

Cornell University Cooperative Extension

Eastern NY Commercial Horticulture Program

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Weekly Vegetable Update

Regional Updates

North Country – Clinton, Essex, Northern Warren & Washington Counties:

Episodes of rain continued this week with occasional heavy downpours. Most growers report being behind on many crops due to delays getting into the fields and poor germination of fine seeded crops like carrots. Crops planted during warm, dry spell in early May got established before the rainy spell arrived. Slugs are flourishing under these wet conditions. Warm season crops like peppers, eggplants, field tomatoes, basil, are growing slowly. Cucurbit crops that have been under row cover are faring better in general than uncovered but periodic high winds have pulled off cover in some fields. Tunnel crops are doing better that field plantings thanks to protection from wind and heavy rain, and some temperature moderation when sides are rolled down on chilly nights as needed.

The second generation of leek moth adults showed up in traps this week and swede midge damage in broccoli, kale and Brussels sprouts is visible now. Cold night temperatures in May caused some early planted broccoli transplants to bolt. Later plantings should do better.

Capital District – Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Southern Warren & Washington Counties:

Green and yellow summer squash, peas and some early beans are making their way to markets the last couple of weeks. Potato hilling has also been a priority for many in the last week and will continue to be for the next couple weather permitting and so will post cultivating weed control. Potato Leafhoppers are starting to make an appearance in our Sothern region but have not been found yet in our neck of the woods, but I would not be surprised to see them arrive with the storm fronts predicted for the week.

Mid-Hudson Valley- Columbia, Dutchess, Greene, Orange, Putnam, & Ulster Counties:

In the muck-The heavy wind and rain we received over the weekend knocked down portions of sweet corn plantings and damaged summer squash, particularly near field edges. Several onion fields were bruised by the heavy rainfall. Many sweet corn plantings are now in full tassel. Some early plantings of summer squash are beginning to flower and will be setting fruit shortly. Three-lined potato beetles (often confused with striped cucumber beetles) were spotted in a couple potato fields, but are not reported to be a major threat to this crop.

Upland- It was discouraging to see that bacterial speck and canker has shown up on several farms this past week. More on this inside this issue. On the brightside, I have not seen major problems with other crops and it looks like we should have some sweet corn ready for the fourth of July. Summer squash, lettuces, radish, and Kale are being harvested.

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

Cucurbits—Powdery Mildew Update

As mentioned earlier, green and yellow squash production is off and running which means that the next pest to probably arrive will be Powdery Mildew. This has been somewhat of a difficult disease to control due to the daily harvesting that is usually necessary with summer squash but should be easier this year with the introduction of one new product this year and one from last year that we can add to our fungicide programs that have been working very well in other areas of the country. Torino is labeled on all of the cucurbits at 3.4 ounces per acre (maximum two applications per year). What's nice is it has a 0 days to harvest and a 4 hour re-entry interval. I would start with this material and rotate to the newly registered Vivando (metrafenone) in a new chemical group (FRAC Group U8). Remember that the entire label and the supplemental label must be in the possession of the user when applying. These labels can be viewed and downloaded at: http:// pims.psur.cornell.edu/ The Vivando rate is 15.4 fl oz/acre with a maximum number of applications per year of three with no more than two consecutive. Again this is a nice fit for summer squash because the preharvest interval is 0 days with a restricted-entry interval of 12 hours. Pre-harvest interval is 0 days.

For organic squash, getting on them early with JMS Stylet Oil (3 - 6 quarts per 100 gallons of water) has seemed to work fairly well in the past and again there is a 0 days to harvest and a 4 hour restricted entry interval makes it nice for har-

I received a call yesterday from a grower wondering about the value of pruning his tomatoes that he is staking. After talking with him for a few minutes I understood his concern all to well and he is not the first grower to wonder about the value of pruning. I personally think there are lots of good reasons to prune; earlier fruit production, larger fruit, easier harvesting which relates to less labor and better air movement and fungicide coverage for better disease control. And as always there are the negatives; lots and lots of labor, over pruning which can lead to poor overall plant canopy/vigor and exposure of the fruit to more sunscald issues. However, I still think it is worth it based on one major factor—<u>timing of pruning!</u>

It's not the first time we've talked about tomato pruning for outdoor field plantings. First, I do think that there are some varietal sensitivities to pruning, especially when it comes to early varieties. I've had lots of growers comment on how poor the vigor and canopy is on early maturing varieties and I agree. But the simple fact of the matter is, these early varieties put so much energy into fruiting, that overall plant vigor and canopy is less just because the plant can't do it all. Bear that in mind when pruning these varieties—may be a little less pruning is required.

vesting. Do not tank mix JMS Stylet Oil with spreader stickers, NuFilm-P or Nu-Film-17 (pinolene based products). Wait at least 10 days between an oil application and spraying pinolene-based products with fruit present. JMS Stylet oil rotated with a potassium bicarbonate (Armicarb, MilStop, Kaligreen etc.) at 2.5 - 5 pounds per acre plus a spreader sticker may extend your harvesting period if your next plantings are not ready (Preharvest interval and restricted entry interval depend on product used). You can also use a good sprayable grade sulfur when the temperatures and humidity are low but you must wait at least 10 days between a JMS Stylet Oil application and sulfur application! Because these materials are contact protectants, coverage is essential. Use as much volume as you can and high pressure to make sure to penetrate the canopies. Another management tool for <u>all growers</u>: DESTROY OLDER PLANTINGS WHEN YOU ARE DONE HARVEST-ING! This will help reduce inoculum levels for new plantings. If you can't destroy them, continue to spray them if nothing else.

And not to disappoint anyone, but as I was writing this article, I received an email from the Cucurbit Downy Mildew forecasting website that Downy Mildew has been confirmed on cucumber in Michigan today (June 23rd) and Ontario, Canada on June 22nd. Seeing that the current disease forecast has us in a "low risk" for disease spread, more control information to follow in next weeks issue!

Tomatoes–To prune or not to prune?

Second, and I still think more importantly is the timing of pruning. I cringe when I walk into a field of just pruned tomatoes and the ground is green with discarded suckers! At this time of year we are all so busy on getting fields prepared for planting and getting things planted, that we sometimes neglect the post planting activities that need to be done until we feel "caught up" and that is where we get in trouble with pruning tomatoes! There is a lot of information out there on pruning and the one fact that sticks out is do not prune suckers that are larger than 4 inches! Removing suckers larger than that can really hurt a plant and set it back therefore making all the time and money spent on pruning and staking a waste. I know that sounds harsh, but it is the truth. Personally, I think even 4 inches is still to big and would like to see them pruned at 3 inches or less when possible. I guess the bottom line is, when it doubt, leave them on! The growers that I've convinced to prune earlier have definitely noticed the difference in overall plant vigor/canopy and packout.

Again, if you need help knowing how to prune, please feel free to give any of the vegetable specialist on the team a call and we will be glad to assist you.

Beware of Bacterial Diseases of Tomatoes

Already this season, bacterial diseases of tomato have been seen in fields, particularly toward the southern half of the region. Over the past week more reports have come in. It is likely the driving rains over the past two weeks have helped move the disease around. Bacterial speck, spot and canker have been increasing in occurrence and severity in the northeastern United States. Bacterial canker is presently the most serious disease in production systems.

Last year I saw more fields with bacterial disease than ever in my 20 years scouting tomatoes. Those who had these diseases in their fields last year are at greater risk this year as the bacteria persist in soils for several years as well as on stakes and in transplant production areas . Below are some tips on identification and management of these bacterial diseases.

Bacterial Speck (Pseudomonas)

- ◊ dark blisters on fruit
- ♦ development favored by cool moist conditions
- \diamond dark lesions on leaves with discrete yellow halo

Bacterial Spot (Xanthomonas)

- ♦ dark, scabby lesions on fruit
- ◊ can start on or spread to peppers
- ♦ favored by warm weather
- ◊ often misdiagnosed as speck
 - Bacterial Canker (Clavibacter)
- ◊ dark lesions on leaves starting at the edge
- ◊ light blisters on fruit cankering of branches.
- ◊ systemic infections can kill plants

The first infection on the farm is typically introduced through infected seed or plants. Once introduced on the farm, it can recur when rotation or sanitation practices are not adequate OR through new infections on seed or plants. These organisms are very difficult to detect on seed at low levels but can still result in a field epidemic. Plants may have no symptoms for 6-8 weeks *or longer*! (TR)

Management of Tomato Bacterial Diseases: Speck Spot and Canker

The first defense starts with seed and greenhouse sanitation, but we're way past that stage now. If you stake and tie your tomatoes, make sure any stakes you use are cleaned with a disinfectant. These include, Green-Shield, OxiDate, ZeroTol and sodium hypoclorite or common household bleach. Bleach is still one of the most inexpensive materials to use and is effective.

Whatever disinfectant you use, be sure to remove any dirt or debris first. Then, rinse the stakes followed by

dunking them in a tank with the disinfectant material, then rinse them again. The problem with any of these disinfectants is that they are tied up by organic matter such as dirt and debris, so it's recommended that you change the water often in order to maximize its effectiveness. Also, try not to prune or send workers through the fields when they are wet as this will help spread the disease.

Tannos has some suppressive activity on Speck, Spot and Canker, but I think using copper plus mancozeb is just as effective. The reason for mixing the two together is the addition of the mancozeb increases the effectiveness of the copper by releasing more of the copper ions. Gavel is also labeled due to the mancozeb component of the material. In an organic system the grower is limited to OMRI approved copper compounds such as Champ or Cueva.

Actigard, not approved for organic production, has a unique mode of action: it induces host plant resistance to speck and spot, but not to canker. Trials conducted by Cornell plant pathologists Christine Smart and Margaret



McGrath found Actigard to provide excellent control of bacterial speck without a reduction in yield. They used 0.75 oz/A applied at 100 gpa on a 7-day schedule. It takes at least three days for Actigard to induce plant defenses, so it is necessary to begin applications before symptoms appear on the plant. Actigard is not labeled for fungal diseases.

When infected plants are found throughout a field, not more than 100 plants per acre should be removed in an attempt to restrict spread. Pulling out more is of little benefit. No resistant varieties are available. A minimum of two-year rotation for speck and spot is recommended and three years for canker. More on management can be found at http://vegetablemdonline.ppath.cornell.edu/ NewsArticles/Tom_Bacter_06.html -*CDB* (Edited by TR)

Bacterial Spot on Pepper

We are seeing fairly severe bacterial spot on peppers this year, and the humid, wet weather that we are currently experiencing will certainly contribute to further spread. This is the same disease that affects tomatoes, and can be treated in the same way—copper treatments to kill bacteria which land on unaffected tissue, not handling plants when they are wet, and working with infected varieties after working with any varieties which are not infected.

Different varieties of peppers are more or less susceptible to bacterial spot, though all infected plants seem to end up with lesions on the fruit which render then unmarketable. Symptoms on the leaves and fruits can be found below. I find the easiest way to detect disease on the fruits is to run your fingers over them. Even when they are quite



Raised bacterial lesions on pepper fruit.



Bacterial spot lesions on the lower leaves of peppers

small, tiny raised lesions will begin to appear. Fruit with these tiny lesions will continue to deteriorate, culminating in scabby bumps and often secondary soft rots.

If you are dealing with bacterial issues this year, it is important to start thinking about how to avoid a problem in the future. If you reuse pots, make sure they are sterilized. Either change transplant sources if purchasing plants or talk to your source to make sure they use good sanitation and clean seed. If growing your own transplants, change seed source or plan to treat seed with hot water, and sterilize every surface of the greenhouse prior to the next season. – cls

Onion Maggot Infestations

I have seen several onion fields this year that have experienced a combination of poor stand establishment and dieback. This could be due to the period of hot and dry weather that coincided with planting, although I have also seen several cases where the dieback was associated with onion maggot infestations. In

some cases, infestations are quite severe. It is important to know if the dieback you see in your fields is the result of maggot damage as this can influence management decisions post-harvest and prior to planting next season. Onion maggots overwinter as pupae in



the soil where onions or other Allium crops were grown the previous season. Adult flies emerge in mid-May, with peak flight occurring approximately two weeks later. Females start laying eggs about 10 days after emergence and can deposit several hundred eggs over the course of 2-4 weeks. Eggs hatch in 2-5 days and larvae subsequently enter plants near the base and

begin feeding. Younger plants are more susceptible and are likely to wilt and die if attacked. Larvae will then move to neighboring plants, resulting in a patchy distribution of symptoms. Second generation maggots can attack bulbs, leading to deformed onions and



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Onion Maggot Infestations, continued from last page

wounds that are prone to bacterial infections.

Chemical controls for onion maggot are generally applied as in-furrow drenches and often include chlorpyrifos (Lorsban). Chlorpyrifos can be very effective in controlling this pest, although populations commonly develop resistance. If you suspect that resistance has developed in your field, you may want to consider using treated seed. Foliar applications aimed at controlling adult flies are not likely to be effective since they spend most of their time away from onion fields.

Damaged onions will attract flies, so minimize herbicide and mechanical injury to your plants. Destroy, bury, or place culls in deep piles for the same reason. Fall plowing will expose and destroy overwintering pupae and may be an option for heavily infested fields. Crop rotation can be effective but is not a practical option in the major onion growing regions of New York as neighboring fields are likely to serve as a reservoirs for continued infestations. - *KB*

Tarnished plant bug: a sneaky pest of vegetables



Generally I think of tarnished plant bug, a relative of stinkbug and squash bug, as a pest of strawberries and tree fruit, but it can also be a significant pest of numerous vegetable crops. This year there seem to be localized hot spots of this pest popping up and causing significant damage to broccoli and the fruits of tomato, eggplant and pepper. Significant damage to leafy greens is also reported with this pest. As with stinkbugs, feeding is through sucking and not through chewing, so the damage can be subtle. On leaves it appears as small brown spots; on broccoli and cauliflower as individual aborted flowers; bronzing and off flavor; and in fruiting vegetables you might see unusually high levels of flower/fruit drop or misshapen fruit.

Tarnished plant bug (TPB) is not as elusive as its relative the stink bug, and can be found crawling on the surface of flowers and leaves during the day. It is, however, quite small compared to its stinky counterparts. Organic growers generally have a hard time controlling this pest, and instead try to control the environment around vegetable crops so that tarnished plant bugs will feed elsewhere. For example, TPB will stay in hay fields with abundant flowering plants instead of feeding on vegetables, but as soon as the field is cut, they move to the vegetable



crops. Another key control measure for TPB is good weed control around the vegetables, as populations will quickly grow among flowering weeds. By keeping flowering weeds away from your crops, you will also keep TPB away. Pyganic applications may suppress populations of TPB, particularly of nymphs, but do not expect complete control. As with other stinkbug family pests, the adults are extremely...durable. –cls

Tarnished plant bug adult (left), nympth (above) and on a strawberry flower for size reference.



WEEKLY VEGETABLE UPDATE

Colorado Potato Beetle

Colorado potato beetle (CPB) larvae at several different stages have been found throughout the area, especially on eggplant! Now is the time to concentrate controlling them when they are small larvae. If you have spent some time thumbing through the Cornell Integrated Crop and Pest Management Guidelines for Vegetables, pages 306—307 does a great job of explaining a resistance management plan that researchers and industry has developed to slow the resistance of CPB to the insecticides that continue to work. CPB is notorious for developing resistance to insecticides so anything we can do to extend the usefulness of these materials is important. I've actually copied the section out of the Guidelines for you but the whole gist is not to expose multiple generations in one year to the same family of chemistry!

The overall outline of the plan is to "expose only 1 generation our of every 4 generations on a farm to a particular class of chemistry". This is achieved by only using a particular class of insecticides one time within a 2 year timeframe and aligning the applications based on whether or not in-furrow planting treatments/seed treatments were used and the maturity type of the potatoes being grown. The strategy and the management plan can be found in Table 1 and 2. There of course a couple general rules of thumb:

- If you used an in-furrow or seed piece application of a neonicotinoid (Group 4: Admire Pro, Tops-MZ-Gaucho, Cruiser or Cruiser Maxx, Platinum) do not use a Group 4 insecticide for foliar control of CPB. There are other options that can be found in Table 3.
- Other the should be focused on very small larvae as larger larvae become more difficult to control.

Table 1 below illustrates possible insecticide rotations for managing Colorado potato beetle over a two-year span that also should mitigate resistance development. Programs A-F alternate modes of action groups across early (spring) and late (summer) generation treatment windows in each season (see Table 2 below for program descriptions). In-furrow, at-plant insecticides are designated with (IF). Prepack insecticides containing two modes of action (IRAC MoA) (e.g., neonicotinoid + pyrethroid) should be only used in the presence of two target pests at economic threshold. Programs A-E were designed for long-maturity potato cultivars that require protection from several Colordo potato beetle generations. Program F was developed for short-maturity cultivars (e.g., red and heirloom cultivars) or single generations. Note that each insecticide mode of action is represented only one time in 2 years. This strategy should expose only 1 generation out of every 4 generations on a farm to a particular class of chemistry and should slow down the evolution of resistance to any one of these products.

 Table 1. Programs to consider for managing Colorado potato beetle. IF refers to in-furrow application.

Program	2015		2016		
IN-FURROW + FOLIAR					
	<u>Early</u>	Late	<u>Early</u>	<u>Late</u>	
А	*†∆Coragen SC	Radiant SC	*†Platinum (IF)	*Agri-mek SC	
В	*†Platinum (IF)	*Agri-mek SC	*†∆Coragen SC	Radiant SC	
FOLIAR (ONLY				
С	Blackhawk	*†∆Voliam XPress	*Rimon 0.83EC	*Agri-mek SC	
D	Radiant SC	*†∆Coragen SC	*Agri-mek SC	*†Actara	
E	*Agri-mek SC	*†∆Endigo ZC	Radiant SC	*†∆Coragen SC	
SHORT-MATURITY					
F	*†∆Coragen SC	NO SPRAYS	Radiant SC	NO SPRAYS	

 Table 2. Descriptions of programs for managing Colorado potato beetles.

 Program
 Description

IN-FURROW + *FOLIAR MANAGEMENT PROGRAMS*

- A. Neonicotinoid insecticide has been used in the past, but control has started to weaken or completely fail. This management plan rotates away from the neonicotinoid group for one year. Consider using a full foliar insecticide program in 2016 if control with Platinum fails in 2015.
- B. Populations still easily controlled with at-plant neonicotinoid insecticides. This management program starts with an at-plant neonicotinoid, but rotates away from this class of chemistry for one year.

FOLIAR MANAGEMENT PROGRAMS

- C. Populations are becoming very difficult to control or are no longer controllable with neonicotioid insecticides. DO NOT USE NEONICOTINOID
- INSECTICIDES. Must use different MoAs for each generation over the two years.
 D. Neonicotinoid insecticide has been used in the past, but control has started to weaken. Rotate away from neonicotinoid insecticides in 2015 and do not use until late generation 2016 at the earliest.
- E. Neonicotinoid insecticides are still providing very good control. Consider using Endigo for late season management in 2015, but avoid using neonicotinoid insecticides in 2016.

SHORT MATURITY-SINGLE GENERATION PROGRAM

- F. Full foliar program for short maturing cultivars and regions with only a single generation each year. In areas where colonization pressure is low, early season applications in the first treatment window may be satisfactory to manage beetles until harvest. If there are considerable numbers of late generation beetles, follow up applications with another mode of action group should be completed only if an economic damage is likely to be reached.
- When possible, use the IRAC Group Codes given to you in Table 3 and in the Cornell Vegetable Guidelines to choose the correct rotational materials. Try not to apply insecticides in the same IRAC Group back to back as part of an overall resistance management program.
- **And**, when in doubt call your vegetable extension educator!

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Colorado Potato Beetle, continued from previous page

Table 3: Selected insecticides for controlling Colorado Potato Beetle. This table is not meant to replace reading of the product labels—Please read the insecticide labels prior to application:

Product name	IRAC Group	Rate per Acre	Comments
Coragen	28	3.5-5.0 fl. oz	Do not apply within 100 feet of a water body, allow a minimum interval of 5 days between applications
Voliam Xpress	28	6.0-9.0 fl oz	Do not apply within 100 feet of a water body, allow a minimum interval of 5 days between applications, do not exceed 27 fl oz/acre per season
Agri-Mek SC	6	1.75-3.5 fl oz	Must be mixed with a non-ionic activator type wetting, spreading and/or penetrating adjuvant, best if used on small larvae (50% egg hatch), do not exceed more then 2 applications per acre
Assail 30 SG	4A	1.5-4.0 oz	Do not use on fields that received a in-furrow planting or seed piece treatment of another Group 4 or 4A insecticide (see note above), do not exceed 4 applications per season or a total of 16 oz per acre, read label for more information
Provado 1.6F, Nuprid 1.6F, Prey, Pasada	4A	3.75 fl oz	Do not use on fields that received a in-furrow planting or seed piece treatment of another Group 4 or 4A insecticide (see note above), do not exceed 15 fl oz per season per acre, read individual product labels for more information
Leverage 360	4A + 3A	2.8 fl oz	Do not use on fields that received a in-furrow planting or seed piece treatment of another Group 4 or 4A insecticide (see note above), do not exceed 12.8 fl oz per season per acre
Actara	4A	1.5 –3.0 fl oz	Do not use on fields that received a in-furrow planting or seed piece treatment of another Group 4 or 4A insecticide (see note above), do not exceed 6.0 fl oz per season per acre, read individual product labels for more information
Endigo ZC	4A + 3A	2.5-6.0 fl oz	Do not use on fields that received a in-furrow planting or seed piece treatment of another Group 4 or 4A insecticide (see note above), do not exceed 10 fl oz per season per acre, read individual product labels for more information
Radiant SC	5	6-8 fl oz	Best against smaller larvae, but will also work on larger larvae
Blackhawk	5	1.7-3.3 oz	Do not make more than 2 applications per season
Rimon	15	6-12 fl oz	FIFRA Section 24C Special Local Need registration: apply when most of the population is at egg hatch to second instar, do not use against adults, do not apply to successive generations, do not apply more than 3 applications and do not exceed 24 fl oZ per acre per season
Trigard	17	2.7-5.3 oz	Best if used on 1st and 2nd instar larvae, ineffective on adults
Kryocider or Prokil Cryolite	UN	10-12 lbs	For use against small to medium sized larvae, minimum 7 day intervals, these materials are insoluble in water and should have constant agitation, they are abrasive to roller type pumps and nozzles—use ceramic or stainless steel nozzles. For best results residues should not be subjected to rainfall or irrigation for at least 24 hours after application.
Neemix 4.5 EcoIn Plus	UN UN	2-16 oz 15-30 oz	Most effective on small larvae, initiate application when 25% of the initial egg mass- es have hatched or more than 200 small larvae are found on 25 vines, continue to scout and apply at 5 to 7 day intervals during the egg hatching period, allowed for organic production if allowed by sanctioning body
Azera	UN + 3A	1.0-3.5 pints	Most effective on small larvae, initiate application when 25% of the initial egg mass- es have hatched or more than 200 small larvae are found on 25 vines, continue to scout and apply at 5 to 7 day intervals during the egg hatching period, allowed for organic production if allowed by sanctioning body

Post-Emergent Weed Control in Potato Production

couple post emergent herbicides that can be used after hilling to combat some of those pesky weeds at harvest time, especially for those later varieties. They include:

Matrix

(1.0—1.5 ounces per acre) which will do a good job on broadleaves and some grasses. I have also seen it suppress bindweed, but will not kill it completely. Likewise, it will suppress Quckgrass, but not kill it completely. Please be aware that it has a <u>60 day pre-harvest</u> interval which means you won't be able to use it on early varieties if applied now. You may also see some yellowing of the potato vine growing points but this is usually temporary. According to the label, it can be applied in a tank mix with metribuzin (ie: Sencor, Dimetric). If using Matrix alone post emergent, use a nonionic surfactant (NIS) at 0.125 % v/v (1 pt/100 gal of water).

Dual II Magnum

(1.67 pints per acre) applied right after hilling will help control most annual grasses and suppress some broadleaves, but emerged weeds will not be controlled. Again, this has a 60 preharvest interval so you won't be able to use it on potatoes that you plant to dig early. If you applied Dual II Magnum pre-emergent, do not apply more than 3.6 pts./A of Dual II Magnum in a single crop season.

Metribuzin

(Sencor, Dimetric, see label for rates) can also be used post emergent on russet or white skinned varieties that are not early maturing to help control several broadleaf weeds and annual grass species. Certain varieties may show more injury then others. See label for maximum use rates (depending on formulation). Do not make post-emergence applications prior to rainfall or irrigation on recently cultivated potatoes, nor within 3 days after periods of cool, wet cloudy weather or injury may

occur. Please note that there is also a 60 day Pre-harvest interval for this material too.

Poast

(1.0—2.0 pints per acre) is a good post emergent annual grass herbicide that is safe on the crop as well and

As hilling continues throughout the area, there are a works best if applied to small (less then 6 inches in height), actively growing grasses. Because the grasses need to be actively growing, I would not apply it after heavy rains, hilling or in drought conditions. The label recommends the addition of a methylated/modified seed oil (MSO 1.5 pints per acre), or crop oil concentrate (COC 2.0 pints per acre). In addition, urea ammonium nitrate (UAN at 4.0 pints per acre) or ammonium sulfate (AMS 2.5 lbs per acre) are recommended for use on potatoes. However, when used in many vegetable crops under the following conditions, Poast plus adjuvants should be used with caution due to potential crop leaf injury: when the temperature exceeds 90° F and the relative humidity is 60% or greater, or anytime the temperature exceeds 100° F regardless of the humidity. In order to obtain good coverage, apply in at least 15-20 gallons of water per acre. There is a 30 day Pre-harvest interval and for more information on additives, please read the label!

Select Max

(clethodim at 9—16 fluid ounces per acre for annual grasses or 16 to 32 fluid ounces per acre for perennial grasses) will also control annual and some perennial grasses very well in potatoes when applied to small (less then 6 inches in height), actively growing grasses. Because the grasses need to be actively growing, I would not apply it after heavy rains, hilling or in drought conditions. Apply in 20—40 gallons of water per acre plus a Non-Ionic Surfactant (NIS) at 0.25% v/v or with a Crop Oil Concentrate (COC) or methylated/modified seed oil (MSO) at 1 qt/A or 1% v/v plus 2.5 to 4 lbs/Acre Ammonium sulfate (AMS). Do not apply a postemergence broadleaf herbicide within one day following application of Select Max or reduced grass control may result. And, although not specifically in the label, I think it would be wise to follow similar directions as with Poast and not apply when temperatures exceed 90° F and the relative humidity is 60% or greater due to the increased potential for injury due to the adjuvants recommended for optimum weed control. Other clethodim containing products such as Section can also be used but please consult the label of proper use rates and additives.

Eastern NY Commercial Horticulture Website

For event announcements and registrations, previous issues of our newsletters and more, please visit the Eastern NY Commercial Horticulture Team's website at http://enych.cce.cornell.edu/.

Announcements

3rd Annual Cornell Cooperative Extension of Ulster County Hudson Valley Small Grains Field Day:

Date: Thursday, July 2, 2015 **Location:** Hudson Valley Farm Hub <u>1875 Hurley Mountain Rd. Hurley, NY 12443</u> Parking at above address **Time:** 9:30 am – 2:30 pm

This has been a popular event for the past two years in response to the renewed interest in small grains production in the Hudson Valley. For full printable flier, schedule, and registration information see:

http://ulster.cce.cornell.edu/ events/2015/07/02/3rdannual-small-grains-field-day

For more information or help registering, contact Carrie at <u>845-340-3990 ext. 311</u> or email <u>cad266@cornell.edu</u>.

Additional support for this program comes from a grant from the <u>Local</u> <u>Economies Project</u>.



Value added Grains: Bridging Cornell's Willsboro Research Farm to Reber Rock Farms Draft Powered Foodscapes

Date/Time: Wednesday, July 8th Part 1: Reber Rock Farm 10:00 am – 1:00 pm, Part 2: Cornell's Willsboro Research Farm 1:30 pm – 4:00 pm

Locations: Reber Rock Farm 10-1:00 1699 Jersey St. Essex, NY 12936

Willsboro Research Farm 1:30-4:00 48 Sayward Lane Willsboro, NY 12996

Registration: Registration fees for the morning tour are \$15/person or \$25 two or more people/farm. To preregister and pay, shop online at <u>http://www.cvent.com/d/</u> <u>crqs47</u> or call Stephanie at 585-271-1979 ext. 509. Preregistration is encouraged and closes at 4pm on 7/6/15. There is no charge for the Willsboro Farm Open House that begins at 1:00 PM.

The morning event is produced by NOFA-NY, in partnership with Cornell University and USDA/OREI

Sweet Corn Pest Trap Catches						
Location	ECB-E Last Week	ek ending 6/16/15 ECB-E This Week	ECB-Z Last Week	ECB-Z This Week	CEW Last Week	CEW This Week
Central Clinton	0		0		0	
South Clinton	0		0		0	
Essex	0		0		0	
Orange	2	1	7	6	2	0
C. Ulster	5	2	0	1	N/A	3
N. Ulster	10	8	8	7	8	3

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2015 Weather Table—The weather information contained in this chart is compiled using the data collected by Network for Environment and Weather Applications (NEWA) weather stations and is available for free for all to use. For more information about NEWA and a list of sites, please visit http://newa.cornell.edu/ This site has information not only on weather, but insect and disease forecasting tools that are free to use.

2015 Weekly and Seasonal Weather Information							
	Growing De	Growing Degree Information Base 50° F			Rainfall Accumulations		
Site	2015 Weekly Total 6/14- 6/21	2015 Season Total 3/1-6/21	2014 Season Total 3/1 - 6/21	2015 Weekly Rainfall 6/14- 6/21 (inches)	2015 Season Rainfall 3/1 –6/21 (inches)	2014 Total Rainfall 3/1 - 6/21 (inches)	
Albany	132.7	897.1	750.5	1.47	9.1	9.99	
Castleton	125.0	847.1	711.7	1.40	9.48	9.95	
Clifton Park	123.8	858.6	677.5	1.27	9.92	9.43	
Fishkill	135.5	862.1	Na ¹	0.49	4.54	Na ¹	
Glens Falls	108.0	731.6	690.5	1.83	8.56	14.5	
Griffiss	121.0	700.6	620.0	1.38	14.61	17.85	
Guilderland	Na	Na	Na	Na	Na	Na ²	
Highland	136.0	922.8	783.9	2.52	13.55	13.19	
Hudson	127.7	916.1	775.5	2.77	10.3	13.22	
Marlboro	131.1	864.1	732.2	1.45	10.09	12.15	
Montgomery	143.6	896.7	751.0	2.14	11.86	14.11	
Monticello	115.1	673.7	543.5	0.04	7.78	6.65	
Peru	103.5	669.5	627.4	1.74	9.72	11.54	
Red Hook	131.0	866.8	760.7	2.71	11.25	5. 42 ³	
Shoreham, VT	Na ⁴	Na ⁴	643.9	Na ⁴	Na⁴	9.98	
Wilsboro	96.5	642.8	587.1	2.81	12.99	9.73	
South Hero, VT	108.6	679.1	617.1	1.55	12.41	12.07	
N. Adams, MA	105.5	663.0	572.0	1.64	9.54	10.7	
Danbury, CT	130.1	773.3	653.0	0.4	10.41	14.47	

Na1: The Fishkill site is new for 2015 so there is no historical data to report.

Na²: The Monticello station is not properly recording data at this time.

Na³: The Guilderland weather station was not properly reporting precipitation data in 2014 so no data will be shown for this site.

*: Precipitation data for this site did not began until May of 2014.

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