

PAGE 1

changes of your crops being

affected by these pathogens.

Snow molds may be causing premature death of high tunnel cover crops. Minimize the



tunnel fertility.

PAGE 4

Long term high tunnel sustainability requires attention to soil nutrients. This checklist will



control it.

PAGE 5

Was velvetleaf plaguing you last year? Want to stay ahead of it this year? Learn about the biology



The most important time to make nitrogen available to a garlic plant, in order to increase

yield, is shortly after leaf emergence from the ground.



YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE





Cornell University Cooperative Extension Cornell Vegetable Program

Snow Mold in High Tunnel Cover Crops

Judson Reid, CCE Cornell Vegetable Program

The Cornell Vegetable Program (CVP) has recommended the use of winter cover crops in high tunnels to benefit tomato production with the benefits of:

- Increased organic matter
- Enhancing soil microbial activity
- Nutrient cycling, particularly nitrogen.

Given the long production period of tomatoes, most growers are restricted to using a winter grain such as wheat, barley, rye or triticale. Sown in the mid-fall these cereals can put on several inches of vegetative growth before being tilled under in the late winter or early spring. However, these crops were not originally intended to be grown in tunnels with high humidity. This could be a perfect setting for diseases of the cover crop to develop. The CVP sampled a suspected case of pink snow mold on a rye cov-



Snow mold on high tunnel rye cover crop. Photo: Judson Reid, CCE Cornell Vegetable Program

noto: Judson Reid



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 13 counties in Western New York.

The newsletter is a service to our enrollees and is intended for educational purposes, strengthening the relationship between our enrollees, the Cornell Vegetable Program team, and Cornell University.

We're interested in your comments. Contact us at: CCE Cornell Vegetable Program 480 North Main Street, Canandaigua, NY 14224 Email: cce-cvp@cornell.edu

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Information provided is general and educational in nature. Employees and staff of the Cornell Vegetable Program, Cornell Cooperative Extension, and Cornell University do not endorse or recommend any specific product or service.

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 Department 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.

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

Cornell University



Cooperative Extension Cornell Vegetable Program

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The next issue of VegEdge will be April 26, 2017.

Hoepting Wins 2016 Excellence-in-IPM Award

For her exemplary work on behalf of farmers, not just in the rich muck-soil region of western New York but statewide and nationally, Christy Hoepting [CCE Cornell Vegetable Program Specialist] has earned an Excellence in IPM award from the New York State Integrated Pest Management Program at Cornell University. IPM weaves together a broad range of tactics that minimize the environmental, health and economic risks of pests and pesticides.

"Christy is a star in Cornell Cooperative Extension," says Brian Nault, a professor of entomology at Cornell. "She's a gifted educator and advocate, more passionate and successful in promoting IPM practices than just about anyone I know." While onions are Hoepting's main research focus -- they're a high-value crop for New York, with annual sales upward of \$40 million -- growers in WNY also welcome her expertise in cabbage, broccoli and garlic.



Hoepting has conducted hundreds of on-farm research trials in plant pathology, entomology, weed science, cultural practices and crop nutrition, presented at scores of stakeholder and scientific meetings, and published scores of articles and research papers. It's also why she scouts farm fields relentlessly, tracking every movement of insect and disease pests.

"Christy does her research on the farm in growers' fields," says onion grower Matt Mortellaro. "It makes us confident that her work will apply to our situations. She's extremely responsive, and she's always listening."

Christy Hoepting received her award on March 8 at CCE Cornell Vegetable Program's "Elba Muck Region Onion School" in Albion, NY. •

er crop in a Finger Lakes high tunnel in mid-January. The pathogen was confirmed as a *Michrodochium* species by the Gary Bergstrom lab in Ithaca.

Snow molds are a group of diseases caused on cereals and grasses under low light and low temperatures. The pathogens degrade the leaf tissue and develop white or pink sporulation masses. Growers who are trying to maximize cover crop growth will likely leave the tunnel unventilated to increase heat units. This increases disease in 2 ways.

- 1. Decreased ventilation increases relative humidity in the crop canopy.
- 2. Higher day time temperatures lead to condensation on cold nights.

Fortunately Snow Molds are weak pathogens, and we don't expect this outbreak to be a threat to the following season of tomatoes. However, we do lose the value of the cover crop with its premature death in January. At this point we are still learning about Best Management Practices, but support the continued use of cover crops with the following practices:

- ✓ Do not exceed the established cover crop rate. In the case of winter grains; about 150 lbs/ac.
- ✓ Consider continual ventilation with open gable-end louvers, or the regular opening of side curtains.
- ✓ Do not over-water the crop. Once seeds have germinated in the late fall, no-to -little irrigation should be required until late February or early March depending on weather.
- There are Snow Mold resistant varieties of wheat available, check with your seed company.
- ✓ Watch market-prices and consider removing tomatoes earlier in the fall to open up more cover crop opportunities. Some growers report success with tillage radish.



High tunnel cover crop decline caused by Snow Mold. Photo: Judson Reid, CCE Cornell Vegetable Program

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Farm Food Safety Assistance Available

Robert Hadad, CCE Cornell Vegetable Program

The Cornell Vegetable Program is providing assistance to farmers who have questions or need help in implementing food safety practices on the farm. Following the guidelines, farmers are faced with some daunting tasks. There is worker training, dealing with adjacent land use, wildlife incursions, surface water testing and irrigation issues, wash and pack shed design, using sanitizers, cleaning protocols, record keeping, and audits.

Our team offers the expertise needed to meet these demands. Whether it is

GAPs, Harmonized GAPs, or the new FDA Food Safety Modernization Act (FSMA) requirements, we have the resources. If you have questions on implementing farm food safety practices, help with writing a food safety plan, having a pre-audit assessment, wash or pack shed issue, or any other inquiries, contact Robert Hadad at rgh26@cornell.edu or call 585-739-

Compliance for the FSMA regulations for farms non-exempt is January 26, 2018.

The Taste of NY labelling program requires a farm food safety audit along with nutrient management plan. For more information go to <u>https://</u> <u>taste.ny.gov/fruits-vegetables</u>

The NY Dept. of Ag & Markets still has some reimbursement money available to help farmers offset the costs of food safety audits. For more information on this program, go to <u>https://</u> www.agriculture.ny.gov/rfps/GAP/GAP -Application.pdf

Spring High Tunnel Fertility

Judson Reid, CCE Cornell Vegetable Program

April is transplant time for high tunnel tomatoes in New York. Through ongoing work with Cornell Vegetable Program and NOFA-NY, we have observed that long term high tunnel sustainability requires attention to detail on soil nutrients. The challenge in soil-based production is that the soil acts as a bank for phosphorus (and calcium and magnesium) and the build-up over time interferes with other nutrient uptake. So we generally are not recommending fertilizers with P beyond the first year. For conventional growers, nutrient additions can be restricted to a 10-0-0 or urea; plus the K product of their choice. For organic growers, we suggest a straight N source such as soy, alfalfa, blood or feather meal plus sulfate of potash.

- ✓ Soil test ASAP. We prefer a Fall test, as warmer, biologically active samples will give more accurate results, particularly for P and N, but a Spring test is better than none.
- ✓ Adjust soil pH. In nearly every high tunnel that has been in place for more than one year we find pH on the rise. This needs to be checked with annual applications of elemental sulfur.
- ✓ Add potassium based on test results. The benefit of sulfate of potash is additional sulfur to react with excess calcium already in the soil.

Foliar testing throughout the season is essential for fine tuning these rates and any other nutrients of concern. The other key factor for long-term productivity is to keep irrigation water on the acid side; reducing pH and alkalinity to low 6's and 0-50 ppm bicarbonate, achieved with the addition of sulfuric (conventional) or citric (organic) acids. To determine rates we need a water test and Spring is the time to get this done. If you have questions on labs that provide these services, or you would like interpretation of your test results, call Judson or Cordelia. This work has been funded by the New York Farm Viability Institute.



Early spring high tunnel tomato crop. Photo: Judson Reid, CCE Cornell Vegetable Program

U.S. EPA Denies Activist Petition and Retains All Chlorpyrifos Tolerances

Phil Jost, Dow AgroSciences, 3/29/17

[This just in! Active ingredient chlorpyrifos (trade name Lorsban) will continue to be available for vegetable growers. Onion growers use Lorsban for onion maggot control. Cabbage growers use Lorsban for controlling cabbage maggot. Ed. C. Hoepting, CCE CVP.]

On October 30, 2015, the U.S. Environmental Protection Agency (EPA) announced a proposal to revoke U.S. food tolerances for the insecticide chlorpyrifos. This proposal was an outcome of a Ninth Circuit Court of Appeals decision ordering EPA to respond to allegations about chlorpyrifos in a 2007 petition from the Natural Resources Defense Council (NRDC) and Pesticide Action Network North America (PANNA), even before the Agency had finished its formal health and safety evaluations of the product underway in registration review.

On November 17, 2016, the EPA released a Notice of Data Availability (NODA) with accompanying assessments to notify the public of the data that the Agency may use to support its proposed decision to revoke all chlorpyrifos tolerances. Both of these releases by EPA offered the opportunity for public comment and many comments were submitted in support of retaining chlorpyrifos tolerances from universities, stakeholders, growers, and customers in the ensuing comment periods. Dow AgroSciences also submitted a comprehensive response to both EPA releases.

U.S. EPA on 29 March 2017 announced that it would not proceed forward at this time with any restrictions for chlorpyrifos or changes to U.S. tolerances. In addition, EPA has notified the Courts that it is denying the NGO petition in full. Instead, EPA announced that it will focus its attention on updating and revising its human health assessment for chlorpyrifos under the standard procedures of the Registration Review process scheduled for completion on October 1, 2022 in order to support future decision making.

Dow AgroSciences believes the science and established legal and regulatory standards and processes support the EPA decision to deny the activist petition and retain all chlorpyrifos tolerances. Dow AgroSciences remains confident that authorized uses of chlorpyrifos products offer wide margins of protection for human health and safety. This is the right decision for farmers who, in about 100 countries, rely on the effectiveness of chlorpyrifos to protect more than 50 crops from damaging insect pests, some of which are can only be effectively controlled with chlorpyrifos. Dow AgroSciences will continue to cooperate with EPA under the established Registration Review process in its scientific review of this important crop protection solution.

Velvetleaf: Don't Let it Go to Seed

Darcy Telenko, CCE Cornell Vegetable Program

Over the winter I have heard many comments about the need for better velvetleaf control. Here is some information on biology and management of velvetleaf. It is extremely important to not let it go to seed as the seed remain viable for decades. Since there were many escapes of this weed last summer, I'm expecting we might see increased pressure this year especially if ineffective weed management programs were implemented.

Velvetleaf (Abutilon theophrasti Medicus) is a member of the Malvaceae family (the mallows) which includes okra, cotton, and cacao. It is an erect, summer annual and distinguished by heart-shaped leaves. Soft hairs line the leaves and stems and make it velvety to the touch. Reproduction occurs via very large seeds that can germinate from several inches below soil surface. Cotyledons are heart-shaped and hairy on both surfaces. Young leaves are also heart-shaped, densely hairy, and may be bluntly toothed along the margin. They are alternately arranged along the stem. When leaves and stems are crushed an unpleasant odor may be emitted. Velvetleaf produces a fibrous root system with a shallow taproot.

Flowers are produced starting in July into the fall and have 5 yellow petals and numerous stamens fused into a tube. The fruiting structure is a circular cup-shaped disk of 9-15 carpels and each carpel contains 3-9 seed; a single large plant can produce up to 8,000 seed. Seeds can persist in soil for several decades. Preventing seed production is important to managing the population in a field.



Velvetleaf flowers have 5 yellow petals. Two seed pods, a green immature pod and a black, mature pod can be seen in this photo. *Photo from University of Missouri IPM*



Each heart-shaped leaf of velvetleaf is covered with hairs and has visible main veins. Photo: Phil Westra. Colorado State University, Bugwood.org

Velvetleaf can be easily controlled by repeated cultivation early in the season until the crop has a dense canopy. Herbicide management programs that include a soil-applied treatment followed by a postemergence treatment are generally effective in controlling velvetleaf. Note the best time to apply postemergence herbicides for velvetleaf is during the day when the leaves are open and horizontal, during the late evening and early morning velvetleaf will go into a sleep cycle and the leaves will droop to nearly a vertical position. When in a drooped position herbicide uptake in the leaves will be reduced.

Preemergence surface applied herbicides with good to excellent control of velvetleaf include Callisto, Prowl H₂O, Pyramin, Sandea, metribuzin, and Strategy. Pre-plant incorporation of Eptam will also provide good control. A number of herbicides will provide good to excellent postemergence control of velvetleaf including Aim, Basagran, Callisto, Clarity, Gramoxone, Impact, Laudis, Lorox, Roundup, Sandea/ Permit, metribuzin, and 2,4-D. See product label for specific crop uses.



Velvetleaf in sweet corn. Photo: Darcy Telenko, CCE Cornell Vegetable Program



Velvetleaf. Photo: Darcy Telenko, CCE Cornell Vegetable Program

Terminating Cover Crops

Mike Stanyard, NWNY Dairy, Livestock, & Field Crops Team; from Ag Focus newsletter, Vol. 26, Iss. 4, 4/1/17

So far, it looks like cover crops did well despite the lack of a prolonged blanket of snow this winter. This makes our cover crops even more valuable as one of their main purposes is to keep our soils from blowing and washing away. It was cold enough that the species that were supposed to winterkill like tillage radish and oats died. For those that remain alive like cereal rye, triticale, wheat, annual rye and clover species, we will have to come up with a plan on how to manage them.

Some of these overwintering cover crops will be used as a forage crop and therefore will be cut at the appropriate time (Growth Stage 9 for triticale) for optimum feed value. Others will be mowed/crimped, tilled under, or terminated with herbicides. Each of these has restrictions depending on what production system you utilize (ie. strictly grain based, no-till, or organic). If cover crops are not dealt with in an appropriate manner, they can become weeds and compete with our production crops. We saw that first hand in a drought situation last year. I have put together some advice on herbicide termination from the Midwest states on some of our commonly used cover crops.

Annual ryegrass (Lolium multiflorum), also called Italian ryegrass or common ryegrass, has become a very popular cover crop in NY but has a confusing name. It is not an annual and survives the winter very well. Do not confuse annual ryegrass with cereal rye. Annual ryegrass is a good cover crop because of its ability to rapidly germinate in the fall, grow aggressively in the spring, and add substantial root and forage mass to the soil profile. Here is some advice from University of IL on proper termination with herbicides (<u>http://</u> bulletin.ipm.illinois.edu/?p=3552).

- Make applications prior to 8" plant height
- Glyphosate rates of at least 1.25 lb ae/A are required, although 2.5 lb is preferred for annual ryegrass termination



Spring cover crops. Photo: Mike Stanyard, NWNY, Dairy, Livestock & Field Crops Team

- Ryegrass must be actively growing, and it is recommended that applications occur only following three consecutive days when air temperatures have been above 45 F
- The addition of saflufenacil to glyphosate can improve control of annual ryegrass
- Combinations of paraquat, metribuzin and 2,4-D or dicamba can control small ryegrass (<6" in height), but are not recommended for control of larger plants
- Avoid using PSII herbicides (atrazine & metribuzin) in mixtures with glyphosate, as they can cause antagonism and poor control of annual ryegrass.

Cereal rye. Glyphosate at a rate of 0.75 lb ae/A will effectively control both species up to 18 inches tall. Mix-tures of glyphosate plus 2,4-D, chlorimuron, chloransulam, atrazine, or saflufenacil can also be applied for additional control of other cover crop species (specifically broadleaf species) and residual control of summer annual broadleaf weeds. Depends on what crop species is going to be planted. The nonselective herbicides paraquat and glufosinate are less effective than glyphosate on these species.

Gramoxone SL (paraquat) applied at 3 to 4 pints per acre works well on small-

er rye before it reaches the boot stage. Add a nonionic surfactant to the spray tank to enhance penetration and total kill. If you will be planting corn and choose to use Gramoxone SL, consider adding 1 quart of atrazine per acre to improve control of the rye. (personal communication, Mike Hunter, CCE). In 2009, research by Bill Curran at Penn State University, found that the additional of 1 quart of atrazine per acre, when used with Gramoxone, provided 99% control of 8-10 inch tall rye. Only 70% control of the rye was achieved when Gramoxone was used alone in this study.

Crimson clover and Austrian winter

peas are two popular legume species used as cover crops that typically do not winter kill and require a spring termination. I have seen control issues with large pea vines with glyphosate. Information on control of these species with herbicides is limited, but cover crop guides advise that glyphosate and 2,4-D/ dicamba easily control crimson clover and winter peas.

University of Wisconsin has a nice fact sheet with additional cover crops which lists termination methods preferred and herbicide options (<u>https://</u><u>host.cals.wisc.edu/wcws/wp-content/</u><u>uploads/sites/4/2013/03/</u> WCWS 204 cover crop termination WEB.pdf).

Early Season Garlic Fertility

Crystal Stewart, ENY Commercial Horticulture Program; from Produce Pages newsletter, March 2017

The unseasonably warm weather we are having at the end of this winter is slowly increasing soil temperatures, and may mean that garlic will start to grow earlier than usual. The most important time to make nitrogen available to a garlic plant in order to increase yield is shortly after leaf emergence from the ground. Success in providing optimal nitrogen will depend on the nitrogen source you are using and some well-timed assistance from soil biology.

Many organic growers as well as some conventional growers mulching with straw are opting to put down all of their fertility in the fall, leaving the garlic's cover undisturbed in the spring. This is a fine approach as long as the behavior of your nitrogen source is taken into account. First, if making a fall application of N, make sure that the source is not a nitrate form (for example, ammonium nitrate is 51% nitrate nitrogen, while ammonium sulfate is 0% nitrate nitrogen). Waiting until soil temperatures are below 50 degrees to apply fall fertility will prevent most fall nitrification of both ammonium sulfate and organic nitrogen sources such as pelletized chicken manure. You want to keep your N in the ammonium form because it will not leach. Once it is converted to nitrate, nitrogen moves readily in water.

Second, remember that the nitrogen cycle is driven by biology, and biology is driven by temperature (and soil health!). Organic matter is decomposed partially into ammonium by a



Figure 1: Nitrogen cycling, including organic and inorganic forms.

suite of microbes before nitrification (see Figure 1 for a handy visual). You want to make sure that your fall applied N source contains enough ammonium/urea nitrogen to provide adequate nutrition in the spring, because garlic starts growing and using N earlier than any other vegetable. As the soil warms, N that is bound in organic matter (slow release N) will be made available, and ammonium nitrogen will turn to nitrate nitrogen (Figure 2), which is easily taken up by plants.



Figure 2: Relationship of nitrification to soil temperature. As temperatures climb, nitrifying bacteria more quickly convert ammonia forms of N to nitrate forms, which are more plant available but also more prone to leaching.

Bare ground garlic growers can apply their nitrogen in the spring using a variety of sources including nitrate-nitrogen forms. Side-dressing as soon as the ground is dry enough to work with either all or half of the needed nitrogen is best. If using half, come back 2-3 weeks later to apply the rest. The recommendation created by Cornell recommends numerous applications, but research has not supported the need to divide the application into more than two (Figure 3).

Nitrogen applied later in the growing cycle of garlic (after approximately May 1st) has very little if any effect on the final bulb size. The good news is we can spend less time fertilizing and more time on weed control!

Figure 3 (from Cornell Recommendations for garlic, used by Agro-One Soil Lab. Based on use of a Morgan extra
--

Garlic	Nitrogen (N) Lbs/ A	Phosphorus (P2O5) Lbs/A					Potassium (K2O) Lbs/A				
Soil Test Results		Very Low <3lbs/A	Low 3-6	Medium 7-13	High 14-40	Very High >40	Very Low <50	Low 51-100	Medium 101-200	High 201-300	Very High >300
Incorporate at planting	0	200	150	100	50	0	200	150	100	50	0
Sidedress before emergence	25-50	0	0	0	0	0	0	0	0	0	0
Sidedress 2-3 times, 3-4 weeks apart	25-50 divided among sidedressings	0	0	0	0	0	0	0	0	0	0
TOTAL	50-100	150	100	75	50	0	150	100	75	50	0 O

Cooperating Farms Wanted!

We know wildlife has wreaked havoc in many crops.

We are looking for a few more sites to run wildlife research trials. Ideal fields are those that experience yearly damage by birds early in the season (reduced plant populations) and will be planted to cucurbit crops this spring. If you think you have a site that fits and are willing to evaluate a few tools please contact Darcy Telenko, 716-697-4965/ <u>dep10@cornell.edu</u> for more information. •

Census of Agriculture Countdown Begins

USDA National Agricultural Statistics Service (NASS)

America's farmers and ranchers will soon have the opportunity to strongly represent agriculture in their communities and industry by taking part in the 2017 Census of Agriculture. Conducted every five years by the U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS), the census, to be mailed at the end of this year, is a complete count of all U.S. farms, ranches, and those who operate them.



"The Census of Agriculture remains the only source of uniform, comprehensive, and impartial agriculture data for every county in the nation," said NASS Administrator Hubert Hamer (at podium). Photo: U.S. Department of Agriculture, Flickr/Creative Commons

"The Census of Agriculture remains the only source of uniform, comprehensive, and impartial agriculture data for every county in the nation," said NASS Administrator Hubert Hamer. "As such, census results are relied upon heavily by those who serve farmers and rural communities, including federal, state and local governments, agribusinesses, trade associations, extension educators, researchers, and farmers and ranchers themselves."

The Census of Agriculture highlights land use and ownership, operator characteristics, production practices, income and expenditures, and other topics. The 2012 Census of Agriculture revealed that over three million farmers operated more than two million farms, spanning over 914 million acres. This was a four percent decrease in the number of U.S. farms from the previous census in 2007. However, agriculture sales, income, and expenses increased between 2007 and 2012. This telling information and thousands of other agriculture statistics are a direct result of responses to the Census of Agriculture.

"Today, when data are so important, there is strength in numbers," said Hamer. "For farmers and ranchers, participation in the 2017 Census of Agriculture is their voice, their future, and their opportunity to shape American agriculture – its policies, services, and assistance programs – for years to come."

Producers who are new to farming or did not receive a Census of Agriculture in 2012 still have time to sign up to receive the 2017 Census of Agriculture report form by visiting <u>www.agcensus.usda.gov</u> and clicking on the 'Make Sure You Are Counted' button through June. NASS defines a farm as any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year (2017).

For more information about the 2017 Census of Agriculture and to see how census data are used, visit <u>www.agcensus.usda.gov</u> or call (800) 727-9540.



The Census of Agriculture happens just once every five years, and it's that time again! Currently, the census is the only complete count of U.S. farms and ranches and the people who operate them. It includes even the smallest plots of land – rural or urban – growing fruits, vegetables, or raising food animals, if \$1,000 or more of such products were raised and sold, or normally would have been sold, during the census year.

It is through the census that U.S. farmers can show the nation the value and importance of agriculture.

In December, the 2017 Census of Agriculture will be mailed to more than three million U.S. farmers.

New to farming or didn't receive the 2012 Census of Agriculture form? **Click the button above to be added to the 2017 mailing list** or visit https:// www.agcounts.usda.gov/cgi-bin/ counts/ to make sure you are counted!

Help Us Define and Measure IPM Adoption and Practices in New York Vegetables

Darcy Telenko, CCE Cornell Vegetable Program

Darcy Telenko is coordinating the Vegetable Crop Pest Program in New York with the Integrated Pest Information Platform for Extension and Education (iPiPE) Project. iPiPE is a national webbased IT platform that combines usercontributed pest observations and translates them to real-time pest distribution maps and forecasts of pest risk. Throughout the season iPiPE informs you about the pests and diseases in your vicinity and provides management recommendations from professionals to help you make decisions about protecting your crop. The project is funded by a USDA Food Security Program grant and involves 28 crops around the nation.

As part of the program, a new set of tools is currently being developed to help you manage crop pests and increase your profitability.

Your participation in the below survey will help shape the development of these tools to best support your pest management efforts. In addition, the results of the survey will help the Cornell Vegetable Program and other Extension professionals get a better picture of pest management practices among fresh market vegetable growers in New York.

Please take few minutes to complete a survey before the season kicks into full swing. Click or copy and paste the link below to access the survey: <u>https://survey.ncsu.edu/ipm/nyveggies/</u>

This is the first of two similar surveys that will be used to determine iPiPE's impact on the pest management practices used by New York fresh market vegetables growers. The second survey will take place in 2019. Survey results will be compiled by the Center for Urban Affairs and Community Services at NC State University. All answers are completely confidential and will be grouped for analysis purposes. If you have questions about the survey, please contact Dr. Jean-Jacques Dubois, at jbdubois@ncsu.edu.

Spotted-Wing Drosophila



Examples of maps that can be generated from iPiPE.

Tomato Septoria Leaf Spot

New York Pennytvania Connecticut

Brown Marmorated Stink Bug



Precooling and Curing Project Survey

Chris Callahan, UVM, and Robert Hadad, CCE Cornell Vegetable Program

Ever wonder...

Why is my winter squash getting all moldy when I've kept it at the right storage conditions?

Why is my garlic drying out in storage?

Can I get better storage life out of my onions with improved curing?

Can I get better shelf life from my greens with better precooling?

How do I get the stuff on the inside of the harvest bin cooler more quickly?

We have.

Chris Callahan (UVM) and Robert Hadad (Cornell) have received <u>a NE-SARE grant</u> to work with vegetable farmers throughout the Northeast on improving post-harvest practices through research, collection, distribution and demonstration of best practices for precooling and curing vegetable crops.

To help us better understand current practices, existing challenges and identify farmer partners for future work, we ask that you kindly complete this survey: https://goo.gl/forms/cA7wQwtSA3n6Dqug2

There is an opportunity in this project for growers to be actively involved in designing and testing new and improved systems that address precooling and curing challenges. If you have ideas or specific challenges, we want to hear from you. The first step is the survey.

Should you have any questions, please contact Chris at

<u>Chris.Callahan@uvm.edu</u>, 802-447-7582 x256.

Thanks, in advance, for your help.

Project Home Page: <u>http://</u>go.uvm.edu/precoolcure •

UPCOMING EVENTS view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu

Worker Protection Standard Training and DEC Special Permit Training April 4, 2017 | 8:30 AM - 12:30 PM English session | 1:00 PM - 5:00 PM Spanish session CCE Wayne County, 1581 St Rt 88, Newark, NY 14513

April 5, 2017 | 8:00 AM - 12:00 PM English and Spanish sessions CCE Orleans County, 12690 Rt 31, Albion, NY 14411

Just like last year, **Special Permits (SP) will only be issued for 11 specific pesticide labels** and **SP trainees will have to pass a test.** This will relieve the certified pesticide applicator from "on-site within voice contact" supervision of non-certified pesticide applicators when they are handling federally-restricted-use pesticides for which they hold a Special Permit. The labels that will be covered include Lorsban Advanced, Endigo ZC, Warrior II with Zeon Technology, Agri-Mek SC, Beseige, Gramoxone SL 2.0, Leverage 360, Danitol 2.4EC, Mustang Maxx, Asana XL, and Lannate LV. Certified Supervisors are required to attend the first 30 minutes of training. Workers in need of special permits vs general pesticide training will need to be identified.

New York DEC notes that the Special Permit process is intended for farm workers with English language skills that are not adequate to pass the DEC private applicators exam. All others are encouraged to apply for their private applicators license by taking the certification exam.

Cost: \$20 per DEC Special Permit/General Pesticide Training. To register, contact Kim Hazel at 585-798-4265 x26 with farm name, farm address, name of supervising pesticide applicator, supervisor's DEC Pesticide Applicator ID No, and name(s) of non-certified applicators that will be attending. Or <u>download the registration form</u> and email it to at <u>krh5@cornell.edu</u>. Questions – contact Christy Hoepting at <u>cah59@cornell.edu</u> or 585-798-4265.

Produce Safety Alliance Grower Training Course *plus* Optional Food Safety Plan Writing Workshop



April 5-6, 2017 | April 5: 8:00AM - 5:00 PM; April 6: TBA Genesee County Fire Training Center, 7690 State St Rd, Batavia, NY 14020

Fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA) Produce Safety Rule, Good Agricultural Practices (GAPs), and co-management of natural resources and food safety should attend this food safety training. Individuals who participate in this course are expected to gain a basic understanding of:

- Microorganisms relevant to produce safety and where they may be found on the farm
- How to identify microbial risks, practices that reduce risks, and how to begin implementing produce safety practices on the farm
- Parts of a farm food safety plan and how to begin writing one
- Requirements in the FSMA Produce Safety Rule and how to meet them

In addition, the **PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement** outlined in section 112.22 (c) that requires 'At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration.'

What to Expect at the PSA Grower Training Course (Wednesday, April 5):

The trainers will spend approximately seven hours of instruction time covering content contained in these seven modules:

- Introduction to Produce Safety
- Worker Health, Hygiene, and Training
- Soil Amendments
- Wildlife, Domesticated Animals, and Land Use
- Agricultural Water (Part I: Production Water; Part II: Postharvest Water)
- Postharvest Handling and Sanitation
- How to Develop a Farm Food Safety Plan

In addition to learning about produce safety best practices, key parts of the FSMA Produce Safety Rule requirements are outlined within each module. There will be time for questions and discussion, so participants should come prepared to share their experiences and produce safety questions.

After attending the entire course, participants will be eligible to receive a certificate from the Association of Food and Drug Officials (AFDO) that verifies they have completed the training course. To receive an AFDO certificate, a participant must be present for the entire training and submit the appropriate paperwork to their trainer at the end of the course.

Optional Workshop on Farm Food Safety Plan Writing (Thursday, April 6):

Although this is not a requirement of FSMA, it is for those being asked by their buyers to have a food safety plan and undergo a 3rd-party audit. Participation in the Day 2 session is limited to those who previously attended a 1 day FSMA or GAPs training.

For more info about this training, vegetable growers should contact Robert Hadad, or fruit growers should contact Craig Kahlke.

COST: \$125 per attendee includes lunch, refreshments, and training materials. Register for this event at cvp.cce.cornell.edu by April 3.

PESTICIDE



Spring 2017 CleanSweepNY will target NYSDEC Region 7:

Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, and Tompkins Counties (growers from neighboring counties may be able to participate as well)

> Tuesday, May 9, 2017 N. Syracuse, NY

CleanSweepNY is an Environmental Benefit Project that provides for the environmentally safe and economic collection and disposal of canceled, unwanted, unusable, or otherwise obsolete pesticides and other chemicals from agricultural or nonagricultural business activities. The collections are scheduled and organized by NYSDEC with the collaboration of NYSDOT who generously provide sites for the collection of these unwanted chemicals.

CleanSweepNY services are provided to farmers and owners of former farms, all categories of NYS certified pesticide applicators, cemeteries, golf courses, marinas, and other entities possessing unwanted or unusable pesticides and other waste chemicals. Each participant is responsible for transporting their materials to the collection site.

These services are NOT available to homeowners.

CleanSweepNY is supported by Cornell Cooperative Extension, the Agricultural Container Recycling Council, Soil and Water Conservation Districts, New York Farm Bureau, and related grower associations.

Pre-registration for the May 9th collection event is required by April 21. Interested individuals should call the Albany DEC office at 877-793-3769 to obtain a signup packet or e-mail info@cleansweepny.org. For more information, visit <u>http://</u> www.cleansweepny.org.

The next collection event will take place in the fall in Region 8. •











Cornell University Cooperative Extension Cornell Vegetable Program

480 North Main Street Canandaigua, NY 14424





VegEdge is the award-winning newsletter produced by the Cornell Vegetable Program in Western New York. It provides readers with information on upcoming meetings, pesticide updates, pest management strategies, cultural practices, marketing ideas and research results from Cornell and Cornell Cooperative Extension. VegEdge is produced every few weeks, with frequency increasing leading up to and during the growing season.

VEGETABLE SPECIALISTS

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Julie Kikkert | 585-313-8160 cell | 585-394-3977 x404 office | jrk2@cornell.edu processing crops (sweet corn, snap beans, lima beans, peas, beets, and carrots)

Judson Reid | 585-313-8912 cell | 315-536-5123 office | jer11@cornell.edu greenhouse production, small farming operations, and fresh market vegetables

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Cornell University Cooperative Extension Cornell Vegetable Program

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

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