3/1 - 6/22	2014 Weekly Rainfall 6/16 –6/22 (inches)	2014 Season Rainfall 3/1 - 6/22 (inches)	2013 Total Rainfall 3/1 - 6/22 (inches)	
Albany	137.6	767.3	697.5	0.30	9.21	16.46	
Castleton	126.1	727.1	702.7	0.59	10.94	13.02	
Clifton Park	124.1	692.2	643.5	0.41	9.67	19.62	
Clintondale	N/A	N/A	787.5	N/A	N/A	12.85	
Glens Falls	106.9	702.0	589.5	0.69	11.63	14.10	
Guilderland	127.0	711.0	629.5	0.17	1.79	4.02	
Highland	134.9	801.2	783.9	0.17	11.78	11.36	
Hudson	134.9	789.8	723.5	0.29	10.12	13.20	
Marlboro	141.6	749.8	744.6	0.31	13.09	13.68	
Montgomery	134.0	768.3	721.0	0.43	14.89	13.88	
Monticello	108.0	554.4	542.5	N/A	N/A	N/A	
Peru	105.5	639.2	623.2	0.28	10.41	9.66	
Shoreham, VT	109.6	658.1	652.6	0.27	9.49	11.62	
Willsboro	99.6	599.0	594.8	0.01	4.27	12.57	

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.

Sweet Corn Pest Trap Catches for the week ending June 23

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Location	ECB-E	ECB-Z
Albany	0	1
Columbia	1	1
Dutchess	0	4
Fulton	0	1
Orange	1	0
Saratoga	0	0
Schoharie	0	0
C. Ulster	4	4
N. Ulster	0	3
C. Washington	1	0
N. Washington	2	1