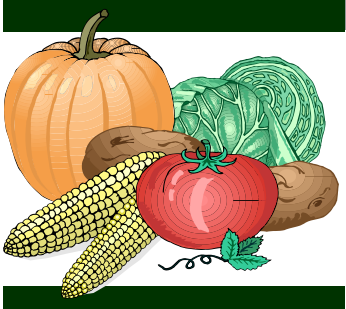

Veg Edge
Your Trusted Source for Research-Based Knowledge

Cornell University
Cooperative Extension
Regional Vegetable Programs

May 2011 **Volume 7, Issue 5**

by Steven B. Johnson, University of Maine Cooperative Extension (Abstract from the Maine Potato Pest Management Conference, 12/8/10)

The keys to repeating the late blight free year of 2010 involve the pathogen, the host, and the environment. Know the pathogen and the disease it causes. Late blight is caused by *Phytophthora infestans*, a fungus-like organism that overwinters in infected tubers, potato cull piles and in infected volunteer potato plants. The pathogen is an obligate parasite. It cannot survive in the absence of a host. It cannot overwinter in soil or dead plant debris. Late blight will not survive long in soil or away from a living host. Eliminating potato cull piles should be part of the control strategy.

Know the hosts, potatoes (and tomatoes) and strategies that can be used to minimize risk of infection and spread. Late blight is a community issue and those in the growing community need to be part of the solution. Planting only late blight-tested (or certified) potato seed and knowing the source of your seed are a good beginning of season-long late blight control. (It's also critical to know your tomato transplant grower and their reliability at producing disease free plants, and to inspect the plants.) Good potato seed handling and treating seed with a mancozeb-based seed treatment followed by building a good hill can contribute to a late blight free year. Maintaining fungicide coverage on new growth with a calibrated sprayer is a good strategy to reduce late blight. Performing regular field observations and working with and training employees for late blight detection will further this cause. (For great photos of late blight on potatoes and tomatoes go to: http://www.longislandhort.cornell.edu/vegpath/photos/index.htm)

(NEW, 4/16 – Wisconsin is reporting a low level of late blight detected in seed potatoes, collected from culls picked out that had primarily soft rot. Highly sensitive ELISA and molecular tests were needed to confirm it. Be sure to cull out seed showing disease, sharpen seed cutters, and sanitize cutters between seed lots! CRM, CCE, CVP)

Late blight prevention extends into harvest as potatoes should be killed in a timely manner to ensure good skin set. (Avoiding nitrogen fertilizer rates above that recommended for the variety, and avoiding late side-dressing, will avoid delayed maturity, difficulty in killing foliage, and will decrease skinning.) Fields with, or suspected of having, late blight should be thoroughly dead before harvest. Minimizing bruising and skinning during harvest will minimize the tuber-to-tuber transmission of the pathogen. Skinning of the tubers during harvest greatly increases the risk of infection. Tuber infection can also occur at harvest when there is contact between tubers and spores. This typically occurs when tubers come into contact

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Veg Edge is a shared publication of two Cornell Cooperative Extension teams, the **Cornell Vegetable Program**, serving 12 counties in Western & Central NY, and the **Capital District Vegetable & Small Fruit Program**, serving 11 counties in the Capital Region of NY

This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are possible. Some materials may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in NYS must be registered with the NYS Dept of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide usage in NYS should be directed to the appropriate Cornell Cooperative Extension (CCE) specialist or your regional DEC office.

CCE and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products or companies is made or implied. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

NYS IPM Program Funding Continued

Donald Rutz, Director, NYS IPM Program

The existence of the NYS IPM Program was threatened during the recent state budget process. During January, we informed you that the Program would be forced to close March 31. However, during budget negotiations, some funding for the NYS IPM Program was restored. **We are absolutely certain this would not have occurred without the tremendous support expressed by you, our stakeholders**!! We are most grateful for all of your efforts. In the 2011-2012 state budget $500,000 was appropriated for Agricultural IPM, and $200,000 for Community IPM. The Agricultural funding is approximately half of the state funding received when the Program was fully staffed, but is the same as the 2010-2011 appropriation.

Most of our losses in programming and staffing occurred the last two years as our Agricultural funding was cut and Community funding was eliminated. This year's funding is unlikely to allow replacing staff that are gone, so responsibilities within the NYS IPM Program will undergo some shifts. As is our mandate, we will deliver IPM programming throughout the state and across agricultural commodities—Vegetables, Livestock and Field Crops, Fruit, and Ornamentals – and in Community IPM venues such as schools, homes, parks and golf courses. ■

Western Bean Cutworm - New Pest of Beans and Corn

Keith Waldron, NYS IPM Program Field Crop Specialist (edited by C. MacNeil, CCE, Cornell Vegetable Program)

Western bean cutworm (WBC) is an emerging pest in NY, with the potential to cause substantial damage to corn and dry beans. Native to North America, WBC has historically been a pest in the high plains region of the western US. However, in the last decade, infestations have steadily been moving eastward and reached NY in 2009.

In corn, WBC larvae feed on the tassels and then move to the ears. Larvae can bore through the husks or enter the ear near the silk. WBC larvae feed on developing kernels. WBC often move from corn into dry beans, especially if there's no corn in whorl or tassel stage nearby. In dry beans, WBC reduces yield and quality, as larvae chew holes into pods and feed on the beans, increasing the number of damaged beans (pick) at harvest.

According to Mike Stanyard, CCE, Northwestern NY Field Crops Specialist, there are limited WBC resistant field corn varieties since only the Bt Viptera and Herculex (Cry 1F) genes are labeled for WBC control. Theoretically, dry beans near corn fields with these Bt genes could be at less risk from WBC. For a *Handy Bt Trait Table, 2/11,* from MI and WI go to: http://msuent.com/assets/pdf/28BtTraitTable.pdf WBC resistant varieties will be limited in NYS.

In 2008, WBC moths were collected in Ontario, Canada. In 2009, low numbers of WBC moths were first confirmed in PA, western NY (Genesee, Livingston, Niagara, Wyoming counties) and Quebec, Canada. In 2010, 54 WBC pheromone traps were deployed in 29 counties across NY. A total of 739 WBC moths were collected this past season. Peak catches occurred during the weeks of July 25 and August 1. Fortunately, WBC numbers in NY have, to date, been well below numbers associated with potential crop loss, but indicate widespread distribution. The concern is that these insects may become established and a chronic problem in our region. (WBC can overwinter here.)

Plans are to continue monitoring for this insect in 2011. *(The NYS Dry Bean Industry Advisory Committee is funding 12 traps in prime dry bean areas of NY. Results of WBC trapping in western and central NY will be included in the Weekly Veg Edge. ed. CRM, CCE, CVP)* WNY WBC trap catches are posted on the Penn State Sweet Corn Website: http://www.pestwatch.psu.edu/sweetcorn/tool/tool.html

For info and photos of WBC and damage in dry beans see Michigan's factsheet below. Michigan dry beans have suffered damage and insecticide sprays have been needed in recent years. http://msuent.com/assets/pdf/11WBCDryBeanDamage.pdf

For info and photos of WBC and damage in corn see the North Central IPM factsheet: http://www.ncipmc.org/alerts/wbc_alert.pdf

Tracey Baute, OMAFRA Field Crop Entomologist from Canada, spoke extensively at the March 3rd NYS Dry Bean Meeting about WBC. She has a "bug blog" which you may be interested in following. Go to: http://bautebugblog.com/2011/ ■

2011 Cabbage Research Grants Awarded

Julie Kikkert, CCE, Cornell Vegetable Program

The New York Cabbage Research and Development Board has awarded a total of $28,000 towards 6 Research Projects. The funds for these grants are contributed by the growers. The following projects were awarded for 2011. ■

Researchers	Title	CRDP Funded 2011
Bellinder, Kikkert	Determining nightshade control and herbicide tank-mixture antagonism with currently registered and new herbicides for cabbage	4,000
Dillard, Strauss, Kikkert, Hoepting	Fungicides - which will control Alternaria leaf spot/combating Alternaria leaf spot on cabbage	4,000
Griffiths	Breeding cabbage for black rot resistance	6,000
Hoepting	Feasibility of reducing slug damage in cabbage: part II	2,000
Shelton, Fail	Determining factors responsible to thrips resistance in cabbage	5,000
Smart, Lange	Efficacy of conventional & biorational pesticides against black rot	7,000
	Total Funded	**28,000**

State Helps Retailers Promote Local Food

from Darrel Aubertine, NYS Acting Agriculture Commissioner

Funds are now available to help grocery stores market and promote locally grown or made-in-New York products. The Pride of New York Retail Promotion Grant Program, funded by USDA's Specialty Crop Block Grant Program, will help consumers identify New York food items, and help increase sales for New York's farmers and retailers. "This program will provide assistance to retailers to help them source more local New York products as well as necessary resources to develop promotional materials that highlight local businesses," said the Commissioner.

The "Buy Local" Retail Promotion Grant Program is open to individual food stores and grocery store chains. Each applicant is eligible for up to $3,500 to highlight fresh produce, and $1,500 to promote processed and value-added products made in New York, including frozen produce, jams and jellies, maple syrup and honey. Funding must be matched by the retailer and no more than $350 per individual store will be awarded. The funding can be used to supplement existing consumer-focused programs or to initiate new "buy local" retail efforts. There is a total of $43,172 available for this one-time program.

The Department will provide promotional and marketing assistance in developing or expanding "buy local" promotions that range from point-of-sale materials and promotional items to advertising. Applications for the "Buy Local" Retail Promotion Grant Program can be found at www.agmkt.state.ny.us. For more info contact Retail Promotion, at 518-457-2774 or dtraecelle.carter@agmkt.state.ny.us. ■

USDA Expands Fresh Produce to Schools Program

Cornell Farm-to-School Research & Extension Program

Agricultural Secretary Tom Vislack announced that the USDA would increase funding to state agencies for schools running the Fresh Fruit and Vegetable Program. The Fresh Fruit and Vegetable Program provides grants to elementary schools to enable them to distribute free fresh fruit and vegetable snacks to students during the school day, outside of lunch time. The goals of the program are to increase the variety and amount of fruits and vegetables children eat. Schools with 50% or more students eligible for free or reduced price lunch are qualified for the grants but all students receive the produce snacks.

The 2008 Farm Bill provided funding to all 50 states. New York participated for the first time in 2008. For the 2011/2012 school year the expanded funding will provide $6,376,788 to NYS, allowing the program to give approximately 91,000 children fresh fruits and vegetables each school day. ■

Are There Price Premiums for Local Products?

Kristen Park and Miguel I. Gómez, Applied Economics & Management, Cornell

Demand for locally produced food has increased sharply in recent years, as certain consumer segments seek out local foods to support local farmers and the local economy, or because local foods represent features or production practices that consumers look for in their foods. An important question for those who produce and distribute local food products is: ***Can I get a price premium for my "local" product?***

As researchers, we can safely say, "It depends." Most studies on price premiums for local foods ask consumers how much they are "willing to pay". This measures consumer intentions although it does not measure behavior. Eastwood, Brooker, and Orr, 1987, found no local preference except in the case of tomatoes, but perhaps there were regional or geographic differences in demand for local products and/or a preference for local was an emerging trend. Studies since then have found willingness-to-pay a premium for local products varying by geography, product, and consumer demographics, listed in Table 1.

Table 1. Willingness-to-Pay Price Premiums for Local Products

Willingness-to-Pay Studies for Local	% Premium
Colorado potatoes	9
Ohio strawberries	27
Michigan greens	36
South Carolina produce	27
South Carolina animal products	23
Florida fresh produce	50
Pennsylvania applesauce	31

In our study, prices were collected for five food products (apples, blueberries, 2% fluid milk, ground beef, and spring mix). These price data were hand-collected from thirty retail outlets in five U.S. metropolitan areas. The retail outlets include farmers markets, natural food stores and conventional supermarkets. Each study area defined its "locality or region" according to how its consumers might perceive the definition of local in their area. For a product to be considered "local" its label or marketing materials had to convey information about where, how and by whom it was produced, and to have a "farm identity".

Our study results indicate that a price premium for local exists for 2% fluid milk, blueberries, spring mix, and ground beef but not for apples (see Table 2). In the case of apples, variety was an important attribute affecting price. Organic labeling commanded a price premium for all five products. Although most price differences are explained by product attributes, such as local, organic, variety (in the case of apples), and packaging, we found many other factors that also significantly affect price, including seasonality, geographic region and type of retailer.

Table 2. Percent Price Premiums Found for Local and Organic Products

Product	% Premium for Local	% Premium for Organic
2% Milk	16.2%	82.9%
Blueberries	8.7	27.9
Spring Mix	20.8	12.9
Ground Beef	21.1	43.4
Apples	(none)	18.0

In general, price premiums calculated in this study were lower than those reported in willingness-to-pay studies. Consumers may over-estimate their interests in local when presented with a survey as opposed to making actual purchases. In addition, the price data were collected in 2009 during the recession. Any premiums for local as well as for organic may have suffered.

We also suggest that the results for the product attribute 'local' hinge on the definitions of local used in this study and that changes in the definitions of local could alter the results. Definitions of local rely on consumer perceptions of what is local. In addition, consumers may have different perceptions as to what is local according to different products. Fluid milk is costly to transport long distances, and would likely be labeled as local by many existing definitions, yet consumers do not think of milk purchased in the grocery store as a store brand as being a local product. And, in general, milk packaging does not provide any information that would help to identify the milk as being locally produced.

The price premiums observed in these models with our current definition of local may be linked more to perceptions of farm identity, farm size, label information and marketing than to a local geography. ■

"Smart Marketing" is a newsletter for extension newsletters and for placement in local media. It reviews elements critical to successful marketing in the food and agricultural industry. Past articles are available at http://marketingpwt.aem.cornell.edu/publications.html.

Onion Thrips Management in Onions: Consider Before You Spray

Brian Nault and Tony Shelton, Entomology, Cornell - NYSAES

This article provides guidance for managing onion thrips infestations in onion fields using insecticides. The goal is spray insecticides only when needed and in a manner that should reduce the development of insecticide resistance. We cover three areas that you should consider before making your first application this season: (1) general information about commonly used products like Radiant, Movento and Agri-Mek, (2) timing applications of these products, and (3) an approach for using these products that will manage thrips all season long.

Insecticides

Not all products registered for thrips control on onion in New York are actually effective (**Table 1**). Three products have consistently demonstrated good to excellent control of onion thrips: Radiant, Movento and Agri-Mek. **Radiant** is highly effective against both thrips larvae and adults and has excellent residual activity lasting >7 days. **Movento** is systemic and has residual activity of >10 days, but it is not very effective against adult thrips. Therefore, Movento should be used during the first half of the season when adult populations are often lower than they are later in the season. **Agri-Mek** provides moderate to excellent control of onion thrips adults and larvae and has a residual activity of 5-7 days. The Agri-Mek label states "thrips suppression" rather than "thrips control" because this product is mediocre against western flower thrips, which is a serious pest of onion in the western US, but not in New York. You must have a Section 18 label before applying either Movento or Agri-Mek.

Radiant, Movento and Agri-Mek must get inside the leaves of the plant to become most effective against thrips. To do this, a **penetrating surfactant** must be included in the spray tank. There are many types of penetrating surfactants to choose from, and research in NY in 2010 showed that these insecticides performed equally well against thrips when either the non-ionic surfactant Induce, the methlyated seed oil MSO, or the organosilicone surfactant Silwet L-77 was added to the spray mixture.

Two years ago, we noticed a drop in thrips control when Agri-Mek and Movento were "tank mixed" with a fungicide that included a **spreader sticker** (*e.g.*, Bravo WeatherStik). We were concerned that the spreader sticker used to aid in leaf disease control interfered with the insecticide's ability to penetrate the leaf surface. While spraying these insecticides separately from fungicides would eliminate this problem, it also would be a more costly and less efficient approach to managing thrips and foliar diseases. Therefore, studies were carried out in 2010 to understand how various combinations of insecticides, penetrators, fungicides and spreader stickers affect the level of thrips and foliar disease control. As we feared, when Radiant, Movento or Agri-Mek was combined with Chloronil 720, which contains a spreader sticker, **thrips control was significantly reduced by 12 to 35%**. Luckily, this problem was overcome when a high rate of one of the penetrating surfactants mentioned above was added to the mixture. More research is needed to determine if the efficacy of these insecticides is reduced when tank mixed with other fungicides. Additionally, lower rates of the penetrating surfactants to use in the insecticide and fungicide tank mix should be identified to reduce the overall cost of using these products.

Speaking of mixing pesticides, you should **avoid mixing two or more "stand alone" insecticides** in the spray tank to control thrips. For example, do not mix highly effective products like Movento and Radiant. Tank mixing products likely will increase the risk that the thrips will develop resistance to both products used in the mix faster than if each product is used separately. With the cost of developing new insecticides, we need to prolong the life of those we have.

Insecticide resistance in thrips populations is a major concern. Resistance in thrips populations to the

Table 1. A current list of conventional products for each class that are labeled to manage onion thrips on onion in NY in 2011.

Tetramic Acid	Avermectin	Spinosyn	Neonicotinoid	Carbamate	Organophosphate	Pyrethroid
Movento	Agri-Mek SC*	Radiant SC	Assail 30SG	Lannate LV	MSR Spray	Ambush or OLF**
		Entrust			Penncap-M	Mustang Max
		OMFI				Pounce or OLF**
						Warrior II or OLF**

* Labeled for onion thrips suppression only. ** OLF: other labeled formulation.

pyrethroid Warrior has been documented in many New York onion fields. Resistance in thrips to organophosphates and carbamates also is likely common throughout New York. Caution should be taken when using products in these three classes. If you see that you are not getting the control you should and think resistance may be the cause, contact your CCE educator.

Because only a few highly effective products are available for thrips control and insecticide resistance is a concern, **targeting the same generation of thrips with only one product** is suggested. Based on past studies, two applications of the same product timed 7 to 10 days apart may be necessary to see a reduction in the thrips population.

Timing of Applications

Onion fields should be scouted for onion thrips each time before a decision is made to spray the field. In many cases, infestations will begin along an edge or edges of the field. When this occurs, many thrips may be seen along edges and much fewer or none in other parts of the field. If possible, only spray the infested edges rather than the entire field. Otherwise, wait to spray the entire field when the **average number of thrips sampled throughout the entire field** reaches a threshold (see more below). When weather is hot and dry, thrips populations can build rapidly and thresholds can be reached very quickly. In this case, scouting may need to occur more frequently. In contrast, if weather is cool and wet, weeks may go by before the thrips population increases to the threshold.

Timing insecticide applications following an action threshold can be challenging because of weather events (e.g., rain) and other farming practices (e.g., timing fungicide sprays). However, using an action threshold to determine when to spray can save money and time and keep resistance from developing as quickly. Based on results from field studies from 2006 - 2010, we found that the usefulness of an action threshold is highly dependent on the effectiveness of the product used (Table 2). For example, **Radiant and Movento** were the most effective products and provided excellent thrips control when applied at a threshold of **3 thrips larvae/leaf**. Basically, these products have such good activity against onion thrips that they can control a population even when it has been allowed to build to a relatively high level. In contrast, **Agri-Mek and Lannate LV** needed to be applied using a more conservative threshold to manage the population, only **1 thrips larva per leaf**.

Table 2. Action thresholds for selected insecticides suggested for managing onion thrips on onion.

Products	Action Threshold
Radiant SC and Movento	3 thrips per leaf
Lannate LV and Agri-Mek SC	1 thrips per leaf

Sequences of Insecticide Applications for Season-Long Control

Sequences of insecticides used to manage onion thrips infestations are shown in **Tables 3 & 4**. Sequences and products selected for these examples are based on experience from several small-plot onion research trials.

Onion thrips infestations typically occur in onion fields in downstate NY before upstate NY because temperatures are warmer earlier in the season downstate. The treatment window for onion thrips varies considerably among fields because the period between thrips colonization and harvest varies considerably. In most cases, transplanted fields will need

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to be sprayed earlier and for a shorter period compared with direct-seeded fields. For transplanted fields, action thresholds for thrips control are often reached in early to mid-June and protection is needed only for about 4 to 6 weeks. For direct-seeded fields, action thresholds are often reached in late June to early July and protection is needed for up to 6 to 8 weeks. These generalizations were taken into consideration to estimate the total number of sprays needed in a sequence to protect the onion crop from thrips **(Tables 3 & 4)**.

Sequences begin with Movento and end with Radiant (**Table 3 & 4). Do not use Movento if onion thrips adults have recently migrated into the field** from nearby alfalfa or small grains because Movento is very weak against adults. Agri-Mek and Lannate LV are options between Movento and Radiant applications. Agri-Mek has a 30-day pre-harvest interval, so this product should be used during the first half of the season. **Radiant is the most effective product against larvae and adults, so it is positioned at the end of the insecticide use sequence when thrips populations are highest.**

Insecticides that belong to the same insecticide class or have the same mode of action used sequentially against some insect pests can accelerate the development of insecticide resistance. The Colorado potato beetle is notorious for insecticide resistance development and rotation of insecticide classes has extended the life of products used to manage it. Obviously, we want to avoid insecticide resistance development in onion thrips populations. Therefore, we encourage the use of products belonging to different insecticide classes (a class of insecticide is based on its mode of action - see http://www.irac-online.org/teams/mode-of-action/) and suggest following the guidelines outlined in **Tables 3 & 4**. Additionally, for each product (Radiant, Movento and Agri-Mek), only two applications should be applied during the season and they must be applied consecutively.

Table 3. Sequence of insecticides to apply for onion thrips control in transplanted onion fields. Two applications of each product should be applied based on action thresholds. Transplanted onions*

Application #	Product	Action threshold/ Timing of spray to consider
1	Movento	3 thrips larvae per leaf
2	Movento	7 to 10 days after 1st Movento spray [1]
3	Agri-Mek SC	1 thrips larvae per leaf
4	Agri-Mek SC	7 days after 1st Agri-Mek spray
5	Radiant SC	3 thrips larvae per leaf
6	Radiant SC	3 thrips larvae per leaf

*Note: If after using Movento and Agri-Mek (first four sprays) there are at least 4 weeks remaining before onions are pulled, consider inserting two applications of Lannate between the Agri-Mek and Radiant sprays (see direct seeded onions below). Conversely, if after using Movento there are only 2 to 3 weeks remaining before onions are pulled, eliminate the Agri-Mek sprays and go to Radiant.

Table 4. Sequence of insecticides to apply for onion thrips control in direct-seeded onion fields. Two applications of each product should be applied based on action thresholds. Direct-seeded onions*

Application #	Product	Action threshold/ Timing of spray to consider
1	Movento	3 thrips larvae per leaf
2	Movento	7 to 10 days after 1st Movento spray [1]
3	Agri-Mek	1 thrips larva per leaf
4	Agri-Mek	7 days after 1st Agri-Mek spray
5	Lannate*	1 thrips larvae per leaf
6	Lannate*	7 days after 1st Lannate spray
7	Radiant	3 thrips larvae per leaf
8	Radiant	3 thrips larvae per leaf

*Note: If control of thrips using Movento and Agri-Mek (first four sprays) has provided control up to 2 or 3 weeks before onions will be pulled, eliminate the Lannate applications and go to Radiant.

[1] If the thrips population is reduced to a low level (e.g., below 1 thrips per leaf) after the first Movento spray and does not reach threshold again until 3 weeks later, consider skipping another application of Movento. If this scenario occurs, the second application of Movento would likely be used against the next generation of thrips. Based on insecticide resistance management principles, such a case should be avoided if possible. The recommendation would be to continue the sequence with the next product, which would be Agri-Mek or Radiant.

Additional Thoughts on Controlling Thrips

Insecticides should be applied with ground rigs using moderate pressure

and a high volume (of water) and proper nozzle types and spacing. The goal should be to cover as much of the onion canopy as possible.

Other ways of controlling thrips besides using insecticides also should be considered. For example, studies have shown that **thrips populations can build on early season volunteers** and that some of these volunteers may be infected with *Iris yellow spot virus*, so removing them as early as possible should be part of an overall management strategy. Recent work in upstate NY has shown that reducing the amount of nitrogen at planting will reduce populations of onion thrips larvae during the season. Reducing the amount of nitrogen applied to onion fields will save money and potentially may reduce the percentage of bacterial rot problems in storage. Additionally, studies in upstate NY a few years ago indicated that applying straw mulch over young onion seedlings resulted in a delay in thrips infestations and lowered the overall population, and may have improved yield and size of onions. While additional work needs to be done on these and other cultural practices, experimenting with other ways of reducing thrips infestations will be important to preserve the very few effective insecticides. ■

Become a Member of NOFA-NY

from NOFA-NY Weekly Fresh News Online, NOFA_NY@mail.vresp.com

NOFA-NY is a member based organization that fosters peer to peer networking, education and information sharing. NOFA-NY members care about local organic food production, family scale farming and their impact on human health, the environment and society. Membership dues support local organic food production through research, training, and the further development of local processing and distribution systems. We have a great deal to do, but together we can accomplish what none of us can do alone—a sustainable regional food system that provides organic food to all.

Please consider joining NOFA-NY as we work to make organic agriculture the basis for food production in the 21st century. **NOFA-NY's membership benefits include:**

- Quarterly subscription to the NOFA Interstate newspaper, The Natural Farmer
- Quarterly subscription to the NOFA-NY newsletter, *The New York Organic News*
- Free issue of *The NYS Organic Food Guide*
- Conference and Event Discounts
- Discounts to a number of vendor products
- Voting privileges for Board of Director elections and Annual Policy Resolutions
- Free Opportunities, Want Ads and Event postings on our website

Farm Membership is $50 per year. To join or renew go to: https://www.nofany.org/join or call 585-271-1979. The *NOFA-NY Weekly Fresh News Online* is available from a member who forwards it to you by clicking on the box at the very bottom of the e-letter. ■

2011 Pesticide Updates

Christy Hoepting and Katie Klotzbach, CCE, Cornell Vegetable Program

Changes in pesticide registrations occur constantly and human errors are possible. Read the label before applying any pesticide. No endorsement of products or companies is made or implied. Other pesticide updates that we missed are welcome. Information was last updated on April 10, 2011. Updates after this date will be posted in Veg Edge Weekly for CVP enrollees.

Note: *We* only included the uses that pertain to vegetables. Several labels include uses in fruit and field crops as well.

New Registrations (i.e. new EPA No.s)

- **MOVENTO Insecticide**: (EPA No. 264-1050, a.i. Spirotetramat, Bayer CropScience) for managing a broad range of sucking insect pests in fruiting vegetables, Leafy vegetables, Brassica leafy vegetables, potato and other corm vegetables and onions (under a section 18).
- **BELT Insecticide:** (EPA No. 264-1025, a.i. Flubendiamide, Bayer CropScience) for control of Lepidoptera pests in sweet corn and edible and succulent and dried shelled peas and beans.
- **SYNAPSE WG Insecticide:** (EPA No. 264-1026, a.i. Flubendiamide, Bayer CropScience) for control of Lepidoptera pests in cucurbits, fruiting vegetables, leafy vegetables and brassica leafy vegetables.
- **PRESIDIO Fungicide:** (EPA No. 59639-140, a.i. Fluopicolide, Valent) labeled for control of various fungal diseases on brassica vegetables (head and stem), bulb vegetables, cucurbit vegetables, fruiting vegetables, leafy vegetables (except brassica), root vegetables (except carrot, potato, and sugar beet), and sweet potatoes.
- **PROLINE Fungicide:** (EPA No. 264-825, a.i. Prothioconazole, Bayer CropScience) labeled for management of Fusarium and white mold I in dry shelled peas and beans (Field, Kidney, Dry lima, Navy, Pinto and Tepary beans) and cereal crops.
- **INSPIRE SUPER Fungicide:** (EPA No. 100-1317; a.i. difenoconazole + cyprodinil, Syngenta) for control of mostly *Alternaria spp*. and *Botrytis spp.* diseases in Brassica leafy vegetables, bulb vegetables, cucurbits and tomatoes.
- **LAUDIS Herbicide**: (EPA No. 264-860, a.i. Tembotrione, Bayer CropScience), a systemic herbicide that provides post emergence control of annual grass and broadleaf weeds in all types of corn.

Section 18s (i.e. Emergency registrations)

- **MOVENTO Insecticide**: (EPA No. 18-11091, a.i. Spirotetramat, Bayer CropScience) to control onion thrips on dry bulb onions during the 2011 growing season. Effective from February 4, 2011 to September 15, 2011.
- **AGRI-MEK 0.15 EC Insecticide:** (EPA No. 18- 11090, a.i. Abamectin, Syngenta) for suppression of onion thrips on dry bulb onions. Effective from February 4, 2011 to September 15, 2011.

Label Expansions (i.e. new crops added to the label)

- **VOLIAM XPRESS Insecticide**: (EPA No.100-1320 , a.i. chloranthraniliprole + Lambda-Cyhalothrin, Syngenta). Additions to label include sweet corn, peas, beans, tuberous and corm vegetables.
- **ENDIGO ZC Insecticide:** (EPA No. 100-1276, a.i. thiamethoxam + lambda-cyhalothrin, Syngenta) for broad spectrum control of insects in head and stem brassicas, cucurbits, fruiting vegetables, head and stem lettuce, and tuberous and corm vegetables (i.e. potatoes).
- **ACTIGARD Fungicide:** (EPA No. 100-922, a.i. Acibenzolar-s-methyl, Syngenta) Now labeled for suppression of IYSV, Xanthomonas leaf blight and downy mildew in onions. Also for suppression of downy mildew, powdery mildew, scab, bacterial fruit blotch, bacterial leaf spot, and angular leaf spot in cucurbits.
- **QUILT XCEL Fungicide:** (EPA No. 100-1324, Propiconazole + Azoxystrobin, Syngenta) Now labeled for bulb veggies, carrots, sweet corn, celery.
- **QUADRIS TOP Fungicide:** (EPA No. 100-1313, a.i. Azoxystrobin and Difenoconazole, Syngenta). Now labeled for Brassicas, bulb vegetables, and cucurbit vegetables.
- **CALLISTO Herbicide:** (EPA No. 100 -1131, a.i. mesotrione, Syngenta). Now for broadleaf weed control in asparagus and rhubarb.

2 EE's (add new pest or rate to crop already existing on label)

- **MOVENTO insecticide:** (EPA No. 264-1050, a.i. Spirotetramat, Bayer CropScience) to control the unlabeled pest onion thrips (larvae) on Brassica leafy vegetables.
- **RADIANT SC Insecticide:** (EPA No. 62719-545, a.i. Spinetoram, Dow AgroSciences) is labeled for control of leek moth in garlic, leek, and onion .
- **DANITOL 2.4 EC Insecticide:** (EPA Reg. No. 59639-35, a.i. Fenpropathrin, Valent) to control the unlabeled pest brown marmorated stink bug on cucurbit vege-

tables, head and stem Brassicas, fruiting vegetables and succulent peas.

- **LANNATE SP Insecticide:** (EPA Reg. No. 352-342, a.i. Methomyl, DuPont) to control the unlabeled pest brown marmorated stink bug on sweet corn, peppers and tomatoes.
- **LANNATE LV Insecticide:** (EPA Reg. No. 352-384, a.i. Methomyl, DuPont) to control the unlabeled pest brown marmorated stink bug on sweet corn, peppers and tomatoes.
- **VYDATE L Insecticide:** (EPA No. 62719-591, a.i. oxamyl, DuPont) to control the unlabeled pest brown marmorated stink bug in peppers and tomatoes.
- **LORSBAN ADVANCED Insecticide:** (EPA No. 62719-591, a.i. chlorpyrifos, Dow AgroSciences) to control the unlabeled pest brown marmorated stink bug in asparagus, Brassicas, swert corn, succulent or dried peas and beans and dry bulb onion.

Supplemental Labels

- **QUINTEC Fungicide:** (EPA No. 62719-375, a.i. Quinoxyfen, Dow AgroSciences. Several supplemental labels are now available for: Control of powdery mildew in melons, peppers, winter squash, gourds, pumpkins and head and leaf lettuce. Also, aerial applications are now available on labeled crop: permitted on all labeled non-tree and vine crops.
- **PROWL H2O Herbicide:** (EPA No. 241-418, a.i. Pendimethalin, BASF). Labeled for use on tomatoes with reduced pre-harvest interval of 21 days, down from 70 days (EXPIRES December 31, 2011).

Discontinued Products

- **THIONEX 3EC & 50W Insecticide** (EPA No. 66222-63(EC), 66222-62 (W), a.i. Endosulfan, MANA Crop Protection). MANA was able to sell endosulfan until December 31, 2010. Distributors/retailers may sell existing endosulfan inventories with the labeled uses until May 5, 2011. Growers and other end users may use endosulfan on the following labeled crops until the **stop use date of July 31, 2012:** Broccoli, Brussels sprouts, cabbage, carrots, cauliflowers, celery, collard greens, cucumbers, dry beans, dry peas, eggplant, kale, kohlrabi, lettuce, mustard greens, summer melons, summer squash, sweet potato and turnip. Crops/Uses with a stop use date of July 31, 2015: peppers, potatoes, pumpkins, sweet corn, tomato, and winter squash. Crop Uses with a stop date of July 31, 2016: vegetable crops grown for seed.
- **DI-SYSTON 8 Insecticide**: (EPA No. 264-734, a.i. Disulfoton, Bayer CropScience). Registered crops (except lettuce): Distributors, retailers and growers can sell and use Di-Syston 8 on registered crops (except lettuce) until December 31, 2013, after which time Di-Syston 8 tolerances on registered crops (except lettuce) will be cancelled. Distributors, retailers and growers can sell and use Di-Syston 8 on lettuce until December 31, 2014, after which time Di-Syston 8 tolerances on lettuce will be cancelled. Any uses of Di-Syston 8 after the listed dates are illegal.
- **MONITOR insecticide:** (EPA No. 264-729, a.i. Methamidophos, Bayer CropScience). Distributors, retailers and growers can sell and use Monitor on registered crops until December 31, 2013, after which time, Monitor tolerances will be cancelled. Any uses of Monitor after December 31, 2013 are illegal.
- **SEVIN 80 SOLUPAK Insecticide:** (EPA No. 264-316, a.i. Carbaryl, Bayer CropScience) At this time, Bayer CropScience will exit the Sevin 80 Solupak insecticide business in the United States. Available supplies of Sevin 80 Solupak will continue to be sold as long as supplies last. Sevin 4F or Sevin XLR+ will serve as replacements for Sevin 80 Solupak.

How to look up labels for pesticides labeled in New York

Go to the website of the NYS Pesticide Product, Ingredient, and Manufacturer System (PIMS): http://magritte.psur.cornell.edu/pims/

To look up **currently registered labels**, click on "NYS PIMS Current Products". For primary and supplemental labels, you may search by product name, active ingredient or EPA number. From the product search results, click on the arrow under the "details" column of the material in which you are interested. From the resulting "supplemental information" page, click on the "NYS labels/docs" button for a list of primary and supplemental labels. Click on the most recent (by date) label to view the actual label as a pdf file. Often, but not always, **Section 24C Special Local Needs** and **2(ee)** labels will be available via this search. If you want to check and see if a **pesticide has been deregistered**, click on "NYS PIMS Archived products" from the main search menu. To look up **Section 18 Emergency** labels, from the main search menu, click on "Special/Pending registrations". Click the link "NYS Emergency Exemptions (FIFRA Section 18s) for the current year". Click on the label directly to view the label as a pdf. ■

Integrated Pest Management Workshop

Integrated Pest Management (IPM)

Thursday, May 5, 2011

6:00 - 8:30 pm

ECC South Campus Computer Lab*
4041 Southwestern Blvd
Orchard Park, NY 14127

From the Erie County Soil & Water Conservation District & Cornell Cooperative Extension Erie County

2.5 DEC credits available

Internet Tools and Forecasts for Improved Pest Management – *Carol MacNeil, CCE, Cornell Vegetable Program*

Brown Marmorated Stinkbug: An Invasive Pest with Potential to Affect Many Crops - *Sharon Bachman, CCE - Erie Co - Info from Peter Jentsch, Cornell; Daniel Gilrein, CCE - Suffolk Co; and Laura McDermott, CCE, Capital District Vegetable & Small Fruit Program*

Try-out Web Based IPM and Adapt N Tools for Yourself *(Bring your own laptop if you'd like)*

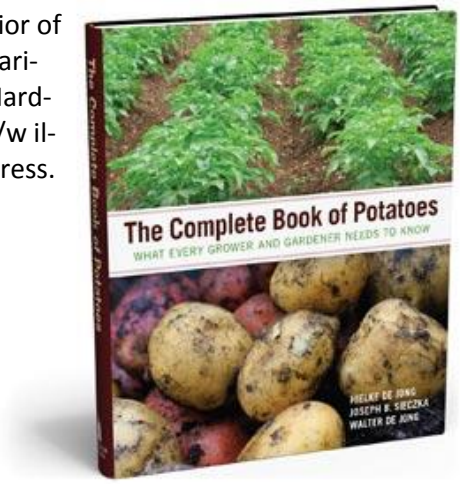
To register contact Sharon Bachman at 716-652-5400x150 or sin2@cornell.edu.

*For directions contact Carol MacNeil, CCE, CVP at 585-394-3977x406. ■

Complete Book of Potatoes: What Every Grower Needs to Know

By Hielke De Jong, Joseph B. Sieczka and Walter De Jong, Agriculture & Agri-Food Canada, New Brunswick (Retired), Horticulture, Cornell (Retired), and Plant Breeding, Cornell

The only comprehensive resource for home gardeners and commercial potato growers, *The Complete Book of Potatoes* has everything a gardener or commercial potato grower needs to successfully grow the best, disease-resistant potatoes for North America. Includes practical as well as technical information about the potato plant, its origin, conventional and organic production techniques, pest management, and storage practices. The variety profiles include photographs of the exterior and interior of the tuber, and a description of each variety's physical and culinary qualities. Hardcover, 260 pp, 191 color photos, 14 b/w illustrations, $34.95 plus S/H, Timber Press. To order go to: http://www.timberpress.com/books/complete_book_potatoes/de_jong/9780881929997 ■



Colorado Potato Beetle Resistance Management in Potatoes

from the 2011 Cornell Crop & Pest Management Guidelines for Vegetables, http://www.nysaes.cals.cornell.edu/recommends/24frameset.html and the Organic Guidelines for Potatoes at: http://nysipm.cornell.edu/organic_guide/

(Note: The Colorado potato beetle has shown a tremendous ability to develop resistance to insecticides. In just three years I observed resistance to pyrethroids develop where there was no alternation or rotation of insecticides. ed. CRM, CCE, CVP)

Genetic resistance to insecticides is an inherited change in the sensitivity of a pest population that is reflected in the failure of a product to achieve the expected level of control. The objective of insecticide resistance management (**IRM**) is to prevent or delay the onset of resistance or to help regain susceptibility in insect pest populations. In practice, **alternations, sequences, or rotations of insecticides from different IRM classes (modes of action) reduce selection for resistance** in any one class and prolong the effective life of compounds having that mode of action. Avoid treating 2nd generation CPB adults and larvae with insecticides in the IRM Class that was used to control the 1st generation of CPB adults and larvae. Be sure to consider insecticide seed treatments and at-planting in-furrow treatments targeted at the 1st generation. Insecticides below are only suggested since populations on different farms, in different areas, have different levels of resistance to common materials, based on what has been used previously. ■

Insecticides Which May Help Manage Colorado Potato Beetle. Read the label and consult the 2011 Guidelines for more details.

Mode of Action (MOA)	IRM Class	Class	Active Ingredient	Trade Name
Sodium Channel Modulators	3	Pyrethroids	beta cyfluthrin	*Baythroid XL, *Renounce 20WP, *Tombstone
			cyhalothrin	*Warrior II, *Lambda-Cy
			esfenvalerate	*Asana XL
			pyrethrin[1, 2]	Pyganic Crop Protection EC 5.0 **OMRI**
Nicotinic Acetylcholine	4	Chloronicotinyl	acetamiprid	Assail
			*imidacloprid	*Provado 1.6F, OLF
			thiamethoxam	*†Actara
Nicotinic Acetylcholine Allosteric Activators	5	Spinosyns	spinosad[2]	Entrust 80W **OMRI**
			spinetoram[2]	Radiant SC
Chloride Channel Activators	6	Abamectin	abamectin[1, 2]	*Agri-Mek, *Abba
Microbials - Gut Membrane Disruptor	11	*Bacillus thuringiensis*	*Bt*[1, 2]	Novodor
		Beauveria bassiana[2]	*B. bassiana*[2]	Mycotrol O **OMRI**
Moulting Disruptor	17	Cyromazine	cyromazine[1, 2]	Trigard
Voltage Dep. Na Channel Blockers	22	Oxadiazines	indoxacarb[2]	Avaunt
Ryanodine Receptor Modulators	28	Diamides	chlorantraniliprole	*†Altacor
Mixes – Multiple MOA	4/3	Chloronicotinyl/Pyrethroid	imidacloprid/cyfluthrin	*Leverage 360
	4/3	Chloronicotinyl/Pyrethroid	thiamethoxam/cyhalothrin	*†Endigo ZC
	28/3	Diamide/Pyrethroid	chlorantraniliprole/cyhalothrin	*†Voliam Xpress
Unknown MOA		Cryolite	sodium aluminofluoride[1, 2]	Kryocide, Prokil Cryolite 96
		Azadirachtin	azadirachtin/neem[1,2]	Ecozin 3EC; Ecozin PLUS 1.2% ME **OMRI**, Neemix 4.5 **OMRI**

*Restricted use only
† Not for use in Nassau/Suffolk Counties

1. Time application based on egg hatch
2. Effective primarily against larvae

Always Read the Label! The Label is the Law!

Continued from cover

with infected green foliage/stems. Under proper storage management (relative humidity at or below 85% and excellent air circulation) tuber-to-tuber spread of late blight is minimal, if at all. (Note: It takes a few days for infected potato tubers or tomato fruit to show symptoms.)

A cool, moist environment favors development of the pathogen. (Cool temperatures at night, as often occurs in August, increases dew and leaf wetness. Warm, wet weather also favors the disease.) Initiating fungicide applications and scheduling fungicides based on severity values is the most effective control strategy (such as in forecast programs like Blitecast and the new Simcast/LB DSS; go to: http://newa.cornell.edu/ and click on Crop Pages, Potato, Late Blight (Blitecast) and Late Blight (Disease Support System).

Recent strategy changes have coupled environmental factors with fungicide strategy and potato growth. The potato growth season is broken down into five periods: generally, before July 1, July 1–15, July 16 – Aug 15, Aug 16–31, and after Aug 31. As the potato plant changes during these periods control tactics change. One control tactic is fungicide selection. As the growth rate of potato foliage changes from the beginning (rapid foliar growth) to the end of the season (limited foliar growth as tuber bulking occurs), fungicide selection changes from systemic to translaminar to contact materials. (Tomato growth rate follows a somewhat different pattern, especially for indeterminate varieties, which continue to produce new growth late into the season.) During these fungicide selection changes the timing of applications based on environmental factors (severity values, etc) remains unchanged. (For info on fungicides for late blight go to: http://vegetablemdonline.ppath.cornell.edu/home.htm)

(See also the *Cornell Crop & Pest Management Guidelines for Vegetables* at: http//www.nysaes.cornell.edu/recommends/ and the *Organic Guidelines for Potatoes* at: http://nysipm.cornell.edu/organic_guide/)

(edited by C. MacNeil, CCE, CVP) ■

A meeting on the identification and management of late blight in potatoes and tomatoes, including the new online Late Blight Disease Support System (forecast) will be held **Monday, June 27th, 6:30 - 8:30 pm, at CCE - Monroe Co, 249 Highland Ave, Rochester**. There will be a new on-farm weather station in the county. DEC credits will be available. Pre-registration required. Contact Carol MacNeil (crm6@cornell.edu; 585-394-3977x406) or Robert Hadad (rgh26@cornell.edu; 585-739-4065) CCE, Cornell Vegetable Program, for more info.)

Tomato Disease Workshop - Ithaca

Tom Zitter, Cornell

The 26th Annual Tomato Disease Workshop (TDW) will be held at the Holiday Inn downtown in Ithaca on October 11-13, 2011. The TDW discusses how pathogens cause disease and develop and spread. Breeding for disease resistance, and use of chemical, cultural and biological disease management are included.

Attendees include growers and processors, researchers, crop protection specialists, industry representatives, and extension educators. TDW remains the only workshop devoted to the presentation of up-to-date information on currently critical tomato disease problems in the US.

Go to: http://vegetablemdonline.ppath.cornell.edu/TDW/index.html ■

Grants for Processing Crops Research Awarded

Julie Kikkert, CCE, Cornell Vegetable Program

The New York Vegetable Research Association and Council awarded a total of $158,942 for 10 Research Projects. The funds for these grants are contributed by the growers and processors through the processing contracts. The following projects were awarded for 2011. ■

Researcher(s)	Title	TOTAL
Abawi, Moktan	Evaluation of pea varieties for resistance to root rot diseases in greenhouse tests and commercial fields	**8,755**
Abawi, Moktan	Managing leaf spot and decay in beets	**8,505**
Bellinder	Weed management research for sweet corn, peas, snap beans, beets, carrots, and leafy greens	**39,000**
Dillard, Strauss, Kikkert	Varieties for Phytophthora blight and fungicides for white mold for snap beans	**19,330**
Griffiths	Breeding snap beans for host plant resistance & quality	**29,400**
Griffiths, Hart	Development of populations and molecular markers to increase the efficiency of breeding virus resistant snap beans	**9,500**
Nault, Hessney	Evaluating the performance of chlorantraniliprole for european corn borer management in snap beans	**15,952**
Reiners, Ballerstein	NYS processing snap bean variety evaluations	**10,000**
Reiners, Ballerstein	NYS processing sweet corn variety evaluations	**12,500**
Reiners, Ballerstein	NYS processing green pea variety evaluations	**6,000**
	TOTAL AWARDS	**158,942**

Reduced Till Presentations on YouTube; Cost Share $ Available

Betsy Leonard, Cornell

The January 27th Reduced Tillage session at the Empire State Fruit & Vegetable Expo, including six grower presentations, and the February 12th Reduced Till Videoconference presentations of expert growers and university faculty were recorded and recently uploaded to You Tube. Now more growers can benefit from the information, photos and recommendations on equipment, attachments, weed control, cover crops, fertility management and more.

You can see the Expo presentations and all six Videoconference sections on the Cornell Horticulture YouTube channel: http://www.youtube.com/user/CornellHorticulture#g/u

Reminder: Funding from a NYS Dept. of Agriculture & Markets Specialty Crop Grant, is available for **cost share funds of $600 each to 16 growers this year for deep zone tiller rental and transportation.** Several equipment dealers have agreed to cooperate by making reduced till equipment available for rent. This program is for growers who are interested in reduced till for vegetables but have not yet had a good chance to try it. Information and technical assistance are also available. See the March or April Veg Edge Soils sections, or go to http://www.vegetables.cornell.edu/reducedtillage/ and read the article on "Funding for (Reduced Tillage) Equipment Rental Available." For more information contact: Eastern NY - Chuck Bornt, 518-272-4210, ext 125, cdb13@cornell.edu or Western NY - Carol MacNeil, 585-394-3977 x406, crm6@cornell.edu ■

Saving Your Fertilizer Dollar

Steve Reiners, Department of Horticulture, Cornell University, NYSAES

The cost of fertilizers has reached record levels this spring. Compared to a year ago, price per ton of urea is up $76, DAP $209, MAP $207, Potash $83, UAN $90, and Anhydrous $261. There are several factors that are causing the rise. High grain prices are resulting in increased plantings in 2011, which puts more demand on fertilizer. Mideast political instability has impacted the importation of urea, as Egypt has become a major exporter. Finally, China has imposed high fertilizer export tariffs. Growers can visit this website, maintained by the USDA-Illinois Dept. of Ag, to monitor prices: http://www.ams.usda.gov/mnreports/gx_gr210.txt By monitoring price trends growers may find a window when prices are lowest. With costs skyrocketing, vegetable growers are rightfully asking how they can maintain yields and save on their fertilizer bill. Here are some suggestions.

1) Soil test. Not only does this reveal the soil's nutrient status, it will let you know if your pH is optimum. The pH, a level of your soil's acidity, should be somewhere between 6.0 to 6.8 for most vegetables grown on mineral soils (5.2 – 5.8 on muck soils, ed. CRM, CCE, CVP). Soils with a pH out of this range will not use fertilizer effectively, requiring greater amounts to maintain yields. Agro-One is now handling soil testing previously done by Cornell. For more information visit their website at: http://www.dairyone.com/AgroOne/default.htm

2) Take nitrogen credits. Cover crops, manures, previous crops and even the soil organic matter (SOM) provide nitrogen. Figure about 20 pounds of N for every 1% of SOM. That would give you 40 pounds of N for a soil with a 2% soil organic matter. A legume cover crop will provide at least 40 pounds of N minimum, with two to three times that amount in a well established, legume sod. Even that field of cereal rye that was planted last fall has N in it, scavenged from last year's applications. Figure on 20 to 30 pounds of N once the rye begins to break down. For a rye cover crop, kill and turn under when it's 6 to 8 inches tall. Waiting longer will not provide more N and may tie up N during decomposition.

3) Don't apply all N preplant and at planting. Sidedressings of N are always better than applying all of it preplant. Most vegetables only need about 25 pounds of N/A during the first 2 to 4 weeks of growth. Better to apply 25% at planting and the rest split over a couple of sidedressings later in the season.

4) Don't let N blow in the wind. Broadcast applications of urea or ammonium based fertilizers have an increased chance of being lost through volatilization than incorporating or knifing these same products into the soil. Any tillage or applicator that puts the nitrogen in the soil rather than on the soil improves use efficiency of the nutrient.

5) Test your soil for nitrogen. Traditional soil tests do not test for nitrogen. The amount is always in a state of flux depending on soil types, rainfall, temperature and cropping history. Adapt-N is a tool developed at Cornell that allows you to get site-specific N recommendations for field corn. Just go to the following website to learn more about it and try it on sweet corn: http://adapt-n.eas.cornell.edu/

You can also use the Pre-sidedress Nitrate Test (PSNT) to check your soil prior to sidedressing to see if any N is needed. The PSNT is an in-season test that measures the nitrate level in the top foot of soil. Soils testing at 25-30 PPM nitrate can cut their usual sidedress level in half. Above 30 PPM and no N is needed. Check with your local CCE office for details. Agro One can conduct this test.

6) Reduce tillage. The quickest way to burn off organic matter is with conventional tillage. This puts lots of oxygen into the soil and microbe populations explode, at the expense of SOM, and thus N. Check with your local CCE educator for advice on ways to reduce tillage.

7) Don't over apply P. If your soil level is high and you are planting when soils are still cool, use no more than 10-20 pounds of actual P/A as a starter. This will help the plants get established until soil P becomes available as the soil warms in the spring. If planting in warm soils after June 10 on high P soils, no additional P is needed. For transplants on plastic mulch, a high P soluble fertilizer in the transplant solution may be all that is needed on high P soils. *(I frequently see vegetable soil tests with P levels 2 – 3X the very high level! ed. CRM, CCE, CVP)*

8) Fertilized Mulched Acre. When using plastic mulch, think "Fertilized Mulched Acre" or FMA. Let's say you are planting on 5-foot centers, with the plastic mulch covering 3 feet, and bare ground between the rows covering 2 feet. To figure the FMA, take the area of soil covered by mulch (3') and divide by the row center distance (5'), which gives 0.6 or 60%. If the soil test calls for 100 pounds of actual N per acre, you can cut this amount to only 60 pounds if you apply the N only to the area covered by the plastic. In this situation you are only applying fertilizer where it will be used by your crop, not by weeds growing between rows.

9) Grow your own N in-season. Plant a clover between rows of plastic mulch. Not only will it make field operations easier (less mud) and provide a habitat for beneficials, it could add 20-30 pounds of N for next season. Research at Cornell has indicated that the between-row cover crop does not compete with peppers.

10) Soak up residual N this fall. Planting a rye, wheat (or rye/vetch) cover crop can hold on to nitrogen that would otherwise be lost. Tilling in the cover crop next spring will give you that captured N. ■

Disaster/ Emergency Assistance Due to Severe Winter

from information provided by Beth Claypoole, CCE - Wayne County

In a response to NYS Governor Andrew Cuomo, USDA Secretary Thomas Vilsack outlined assistance available to farmers due to severe weather this past winter. Application deadline is October 14, 2011. Contact your local FSA office for more details.

Wayne County has been designated as a primary natural disaster area due to crop losses from extreme cold January 22, 2011. Contiguous counties eligible for assistance are Cayuga, Monroe, Ontario and Seneca Counties. Assistance that eligible farmers can access includes FSA emergency loans and Supplemental Revenue Assistance Payments (SURE).

While no qualifying crop losses due to weather occurred in Dutchess, Herkimer, Oneida, Rensselaer, Washington or Westchester Counties, FSA emergency loans are available for physical losses (dead livestock, collapsed buildings, etc) due to blizzards and excessive snow from December 28, 2010 to February 10, 2011. ■

SUMMER ASSISTANT NEEDED for Cornell Vegetable Program

The Cornell Vegetable Program anticipates hiring a summer assistant to work in Western NY to assist with field research and crop scouting.

Interested persons should direct inquiries to Julie Kikkert at jrk2@cornell.edu or 585-394-3977 x404.

Contact the Cornell Vegetable Program

Cornell Vegetable Program (CVP) Specialists

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CVP Region Berry Program

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Contact the Capital District Vegetable & Small Fruit Program

Capital District Vegetable and Small Fruit Program (CDVSFP) Specialists

Chuck Bornt, Team Leader
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Small and beginning farms, organic, root crops, brassicas, and garlic

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Email: cls263@cornell.edu
Address: 141 Fonclair Terrace
Johnstown, NY 12095

CDVSFP Administration

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County CCE Offices

Albany County CCE
William Rice Jr. Extension Center
24 Martin Road
Voohreesville, NY
Phone: (518) 765-3500

Colombia County CCE
Education Center, 479 Rte. 66
Hudson, NY 12534
Phone: (518) 828-3346

Fulton & Montgomery Counties CCE
50 E. Main Street
Canajoharie, NY 13317
Phone: (518) 673-5525

Greene County CCE
906 Green Co. Office Building,
Mountain Avenue
Cairo, NY 12413
Phone: (518) 622-9820

Rensselaer County CCE
61 State Street
Troy, NY 12180
Phone: (518) 272-4210

Saratoga County CCE
50 West High Street
Ballston Spa, NY 12020
Phone: (518) 885-8995

Schenectady County CCE
Schaffer Heights
107 Nott Terrace, Suite 301
Schenectady, NY 12308
Phone: (518) 372-1622

Schoharie County CCE
Extension Center
173 S. Grand Street
Cobleskill, NY 12043
Phone: (518) 234-4303

Warren County CCE
377 Schroon River Road
Warrensburg, NY 12885
Phone: (518) 623-3291

Washington County CCE
415 Lower Main Street
Hudson Falls, NY 12839
Phone: (518) 746-2560

Advisory Members

Albany:	Tim Albright and Tim Stanton
Columbia:	John Altobelli, Bryan Samascott, Jody Bolluyt (organic)
Fulton:	Eric and Stephanie Grey
Greene:	Pete Kavakos, Jr. and Jim Story
Montgomery:	Jim Hoffman and Ken Fruehstorfer (organic)
Rensselaer:	Larry Eckhardt and David Mesick
Schenectady:	Al Lansing and Keith Buhrmaster
Saratoga:	Cyndi Pastore and Craig DeVoe
Schoharie:	Bob and Linda Cross, and Jake Hooper
Washington:	George Armstrong and Rich Moses
Warren:	Kim Feeney
Industry Representatives:	Jay Matthews and Paul Peckham

If you have questions or comments about this publication or the Capital District Program in general, please contact your county's grower advisory member or the Agricultural Program leader of your local Cornell Cooperative Extension office.

Dates to Remember...

May 5 - Integrated Pest Management Meeting
6:00 - 8:30pm, Orchard Park, Erie Co. Disease forecast programs, marmorated stink bug, and more.
See page 12

May 20 - Deadline to Apply: Funding for Conservation Practices - Transitioning, Organic Farms. Apply at local NRCS offices (http://offices.sc.egov.usda.gov/locator/app?state=NY)

June 27 - Tomato/Potato Late Blight Update and Online Forecasting Resources, 6:30 - 8:30 pm, CCE - Monroe Co, 249 Highland Ave, Rochester. DEC credits available. Pre-registration required. Contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.
See page 14

October 11-13 - 26th Annual Tomato Disease Workshop, Ithaca
See page 14

Thank You to Our Sponsors

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