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Weed Seedling Identification

Weed Seedling

Identification

Elizabeth Buck, Cornell Cooperative Extension, Cornell Vegetable Program

Last week I wrote about scenarios that can lead to failures of control with pre-emergence applied herbicides. Following on the weed control theme, this week is all about preparing to deal with weed control after your crop is in the ground and the weeds begin to germinate. Whether you're planning to address new flushes of weeds by cultivation or through herbicide use, it is helpful to know which species you have coming up.

I expect little argument that species matters when using herbicides – hard to kill a weed if you don't know what it is and can't pick an herbicide that will work on it.

But the cultivation piece may be more a matter of opinion. Here's my opinion:

IF you have your cultivator set up so that it thoroughly covers the entire pass and you get even soil distribution,

AND you are cultivating weeds less than 1.5 inches tall,

AND the weeds are primarily broadleaf annuals, AND you have good cultivation conditions,

THEN it doesn't matter much what weed species are coming up.



Hairy Galinsoga: This weed can be a nightmare on vegetable farms. Poorly controlled by many herbicides, not the easiest to cultivate, and short life cycle, and seeds with no summer time dormancy means escapees can quickly give rise to up to 4 or 5 generations a field season. Round edged, flat tipped seed leaves followed by pointed, toothed edged hairy true leaves. Very hairy stems. *Photo by E. Buck, CCE Cornell Vegetable Program*

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: CCE Cornell Vegetable Program 480 North Main Street, Canandaigua, NY 14224 Email: cce-cvp@cornell.edu Web address: cvp.cce.cornell.edu

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The next issue of VegEdge newsletter will be produced on June 16, 2021.

Growing Degree Days (GDDs)

Julie Kikkert and Emma van der Heide, CCE Cornell Vegetable Program

Accumulated Growing Degree Days (AGDD) Base 50°F: April 1 - June 7, 2021

Location**	2021	2020	2019
Albion	476	380	311
Arkport	396	329	319
Bergen	445	383	323
Brocton	486	402	348
Buffalo*	493	375	301
Burt	379	338	253
Ceres	389	328	387
Elba	422	368	294
Fairville	438	378	295
Farmington	458	394	309
Fulton*	429	388	281
Geneva	473	395	338
Hammondsport	440	386	331
Hanover	451	395	344
Lodi	436	410	365
Niagara Falls*	446	367	274
Penn Yan*	500	403	370
Rochester*	468	393	375
Sodus	493	371	291
South Bristol	465	385	329
Varick	515	428	380
Versailles	437	397	359
Williamson	412	363	263

* Airport stations

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

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For the times when those conditions can't all be met, it does matter what weed you're trying to kill via cultivation. Perennials cultivate poorly. Grasses have thick fibrous root systems that must be uprooted – a cutting strategy won't work and they can't easily be buried. Bigger weeds must be cut off or uprooted. Some species regrow just fine after being uprooted (I'm looking at you, purslane!), others quickly develop tough stems and can survive a cultivator. Not to mention that the requirements for aggression and action (tooth/shank vibration) change based on both species and field conditions.

Generally, the sooner you act to control emerged weeds, the more success you will find. It can be difficult to solidly ID species when they are quite young. To that end, here are some seedling photos.



Common Ragweed: This 4 true leaf stage seedling is getting big and robust. It will grow rapidly from here, so if you see ragweeds of this size in your field, get after them. The seed leaves are distinctively fleshy little rounded spoons that come up perfectly opposite one another and the first true leaves (left-right orientation in this photo) are usually 3 lobed with wavy margins. By the 2nd pair of true leaves, the seedling is clearly a ragweed. That's a bonus crabgrass in the background, BTW.





Common Lambsquarters: This image is a bit distorted, but I really like how it shows the individual grains of mealy wax on the baby lambsquarters leaf. Lambsquarters seedlings always have a mealy looking dusting of white or pink wax in the center of the growing point that shows up with the very first set of true leaves. This is a distinguishing trait that separates them easily from the similar looking seedlings of pigweed species. Lambsquarters seed leaves are the long, narrow, N-S oriented leaves.



Venice Mallow: Venice mallow, or Four-o-clocks if you're Canadian, literally pour their heart out to you when they first emerge. That's because their seed leaves are perfect little hearts held up to the world on a long stem. True leaves emerge fan or shell shaped and hairy. Venice mallow is related to velvetleaf and can be tough to control with herbicides because of limited effective choices in several crops. Seeds are large, hard, and can germinate from much deeper than most other annual broadleaf weed species.



Crabgrass: Grass seedlings can be very difficult to ID without an identification key. The exception to that is craborass. Crabgrass seedlings have delightfully broad leaves relative to their length. They will grow 4 or 5 leaves before they begin to tiller (branch). They tend to be harder to remove once they begin tillering, more robust root system. This little one already has 3 leaves emerged with a 4th poking through the whorl. Time to remove it from the field! Photos by E. Buck, CVP 🛑

Avoid Weak Pumpkin Stems by Thinking About Powdery Mildew

Robert Hadad, Cornell Cooperative Extension, Cornell Vegetable Program

The other week there was a question asked to the Great Lakes Vegetable Working Group (a place where Extension vegetable specialists ask each other questions and share experiences). Someone brought up a situation that a grower had really nice looking pumpkins going into September but at harvest, the handles would break off easily. The discussion turned to powdery mildew (PM) as the probable cause.

PM is the bane of most winter squash and pumpkin growers in WNY. When the humidity goes up and the nights cool down (even a little – enough for a dew), this disease shows up. We tend to think of it a foliar disease coating the leaves in the dirty powdered sugar effect. Without treatment, the leaves yellow and dry up. Too early in the season, the canopy opens to sun scald of the fruit and if a lot of foliage goes down too early, size of the fruit can also be decreased. If PM happens later in the season, some folks may not treat at all but some stems may have become infected.

Apparently, PM also infects the stems. Stems infected with PM long enough can have dried handles that can break off more easily than uninfected stems. Stems can also shrivel up. All in all, for great pumpkin sales, strong stems are a must. There are newer varieties being offered my seed companies that seem to have more tolerance to PM. Older varieties can be more susceptible. All in all, keeping up with a strong spray program or spacing plantings further apart to allow more air circulation and planting in fields away from dead air spaces can help manage this disease.

Margret McGrath, Cornell Plant Pathologist provides <u>a great powdery mildew resource</u> on the Cornell Vegetable website (www.vegetables.cornell.edu) where she goes into great detail on management, pesticides, organic options, and photos. Or check the <u>2021 Cornell Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production</u>.

CR P Insights

Observations from the Field and Research-Based Recommendations

ASPARAGUS

Asparagus beetles are laying many eggs, with some eggs beginning to hatch. Scout to get a sense of egg pressure and decide whether you may want to treat with an insecticide. As final cuttings approach, begin to assess spears for purple spot. Fungicides should be applied to new ferns if purple spot lesions are showing up on cut spears.

BEETS

<u>Black cutworm</u> larvae continue feeding this week, so make sure to scout your fields. Conventional growers can apply a pyrethroid, with bifenthrin recommended by R. Groves at Univ. Wisconsin. Sniper LFR (bifenthrin alone) or Hero (bifenthrin + zeta-cypermethrin) are labeled for table beets in NY. According to Dr. Groves: "The bifenthrin will have the longest residual (and acute) activity of any pyrethroid. And generally yes, you will get a slight increase in residual with higher vs lower rates. If the application is made to the soil surface (predominantly), and targeting the area where cutworm larvae are residing during the day, then the bifenthrin should have a reliable 2-3 week residual. Especially if it were watered in as much as possible (> 0.25") immediately after application. I don't think it will be necessary for re-applications." For organic growers, a mixture of azadirachtin and pyrethrin provides the best chance of control. Recent rain showers have brought on a flush of annual weed seedlings. It is critical to manage these weeds when they are small. Make sure to scout for weeds and perform timely cultivation or herbicide applications (or both). Choose the post-emergence herbicides based on the weed species present. Stinger herbicide is effective on small ragweed, while UpBeet is best suited for velvetleaf. It is common to tank mix herbicides for beets because low rates are used, and the combination may be more effective. Spin-Aid can be "hot" and injure young beets, so be cautious with rates used at the 2-4 leaf stage. - JK

Receiving reports of leaf miners troubling beets and chard. We're in peak adult fly activity right now. There's not much of anything useful to be done once you're seeing mines appear in the foliage. Best is to prevent egg laying on small plantings by using row cover from mid to late May until late June. If you spray, you have to target the adults – not a great prospect so in reality this approach is of little pragmatic value. On small, high value plantings consider removing mined foliage from your plants and take away from the planting to reduce emegrence of the next generation. See <u>How to Beet Leafminers in the</u> 6/19/2019 issue of VegEdge (pg 4) but refer to the 2021 Cornell Commercial Veg Guidelines for new recommendations. - EB

CARROTS

Black cutworms can feed on carrot seedlings (see note in the beet section and the general article in last week's VegEdge). Weed control is also important at this time. - JK

COLE CROPS

Flea beetles can be a continuous problem in brassica plantings. Scout 2 or 3 times per week, as populations can build quickly, and large populations can cause enough damage to render greens unattractive or even unmarketable. For cotyledon and seeding stage, the threshold is one beetle per plant. Contact and systemic insecticides are available; see the Cornell Integrated Crop and Pest Management Guidelines for a list. Row covers placed at the time of planting may also be effective. -Ev

CUCUMBERS

Cucumber beetles continue to appear. To scout, check the undersides of leaves on five plants at each of five sites spaced throughout the field and calculate the average number of beetles per plant. The threshold for small plants (cotyledon to 4 leaf stage) is more than 5 beetles per plant, if the crop is not inherently susceptoble to bacterial wilt. Crops that are susceptible to bacterial wilt (especially cukes) and have more than 4 leaves should be treated when there are 1 or more beetles per plant. Treating hot spots or field edges, where beetle counts may be higher, is an option. For a list of useful insecticides, see the Cornell Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production. - Ev

GARLIC

Garlic has had a rough time with limited rain in some areas. If these spotty showers don't hit your field, consider adding some irrigation. Thrips, not usually a problem, have been feeding heavily in various locations across WNY. Some severe enough to cause upper leaf damage. The cost of treatment might be prohibitive at this point but keep note of this pest for next season and get on top of them earlier on. - RH

LETTUCE AND GREENS

Stressed plants have really suffered. Bolting in brassicas is rampant. There is significant rot showing up in lettuce. High heat can be a trigger for several pathogens to kick in. Drop, sclerotinia, and fusarium are all common. Consider for future spring plantings to look for drier ground and add irrigation as needed rather than letting plants sit in wetter soils. Note on a field map where problems arise and don't come back to those sites for more than 3 years. Space lettuce plants further apart to allow more air movement and keep down weeds as much as possible - RH

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ONIONS

The big news of the week is that onion thrips reached the spray threshold of 0.6-1.0 onion thrips per leaf in most fields with four or more leaves, which will be getting their first application of Movento insecticide this week. Also, Botrytis leaf blight showed up in a couple of locations in Oswego in onions with 2.5 to 3.5 leaves, but has not yet reached the spray threshold. See "Movento and Mancozeb Recommended for First Insecticide and Fungicide Sprays in Onion" on page 6. Earliest transplanted onions are at 6-8 leaf and early bulb swell with a wide range in crop stage among other transplanted fields. Majority of direct seeded crop is between 3 and 4 leaf stage with some still in 2-leaf. Onion maggot damage is ramping up. With chlorpyrifos-based products available until July 31, they could be applied over-the-top as a banded high volume spray that may provide some protection from new maggot hatches or from maggots migrating through soil to healthy plants.

Muck Donut Hour is Open for the Season! Tuesday mornings at 8:30 am at the corner of Transit and Spoilbank Roads in the Elba muck.

Plan to attend the <u>Oswego County Onion Twilight Meeting on June 24</u>! 4 pm to 7 pm. This will be the only onion twilight meeting of the year. 2.25 DEC recertification credits will be available. See CVP website for more details. - CH

POTATOES

See "Tracking Late Blight Severity Values" on page 7. Colorado potato beetle (CBP) adults are out and laying eggs on emerged potatoes. CPB will generally start feeding on and laying eggs on the edge of fields and work their way inward. Pesticides applied in-furrow should help control CPB numbers early in the season, but be sure to keep a close eye on fields that are nearby areas where potatoes were planted last year, or where CPB have been a problem in recent years. It is important to monitor fields for egg hatch in order to use insecticides to target small larvae for good early season control. - ML

TOMATOES

In high tunnel tomatoes, we begin to see signs of potassium deficiency. Foliar symptoms can include an interveinal yellowing and purple. Flowers can drop and fruit quality is decreased with yellow shoulders and white core. Growers often are fertigating with high levels of potassium but ignoring the other nutrients that influence potassium uptake. Calcium, phosphorus, and magnesium can all become out of balance in the soil, and are often blended into the high K fertilizers that tomato growers reach for to maintain fruit quality. To avoid these imbalances avoid blended fertilizers and instead develop a specific plan based on recent soil tests. Often there are savings to be had by reducing the excess nutrients while improving K uptake. - JR

NY Sweet Corn Trap Network Report, 6/8/2021

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

Statewide, 17 sites reporting this week. Only one site caught European corn borer (ECB)-E. Four sites caught ECB-Z. All four of sites with ECB hybrid traps caught hybrids with a high count of 12 at the Seneca Castle site. Corn earworm was caught at six sites with four sites high enough to be on a 4, 5 or 6 day spray schedule (see table below). Still no fall armyworm (FAW) or western bean cutworm (WBC) caught this season.

Most sites are at the egg laying stage of ECB (450 DD modified base 50) with some reaching peak flight (630 DD modified base 50). When scouting focus on the emerging tassel. Separate the leaves and look down into the tassel for any signs of feeding, frass or larvae. The threshold for ECB is 15% infested plants at tassel emergence.

European corn borer (bivoltine) development estimated using a modified base 50F degree day calculation

Development Stage	Accumulated Degree Days				
First Generation					
First spring moths	374				
First eggs	450				
Peak spring moths	631				
First generation treatment period	800-1000				
Second Ge	eneration				
First summer moths	1400				
First eggs	1450				
First egg hatch	1550				
Peak summer moths	1733				
Second generation treatment period	1550-2100				

WNY Pheromone	Trap	Catches:	June 8,	2021
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Location	ECB-E	ECB-Z	ECB Hybrid	CEW	FAW	wвс	DD to Date
Batavia (Genesee)	0	0	0	0	0	0	556
Bellona (Yates)	NA	NA	NA	NA	NA	NA	535
Brockport (Monroe)	NA	NA	NA	NA	NA	NA	573
Collins (Erie)	NA	NA	NA	NA	NA	NA	512
Eden (Erie)	0	0	NA	1	0	0	539
Geneva (Ontario)	NA	0	1	0	0	0	536
Hamlin (Monroe)	NA	NA	NA	NA	NA	NA	535
Leroy (Genesee)	NA	NA	NA	NA	NA	NA	544
Lyndonville (Orleans)	0	0	NA	2	0	0	513
Oswego (Oswego)	0	1	NA	0	0	0	443
Panama (Chautauqua)	NA	NA	NA	NA	NA	NA	484
Penn Yan (Yates)	0	2	2	0	0	NA	517
Portville (Cattaraugus)	NA	NA	NA	NA	NA	NA	494
Ransomville (Niagara)	0	0	NA	0	0	0	563
Seneca Castle (Ontario)	0	0	1	0	0	0	518
Williamson (Wayne)	NA	NA	NA	NA	NA	NA	469

ECB: European Corn Borer; CEW: Corn Earworm; FAW: Fall Armyworm; WBC: Western Bean Cutworm; NA: not available; DD: Degree Day (base 86/50) April 1st accumulation <u>Climate Smart</u> <u>Farming</u>

Avera	ige Corn Earworm		
Per Day Per Five Days Per Week			Days Between Sprays
<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.

Movento and Mancozeb Recommended for First Insecticide and Fungicide Sprays in Onion

Christy Hoepting, Cornell Cooperative Extension, Cornell Vegetable Program; Movento section edited by Brian Nault, Dept, of Entomology, Cornell Agri-Tech

MOVENTO/SENSTAR FIRST FOR ONION THRIPS

Movento/Senstar remains our recommendation for the first insecticide spray of the season to control onion thrips! While most of you have used Movento for many years, Senstar is a brand new product, which is a premix of the active ingredient in Movento, spirotetramat and pyriproxyfen. In 2020 Cornell field studies, Senstar performed as good as Movento for controlling onion thrips. The pyriproxyfen active ingredient is typically used to manage whiteflies and is not likely contributing to onion thrips mortality.

One difference between Movento and Senstar is that Senstar requires a 14-day interval between its first and second application. Because two applications of Movento/spirotetramat spaced 7 to 10 days apart are advised to get the best efficacy and to reduce exposure of multiple thrips generations needed to avoid insecticide resistance, **two applications of Senstar is not advised**. Rather, if you intend to use Senstar, use it either as your first or second spray and use Movento for the other application.

The spray threshold for Movento/Senstar is 0.6 to 1.0 thrips per leaf, or prior to bulbing (e.g. 6-7 leaf/early bulb swell), whichever comes first.

This is because the efficacy of Movento/Senstar drops off considerably during bulbing, and it does not have much activity on adult onion thrips, which occur in higher proportions of the thrips population later in the season. This double application generally results in residual activity that keeps thrips below spray threshold for 1-2 weeks or more, "the momentum of Movento". During the last few years when thrips pressure in June was lower than it is currently, it was not uncommon for crop stage instead of thrips counts to trip the first application of Movento.

Wait to Spray Until Spray Threshold is Reached

With thrips pressure starting so early this year, there is a chance that more than six insecticide applications may be required to protect onions from onion thrips throughout the growing season. Therefore, we recommended that you wait until the spray threshold is reached, unless your onions are about to bulb. This will ensure that the protection against thrips provided by Movento extends further into the growing season, to decrease the chance of running out of effective product options before the thrips season is over.

For maximum efficacy,

- Movento/Senstar should be used with a penetrating surfactant to ensure that it gets into the plant where it has systemic action.
- Movento/Senstar should NOT be used with chlorothalonil-containing fungicides such as Bravo as this tank mix can reduce the efficacy of Movento by up to 33%.
 - Last year, I trialed a dry formulation of chlorothalonil, Echo DF for its compatibility with systemic/translaminar insecticides and found that it too reduced the ability of Movento and other systemic/translaminar insecticides to control onion thrips.

Caution with Movento and Chateau

With application of Movento with penetrating surfactant being applied so early this year, it may be in close proximity to application of Chateau herbicide, which absolutely should not be applied with an adjuvant or excessive leaf burn may result. **Ideally, apply Movento + penetrating surfactant 3-5 days after Chateau application.**

MANCOZEB FOR FIRST BLB FUNGICIDE SPRAY

Last year, we recommended using the multi-site mode of action (FRAC M03) active ingredient mancozeb (tradenames Manzate Max/Pro Stik, Roper, Penncozeb, etc.) applied at first detection of Botrytis leaf blight (BLB) for early season disease control. This was based on 2019 field studies that showed that mancozeb 1 lb/A and 3 lb/A were as good as Bravo and Luna Tranquility for early season BLB control. The key was that it worked better when it was applied at first detection of BLB than when it was applied after the spray threshold of 1.0 BLB halo lesions per leaf was reached. We repeated this fungicide trial again 2020 and got the same results:

- After two fungicide applications that started at first detection of BLB, mancozeb 1 lb/A and 3 lb/A had significantly lower BLB halo lesions per plant than the untreated, which was not significantly different than Bravo 3 pt/A and 1.5 pt/A and Luna Tranquility 16 fl oz/A all applied at first BLB detection.
- All of these at first BLB detection treatments had significantly fewer BLB halos/leaf than when these treatments were started once spray threshold was reached.
- After the fourth spray, mancozeb 3 lb/A had significantly fewer BLB halo lesions than mancozeb 1 lb/A, but there were no differences between at first detection and after spray threshold timings. Based on these results, it is suggested to use mancozeb 3 lb rate when onions are larger and BLB pressure is higher.
- Mancozeb was ineffective at controlling BLB necrotic spots, which dominated during the month of August.

USE MANCOZEB THROUGH MOVENTO SPRAYS TO PRESERVE SLB FUNGICIDES

In light of Stemphylium leaf blight (SLB) developing fungicide resistance at an alarming rate to several Fungicide Resistance Action Committee (FRAC) groups, there is an urgent need to preserve the use of the remaining effective FRAC groups for SLB. Most importantly, FRAC 3 (e.g. Inspire Super, Tilt, Quadris Top and Viathon) and 7 (Luna Tranquility/Experience,

continued from page 6

Miravis Prime). If mancozeb could be applied early at first detection of BLB, then it could be used weekly through first two applications of Movento. Unlike, Bravo-type products, it is compatible with Movento. During the momentum of Movento when no insecticides for thrips are being applied, Bravo may be used for BLB. This strategy will help to preserve the use of SLB fungicides in FRAC 2, 3, 7 and 9. Table 1 lists an example spray program. In 2020, over 80% of the individual spray programs in our scouting program adopted use of mancozeb for early BLB control for at one spray and it seemed to work fine – let's do it again!

Table 1. Example of early fungicide program that utilizes mancozeb for BLB early and with Movento to preserve precious SLB fungicides.

Week No. & Crop Stage		Fungicide for BLB	Insecticide for Thrips	
1.	3-leaf or 1st detection, whichever comes first	mancozeb 1-3 lb¹		
2.	4-5 leaf	mancozeb 1-3 lb		
3.	6-leaf	mancozeb 3 lb	Movento 5 fl oz	
4.	7-leaf, start bulb	mancozeb 3 lb	Movento 5 fl oz	
5.	8-leaf	Bravo 3 pt More on this later…	No insecticide: mo- mentum of Movento	

1 3 lb rate more effective than 1 lb rate when pressure higher and when onions are bigger.

Tracking Late Blight Severity Values

Margie Lund, CCE Cornell Vegetable Program

Potatoes are emerging, so we have started tracking late blight severity values (SV) across the region. A SV \geq 18 indicates the threshold for late blight risk. The first fungicide application should occur in fields with plants larger than six inches tall as soon as possible after 18 SV have accumulated in your area. This week, Wellsville has surpassed 18 SVs, while Buffalo, Ceres, Fulton, and Niagara Falls are approaching the threshold. Weather data used to calculate SVs comes from weather stations located at each site, and can be accessed via http://newa.cornell.edu/index.php?page=all-weather-data. No late blight has been reported on a national level yet this year.

Late Blight Severity Values (SV) 6/9/21

Location	sv	Forecast 6/10-6/12	Location	sv	Forecast 6/10-6/12
Albion	4	1	Hammondsport	3	1
Arkport	9	3	Knowlesville	6	1
Baldwinsville	0	1	Lyndonville	6	4
Bergen	2	2	Medina	7	1
Buffalo	13	0	Niagara Falls	12	2
Burt	8	2	Penn Yan	10	1
Ceres	13	4	Rochester	10	1
Elba	5	2	Sodus	7	1
Fairville	6	2	Versailles	3	3
Farmington	6	2	Wellsville	22	4
Fulton	16	0	Williamson	6	1
Geneva	5	1			

Calculated using a May 26 crop emergence date, and May 15 volunteer emergence date





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

Margie Lund | 607-377-9109 cell | mel296@cornell.edu potatoes, dry beans, and post-harvest handling and storage

Judson Reid | 585-313-8912 cell | jer11@cornell.edu greenhouses/high tunnels, small farming operations, fresh market vegs

PROGRAM ASSISTANTS

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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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