Cornell Cooperative Extension | Cornell Vegetable Program

VEGEdge

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2025 Update on Herbicide Resistance in New York

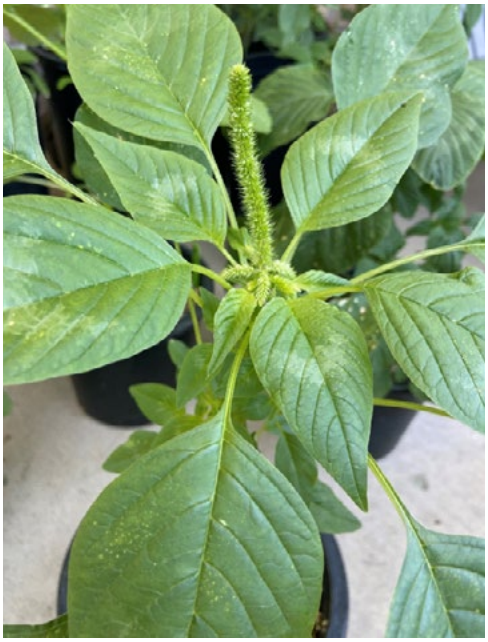
Lynn Sosnoskie, Cornell AgriTech

Many farmers are discovering that herbicides they've relied on for decades no longer provide effective weed control. While some failures may result from unfavorable environmental conditions and application errors, many instances are evolutionary adaptation occurring in real-time, i.e., herbicide resistance.

Herbicide resistance represents the naturally occurring, inheritable ability of a plant or population to survive an herbicide application that would normally be lethal. Herbicide resistance develops through natural selection, a process where repeated use of the same herbicide over space and/or time kills most weeds, except for rare individuals with genetic changes that permit their survival. These genetic changes include altered herbicide target sites, or mechanisms that enhance herbicide metabolism or reduce herbicide uptake. As these resistant individuals survive treatment and produce seed, they pass on their resistant traits to the next generation.

When the same herbicide or group of herbicides is used repeatedly without incorporating other control methods, selection pressure shifts the weed species population until resistance traits are widespread and the herbicide is no longer effective.

The scale of worldwide herbicide resistance underscores the significance of the problem (International Herbicide Resistant Weed Database). As of June 2025, there are 534 unique cases of herbicide resistance spanning 273 weedy species and 168 different herbicides across 21 of the 31 known herbicide modes of action. These resistant weeds are documented in 102 different crops across 75 countries, demonstrating that resistance knows no geographic or crop boundaries.



Palmer Amaranth. *Photo: L. Sosnoskie, 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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There are 132 unique cases of herbicide resistance in the United States with **eight occurring in New York**. Specifically:

- Common lambsquarters (*Chenopodium album*) with resistance to atrazine, and current studies are evaluating the possibility of bentazon resistance in snap bean production.
- Smooth pigweed (*Amaranthus hybridus*) with resistance to atrazine.
- Common ragweed (*Ambrosia artemisiifolia*) with resistance to atrazine.
- Common groundsel (*Senecio vulgaris*) with resistance to atrazine.
- Palmer amaranth (*Amaranthus palmeri*) with resistance to glyphosate. View Weed Science article.
- Horseweed (*Erigeron canadensis*) with resistance to glyphosate, paraquat, diquat. View HortScience article.
- Waterhemp (*Amaranthus tuberculatus*) with resistance to glyphosate. View Weed Technology article.
- Italian ryegrass (*Lolium perenne* L. ssp. *multiflorum*) with resistance to glyphosate (confirmed by genetic analysis but not dose response screening).

While eight occurrences of resistance have been confirmed in New York, resistant weeds are widespread in the Mid-Atlantic and Northeastern states: Herbicide-resistant weed species | CALS

Herbicide-resistant weeds spread through the same pathways as non-resistant weeds, but with far more serious consequences for agriculture. Natural dispersal mechanisms include wind, which can carry lightweight seeds like those of horseweed (marestail) long distances using their parachute-like pappuses, and water, which can transport seeds through runoff or flooding. Some seeds may survive digestion by birds and wild animals, enabling their spread through wildlife movement.

However, **human activities are the primary drivers of resistance spread.** Contaminated crop seed can introduce resistant weeds into clean fields. Soil amendments like manure or compost may contain viable seeds if not properly treated. Farm equipment is often the most significant means of human-mediated dispersal, as vehicles, cultivators, and harvesters can carry seeds from one field to another, spreading resistance within and between farms, and even across counties, states, and regions. **For more information about combine cleanout practices, please see Weed seed movement and equipment clean out | CALS.**

To manage herbicide resistance, consider the following:

- **Monitor resistance.** Check fields regularly for signs of herbicide resistance.
- **Rotate herbicides.** Regularly switch herbicides so you do not consistently apply herbicides that use the same mode of action.
- **Use recommended herbicide application rates.** Applying herbicides at less than the recommended rate can allow escapes that lead to herbicide resistance.
- **Prevent weed seed production.** Rogue weed escapes before they set seed.
- **Use Integrated Weed Management (IWM) practices.** Combine multiple weed control methods that include mechanical, cultural and biological controls along with herbicides to reduce the evolutionary pressure for resistance development.
- **Limit spread when resistance develops.** Use certified crop seed, regularly clean farm equipment between fields, and properly compost manure and organic waste to prevent spreading resistant seeds.

Additional resources:

- Cornell's Herbicide Resistance Webpage: https://cals.cornell.edu/weed-science/herbicides/herbicide-resistance-basics
- The Basics of Herbicide Resistance: https://growiwm.org/herbicide-resistance
- How to Manage Herbicide Resistance with IWM: https://growiwm.org/how-to-manage-herbicide-resistance-with-iwm/

Sunlight is Critical for Winter Harvest: Plan Now

Judson Reid, Cornell Cooperative Extension, Cornell Vegetable Program

On this 85 degree day in mid-July, it feels a long way off to don a heavy coat and tuque, brave the ice and snow to harvest spinach. But, it also offers a cool sense of refreshment in contrast to the haze of mid-summer. Why think (and write) about winter greens now? I have to give a talk tomorrow (of which the following is an excerpt) and (although hard to imagine) the growing season for winter greens is less than 8 weeks away. Here, I'll share some of the guiding principles and practices of winter greens, not recommended as a method for all growers, but for some who have active winter markets, this is an interesting possibility.

Let's begin with 'Where?'

Winter production of greens in NYS and other cold climates happens inside. This could include an unheated high tunnel, or heated greenhouse, but protection from winter conditions is the most essential production element for winter greens. Within the greenhouse or high tunnel, low tunnels, or simply floating row-cover are also near essentials for protection from nighttime low temperatures. These structures are ideally oriented with the long axis east-to-west, to capture as much solar gain from the sun in the southern sky. The sun is a reoccurring theme in winter production and also influences the next practice.

Within the greenhouse or high tunnel, low tunnels or simply floating row cover are also near essentials for protection from nighttime low temperatures. In this photo, we can see the white row cover gathered into the row middles to allow the sun to reach the crop. It will be reapplied at sundown. *Photo: J. Reid, CCE*

Scheduling

I mention above that the growing season for winter greens begins soon. This is one of the first secrets to understand about 'winter' growing. It is actually fall, and even summer growing. How so? In New York, many successful winter harvests are taken from plants sown or transplanted on September 15. Autumn begins on September 21, so some of our December harvest indeed comes from summer plantings. Most growers target a window of seeding and transplanting for upstate NY from approximately September 15-October 15.

However, research[1] from Liz Maynard et al (Purdue University, Indiana) demonstrates a dramatic increase in days to harvest in lettuce and other crops past the date of October 1. In the case of spinach, the days to harvest nearly triple between a crop seeded October 1 and November 1; going from a 40 day harvest to 120 days! Furthermore, total yield of late seeded spinach was 1/10th of the total harvest of crops seeded in late summer. These differences are less pronounced in transplanted crops, as well as root crops, however the trend is consistent across species and is related to the position of the sun in the sky. Crops that have multiple harvests will show the greatest benefit from early planting dates.

As the calendar moves past the Equinox of September 21, daylength and photo-intensity (strength of light) decrease (this is sometimes coupled into a value known as Daily Light Integral or DLI). The Solstice of December 21 is the point when each calendar day gains length and photo-intensity (or DLI). Different crops have different ideal DLI values, however targeting a 10 hour daylength is a shortcut to approximate sufficient DLI for crop growth.

During the darker days, plants decrease or stop growing. Believe it or not, this can be an advantage too (more on this later). So, the reason summer plantings yield more and sooner is simple: they have more light to work with. The non-growing weeks are called the Persephone period and vary with latitude. Within New York there is a significant difference in the Persephone period dates. For example in Fort Covington the last 10 hour day occurs November 4 and then the next 10 hour day will be February 5. In Staten Island the last 10 hour day occurs November 13 and then the next 10 hour day will be January 28. This is over a two-week difference in the Persephone within the state of NY!

Interested in calculating daylength values for your farm? Check out the Astronomical Data Application website from the United State Naval Observatory: https://aa.usno.navy.mil/data/Dur_OneYear or call your local extension educator for support.

Understanding now the importance of light on winter crop harvest timeline and total yield, we can begin to appreciate that successful growers prioritize winter greens over summer crops. This isn't to say there can't be a combination of the two, however summer crops (such as tomatoes) must be removed by the end of August in NY to maximize winter green potential. The planting of summer crops will also be delayed at least into mid-April to maximize winter harvest, which we can now see is truly a 3-season crop.

Considering we need the 10-hour day for photosynthesis and crop growth, is the Persephone period of benefit? Yes. In the case

1 Maynard, E; Hilfinger, D and O'Donnell, M. 2024. Scheduling Fall and Winter Vegetable Production in High Tunnels. https://ag.purdue.edu/hla HO-330-W. 18 pgs

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of winter crops the pause in growth allows us to treat the high tunnel or greenhouse as a living warehouse. The crop is in the ground, alive and fresh. Since it is not actively growing we can delay, or stagger harvest throughout this time depending on market demand. There is no other production method that permits the flexibility of harvest date such as winter greens during the Persephone period. However, the quality and freshness of the crop is not entirely dependent on DLI, but also temperature and stage of growth.

Ideal rootzone and canopy temperatures are debated concepts among growers and university research hasn't delivered uniform recommendations to date. The important concept to remember is that each time a crop goes through a freeze-thaw cycle, plant cells are at risk for bursting. If this happens too often, quality is compromised. To avoid this we use the following techniques:

- Row cover applied at or before sunset every day
- Select crops that do not freeze as readily (ie spina.ch vs. lettuce).
- Stage planting dates such that crops are not fully mature entering cold months.
- Supplement the growing space with forced heat.

In regards to planning crop crops for ideal maturity, there is an excellent resource available from Johnny's Selected Seeds: https://tinyurl.com/5n7rdj2n

Heat

Supplemental heat for winter greens is a topic we don't have time to fully explore today. However, we'll briefly return to light to begin some consideration of the benefits of heat. Minimum temperatures (above freezing) are critical to maintain the crop and influence quality. Maximum temperature benefit is not as well understood in the winter. We do know that even in the presence of ideal crop temperature, lower DLI values will result in plants that are stretched and of lower quality. In short, heat without light is of limited benefit. Most growers I've spoken with who have installed heating systems for winter greens do report favorable results, but bear in mind the target temperatures are generally in the 30s or 40s.

In a future article, we'll consider soil and nutrient management, pests and greenhouse design for optimal winter production.

Early Blight of Tomato and Potato

Diana Mulder, Cornell Vogel Lab

Early blight is a common disease seen most seasons in the Northeast and other areas where tomato and potato are grown. Two related fungal pathogens cause early blight: *Alternaria linariae* and *Alternaria solani*, which both thrive in warm, wet, and humid weather. Early blight can be identified by its characteristic circular lesions with concentric rings that create a "target" appearance, which appear on foliage, stems, or fruit. In seedlings, lesions may girdle the stem at the soil line, causing plants to wilt and die in a condition known as collar rot. Symptoms often first appear at the base of the plant and move upward as the season progresses. Early blight is capable of overwintering in plant debris, and the pathogen spreads most readily through rain splash.

Several management practices can be effective in minimizing the presence of early blight. No tomato or potato cultivars have complete immunity to the disease, though some may offer partial resistance. Removing infected plant debris from soil and covering soil with mulch can reduce disease presence. Additionally, chemical control with fungicides can be useful. Due to the importance of water in early blight development, preventing excess moisture within plant canopies is critical for mitigating disease. This can be accomplished by watering at the base of the plant to avoid wetting foliage and increasing airflow amongst plants by using stakes and trellises.

Tomato leaves infected with early blight lesions.

Tomato plants heavily infected with early blight.

Tomato peduncle and calyx with early blight lesions.

Potato leaves infected with early blight lesions.

Photos from Cornell University CALS Vegetable Pathology Photo Gallery

For more information on early blight, see: https://www.vegetables.cornell.edu/pest-management/disease-factsheets/.

Viathon + Tilt vs. Tilt + FRAC P07 for SLB, BLB Necrotic Spots and Plant Health

Christy Hoepting, Cornell Cooperative Extension, Cornell Vegetable Program

In 2023 and 2024 on-farm fungicide trials for control of Botrytis leaf blight (BLB) necrotic spots and Stemphylium leaf blight (SLB), Viathon 3 pt/A + Tilt 8 fl oz + Bravo 3 pt was the best treatment in the trial. Bravo has good activity on BLB necrotic spots, which is why it is better than Viathon + Tilt. The question is, is Viathon + Tilt (FRAC 3c + P07, 3a) better than Tilt (3a) + FRAC P07? In other words, does FRAC 3c have any activity on SLB, BLB necrotic spots or plant health?

Table 1. Efficacy of FRAC 3a, 3c and P07 on Botrytis leaf blight (BLB) necrotic spots and plant health (green foliage) in on-farm fungicide trials, 2022-2024 (Hoepting *et. al.*).

Elba, 2022			
Product and Rate/A A-H[1]	**FRAC group**	**BLB necrotic spots No./leaf 8 d post last/8th spray (Aug 26)**	**Green foliage %/plot (20 d post last/8th spray (Sep 7)**
Untreated	--	11.4 a[2]	9.8 i
Rampart 3 qt	P07	5.9 b-f	42.5 e-h
Tilt 8 fl oz	3a	4.5 fg	52.5 cde
tebuconazole	3c	8.1 ab	43.8 d-h
Viathon 3 pt	3c + P07	4.5 fg	59.5 abc
Viathon 3 pt + Tilt 8 fl oz	3c + P07 3a	2.0 h	65.0 a

Wolcott and Elba, 2023					
		Wolcott		**Elba**	
Product and Rate/A A-H[1]	**FRAC group**	**BLB necrotic spots No./leaf 8 d post 6th spray (Aug 17)**	**Green foliage %/plot 9 d post last/8th spray (Aug 31)**	**BLB severity (0-100 scale) No./leaf 4 d post 4th spray (Aug 3)**	**Green foliage %/plot 10 d post last/6th spray (Aug 30)**
Untreated	--	62.5 a	5.0 g	37.5 a	4.3 e
Rampart 3 qt	P07	28.9 b	54.7 d	23.1 cd	22.5 c
Tilt 8 fl oz	3a	34.3 b	52.5 d	19.1 de	18.3 cd
Viathon 3 pt	3c + P07	31.8 b	68.3 bc	30.8 ab	26.0 c
Viathon 3 pt + Tilt 8 fl oz	3c + P07 3a	16.7 cd	76.7 bc	13.7 ef	8.6 ef

Elba, 2024			
Product and Rate/A A-H[1]	**FRAC Group**	**BLB necrotic spots No./leaf 5 d post 4th spray (Jul 27)**	**Green foliage %/plot 16 d post last/7th spray (Aug 27)**
Untreated	--	79.0 a	0.5 j
Viathon 3 pt + Tilt 8 fl oz	3c + P07 3a	14.1 ghi	41.3 bcd
Tilt 8 fl oz + Rampart 3 qt	3a P07	19.6 fg	33.8 de

1 Total of 8 weekly sprays (A-H).

2 Numbers in a column followed by the same letter are not significantly different, Fisher's Protected LSD test. Note, analysis conducted on several treatments, not all of which are included in this table.

SLB

It has been well documented now that SLB isolates collected from commercial muck onion fields in Elba, Wayne, Oswego and even South Lima are resistant to FRAC 3c (tebuconazole), the FRAC 3 active ingredient in Viathon. In the SLB isolates collected at the end of the 2024 spray season, 47-67% of them were highly insensitive to tebuconazole. Thus, **FRAC 3c tebuconazole in Viathon has zero activity on SLB.**

Alternatively, FRAC 3a propiconazole in Tilt is still hanging on. Of the SLB isolates collected at the end of the 2024 spray season, ~83% of them were moderately insensitive to FRAC 3a, which means that control could be achieved by increasing the rate or stacking FRAC 3s in a tank mix. The remaining ~ 27% of the SLB isolates were divided between sensitive (meaning regular rates of fungicide will control disease) and insensitive (meaning high rates and stacking FRAC 3s in a tank mix will not control disease).

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This means that Tilt and the FRAC P07 in Viathon are doing all of the work to control SLB in the Viathon + Tilt tank mix. Therefore, **for SLB control, Tilt + FRAC P07 (e.g. Rampart or Reveille) is as good as Viathon + Tilt.**

BLB Necrotic Spots: Results are Inconsistent.

In 2022 trial in Elba, FRAC 3c alone had no activity on BLB necrotic spots, while FRAC 3a and P07 had moderate activity. Yet, Viathon had significantly fewer BLB necrotic spots than both of its counterparts (3c, P07), which would suggest that 3c did have activity on BLB necrotic spots. In this study, Viathon + Tilt had significantly fewer BLB necrotic spots than 3a, 3c, P07 and 3c + P07, showing a benefit to stacking FRAC 3s for controlling BLB necrotic spots.

In 2023 trial in Wolcott, there were no differences between FRAC P07, Tilt and Viathon, which suggests that FRAC 3c did not have any activity. Viathon + Tilt had significantly fewer BLB necrotic spots than any of these three, which suggests that FRAC 3a + P07 is better than either alone.

In 2023 trial in Elba, the results do not make sense because Viathon had no activity on BLB necrotic spots, while FRAC P07 did. Viathon + Tilt was not statistically different than Tilt but better than FRAC P07.

In 2024 trial in Elba, there was no significant difference between Viathon + Tilt and Tilt + FRAC P07, again suggesting that FRAC 3c had no activity on BLB necrotic spots, although numerically, Viathon + Tilt had fewer BLB necrotic spots.

Plant Health (green foliage): Results are Inconsistent.

In 2022 trial in Elba, FRAC 3c alone had significantly 4.5-times greener foliage than the untreated, and Viathon had significantly greener foliage than FRAC 3c and P07 alone, which suggests that FRAC 3c is "doing something".

In 2023 trial in Wolcott, Viathon had significantly greener foliage than FRAC P07, which again suggests that FRAC 3c is "doing something". But in the 2023 trial in Elba, there was no difference between Viathon and FRAC P07, which suggests that FRAC 3c had no activity.

In 2024 trial in Elba, there were no significant differences between Viathon + Tilt and Tilt + FRAC P07, which suggests that FRAC 3c had no activity, although numerically, the foliage was greener in Viathon + Tilt.

Conclusion

I am recommending Viathon + Tilt instead of Tilt + FRAC P07, because there is a chance that FRAC 3c has activity on BLB necrotic spots. I understand that FRAC 3c has no activity on SLB. If you chose to use Tilt + FRAC P07 instead of Viathon + Tilt, that is also acceptable, given the inconsistency of the results for BLB necrotic spots and plant health, and it may be the cheaper option. ●

Get the Most Out of Your Biopesticides

Amara Dunn-Silver, Cornell IPM

Are you planning to use biopesticides to manage diseases this summer? Biopesticide profiles published by Cornell Integrated Pest Management have valuable information that can help you use these products more effectively.

Simple, two-page profiles are available for:

- Actinovate
- Contans WG (now LalStop Contans)
- Double Nickel
- LifeGard
- Regalia
- RootShield and RootShield PLUS
- Serifel
- Stargus
- Theia
- Timorex ACT

View pdfs online or request printed copies from your local CCE office or vegetable specialist.

You may have heard that biopesticides sometimes work a bit differently than conventional chemical pesticides. Get the most out of these products by optimizing your application. Each profile includes practical details about how to use the biopesticide, including the mode of action, compatibility with other pesticides (in the tank or field), shelf life, and recommended storage conditions. It also includes information on any known toxicity concerns for both bees and insect natural enemies of pests.

These profiles are not meant to replace pesticide labels; always read and follow the label and only use pesticides that are currently registered in your state or province.

Cornell IPM will continue to add more biopesticides over time. If you'd like to suggest a biopesticide to move to the top of the list for creating new profiles, please contact Amara Dunn-Silver at 315-787-2206 or arc55@cornell.edu.

Changes in pesticide registrations occur constantly and human errors are possible. Read the label before applying any pesticide. The label is the law. No endorsement of companies is made or implied. ●

CROP Insights

Observations from the Field and Research-Based Recommendations

DRY BEANS

Leaf hoppers are moving into dry bean fields. In Cruiser treated fields, an insecticide before bloom is rarely needed, and the presence of nymphs indicates that Cruiser is no longer working. Many of the early planted fields are now in bloom stage, so white mold management should now be considered. 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.

Western bean cutworm trapping has begun at 15 fields in locations in the region (Attica, Avoca, Caledonia, Churchville, Geneva, LeRoy, Pavilion, Penfield, Wayland) (Table 1). Overall, numbers are starting low this year compared to recent years, with many traps still with no moths caught. – ML

Table 1. Western bean cutworm adult moth numbers by date for each dry bean trap location.

Dry Bean Location	July 1	July 8	July 15	Cumulative Moths
Attica (Wyoming Co.)	0	0	10	**10**
Avoca Valley (Steuben Co.)	-	0	0	**0**
Avoca Hill (Stueben Co.)	-	0	1	**1**
Caledonia 1 (Genesee Co.)	1	0	0	**1**
Caledonia 2 (Genesee Co.)	0	0	0	**0**
Churchville 1 (Monroe Co.)	1	0	10	**11**
Churchville 2 (Monroe Co.)	0	1	2	**3**
LeRoy 1 (Genesee Co.)	-	0	0	**0**
LeRoy 2 (Genesee Co.)	-	-	0	**0**
Pavilion (Wyoming Co.)	0	0	3	**3**
Penfield (Monroe Co.)	-	2	9	**11**
Geneva 1 (Ontario Co.)	0	0	0	**0**
Geneva 2 (Ontario Co.)	0	0	1	**1**
Wayland Valley (Steuben Co.)	-	0	2	**2**
Wayland Hill (Steuben Co.)	0	2	1	**3**

ONIONS

The onion crop is looking gorgeous! As it usually does this time of year when direct seeded onions are in 7-9 leaf stage with 0.5-1" bulbs and the leaves are green to their tips, before thrips and disease pressure escalate. Elba did not experience the thrips "tsunamis" (high numbers of thrips coming into onion fields from harvest of nearby wheat and onion fields) as they have in the past. I'm not jumping for joy yet, as there is still more to come, but every week that thrips pressure is delayed is good. Most fields are experiencing the ride with the "momentum of Movento" following the double application of Movento, where its residual activity will usually hold thrips pressure down for 1-3 weeks before the spray threshold for another insecticide application is reached.

The hot and dry conditions of the past week appeared not to be favorable for leaf diseases, Botrytis leaf blight (BLB) and Stemphylium leaf blight (SLB). For the most part, BLB halo lesions are decreasing while BLB necrotic spots are increasing slowly, except in a couple of fields where BLB necrotic spots jumped. The vast majority of SLB was secondary on necrotic leaf tips and old herbicide necrotic injury. At this point, most fields have had Bravo + FRAC P07 and a FRAC 7 premix (e.g. Luna Tranquility or Miravis Prime) with FRAC P07 or Switch (FRAC 12 + 9). This year I recommended the first of two applications of the best treatment for BLB necrotic spots and SLB (and BLB halos): Viathon + Tilt + Bravo to be applied at ~ 1.5" bulbs just before tipburn begins, especially if weather has been or will be favorable for disease. Last year at this time, many fields made their first V + T + B application, but this year weather conditions appear to be less favorable for disease. The only time that I would be adamant about using V + T + B this week is if the field was already starting to get tipburn and/or SLB looked primary. The FRAC 3c in Viathon has no activity on SLB, which means that it is FRAC 3a in Tilt and FRAC P07 in Viathon that are "doing all the "work". If that is the case, then Tilt + FRAC P07 (Rampart, Reveille) could be used instead. My fungicide trial results have been inconsistent regarding the efficacy of FRAC 3c on BLB necrotic spots (see article on page 6), but I choose to use Viathon + Tilt over Tilt + FRAC P07 in case FRAC 3c does have activity on BLB necrotic spots. V + T + B is better than V + T because of the extra control of BLB necrotic spots provided by Bravo. Conditions may be more favorable for disease in irrigated fields and if there is dew at night during cooler temperatures at night. – CH

POTATOES

Colorado potato beetle larvae are active in many potato fields. If thresholds of 200 small larvae or 75 large larvae per 50 plants are exceeded, an insecticide application is recommended. Many fields are showing signs of heat and water stress this week. If able, irrigating potatoes during the tuber initiation and growth stages can help reduce yield loss and diseases that impact tubers. No new late blight infections have been reported this week. – ML

SWEET CORN

Tar spot of corn (all types of corn) was detected July 10 in Niagara County in field corn with a history of the disease the past two years. There are a few reasons for the earlier detection this year: conducive weather conditions, plenty of inoculum from last season in overwintering corn debris, and a larger number of trained personnel looking for disease. Once I observed tar spot in person two years ago, my eye goes right to it. Each week, additional counties across the US and Canada have confirmed reports of tar spot in

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corn according to the map https://corn.ipmpipe.org/tar-spot/. Disease symptoms are small, raised, black spots that have a 'tarry' appearance and occur randomly across the upper and lower surfaces of the leaves. The black spots are fungal structures (stromata) that contain spores. The spots are typically 1/16th to 3/4th of an inch in diameter and typically extend through the leaf so that they can be viewed on both sides. Occasionally, tan to brown lesions with dark borders can develop around the stromata. The lesions are referred to as fisheye lesions because of their appearance. Additional information is available at https://cropprotectionnetwork.org/encyclopedia/tar-spot-of-corn. The disease can be managed with variety selection, residue management, crop rotation, and fungicides. – JK

Figure 1. Tar spot lesion on corn leaf. *Photo: J. Kikkert, CCE*

Upcoming Events

Lake Erie Summer Produce Meeting

July 24, 2025 (Thursday) | 5:30 PM - 8:00 PM
MCR Farms, 11086 Brant Reservation Rd, Brant, NY 14027

This meeting will feature a mixed fresh market field walk, potatoes, sprayer calibration, and disease control in table and wine grapes. We'll cover organic and conventional controls and present information for growers of all scales of production.

2.0 DEC (0.5 CORE, 1.0 Veg, 0.5 Fruit). Cost - FREE! Pre-registration requested to CCE Erie at 716-652-5400 by noon on 7/23.

Pizza and wings dinner, sponsored by Nutrien Ag Solutions, will be provided at the beginning of the event.

Vegetable Pest and Cultural Management Field Meeting for Auction Growers -- Seneca

July 30, 2025 (Wednesday) | 7:00 PM - 9:00 PM
Jesse Stoltzfus' farm, 5907 Rt 414, Romulus, NY 14541

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 along with CCE staff will instruct participants and facilitate peer-based learning. Details on each topic will focus on field observations at these farms.

2.0 DEC credits in categories 10, 1a, 23, and 24.

This meeting will be held at the corner of Vineyard and Rt 414 in Romulus. FREE to attend. No pre-registration required. Contact Judson Reid, 585-313-8912, with questions.

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Cornell Vegetable Program

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Canandaigua, NY 14424

VEGEdge
YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

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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 increased frequency leading up to and during the growing season.

Contact Us

VEGETABLE SPECIALISTS

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fresh market vegetables, weed management, soil health

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farm food safety, organic, business & marketing, fresh market vegetables

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onions, cabbage, broccoli, garlic, pesticide management

Julie Kikkert, Team Leader | 585-313-8160 cell | jrk2@cornell.edu
processing crops (table beets, carrots, peas, snap beans, sweet corn)

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fresh market vegetables, mushrooms, urban agriculture

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potatoes, dry beans, post-harvest handling and storage

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greenhouses/high tunnels, small farming operations, fresh market vegs

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Cornell Cooperative Extension
Cornell Vegetable Program

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