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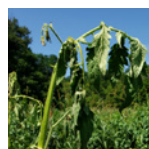
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Garlic Bloat Nematode Review

Robert Hadad, Cornell Cooperative Extension, Cornell Vegetable Program

Now that the garlic has been all harvested, trimmed or not, and set to cure, making sure the garlic that will be held aside for the fall's planting should be of good quality. One major issue that should be revisited is garlic bloat nematode. It may still be on some garlic ground in NY. Trading and/or buying new garlic stock can run the risk of bringing it onto the farm. Being able to identify the symptoms is important for keeping it out or for spotting it on the farm.

Remember that garlic bloat nematodes are microscopic worm-like creatures that feeds on roots and bulb tissue. There can be thousands present which together cause injury and damage. Their feeding opens wounds that can be colonized by bacteria, fungi, and other pests. Nematodes can go "dormant" inside cysts and reemerge later. This is how they can carry over in bulbs or persist in soils. Once in the soil they do not travel far but if infested bulbs are bunched together in storage, they could pass to uninfested bulbs.

If the stock you are growing is your own for 5 or more years and no symptoms have been seen, then keep this garlic away from any new garlic stock brought in. Plant new garlic in separate areas, cure, and store bulbs away from your home stock. Check over new incoming stock or have the seller get a representative sample tested.

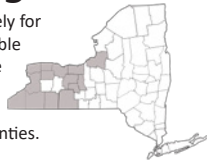


Garlic bulb, on left, with lack of roots from garlic bloat nematode feeding. Photo: G. Abawi, Cornell

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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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Help us serve you better by telling us what you think. Email us at cce-cvp@cornell.edu or write to us at Cornell Vegetable Program, 480 North Main Street, Canandaigua, NY 14424.



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The next issue of VegEdge newsletter will be produced on August 19, 2020.

Upcoming Events

View more events at CVP.CCE.CORNELL.EDU

Wayne County Fresh Market Potato and Onion Twilight Meeting

September 3, 2020 (Thursday) | 6:00 - 8:00pm
Williams Farms, 5060 Russell Rd, Marion, NY

This in-person event, hosted by CCE Wayne County, will cover the fresh market potato variety trial, and potato disease forecasting, as well as results from this year's onion thrips trial. 2.0 DEC recertification credits will be available for those who attend the full meeting.

The meeting will take place in the gravel lot outside the warehouse, and we will not be walking the field trials in order to make sure we are following Cornell guidelines on safe social distancing.

- Bring your own chair.
- No food will be provided. Please eat beforehand.
- Growers may bring their own bottle of water since beverages will not be provided.
- Masks will be required and growers will be expected to maintain 6 feet of distance and follow proper social distancing while in attendance.
- If growers have been feeling ill or have had contact with anyone confirmed to have COVID-19, we ask that they not attend the meeting.
- Attendees will be required to sign a COVID-19 check with contact information at sign-in at the meeting.

This event is FREE! For more information and to register, contact Margie Lund at 607-377-9109.

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If any of your garlic shows these symptoms, please contact the Cornell Vegetable Program Specialists Robert Hadad, rgh26@cornell.edu, 585-739-4065.

Garlic that is infested with bloat nematode should be destroyed. The ground where it grew should not have any allium crop, lilies, or ornamental bulb flowers for 5 or more years. A biofumigation cover crop such as mustards might have beneficial effects in reducing nematode populations. Caution is needed with using tractors, equipment, or tools in the field or plot then going into an established allium field. Nematodes can be carried over in soil stuck on these implements. Clean off and soil or plant debris before moving to an allium crop during this time.



Bulbs with damaged basal plates.
Photo: R. Hadad, CVP



Early stem browning from top down.
Photo: R. Hadad, CVP ●

NY Sweet Corn Trap Network Report, 8/11/2020

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

Statewide, thirty-four sites reported this week. Nine of the sites had European corn borer (ECB)-E and two sites had ECB-Z. Sixteen sites reported corn earworm (CEW) with fourteen high enough to be on a 3, 4, 5 or 6 day spray interval (see table at bottom of post). Fall armyworm (FAW) was caught at eleven sites and Western bean cutworm (WBC) was caught at twenty-seven sites. The hybrid ECB moth was caught at two of the five reporting sites.

Peak flight of WBC occurred last week, with the majority of sites now at >90% flight completion according to the Hanson et al. model.

Both CEW and FAW increased this week. At sites where CEW are being caught in high enough numbers to determine the spray schedule, those applications will be sufficient to take care of other worm pests that are present. Where CEW are not determining the spray schedule, scout to be sure that FAW and WBC are not above threshold.

NEWA Western Bean Cutworm Flight Emergence Lookup Table

Est. Flight Completion	Hanson method (2015) ^{1,2}	
	Base 3.3°C	Base 38°F
1%	1230	2200
5%	1320	2390
10%	1365	2460
15%	1390	2540
20%	1415	2585
25% (scout for egg masses)	1430	2615
30%	1450	2655
40%	1475	2690
50%	1500	2735
60%	1530	2800
70%	1560	2845
80%	1600	2919
90%	1660	3030
100%	2110	3825

¹ Hanson, A.A., R.D. Moon, R.J. Wright, T.E. Hunt, and W.D. Hutchinson. 2015. Degree-Day Prediction Models for the Flight Phenology of Western Bean Cutworm (Lepidoptera: Noctuidae) Assessed with the Concordance Correlation Coefficient. J. Econ. Entomol. 108:1728-1738. DOI: 10.1093/jee/tov110

² Model uses lower and upper thresholds of 3.3°C (38°F) and 23.9°C (75°F), respectively

WNY Pheromone Trap Catches: August 11, 2020

Location	ECB-E	ECB-Z	ECB Hybrid	CEW	FAW	WBC	DD to Date
Batavia (Genesee)	0	0	NA	0	0	12	3098
Bellona (Yates)	0	0	0	1	11	14	3134
Brockport (Monroe)	0	0	NA	0	0	3	3207
Eden (Erie)	0	0	NA	5	46	22	3107
Farmington (Ontario)	0	0	0	0	0	0	3208
Geneva (Ontario)	NA	NA	NA	NA	NA	NA	3141
Hamlin (Monroe)	0	2	NA	9	0	12	3104
Kennedy (Chautauqua)	NA	NA	NA	NA	NA	NA	2947
Leroy (Genesee)	2	0	NA	0	0	2	3081
Lyndonville (Orleans)	0	0	NA	0	0	43	3024
Oswego (Oswego)	0	0	NA	3	0	28	2877
Panama (Chautauqua)	NA	NA	NA	NA	NA	NA	2769
Penn Yan (Yates)	0	0	1	0	0	3	3038
Portville (Cattaraugus)	1	0	NA	0	0	8	2741
Ransomville (Niagara)	0	0	NA	0	1	11	3142
Seneca Castle (Ontario)	0	0	1	0	0	1	3076
Williamson (Wayne)	0	0	NA	0	0	0	2924

ECB: European Corn Borer; CEW: Corn Earworm; FAW: Fall Armyworm; WBC: Western Bean Cutworm; NA: not available; DD: Degree Day (mod. base 50F) accumulation



Fall armyworm larva. Note the inverted 'Y' on head capsule.



WBC egg mass. The eggs will turn purple just before hatching.



WBC larvae just after hatching.
Photo: Tom Cowan

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. ●

Western Bean Cutworm Report, 8/11/20

Margie Lund, Cornell Cooperative Extension, Cornell Vegetable Program

This week, all Western bean cutworm (WBC) traps in dry beans across the region except Geneva have decreased in weekly moth numbers, suggesting we have reached peak flight and dry bean pod scouting should begin. This scouting should continue for three weeks. Growers should also scout adjacent corn fields when cumulative WBC have reached >50 moths per trap, which all locations have surpassed.

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 bor-



WBC damage on the bean inside the damaged pod. The absence of a caterpillar inside the pod helps verify this is WBC damage. Photo: M. Lund

er 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.

Western bean cutworm (WBC) trap set date and WBC adult numbers by date for each dry bean trap location.

Dry Bean Location	7/14/20	7/21/20	7/28/20	8/4/20	8/11/20	Cumulative WBC
Avoca Hill (Steuben Co.)	0	23	67	80	21	191
Avoca Valley (Steuben Co.)	0	6	44	94	43	188
Caledonia S (Livingston Co.)	0	6	54	58	32	150
Caledonia SW (Livingston Co.)	0	8	100	101	48	257
Geneva (Ontario Co.)	2	13	38	42	52	147
Riga (Monroe Co.)	1	24	49	28	17	119
Stafford (Genesee Co.)	1	18	41	34	5	100
Wayland (Steuben Co.)	2	4	24	92	38	160

Project funded by the NYS Dry Bean Endowment ●

USDA Announces More Eligible Commodities for CFAP Payments

USDA Agricultural Marketing Service; press release at: <https://www.ams.usda.gov/press-release/usda-announces-more-eligible-commodities-cfap>

U.S. Secretary of Agriculture Sonny Perdue announced August 11th that additional commodities are covered by the Coronavirus Food Assistance Program (CFAP) in response to public comments and data. Additionally, the U.S. Department of Agriculture (USDA) is extending the deadline to apply for the program to September 11th, and producers with approved applications will receive their final payment.

COMMODITIES NOW ELIGIBLE FOR CFAP

- **Specialty Crops** - aloe leaves, bananas, batatas, bok choy, carambola (star fruit), cherimoya, chervil (french parsley), citron, curry leaves, daikon, dates, dill, donqua (winter melon), dragon fruit (red pitaya), endive, escarole, filberts, fri-see, horseradish, kohlrabi, kumquats, leeks, mamey sapote, maple sap (for maple syrup), mesculin mix, microgreens, nectarines, parsley, persimmons, plantains, pomegranates, pummelos, pumpkins, rutabagas, shallots, tangelos, turnips/celeriac, turmeric, upland/winter cress, water cress, yautia/malanga, and yuca/cassava.
- **Non-Specialty Crops and Livestock** - liquid eggs, frozen eggs and all sheep. Only lambs and yearlings (sheep less than two years old) were previously eligible.
- **Aquaculture** - catfish, crawfish, largemouth bass and carp sold live as foodfish, hybrid striped bass, red drum, salmon, sturgeon, tilapia, trout, ornamental/tropical fish, and recreational sportfish.
- **Nursery Crops and Flowers** - nursery crops and cut flowers.

OTHER CHANGES TO CFAP

- Seven commodities – onions (green), pistachios, pepper-

mint, spearmint, walnuts and watermelons – are now eligible for Coronavirus Aid, Relief, and Economic Stability (CARES) Act funding for sales losses. Originally, these commodities were only eligible for payments on marketing adjustments.

- Correcting payment rates for onions (green), pistachios, peppermint, spearmint, walnuts, and watermelons.

Additional details can be found in the Federal Register in the Notice of Funding Availability and Final Rule Correction and at www.farmers.gov/cfap.

PRODUCERS WHO HAVE APPLIED

To ensure availability of funding, producers with approved applications initially received 80 percent of their payments. The Farm Service Agency (FSA) will automatically issue the remaining 20 percent of the calculated payment to eligible producers. Going forward, producers who apply for CFAP will receive 100 percent of their total payment, not to exceed the payment limit, when their applications are approved.

APPLYING FOR CFAP

Read the [full press release](#) for details or call 877-508-8364 to begin the process. ●

Buckeye Fruit Rot of Tomatoes

Elizabeth Buck, Cornell Cooperative Extension, Cornell Vegetable Program

Phytophthora (fi-tof-thor-a) causes Buckeye Fruit Rot of tomatoes. *Phytophthora capsici* is the most common causal organism in NY, followed by *Phytophthora nicotianae* (aka *Phytophthora parasitica*). Late blight (*Phytophthora infestans*), a closely related species, does not cause Buckeye Fruit Rot. Soil contact, or close soil proximity, with fruit kicks off Buckeye Rot infections. Hot and humid conditions, ample soil moisture, poor drainage, and compaction promote disease development.

The buckeyes produced on fruit are alternating dark brown and lighter brown rings and may be surrounded by pale or brownish unringed tissue. Buckeyes can be anywhere on fruit, usually at the point of soil contact. At first the buckeyes are firm and remain shiny. In humid conditions you may be able to see a very fine coating of powdered sugar-like spores on the buckeyes and/or extending out into healthier looking tissue. The disease quickly progresses and the infected fruit develop nasty rots, including secondary rots caused by opportunistic pathogens.

Phytophthora capsici (P.cap for short) is the same organism that causes Phytophthora Blight in cucurbits, peppers, eggplants, and legumes. It is a nasty, persistent, soil and water-borne oomycete pathogen with a wide host range that includes several common weed species. Cases of Buckeye Rot should be taken seriously on vegetable farms. Fields showing the disease will require special management to prevent spread on farm and to keep the infected field in use for future vegetable crops.

Cultural controls provide the best chance of controlling Buckeye Fruit Rot. Staking tomatoes and using a ground mulching of your choice (plastic, straw, living) goes a long way towards minimizing soil contact with the fruit. Ground tomatoes are not recommended in fields with a history of Phytophthora Blight or Buckeye Rot. Other culturally based avoidance techniques include improving field drainage, reducing compaction, switching to trickle irrigation, and planting on high (6-inch+) raised beds.

Regaining control of symptomatic fields is particularly difficult in ground tomatoes because of the soil-fruit contact and challenges of getting acceptable coverage. Since the disease tends to strike closest to harvest, here are labelled materials with short PHIs.

- Gavel 75 DF at 1.5-2 lb/A, 5 day PHI – restricted use material
- Orondis products. Rates, use pattern, and PHI depend on formulation. PHI is 0 or 1 day.
- Presidio at 3-4 fl oz/A, 2 day PHI – restricted use material
- Quadris F, OLP, or Opti. Rates depend on product, PHI should be 0 days. Must rotate.
- Ranman 400 SC at 2.75 fl oz/A, 0 day PHI.
- Ridomil Gold Bravo at 2.5 pt/A, 5 day PHI. Not all strains respond well to Ridomil.

There are no reasonably effective, organic approved options for control of Buckeye Fruit Rot.



Left: Two early buckeye patterns, starting with alternating light brown rings on the shoulders of a green tomato and green, dark red, and brown discolored rings in two spots on the side of an orange tomato. **Center:** Buckeye rot extends into the flesh of tomatoes. **Right:** A young buckeye surrounded by firm, brownish discolored tissue that does not yet have good ring definition. Photos by Elizabeth Buck, CCE Cornell Vegetable Program



Left: Mid-aged buckeye on side of green tomato fruit showing alternating dark and medium brown rings. **Center:** Small green tomato completely covered in dark brown buckeye lesions with less-obvious ring patterns. **Right:** Off-white, fine spores coat the outer portions of a buckeye on an orange-stage tomato. The center of the buckeye lesion is showing a putrid secondary rot. Photos by Elizabeth Buck, CCE Cornell Vegetable Program ●

Verticillium Wilt

Judson Reid, Cornell Cooperative Extension, Cornell Vegetable Program

The disease Verticillium Wilt has been observed in many fields on several different vegetable crops over the last week. The wilt is caused by a fungus (*Verticillium albo*) that is present in the soil. When soils are moist and in the temperature range of 68° through 75°F, the fungus infects the root zone and then proliferates within the vascular system of the plant. Symptoms include yellow blotches with brown dead centers, often on one side of the leaf; and may be contained within veins. As time goes on the foliage dies and the plant begins to wilt from the top. In some cases the crop will revive on cloudy days or at night, only to wilt again in full sunlight. When water demand is high, for example a large fruit load is being matured, the onset can be more sudden.

If Verticillium likes cool and wet and the 2020 summer has been hot and dry, why do we see so much infection? The spring of 2020 had prolonged cool temperatures leading to poor root development of vegetable crops coupled with a long infection window. As we enter harvest season water demand is high, growers are irrigating as much as possible and the disease becomes most visible during this stress.

CONTROL METHODS

There are no fungicides, conventional or organic, for the control of a Verticillium infection. This means that extended rotation to non-host crops is by far the best management tool. The bad news is that more than 200 species can host Verticillium! Some of these include:

- Tomato
- Potato
- Eggplant
- Beet
- Cucurbits
- Dandelion
- Pigweed

Note that grasses are not listed here. This makes corn and small grains even more important on a vegetable farm. The abundance of susceptible weeds reminds us that weed control is also disease control. Peas and carrots are annual vegetables not-susceptible to the disease.

Other control measures focus on root and soil health:

- Avoid transplanting into cool soils, by laying plastic mulch early enough to allow soil temperatures to rise.
- Do not till the soil when wet to prevent compaction.
- Consider biological fungicides as a preventative measure to promote root health
- Monitor crops on plastic to prevent over-watering
- Control broad leaf weeds

A small silver lining is that some crops can tolerate low levels of Verticillium infection and still provide a marketable yield. Eggplant in particular shows symptoms readily, but still sets and matures fruit in most cases, which is good news for those of us that enjoy eggplant parmesan!



A wilted top in full sunlight means crop loss. Photo by Judson Reid, CCE Cornell Vegetable Program



V-shaped yellow blotches with brown centers often begin on the margin of older leaves. Photo by Judson Reid, CCE Cornell Vegetable Program



Minor levels of Verticillium are almost always found in eggplant. Photo by Judson Reid, CCE Cornell Vegetable Program ●

Botrytis Leaf Blight of Onion – BLB "Halo" and "Necrotic" Spots

Christy Hoeping, Cornell Cooperative Extension, Cornell Vegetable Program

When Botrytis leaf blight (BLB) first occurs in June and early July, the lesions appear as a tiny yellow necrotic spot surrounded by a silvery halo (= BLB halo) (Fig. 1). It is also common for the necrotic spot to be absent leaving just a silvery spot. During the second half of July, BLB lesions often do not have the silvery halo. Instead, they are yellow spots, sometimes yellowish-white spots as they get bigger, with a round defined border, that are pin-prick to 1 mm or slightly larger in size (= BLB necrotic spots) (Fig. 1). By August, BLB necrotic spots are often dominant, while BLB halos are hard to find, especially in Elba muck. BLB halos tend to linger for the duration of the season in Wayne and Oswego muck-onion growing regions, although both do occur. BLB necrotic spots could be confused with Goal herbicide injury (see Quick Guide to Distinguishing Necrotic Spots below). In the past, we have BLB necrotic spots blow up to high densities in some fields at this time of year. We have been trying to improve our understanding of BLB necrotic spots during the past few years and have been counting both types of BLB spots in the onion scouting program and in fungicide trials. Specifically, we are interested in which fungicides are most effective, and whether BLB necrotic spotting predisposes onion to excessive leaf dieback and Stemphylium leaf blight.

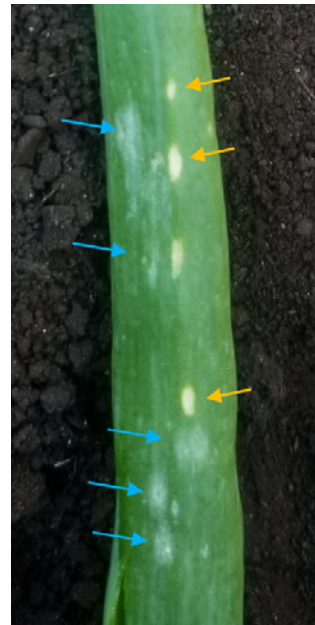
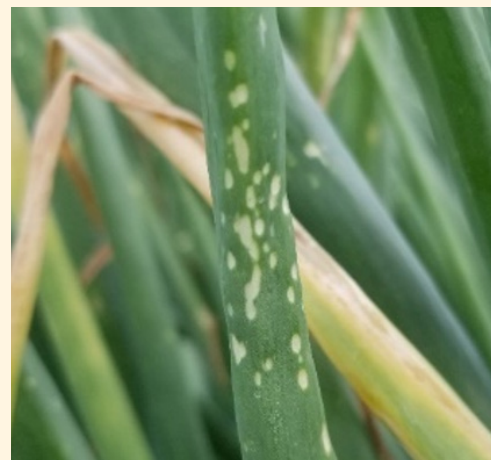


Figure 1. Botrytis leaf blight "halo" spots (blue) and "necrotic" spots (yellow) on onion. Photo by Christy Hoeping, CCE Cornell Vegetable Program

Quick Guide to Distinguishing Necrotic Spots Caused by BLB and Goal Herbicide Injury



		Necrotic Spots Caused by	
		BLB	Goal Herbicide Injury
Spot Color		Yellow or yellowish-white in color.	Greenish-white or white in color.
Spot Shape		Round-shaped, defined border.	Round-shaped and splotches, rough border.
Location		May occur anywhere on leaf. Spots more dense on outer leaves.	Tend to occur on same leaf and portion of leaf on all plants. Often clustered (where plants came in contact with spray).
Other			Often associated with leaf distortion (where Goal stunted growth of cells it contacted, while surrounding cells continued to grow). ●

Register for the Virtual Cornell Hemp Field Day

Due to COVID-19 safety restrictions, this year's Cornell Hemp Field Day is being presented virtually. On Thursday, August 20th from 9AM - 12PM, researchers will discuss topics pertaining to hemp genetics, breeding, crop management and supply chain and regulatory updates. Hemp growers, processors, and crop management advisors are encouraged to attend. [Pre-registration and full agenda](https://hemp.cals.cornell.edu) can be found at hemp.cals.cornell.edu. Industrial hemp is an emerging field crop in NYS, and this event is suitable for both beginners and those actively in production. ●

BEETS

Cercospora, Phoma, and Alternaria leaf spots are active in some fields at this time. I have also seen a small amount of bacterial leaf spot this year, but it has been fairly limited compared to last year. Foliage is looking stressed in some older fields that have been through a wide range of weather, with hot and windy conditions on Tuesday drying things out again. Some rain and cooler weather could perk the foliage up. At this point in the season, the focus is on keeping foliage healthy, letting roots size up, and harvest. - JK

CARROTS

Alternaria in some small fresh market plantings, showing varietal differences in the severity and incidence.

COLE CROPS

Black rot and alternaria are both getting going. Copper is all you can do for black rot in terms of treatment, more important to avoid working wet fields and moving it into new areas. Alternaria is just starting and could be aggressive, so keep a sharp eye on the field, get those protectants out, and have a plan ready for a control fungicide treatment. - EB

CUCURBITS

Blossom drop will be reducing yields in winter squash and pumpkin plantings this year. Stress from heat, drought, and even wind has been affecting plants. - RH

DRY BEANS

Mexican bean beetle (MBB) numbers were high in many dry bean fields this week. MBB feeding causes skeletonized leaves, so if you see this damage in fields check plants for larvae and adults. Plants can manage around 10-20% defoliation by MBB before causing yield losses. If defoliation is higher than 20% consider an insecticide treatment. - ML

ONIONS

Most fields except direct seeded late-maturing varieties are lodging now to some degree (Fig. 1). Some growers have resumed irrigating in fields where bulbing is in full swing during this critical timing for water. Majority of Botrytis leaf blight (BLB) lesions are “necrotic” spots instead of “halo” spots – see article, page 7. Onion thrips, Stemphylium leaf blight (SLB), BLB, downy mildew (DM) and Iris yellow spot virus (IYSV) can all blow up during the second half of August and cause onions to die standing up. For this reason, best products for thrips and SLB/BLB are used during this time. It has been challenging to rotate FRAC groups and active ingredients within FRAC groups, and to co-apply multiple FRAC groups per app for best fungicide resistance management practices, but not impossible! Growers have been very diligent.

Typically, 50% lodging is the timing when sprout inhibitor for storage-bound onions is applied. The rule of thumb is that onions should die down naturally and not from disease or insect damage. If the field is clean, then sprout inhibitor is likely all you need, although most growers opt to include mancozeb for DM protection in their last spray. If necrotic leaf tips and outer leaves have 20% or more leaf dieback, which is infected with Stemphylium leaf blight, than a final SLB fungicide should be included in the spray with sprout inhibitor. Similarly, if thrips are greater than 1.0 per leaf, a final insecticide should be included with sprout inhibitor. See below for tips on using sprout inhibitor, maleic hydrazide. - CH



Figure 1. As onions mature and no longer put on new leaves, the neck tissue softens allowing the onion plant to lodge.
Photo: C. Hoepfing, CVP

Ideal conditions for applying sprout inhibitor to storage bound onions

Maleic hydrazide (MH) is a growth regulator applied to storage bound onions to prevent sprouting. Ideal conditions include:

- 50% tops down, plants have 5-8 green leaves to ensure adequate translocation into the bulb.
 - If MH is applied too late or when onions have been ravaged by disease or thrips when the onion has less than 3 green leaves, it will not be absorbed properly and the onions will start sprouting in storage.
 - If MH is applied to onion that is still producing new leaves, cell division will be stopped but individual cells will continue to grow in size. This will produce spongy bulbs where the scales pull away from each other.

continued on next page

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- Humid weather and temperatures less than 75 °F are ideal.
 - Low humidity and high temperatures (i.e. >80-85 °F) may cause MH to crystallize on the leaves, thereby inhibiting uptake.
- No rain within 24 hours after application, as this reduces uptake.
- Do not tank mix with sodium hypochlorite (= tradename Surchlor), a sanitizer treatment for bacterial diseases, as this tank mix can cause a severe chemical reaction.

PEPPERS

Wind whipping has broken branches laden with fruit or bent plants way over where fruit is uncovered to the sun. Sunburn will damage the marketability of the fruit. Staking using the Florida weave style method may be a reasonable investment in time and labor if it keeps plants upright. Shading the fruit reduces sunburn and other losses.

Sand blasting caused by winds blowing soil particles have peppered leaves and caused abrasions on the fruit skins. The damage starts off as a skin discoloration which fades from pale green to rust. The texture of the skin will be rough looking. This damage will affect marketability. - RH

In areas that had night temps dip into the 40's, we're starting to see a purplish surface discoloration on the outward facing side of the fruit. This is a chilling response. Also finding some corn borer damage. - EB



Sand blasted peppers. Photo: UF Extension

POTATOES

Flea beetles feeding damage has been seen in potatoes this week. Potatoes can handle a fair amount of feeding damage on leaves without a reduction in yield, but treatment for flea beetles should be considered if there are >15 feeding holes per terminal leaf. - ML

This week, Ceres, Wellsville, Penn Yan, Fulton, Versailles, Rochester, Baldwinsville, and Williamson surpassed the 30 Blight Unit (BU) threshold for triggering a late blight spray through the forecast period 8/14/20. All other stations were below the 30 BU threshold. Conditions overall have been dry with spotty precipitation, however conditions can change very quickly in any given area and become favorable for late blight. The chart assumes use of a susceptible potato variety, a spray date of August 5, and an application of chlorothalonil. 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. Forecast BUs are subject to changes as the weather forecast changes, so check forecasting tools regularly to see if disease forecasts have changed. Information for other weather stations can

New Late Blight Risk Chart, 8/11/20

Location	Blight Units ¹ 8/05-8/11	Blight Units ² 8/12-8/14	Location	Blight Units ¹ 8/05-8/11	Blight Units ² 8/12-8/14
Albion	6	18	Hammondsport	11	5
Arkport	14	11	Knowlesville	7	18
Baldwinsville	23	11	Lyndonville	13	16
Bergen	5	11	Medina	12	17
Buffalo	5	10	Niagara Falls	18	10
Burt	12	17	Penn Yan	24	11
Ceres	36	17	Rochester	23	11
Elba	12	16	Sodus	NA	NA
Fairville	17	11	Versailles	26	16
Farmington	22	6	Wellsville	35	18
Fulton	34	12	Williamson	25	12
Geneva	12	6			

¹ Past week Simcast Blight Units (BU)

² Three-day predicted Simcast Blight Units (BU)

be found at: <http://newa.cornell.edu/index.php?page=potato-diseases>. On a national level, **late blight has been reported in Wisconsin this week, adding to the past confirmations in FL, AL, NC, and British Columbia, Canada.** No late blight has yet to be reported in NYS. If you find or suspect you have late blight on your farm, please contact a CVP specialist. - ML and JG

SNAP BEANS

Harvest of the processing crop continues. Weather fluctuations, drought and heat have been the major issues this season. Weed escapes are prevalent in some fields. If you suspect herbicide resistant weeds in your fields, please contact Julie so we can follow up. The risk for white mold will increase as we start having cooler weather and more moisture within the canopy and morning dews. - JK

TOMATOES

Heads up! Read the potato section, the upper midwest has late blight. You can join me in wishing it a very slow journey eastward. - EB

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Season 15



1. Hunting for a Home

Will Squash Vine Borer find a suitable home to start a family? Or can our farmer heroes stop it before the larvae hatch and burrow into the lower stems?



2. Hungry, Hungry Larvae

Can Colorado Potato Beetle children fight off their natural enemies and live to see another day? The Cornell Vegetable Program leads an effort by local farmers to stop these youngsters from defoliating their potatoes.



3. Addicted to Beets

Will Phoma Leaf Spot's cycle of addiction (disease) to Beta vulgaris (beets) be broken? Experts weigh in on the battle.



4. Bewildering Blights

How long will Early Blight have before it's overshadowed by the more ominous Late Blight? Monitor the progress of Late Blight as it moves up the United States eastern coast and threatens New York potatoes and tomatoes.



5. Seeds of Misfortune

Will White Mold be allowed to sow seeds (sclerotia) of misfortune for next season? Timing sprays is critical as no products will cure an infection after it has started.



6. Force Field

Will Three-Lined Potato Beetle larvae's fecal shields be enough to protect them? The future of tomatillo plants could depend on the Cornell Vegetable Program to identify these nasty pests and provide management strategies to growers.



7. Aphid Attack

Can the aphid army be stopped? In addition to feeding on plant sap, aphids can transmit certain viruses and their droppings lead to sooty mold. Biological control may be the answer!

Weather Charts

John Gibbons, CCE Cornell Vegetable Program

WEEKLY WEATHER SUMMARY: 8/04/20 - 8/10/2020

Location**	Rainfall (inch)		Temperature (°F)	
	Week	Month August	Max	Min
Albion	0.34	1.04	88	53
Arkport	0.12	0.14	89	50
Bergen	0.39	0.76	90	50
Brocton	0.96	1.58	87	55
Buffalo*	0.90	1.19	88	58
Burt	0.16	0.63	89	50
Ceres	0.04	0.20	87	52
Elba	0.39	0.48	86	50
Fairville	0.34	1.29	90	51
Farmington	0.55	0.65	89	51
Fulton*	0.39	0.80	91	52
Geneva	0.28	0.37	89	55
Hammondsport	0.44	0.44	91	53
Hanover	0.18	0.80	86	53
Lodi	0.58	0.58	90	56
Niagara Falls*	0.19	0.86	89	54
Penn Yan*	0.61	0.64	91	55
Rochester*	0.14	1.32	89	53
Sodus	0.44	1.68	91	54
South Bristol	0.37	0.43	87	51
Varick	0.34	0.36	92	56
Versailles	0.14	0.79	86	51
Williamson	0.52	1.12	89	52

ACCUMULATED GROWING DEGREE DAYS (AGDD) BASE 50°F: APRIL 1 - AUGUST 10, 2020

Location**	2020	2019	2018
Albion	1836	1635	1927
Arkport	1591	1493	1895
Bergen	1794	1576	1862
Brocton	1762	1610	NA
Buffalo*	1884	1644	1999
Burt	1732	1491	1771
Ceres	1546	1552	1686
Elba	1719	1512	1822
Fairville	1751	1506	1774
Farmington	1772	1532	1818
Fulton*	1799	1503	1827
Geneva	1862	1620	1862
Hammondsport	1757	1541	1774
Hanover	1752	1597	NA
Lodi	1851	1653	1901
Niagara Falls*	1805	1581	2045
Penn Yan*	1892	1692	1936
Rochester*	1835	1741	2057
Sodus	NA	1476	1759
South Bristol	1741	1524	1776
Varick	1923	1705	1933
Versailles	1711	1572	1838
Williamson	1717	1464	1728

*Airport stations

** For other locations: <http://newa.cornell.edu>

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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

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



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