Cornell Cooperative Extension | Cornell Vegetable Program

VEGEdge

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Volume 18 • Issue 16 • July 27, 2022

Potato Disease Identification: Is it Late Blight?

Margie Lund, Cornell Cooperative Extension, Cornell Vegetable Program

With the storm systems that have moved through the area in the past week and with rows now closing, we may start to see a number of diseases developing on potatoes.

Many fungal diseases, such as late blight, can take hold in the undergrowth once rows close, and are more susceptible to spreading with summer storm systems moving through. If left unchecked, late blight can be devastating to fields, so it is important to know how to differentiate it from other diseases that may also present in potatoes this time of year. The descriptions below provide information on various potato diseases, and how their symptoms differ from late blight.

Late blight lesions on potato leaves, and stems. *Photo: Long Island Horticulture Research and Extension Center*

Late Blight

Spreads during wet humid periods, with higher disease incidence when it is cool and wet. Leaf symptoms: light to dark-green water-soaked spots, light green halo will form around the lesion, and white spores will form on the underside of leaves. Leaf lesions will cross over the mid-vein of the leaf. Lesions and white spores will also form on stems, especially at growing points. Attention should be given especially to parts of the fields that exhibit high humidity, such as low-lying areas, along hedgerows, near weedy patches, and near water.

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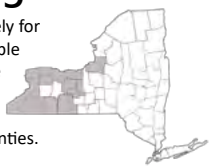
About VegEdge



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension partnership between Cornell University and CCE Associations in 14 counties.

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:
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Contents

The next issue of VegEdge newsletter will be produced on August 3, 2022.

Accumulated Growing Degree Days, 7/25/22

Nina Gropp, CCE Cornell Vegetable Program

Accumulated Growing Degree Days (AGDD)
Base 50°F: April 1 - July 25, 2022

Location**	2022	2021	2020
Albion	1470	1548	1462
Appleton	1397	1398	1379
Arkport	1269	1216	1257
Bergen	1424	1397	1426
Brocton	1444	1430	1411
Buffalo*	1475	1517	1489
Ceres	1196	1252	1218
Elba	1346	1330	1366
Fairville	1376	1340	1382
Farmington	1384	1390	1407
Fulton*	1361	1348	1422
Geneva	1448	1431	1450
Hammondsport	1385	1350	1388
Hanover	1425	1415	1404
Jamestown	1250	1243	1229
Lodi	1593	1179	1463
Lyndonville	1320	1409	1431
Niagara Falls*	1546	1470	1427
Penn Yan*	1499	1511	1495
Rochester*	1472	1446	1459
Romulus	1483	1476	1494
Sodus	1504	1461	1373
Versailles	1382	1356	1366
Waterport	1390	1380	1399
Williamson	1356	1326	1346

* Airport stations
** For other locations: http://newa.cornell.edu

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White Mold

White mold also has white spore growth on foliage, but this mold forms denser fungal growths and areas are not brown to black like late blight. Infected areas turn white in color and dark hard sclerotia will form on stems.

White mold growing on a potato stem. *Photo: Ontario CropIPM*

Rhizoctonia

White fungal growth also occurs on stems, but this growth can easily be wiped off and stem tissue under the fungus is not damaged.

Rhizoctonia fungal growth on a potato stem. *Photo: Ontario CropIPM*

Blackleg

Blackleg causes blackened rotting stems in potatoes. However, no white fungal growth will develop, and plants will sometimes produce a fishy smell. Rotting stems develop at the soil line and work their way up the plant.

Blackleg growth along the base of a potato stem. *Photo: Margie Lund, Cornell Vegetable Program*

Early Blight

Brown circular lesions form on leaves with some yellow halos, and browning on stems. However, lesions form a concentric circle “bullseye” pattern with no white spores, and stem lesions show up as flecks instead of larger infected areas.

Four early blight lesions on a potato leaf. *Photo: Margie Lund, Cornell Vegetable Program*

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Grey Mold

Dark lesions and mold spores form on leaves. However, lesions form a concentric circle "bullseye" pattern and mold spores are grey in color compared to the white spores that form with late blight.

Grey mold lesion and spores. *Photo: Ontario CropIPM*

Alternaria Brown Spot

Brown lesions will form on leaves and stems. However, lesions usually start out very small and older lesions grow larger with a concentric circle "bullseye" pattern. Lesions on stems will be small and scattered spots.

Alternaria brown spot lesions varying from small to large. *Photo: Ontario CropIPM*

Heat Stress

Under heat stress, potato leaves will turn brown. Sometimes full leaves will wilt, and other times browning will occur just along the tips of the leaflets. However, no white spores will form, and brown spots will develop during times of extreme heat and dry conditions.

Water Damage

Water-soaked brown spots form with leaf yellowing surrounding the lesions. However, no white spores will form.

Chemical Damage

Growing points and leaves develop dark lesions. However, lesions will often only form in the boundaries of the leaf veins instead of crossing over veins. Additionally, no spores or yellowing around lesions will form.

More Information and Resources

Resources for pictures of diseases listed:

https://blogs.cornell.edu/livegpath/gallery/

http://www.omafra.gov.on.ca/IPM/english/potatoes/diseases-and-disorders/index.html

For more information about the threat of each of these diseases to your potato crop and management options, contact the Cornell Vegetable Program Potato Specialist, Margie Lund, at 607-377-9109, mel296@cornell.edu. ●

New Project Assistant Joins the Cornell Vegetable Program

Lori Koenick, our new Program Assistant.

The Cornell Vegetable Program is excited to announce Lori Koenick has joined our team as our new Project Assistant! For the last three years, Lori has worked in extension roles with Cornell Garden-Based Learning and Cornell Cooperative Extension of Monroe County developing community programs focusing on horticulture and food system topics.

Lori earned an M.S. in Plant Pathology at Cornell University studying disease management strategies in New York table beet production systems and an B.S. in Applied and Environmental Microbiology at West Virginia University.

In her new role with the Cornell Vegetable Program, Lori will be managing projects around high tunnel soils, urban agriculture (pest and soil management), as well as food safety. Lori will be at farms and meetings this summer getting acquainted with growers in the region and their production practices. Welcome, Lori! ●

Primary vs. Secondary Stemphylium Leaf Blight in Onion

Christy Hoepting, Cornell Cooperative Extension, Cornell Vegetable Program

Stemphylium leaf blight (SLB) of onion usually first appears as onions begin bulbing. It often appears as tan or brownish discoloration of necrotic leaf tips. Eventually, defined target spot lesions form, first tan and brown in color, and then followed by black and purple lesions. Target lesions first form on necrotic tissue and then on green/healthy tissue. Once a plant is infected with SLB, the pathogen produces toxins that exacerbate leaf dieback, the most damaging aspect of this disease. Often, when leaf dieback reaches 30% or more prior to lodging, it will result in a yield reduction (i.e. smaller bulbs).

Secondary SLB

It is not uncommon for SLB to behave as a secondary pathogen. This means that it is casually invading necrotic leaf tissue of onion and is perfectly content to stay there with no intentions of invading healthy tissue or exacerbating leaf dieback. It is normal to see SLB invading the necrotic leaf tip tissue and necrotic outer leaf tissue that commonly forms during bulbing (Fig. 1). SLB also commonly invades necrotic leaf tissue from other causes such as herbicide (Fig. 2) or other phytotoxic tank mixes and IYSV (iris yellow spot virus).

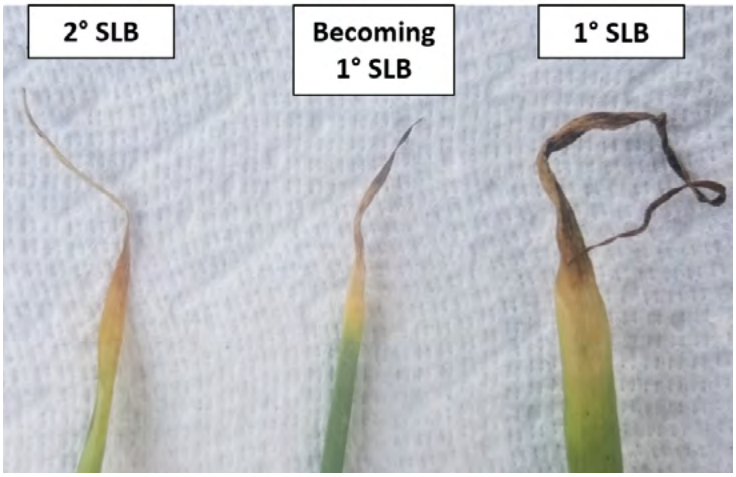

Figure 1. Invasion of necrotic leaf tip tissue with Stemphylium leaf blight (SLB). Primary SLB is characterized by dark and profuse spores. *Photo: Christy Hoepting, CCE Cornell Vegetable Program*

Figure 2. Secondary SLB invading necrotic tissue caused by herbicide injury. Left: disorganized tan-colored "leopard spotting" caused by SLB. Right: Although "showy" this purple SLB target spot appears to be just taking advantage of the necrotic tissue caused by post-emergent herbicide injury in this "pig tail". *Photos: Christy Hoepting, CCE Cornell Vegetable Program*

Primary SLB

When SLB behaves like a primary pathogen, this means that the disease is actively infecting new leaves, including green leaves, and exacerbating leaf dieback. Primary SLB is characterized by:

- dark spores on necrotic leaf tissue (Fig. 1, 4)
- appearance of concentric rings in the target spot lesions
- "greasy" tan target spot lesions (Fig. 3)
- black and purple target spot lesions (Fig. 4)
- target lesions on green tissue (Fig. 3)
- excessive leaf dieback (Fig. 4)

It is important to note that not all excessive leaf dieback is caused by SLB. Excessive leaf dieback can be caused by anything that stresses an onion plant including onion thrips feeding, pink root, Fusarium basal rot, nutrient deficiencies/imbalances and saturated soil conditions, to name a few.

Figure 3. Signs that SLB is becoming a primary pathogen. Tan target spot lesion(s) with noticeable concentric rings (= spores) are "greasy" or "water-soaked" in appearance on necrotic tissue of outer leaf (left) and is attacking green tissue (right). *Photos: Christy Hoepting, Cornell Vegetable Program*

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Figure 4. SLB as a primary pathogen. Left: "dirty tips" where dark spore colonization of necrotic leaf tissue is profuse. Right: Purple and black target pot lesions and excessive leaf dieback. *Photos: Christy Hoepting, CCE Cornell Vegetable Program*

CROP Insights

Observations from the Field and Research-Based Recommendations

BEETS

Harvest of processing table beets has begun for the season. Rain in much of our area has helped beets start to resume growth. There has not been much disease detected because of the dry spell we were in which resulted in smaller foliar canopies. This is usually the time that Cercospora leaf spot (CLS) starts to show up, so don't let your guard down. According to the CLS decision support system available at https://www.newa.cornell.edu/beet-cercospora-leaf-spot, the risk of CLS infection was low at Albion, Bergen, Elba, Geneva, Lyndonville, Sodus and Waterport this past week. Risk was moderate at Conesus Lake South (July 25) and Medina (July 23 and 25) with high risk at Medina on July 24. – JK

DRY BEANS

White mold management should be considered in fields that are in early bloom stages. An initial application of Omega 500F is recommended followed by a second application of Endura 70 WDG. The first application should be made at the early bloom stage. – ML

Western Bean Cutworm Report

Western bean cutworm moth numbers have been increasing steadily at all trap locations over the past few weeks. Currently, Churchville, LeRoy, and Penfield locations have surpassed the 50 cumulative moth threshold for scouting. Historically, peak flight occurs the last week of July into the first week of August, so dry bean scouting should begin within the next 7-10 days regardless of cumulative moth catch, especially where WBC numbers have been high in past years.

Western bean cutworm (WBC) adult numbers by date for each dry bean trap location. Traps were set on 6/27/22.

Dry Bean Location	7/5/22	7/12/22	7/19/22	7/26/22	Cumulative WBC
Alexander (Genesee Co.)	0	1	11	18	30
Avoca Hill (Steuben Co.)	0	1	10	31	42
Avoca Valley (Steuben Co.)	0	2	4	19	25
Caledonia (Livingston Co.)	1	3	8	25	37
Churchville (Monroe Co.)	0	3	30	36	69
LeRoy (Genesee Co.)	0	2	67	92	161
Pavilion (Genesee Co.)	0	1	5	4	10
Penfield (Monroe Co.)	3	2	26	94	125
Penn Yan 1 (Yates Co.)	1	2	6	19	28
Penn Yan 2 (Yates Co.)	0	0	12	7	19
Wayland (Steuben Co.)	1	1	4	34	40
Wyoming (Wyoming Co.)	0	3	24	13	40

To scout for WBC, inspect 50 plants per field (10 stops, 5 plants per stop), looking at all pods present on the plant for holes. WBC chew directly into the pod and eat the seed. It can be difficult to scout dry beans for egg masses or caterpillars, since the caterpillars move from the pods to the soil during the daytime, so looking for signs of damage is the best strategy. European corn borer damage (ECB) may be similar to WBC, but an ECB larva would likely still be present in the pod when inspected. If damage into the pod and seed is found with no larva present, it is possible this is WBC. A spray is recommended if dry bean pod damage is found.

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ONIONS

Most directed seeded fields have 1-2 inch bulbs and healthy foliage. Harvest of the earliest early-maturing transplanted onions has begun, with lodging of other early-maturing transplanted fields in full swing. The crop has gotten enough meaningful natural rainfall over the past couple of weeks during bulbing to keep it from becoming stressed so that the leaves remain green to their tips. Similarly, conditions have been dry enough to keep leaf diseases Botrytis leaf blight (BLB) and Stemphylium leaf blight (SLB) very low and downy mildew nonexistent. Most fields in Oswego and Wayne muck regions have now had their first FRAC 3 + 3 fungicide applications to stay ahead of SLB and BLB necrotic spots, as last week the SLB in many fields appeared to be becoming primary in these regions. Since conditions have been drier (and windy) in Elba, SLB is still mostly secondary and growers are opting to save their FARC 3 + 3 fungicides until August. Hopefully, this will go a long way towards halting SLB from further developing fungicide resistance to FRAC 3. For fungicide resistance management, you are strongly encouraged to use FRAC 3 + 3, not just a single FARC 3 – see article on the fall of the FRAC 3s in July 6 issue of VegEdge (page 3). For more information on the difference between primary and secondary SLB, see article on page 5 of this issue.

Onion thrips are variable and have increased dramatically in some areas (due to influx from neighboring fields where onions were harvested) while they have remained very low in others. Most fields have gotten 1 2-week ride with the momentum of Movento, and Minecto Pro has been applied when the spray threshold was reached. Agri-Mek and Minecto Pro (premix of Agri-Mek + Exirel) have a 30-day PHI, and for that reason it is usually positioned following Movento, so as not to lose the opportunity to use it. Agri-Mek is suitable for thrips pressure of 1.0 per leaf or less, but Minecto Pro should be used for higher pressure. If pressure exceeds 2-3 thrips per leaf, Radiant or Exirel should be used.

Iris yellow spot virus (IYSV) was detected for the first time this week in Elba. Foliar symptoms of bacterial disease are increasing and Fusarium basal rot is starting to show up, as these diseases do during bulbing. – CH

PEAS

Harvest of the processing pea crop is complete for this season. It was a dry and hot year for peas. Aphids were an issue this year and much of the crop had to be treated with insecticides. There was a wide range of yields based on the available moisture for the crop, which varied with planting location and timing. – JK

POTATOES

Second generation Colorado potato beetle adults have been emerging and laying eggs. Monitor fields where beetle pressure has been high earlier in the season and past years. Insecticidal control should be considered at the following thresholds: small larvae: 200/50 vines, large larvae: 75/50 vines, adults: 25/50 vines.

Simcast forecasting indicates that no sites have reached the 30 blight units (BU) needed to trigger a spray for late blight this week, but Ceres, Dansville, Fulton, Medina, Rochester, and Wellsville will surpass 30 BUs by the end of the week. If the weather station closest to you has not yet reached 30 BU and the forecast indicates that it will in the next 2-3 days, a spray is still recommended. Because weather conditions can vary depending on topography and altitude, the recent disease information and disease forecasts will be most accurate very close to the weather station used. For locations that are not close to a weather station, forecast information should only be used as a general indication of how favorable weather has been for late blight. Information for other weather stations can be found at: https://newa.cornell.edu/all-weather-data-query. On a national level, late blight has only been reported in Florida this year. Late blight has recently been found in Ontario, Canada in tomato. – ML

SNAP BEANS

High temperatures last week and over the weekend continue to stress snap beans. Beneficial rain was received in much of the area, however, there was a lake effect rain shadow such that some of our northwestern region remains very dry. Keep scouting for insects and diseases. Bacterial leaf spot could show up after the rains. – JK

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Late Blight Risk Chart, 7/27/22

Location	Blight Units 7/20-7/26[1]	Blight Units 7/27-7/29[2]
Albion	0	0
Arkport	8	18
Baldwinsville	0	0
Bergen	0	5
Brant	11	16
Buffalo	7	24
Burt	-	-
Ceres	22	38
Dansville	25	43
Elba	0	10
Fairville	0	12
Farmington	10	15
Fulton	28	46
Geneva	5	10
Hammondsport	0	5
Knowlesville	0	10
Lyndonville	11	21
Medina	29	44
Niagara Falls	7	24
Penn Yan	14	26
Rochester	22	39
Sodus	5	10
Versailles	18	28
Wellsville	13	32
Williamson	0	5

Calculated using a May 26 crop emergence date, last fungicide application July 20, cultivar Reba. Numbers in red indicate locations that have or will surpass the 30 BUs needed to trigger a fungicide application.

1 Past week Simcast Blight Units (BU)

2 Three-day predicted Simcast Blight Units (BU)

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SQUASH

The appropriately named Squash Bug can be found in most squash fields at this point in the season. This pest injects a toxin when it feeds which leads to marginal necrosis and wilt. Stems of plants with heavy infestations will appear like rotten wood. The adults are very difficult to kill, so it is important to scout for egg masses—copper- colored and laid in groups, mostly on the underside of the leaves (see photo). When recently hatched, the younger stages can be targeted with Assail (0 D PHI), or the organic combo of Neemix with PyGanic (0 D PHI).

The copper-colored eggs of Squash Bug are laid in groups, mostly on the underside of the leaves. *Photo: J. Reid, CCE Cornell Vegetable Program*

SWEET CORN

Fresh market sweet corn harvest is coming on strong. Many farms are experiencing a lot of deer damage to sweet corn this year, likely because the deer are seeking moisture. In some cases, the deer are chomping the tip of the ear right off (see photo from this week on next page). Birds are also starting to get aggressive. Damage is pecked and/or shredded ears (see photo from this week on next page). Control measures need to be implemented before the birds find the field. We are testing the laser scarecrow designed by the University of Rhode Island at seven sites in WNY. Results will be presented at winter meetings. For other methods of control, see the video and final report of CVP team trials at Video and Final Report: Managing Wildlife Damage in Sweet Corn - Cornell Vegetable Program - Cornell University - Cornell Cooperative Extension – JK

Left: Deer biting off the tip of an ear. *Photo: J. Kikkert, CCE Cornell Vegetable Program*

Right: Sweet corn ear shredded by red winged black birds. *Photo: J. Kikkert, CCE Cornell Vegetable Program*

WATERMELON/CANTALOUPES

Recently Watermelon Mosaic Virus (WMV) has been confirmed by Cornell virologist Marc Fuchs in local cantaloupe fields. Other vine crops on these same farms exhibit similar symptoms, indicating widespread infection of watermelon, cantaloupe, zucchini and pumpkin. Infected plant tissue includes distorted leaves, with mottled green patches, along with color breaking on fruit. These spots on fruit often won't mature and can be the first to break down post-harvest. WMV has many host plants and is spread by aphids. Some growers have adopted a preventative strategy that relies on more aphid specific materials earlier in the season. Beleaf (group 29, 0 D PHI) and Fulfill (group 9B, 0 D PHI) offer distinct modes of action and lower toxicity than other labeled materials. A rotation of these, along with insecticides that target Striped Cucumber Beetle) and Assail (group 4A, 0 D PHI) should target early movement of aphids, particularly when small grains (wheat, barley) are harvested or alfalfa fields. Aphids moving out of these crops can rapidly infest produce fields and spread WMV. Prevention is critical for WMV, as the virus cannot be removed from the plant after infection. We recommend rotations aways from vine crops and avoiding too high a percentage of total farm acreage in vine crops.

Symptoms of WMV on both the fruit and the foliage. Infected plant tissue includes distorted leaves, with mottled green patches. The green spots on the cantaloupe will not ripen. Prevention of aphid infestations is critical to reduce WMV risk. *Photo: J. Reid, CCE Cornell Vegetable Program*

Are Onion Thrips Allies of Bulb-Rot-Causing Bacteria in Organic Onion Production?

Pin-Chu Lai and Brian Nault, Department of Entomology, Cornell AgriTech

Onion Thrips and Bacterial Bulb Rot

Onion thrips (Fig. 1) is considered one of the most important insect pests of onions because they cause leaf damage that can not only reduce bulb yield by decreasing photosynthesis efficiency, but their feeding also create wounds on leaves making the plant more vulnerable to disease-causing pathogens. Bacterial bulb rot (Fig. 2) is also a serious problem in dry bulb onion production. Bulb rot-causing bacteria are everywhere in the soil and can infect onion bulbs through wounds on either leaves or bulbs as well as through the neck opening in the leaf axils. When onion thrips and bulb-rot-causing bacteria infest onion plants simultaneously, it is possible that leaf damage caused by thrips feeding could facilitate bacterial infections. In dry bulb onion production in Michigan, an increase in thrips densities and damage was correlated with an increase in bacterial leaf and stalk necrosis incidence; however, the subsequent bacterial bulb rot incidence was not measured. In contrast, no consistent association has been found between onion thrips abundance and bacterial bulb rot incidence in conventionally produced onions in muck fields in New York. Recently, we decided to **further examine the relationship between onion thrips and bacterial bulb rot incidence, specifically in organic onion production systems in NY.**

Figure 1. Onion thrips gathered at the base of leaf axils (left) and onion thrips damage on onion leaves (right). *Photos: L. Iglesias and P. Lai, Cornell*

Figure 2. Examples of bacterial bulb rot affecting the inner (left) and outer scales (right). *Photo: P. Lai, Cornell*

Do Thrips Facilitate Bulb Rot Disease? On-farm Trials Designed to Find the Answer

Field trials were conducted in 2020 and 2021 on two certified organic farms in Ontario County and Wayne County, NY. Two onion storage varieties, 'Bradley' (waxy leaf) and 'USDA Maia' (semi-glossy leaf), were transplanted in raised beds covered with reflective mulch and equipped with drip irrigation. We designed the study to have a range of thrips infestation levels, which were created by making foliar applications of Entrust SC to small plots at varying frequencies based on thresholds of 1, 3, 5 thrips per leaf. Thrips abundance was assessed weekly, and the season average number of thrips larvae per leaf was used in our analysis. Onions were harvested at the end of the season, and a subsample of the largest bulbs were cut in half longitudinally to assess the number of bulbs with bacterial rot.

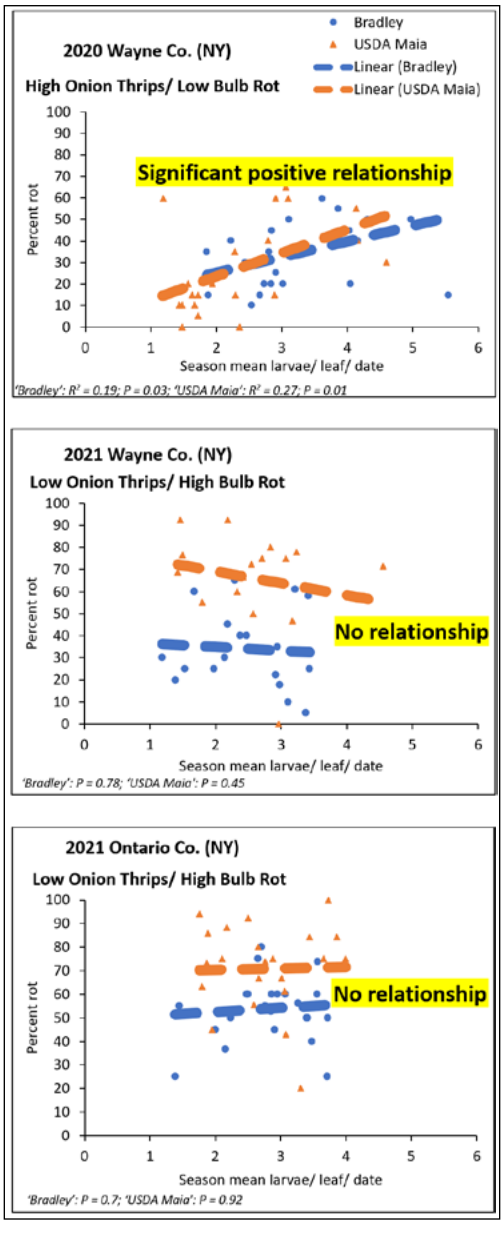

Figure 3. Relationships shown in scatter plots with linear regressions between thrips pressure (season mean number of thrips larvae per leaf per sampling date) and percent bacterial rot incidence in 'Bradley' (waxy) and 'USDA Maia' (semi-glossy) varieties in Wayne Co. 2020 (top), Wayne Co. 2021 (middle), and Ontario Co. 2021 (bottom). Overall, thrips pressure was high and bulb rot incidence was low in Wayne Co. 2020 when positive relationship was found (as thrips pressure increased, bulb rot increased); while thrips pressure was low and bulb rot incidence was high in 2021 in both Wayne and Ontario Co. when no relationship was found between thrips abundance and bulb rot incidence.

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Incidence of bacterial bulb rot was very high in all three trials (trial average bulb rot incidence: Wayne Co. 2020: 48%; Wayne Co. 2021: 44%; Ontario Co. 2021: 62%). Thrips abundance ranged from 1.2 to 5.5 thrips/leaf in Wayne Co. 2020, 1.2 to 4.6 thrips/leaf in Wayne Co. 2021, and 1.4 to 4 thrips/leaf in Ontario Co. 2021. For both onion varieties, **there was no relationship between the incidence of bacterial bulb rot and the season mean thrips density in two of three trials (Fig. 3 middle and bottom). Higher thrips abundance resulted in more bulb rot in the trial in Wayne Co. 2020 (Fig. 3 top).** The incidence of bacterial bulb rot was high overall in 2021 regardless of thrips abundance (Fig. 3 middle and bottom), which was most likely due to extensive rainfall in July and August 2021 (total precipitation in July and August 2021 in Wayne Co.: 10.2 inches; Ontario Co.: 12.1 inches) that created favorable conditions during bulbing for bacterial bulb rot disease to develop.

The higher incidence of bulb rot in 'USDA Maia' in 2021 in Figure 3 (middle and bottom) may catch your eyes. However, 'USDA Maia' was actually not more susceptible to bulb rots than 'Bradley'. In four of six trials, 'USDA Maia' had the same or lower bacterial bulb rot incidence than 'Bradley' (Fig. 4). The only times when 'USDA Maia' had higher bulb rot incidence than 'Bradley' was in 2021 when there was an extremely wet period during bulbing.

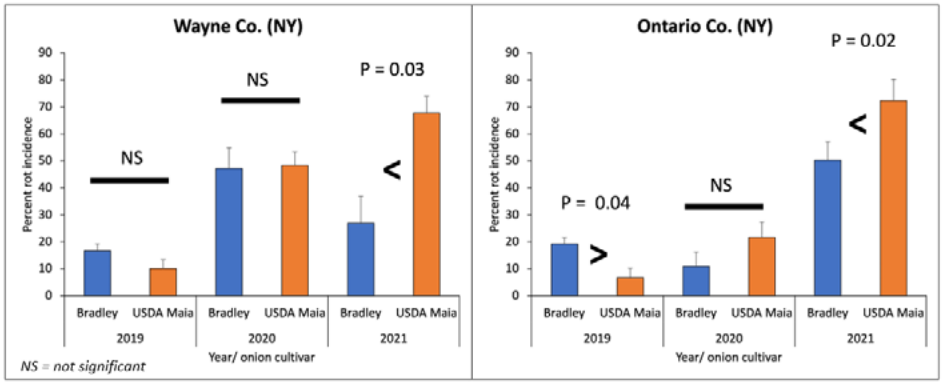

Figure 4. Mean (±SEM) percent bacterial bulb rot incidence in 'Bradley' (waxy) and 'USDA Maia' (semi-glossy) onion varieties shown in bar graphs in Wayne Co. and Ontario Co. from 2019 to 2021. **There were no consistent trends between varieties for their relative susceptibility to bulb rot.**

Based on our results and previous studies in conventionally grown onions, high thrips infestations may occasionally increase the threat of bacterial bulb rot infection, but only when thrips pressure is really high (season average >3 thrips/leaf). **Therefore, we do not recommend spraying more intensively for thrips to reduce bacterial bulb rot as the benefits of doing so are not guaranteed.** On the other hand, **wet growing conditions during bulbing appear to be the most important factor exacerbating bacterial bulb rot disease development.** ●

Upcoming Events

Organic Cucurbit Research at Cornell AgriTech

August 9, 2022 (Tuesday) | 2:00 pm - 4:00 pm rain or shine
Gates Farm West, 3352 Gates Rd, Geneva, NY 14456

This field day will showcase two experiments: 1) a full-season row cover (mesotunnels) for pest and disease exclusion, and 2) a comparison of mulches, cultivation, and rolled cover crops on weeds, pests, diseases, and yield (check out their website Organic Squash Systems Trial - Cornell blogs).

Presenters will include Sarah Pethybridge, Kellie Damann, Abby Seaman, and Bryan Brown. Refreshments and snacks will be provided. This event is free to attend, but **please pre-register** at https://cornell.ca1.qualtrics.com/jfe/form/SV_d5Sp70cxxiaCdJs. For more information, contact Bryan Brown at (315) 787-2432, bjb342@cornell.edu

Genesee Region Vegetable Meeting

August 17, 2022 (Wednesday) | 5:00 pm - 7:45 pm
meet at 2889 Pratt Rd, Batavia, NY 14020

Topics are potato variety trial (including specialty varieties), laser scare crows, carrot production, growing for seed, tomato bacterial disease, vine crops pests and disease management. 2.0 DEC (categories 1a, 10, 23) and 0.25 DEC (category 4) recertification credits will be offered.

Chipping Potato Twilight Meeting

August 25, 2022 (Thursday) | 5:00 pm - 6:30 pm, dinner to follow
Mahany Farms, 10046 NY-36, Dansville, NY 14437

View the chipping potato variety trial and hear updates from Walter De Jong of Cornell! Mike Mager of Arctic Refrigeration will provide updates in potato storage. Brian Nault, Cornell, and Margie Lund, CCE, will talk about insecticidal rotations for Colorado potato beetle and other potato insect updates. 1.0 DEC (categories 1a, 10, 23) recertification credits are available.

NY Sweet Corn Trap Report, 7/26/22

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

According to the NEWA Western bean cutworm flight emergence lookup table, most sites are near 20-25% flight emergence for WBC and should therefore be scouting for eggs with a 4% threshold for processing sweet corn and a 1% threshold for fresh market sweet corn. WBC will usually lay eggs on the upper side of the top 1-3 leaves of pre-tassel corn, close to the leaf base. After tasseling has finished WBC seek out younger corn or dry beans. WBC will most likely peak within the next two weeks.

Average Corn Earworm Catch			Days Between Sprays
Per Day	Per Five Days	Per Week	
<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 80F for the previous 2-3 days.

WNY Pheromone Trap Catches: July 26, 2022

Location	ECB-E	ECB-Z	ECB Hybrid	CEW	FAW	WBC	DD to Date
Batavia (Genesee)	0	0	NA	2	0	13	2609
Bellona (Yates)	0	0	0	0	14	82	2670
Collins (Erie)	0	0	NA	0	0	0	2486
Eden (Erie)	0	0	NA	38	15	17	2596
Farmington (Ontario)	2	1	NA	0	1	8	2668
Geneva (Ontario)	NA	NA	NA	NA	NA	NA	2644
Hamlin (Monroe)	3	1	NA	19	2	6	2548
Leroy (Genesee)	0	0	NA	11	0	21	2594
Lyndonville (Orleans)	0	0	NA	9	0	52	2520
Oswego (Oswego)	0	0	NA	0	0	29	2397
Panama (Chautauqua)	0	0	NA	7	0	25	2300
Penn Yan (Yates)	0	0	0	4	0	8	2598
Portville (Cattaraugus)	0	0	NA	10	2	19	2310
Ransomville (Niagara)	0	1	NA	1	0	3	2606
Seneca Castle (Ontario)	3	10	0	5	1	16	2591
Williamson (Wayne)	0	0	NA	3	0	54	2407

ECB: European Corn Borer; CEW: Corn Earworm; FAW: Fall Armyworm; WBC: Western Bean Cutworm; DD: Degree Days; NA: not available; DD: Degree Day based on accumulation starting March 1 (base 38F) for WBC emergence

Cornell Cooperative Extension
Cornell Vegetable Program

480 North Main Street
Canandaigua, NY 14424

VEGEdge

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VegEdge is the highly regarded newsletter produced by the Cornell Vegetable Program. It provides readers with information on upcoming meetings, pesticide updates, pest management strategies, cultural practices, marketing ideas and research results from Cornell University 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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Cornell Cooperative Extension
Cornell Vegetable Program

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