

spread of Botrytis Gray Mold to your vegetable transplants in

Learn tips for

minimizing the

greenhouses containing ornamentals.

PAGE 1



Many new fungicides are labeled for use in vegetable crops in New York in 2018. Learn

about the new registrations, label expansions, and more!

PAGE 4



and transplants.

PAGE 7

and retard growth of seedlings

Itching to start planting? Cold soil temperatures can reduce seed germination, cause poor stand,



Prototype models of pre-coolers will be tested in WNY this season to try and quickly cool produce leaving

the field and reduce the internal temperatures prior to storage.





April 25, 2018

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

#### Cornell Cooperative Extension Cornell Vegetable Program

## **Reduce Gray Mold Losses on Transplants**

Judson Reid, CCE Cornell Vegetable Program

As we move forward into spring, greenhouses become more crowded with plants, increasing the risk for disease. Vegetable transplants such as tomatoes, peppers and vine crops are often grown on benches with flowering annuals above, such as petunia or geranium hanging baskets. These ornamentals can be sources of devastating diseases such as Impatiens Necrotic Spot Virus, Powdery Mildew or even Late Blight. But with rainy weather, this week Botrytis Gray Mold is a threat. Gray Mold, caused by the fungus Botrytis cinerea is a common mold of dead or decaying tissue. This disease affects many crops such as strawberries, tomatoes and of course flowers. The risk to vegetables occurs when flowers from hanging baskets are cast down onto the greenhouse benches. The point of contact between the flower and otherwise healthy tissue is where a Gray



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Botrytis Gray Mold on begonia. Photo: J. Reid, CCE CVP



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.

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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.** 

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.



# Contents

#### **Contact Us**

	Cornell Vegetable Program	. 10
G	eneral	
	Reduce Gray Mold Losses on Transplants	. 01
	We're Hiring: Temporary Summer Technician	. 02
	Orondis: New Fungicide Registered in New York	. 03
	Aprovia Top: New Fungicide Registered in New York	. 03
	2018 Vegetable Pesticide Updates: A Lot of New Fungicides	. 04
	How to Look Up Labels for Pesticides Labeled in New York	. 05
	New York Crop Insurance Facts for Organic Producers in 2018	. 06
	Reminder on Optimum Conditions for Seed Germination and Veg Growth	. 07
	Two Major Vegetable Diseases of Importance Tracked by National Programs .	. 08
	Pre-Cooling Trials to Start This Season	. 08

#### **Upcoming Events**

FSMA 7-Hour Grower Training Course; Food Safety Plan Writing Workshop .	09
Respirator Fit Testing Clinic, DEC Region 8	09

The next issue of VegEdge will be May 9, 2018.

## WE'RE HIRING

#### **TEMPORARY SUMMER TECHNICIAN**

Under the direction of CCE Cornell Vegetable Program Specialists, this position will provide technical and program support in research and outreach supporting the WNY vegetable industry. Travel to research plots on commercial vegetable farms to assist in collection and recording of data. Scout for insects, diseases, weeds, and crop damage. Perform basic data entry and summary. Assist in setup for educational meetings/events throughout the region. Training in Worker Protection Standards will be provided. This is a full-time, six month appointment with possible extension. Working overtime is common from June-September. Position is based in Albion, NY.

For more info and to apply, visit https://tinyurl.com/CVPTempServTech

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Cornell Cooperative Extension Cornell Vegetable Program

Mold infection begins. The disease is spread to otherwise healthy foliage as spores are dispersed in humid conditions. To prevent this we can:

- Reduce or eliminate overhead ornamentals from vegetable starts
- Ventilate regularly to reduce relative humidity
- Space transplants into larger pots to increase air circulation and light penetration in the canopy
- Irrigate in the morning to allow foliage to dry before nightfall

## Orondis: New Fungicide Registered in New York

Margaret McGrath, Plant Pathology and Plant-Microbe Biology Section, Cornell

Oxathiapiprolin, the active ingredient in Orondis fungicides, is the first in a new chemical group (FRAC code 49, previously U15). It is highly effective for diseases caused by oomycetes, which include downy mildews, late blight and Phytophthora blight. The three formulations were registered in NY in fall 2017. There are some differences in labeled diseases and application method (foliar or soil) among the formulations. Two are formulated with another active ingredient for managing fungicide resistance. Additionally for resistance management, no more than 2 consecutive applications of any Orondis fungicide are allowed; next application must be a fungicide that does not contain a code 49 active ingredient and also a code 40 when Orondis Ultra is used. When at least 3 applications will be made, Orondis fungicides can be no

more than 33% of the applications, or a maximum of 4 applications per planting, whichever is fewer.

Orondis Ultra and Orondis Opti are labeled for downy mildew in brassica crops, cucurbits, and onion. Downy mildew in lettuce, spinach and other crops in leafy greens crop group is only on the Orondis Ultra label. Both fungicides are also labeled for late blight in tomato and potato and buckeye fruit rot in tomato. Only Orondis Ultra is labeled for Phytophthora blight in cucurbits. Orondis Opti is labeled for several other diseases because it contains chlorothalonil. It is only recommended used for these diseases when one of the diseases caused by an oomycete pathogen is also present. Only foliar applications are labeled for Orondis Ultra and Orondis Opti whereas Orondis Gold 200 can be applied to soil. It is important to note that when Orondis Gold 200 is applied to soil, no Orondis product can be applied to foliage of that crop. Orondis Gold 200 is labeled for Phytophthora blight in cucurbit, eggplant, pepper, and tomato. Applications through drip irrigation are considered the most effective way to apply Orondis Gold 200 for managing Phytophthora blight. For crops that do not have drip set up for applying fungicides, it is better to use foliar applications throughout crop production rather than apply once to soil at planting. Orondis Gold 200 is also labeled for downy mildew in lettuce, spinach and other crops in leafy greens crop group. REI is 12 hrs for Orondis Opti, and 4 hrs for Orondis Ultra and Orondis Gold 200. 🔘

### Aprovia Top: New Fungicide Registered in New York

Margaret McGrath, Plant Pathology and Plant-Microbe Biology Section, Cornell

Aprovia Top contains difenoconazole (FRAC Group 3) and benzovindiflupyr (FRAC 7). Many new fungicides are formulated with two active ingredients for resistance management and/or to broaden the product activity. Aprovia Top cannot be applied more than twice consecutively to vegetable crops before switching to another fungicide that does not contain a FRAC 7 (SDHI) ingredient. While allowed, it is not recommended used in rotation with another FRAC 3 fungicide also for resistance management. In NYS it is classified for restricted use and permitted used on Long Island. It was accepted for registration in NYS on 7 December 2017, which was after the 2018 Cornell

Guidelines for Commercial Vegetable Production had been prepared, therefore it is not included. Labeled uses for vegetable diseases that can occur on Long Island include:

- anthracnose, early blight, leaf mold, powdery mildew, and Septoria leaf spot in tomato.
- anthracnose, Alternaria leaf blight, gummy stem blight, and Plectosporium blight in cucurbit crops. Aprovia Top is also labeled for powdery mildew and is expected to provide some control but there are other FRAC 3 fungicides with greater intrinsic activity that are better choices when other labeled diseases are not developing.

Aprovia Top is also labeled for use in blueberries and grapes. REI (restricted entry interval) is 12 hrs. The PHI (preharvest interval) is 0 days for most labeled vegetable crops; 14 days for sweet potato and other tuberous and corm vegetables. For best performance it is recommended Aprovia Top be applied with a spreading/penetrating type adjuvant such as organo-silicon blends with either non-ionic surfactants (NIS) or vegetable based crop oil concentrate (COC); or vegetable based COC (not mineral); or NIS with at least 90% concentration. This and other NYS pesticide labels can be downloaded at: http://www.dec.ny.gov/nyspad/ products?0 0

Fungicides-be certain that any fungicide applied to a mixed ornamental vegetable greenhouse is labeled for such use. Decree 50 WDG (0 D PHI), Luna Tranquility and Scala all have greenhouse transplant labels and low PHIs (0-1 D). Serenade MAX and Regalia are organic options, best used preventatively.

## 2018 Vegetable Pesticide Updates: A Lot of New Fungicides

Christy Hoepting and Amy Celentano, 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 companies is made or implied. Other pesticide updates that we missed are welcome. Information was last updated on <u>April 25, 2017</u>. Updates after this date will be posted in future issues of VegEdge.

**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.)

- APROVIA TOP Fungicide: (EPA No. 100-1476; a.i. benzovindiflupyr and difenoconazole; Syngenta). Two fungicides for broad spectrum control of foliar diseases including leaf spots (Alternaria and Cercospora leaf spots, early blight, rust, Septoria leaf spot) and powdery mildews in cucurbits, fruiting vegetables, dried beans and peas, bulb crops (e.g. onions, etc.), tomatoes, and sweet potato.
- DELARO 325 SC Fungicide: (EPA No. 264-1055; a.i. prothioconazole and trifloxystrobin; Bayer). For control of leaf diseases (Anthracnose leaf blight, rust, gray leaf spot, northern and southern corn leaf blight, etc.) in sweet corn.
- ELATUS Fungicide: (EPA No. 100-1480; a.i. azoxystrobin and benzovindiflupyr; Syngenta). Broad-spectrum fungicide for control of leaf diseases in sweet corn (Anthracnose, gray leaf spot, southern rust, etc.) and potatoes (Rhizoctonia, black dot and Silver scurf).
- **INSTILL Bactericide and Fungicide:** (EPA No. 49538-5-92632; a.i. copper sulfate pentahydrate; S.T. Biologicals). For foliar disease control of several fungal and bacterial leaf diseases (Alternaria and Cercospora leaf blights, downy mildew, powdery mildew, black rot etc.) in carrots, celery/celeriac, chives, crucifer crops, cucurbits, eggplant/pepper/tomato, garlic/onion/ leek/shallot, lettuce, spinach, and peas.
- KOCIDE 3000-O Fungicide/Bactericide (OMRI-Listed): (EPA No. 91411-11-70051; a.i. copper hydroxide; Certis). Foliar application for control of several diseases (Alternaria, Anthracnose, downy mildew, powdery mildew, Cercospora, Septoria, bacterial diseases, etc.) on dry beans, crucifers, beets, carrots, select leafy vegetables, cucurbits, onions/garlic, fruiting vegetables and peas.
- LIFEGARD WG Plant Defense Stimulant (OMRI-Listed): (EPA No. 70051-119; a.i. *Bacillus mycoides* isolate J; Certis). Biological product for foliar disease suppression of several plant diseases (downy and powdery mildew, early and late blight, white mold, bacterial diseases, etc.) on Cole crops, cucurbits, fruiting vegetables, leafy vegetables, legumes (succulent and dried beans and peas), potatoes and table beets.
- MINECTO PRO Insecticide/Miticide: (EPA No. 100-1592; a.i. abamectin and cyantraniliprole; Syngenta). For control of several insects (caterpillars/worms, thrips, flea beetles, Colorado potato beetle, spider mites, etc.) in cucurbits, fruiting vegetables, leafy vegetables (except Brassicas), onions and other Alliums, and potatoes.
- ORONDIS GOLD 200 Fungicide: (EPA No. 1571; a.i. oxathiapiprolin; Syngenta). First active ingredient in a new mode of action – FRAC 49. Soil application for control of Phytophthora blight in cucurbits, fruiting vegetables, stalk and stem vegetables (e.g. asparagus, fennel, kohlrabi) and for Phytophthora pink rot in potatoes (and other tuberous and corm vegetables).
- ORONDIS OPTI Fungicide: (EPA No. 100-1591; a.i. oxathiapiprolin and chlorothalonil; Syngenta). First active ingredient in a new mode of action FRAC 49. For foliar control of late blight and downy mildew in brassica head and stem vegetables, cucurbits, Fruiting vegetables, onion (and green onion, leek, shallots, garlic) and potato. Chlorothalonil component (trade name Bravo) provides control of several other diseases including Alternaria, Anthracnose and Botrytis diseases.
- ORONDIS ULTRA Fungicide: (EPA No. 100-1612; a.i. oxathiapiprolin and mandipropanid; Syngenta). First active ingredient in a new mode of action FRAC 49. For foliar control of late blight, downy mildew and Phytophthora blight in brassica head and stem vegetables, cucurbits, fruiting vegetables, onion bulb, green onion sub-group (green onion, leek, shallots, etc.), leafy vegetables, and tuberous and corm vegetables (e.g. potato).
- SIVANTO PRIME Insecticide: (EPA No. 264-1141; a.i. flupyradifurone; Bayer). First active ingredient in a new mode of action

   4D. Foliar and soil applications for control of aphids, leafhoppers, whiteflies and Colorado potato beetle in Brassica leafy vegetables (broccoli, cabbage, etc.), cucurbits, leafy vegetables, legumes (succulent and dried beans and peas), potatoes, rooting vegetables and turnip greens.
- VENERATE Bioinsecticide (OMRI-Listed): (EPA No. 84059-14; a.i. heat-killed *Burkholderia sp*. Strain A396 cells and spent fermentation media; Marrone Bio Innovations). For control of several insects (aphids, caterpillars/worms, thrips, mites, swede midge, etc.) on asparagus, bulb crops (onion, garlic, leek), Cole crops, cucurbits, fruiting vegetables, leafy vegetables, root vegetables, sweet corn and potatoes.

#### Label Expansions (new pests added to updated version of label)

- AGRI-MEK SC Insecticide: (EPA No. 100-1351; a.i. abamectin; Syngenta). Label expanded to include use on succulent beans, sweet corn, greenhouse-grown tomatoes and green onions for control of mites, leafminors and thrips.
- MOVENTO Insecticide: (EPA No. 264-1050; a.i. spirotetramat; Bayer). Label expanded for control of aphids and white flies in carrots.
- SERIFEL Biofungicide (OMRI-Listed): (EPA No. 71840-18; a.i. Bacillus amyloliquefaciens strain MBI600; BASF). Supplemental label: For suppression of foliar bacterial diseases in brassicas, leafy vegetables and potato, and powdery mildew in legumes (succulent and dry beans and peas).
- VELUM PRIME Fungicide/Nematicide: (EPA No. 264-1078; a.i. fluopyram; Bayer). Label expanded to include brassica leafy vegetables, all cucurbits, all fruiting vegetables. Soil/chemigation applications for suppression of nematodes, white mold and powdery mildew.

#### FIFRA 2(ee) Recommendations (unlisted pest for crop already on label)

- **EXIREL Insecticide:** (EPA No. 352-859; a.i. cyantraniliprole; DuPont). For control of carrot weevil in root vegetables (except sugar beet) and florence fennel.
- VELUM PRIME Fungicide/Nematicide: (EPA No. 264-1078; a.i. fluopyram; Bayer). For in-furrow at-plant applications for suppression of nematodes, white mold and early blight in potatoes.
- SURROUND WP Crop Protectant: (EPA No. 61842-18; a.i. kaolin; Tessenderlo Kerley Inc). For control of swede midge in head/steam and leafy Brassicas.
- VYDATE C-LV Insecticide/Nematicide: (EPA No. 352-532; a.i. oxamyl; DuPont). For control of brown marmorated stinkbug in pepper and tomato.

#### Special Local Needs (SLN)

- DEADLINE M-PS MINI-PELLETS Mollusicide: (EPA No. SLN NY-180002; a.i. metaldehyde; Amvac). For a broadcast application on peas for the control of slugs and snails.
- SURCHLOR Antimicrobial: (EPA No. SLN NY-170004; a.i. sodium hypochlorite; Surpass Chemical Co). For control of bacterial rot on growing onions.

#### Products Being Phased Out

• **BELT Insecticide:** (EPA No. 264-1025; a.i. flubendiamide; Bayer). Bayer stopped shipping and selling Belt as of 7/29/16. It can be sold and applied through 12/31/19, and it is canceled for 2020.

Note: Users must have a copy of <u>both</u> the approved SLN, 2(ee) or supplemental label, AND the primary label in their possession at the time of application. See section on how to look up pesticides labeled in New York. •

## HOW TO LOOK UP LABELS for Pesticides Labeled in New York

You can find all the labeling information you need at the new database called the "New York State Pesticide Administration Database (NYSPAD)" portal. It is available at <u>http://www.dec.ny.gov/nyspad/products</u>.

On the top of your screen, you can search by EPA registration number, Product name or Registrant. In the Advanced Search, there are also options to search by Pesticide Use/Type, Restriction, Formulation, Registration Status, etc.

Enter the information that you are looking for and click "Search". A list of products will come up with some basic information including full product name, EPA registration number, manufacturer and restrictions. For the product that you are interested in, click the "More" button to access a list of the active ingredient(s) and labels. All label types will be presented including primary, supplemental, 2 (ee) and 24 (c) labels. The most recent label will be at the top of that list.



### New York Crop Insurance Facts for Organic Producers in 2018

From Ag Analytics: <u>https://ag-analytics.org/cropInsurance/documents/Factsheets/Crop%20insurance%202018%20-</u>%20Organic%20Fact%20Sheet.pdf

#### CROP INSURANCE FOR ORGANIC FARMING PRACTICES

Organic farming has become one of the fastest growing segments of U.S. agriculture. In New York state alone, organic agriculture sales increased 56% from 2008 to 2014. USDA's Risk Management Agency (RMA) recognizes that organic farming practices result in higher value crops and provides coverage for organic producers and producers transitioning to organic production under several existing crop insurance policies.

#### ARE THERE SPECIAL INSURANCE PRODUCTS FOR ORGANIC CROPS?

No, there are no special insurance products exclusive to organic production. RMA treats organic production for some crops as a "practice" type, which allows for a more accurate "price election" or "projected price" value to be used when calculating the insurance guarantee. This results in a more appropriate guaranteed level of coverage for the higher value crops.

## WHAT TYPES OF LOSS ARE COVERED?

As long as the producer maintains records proving that good organic management practices, as established by organic agricultural experts for the area, were followed and losses were unavoidable, certain types of loss will be covered, including those caused by:

- Weather
- Disease
- Insects
- Weed infestation

## WHAT TYPES OF LOSS ARE NOT COVERED?

Losses that are NOT covered include:

- Failure to comply with USDA National Organic Program standards.
- Crop contamination by prohibited substances. This includes contamination caused by pesticide drift.

#### WHICH NEW YORK CROPS HAVE ORGANIC COVERAGE?

The following crops in New York have crop insurance coverage for certified and transitional practices in 2018:

- Apples
- Barley
- Corn
- Dry Beans
- Fresh Market BeansGrain Sorghum
- Orall Sola
   Potatoes
- Processing Beans
  - FIOCESSING Dealis

#### HOW DO I REPORT ORGANIC ACREAGE?

On the acreage reporting date you must have the following:

- For Certified Organic Acreage:
- A current organic plan; and
- An organic certificate (written certificate) or documentation from a USDAaccredited certifying agent that indicates an organic plan is in effect.

#### For Transitional Acreage:

An organic plan, or written documentation from a USDA-accredited certifying agent that indicates an organic plan is in effect. The organic plan must:

- Identify the acreage that is in transition for organic certification;
- > List crops grown on the acreage during the 36 month transitioning period; and
- > Include all other acreage (conventional acreage) in the farming operation.

#### WHAT IF MY CROPS ARE GROWN FOR A CONTRACT?

A Contract Price Addendum (CPA) is available to organic producers who grow crops under contract. You can choose to use the prices established in those contracts as your "price election" or "projected price" in place of the RMA-issued prices when buying crop insurance. This value can equal up to a maximum contract price amount that is set by RMA. The CPA allows organic producers who have a contract to buy a crop insurance guarantee that is more reflective of the actual value of their crop.

## A copy of the contract must be submitted by the crop insurance acreage reporting date for CPA election!

In 2018, all crops with organic practice elections in New York are eligible for the CPA **EXCEPT fresh market beans and sweet corn**.

#### WHOLE FARM REVENUE PROTECTION (WFRP)

RMA's Whole-Farm Revenue Protection product insures revenue for all commodities sold by one farm under one policy. The plan guarantees up to \$8.5million of revenue, and is available for farms with specialty or organic commodities (both crops and up to \$1million of livestock.) This product also allows certified organic producers to use organic prices when calculating guaranteed revenue.

#### **ANYTHING ELSE I SHOULD KNOW?**

There are many important dates to keep track of when participating in the crop insurance program. Important date information for New York can be found at the RMA Raleigh, NC Regional office website: <u>www.rma.usda.gov/aboutrma/fields/rsos</u> or at: <u>ag-analytics.org/cropinsurance</u>

**FOR MORE INFORMATION...** Crop insurance policy information, crop provisions and handbooks can be found on the RMA Organic Crops Page at <u>www.rma.usda.gov/</u><u>news/currentissues/organics/</u>. A crop insurance agent can provide you with detailed information regarding crop insurance for your farm. A list of crop insurance agents is available online at the RMA agent locator at: <u>www.rma.usda.gov/tools/agent</u>. You can also find a list of insurable crops in New York and additional crop insurance educational materials for New York farmers at: <u>ag-analytics.org/cropinsurance</u>.

SoybeansSweet Corn

- Tomatoes
- Wheat

## Cold, Wet Start to Spring – Reminder on Optimum Conditions for Seed Germination and Vegetable Growth

Darcy Telenko, CCE Cornell Vegetable Program

Our long winter looks to be coming to an end as the sun has been shining for a few days and everyone is excited to get outside and start planting. We have only just begun to see an increase in temperatures. This is just a reminder that cold soil temperatures can reduce seed germination, cause poor stand, and retard growth of seedlings and transplants.

Vegetable	Optimal temperature range for germination	Optimal growth temperatures (°F)**		When to plant outdoors			
	°F	Day	Night	•			
Cabbage	70 – 80	60 – 70	50 – 60	4 weeks before last frost			
Cauliflower	70 – 80	60 – 70	55 – 60	4 weeks before last frost			
Broccoli	70 – 80	60 – 70	50 – 60	4 weeks before last frost			
Brussels Sprouts	70 – 80	60 – 70	50 – 60	5 weeks after last frost			
Head Lettuce	60 – 75	60 – 70	60 – 70	1-2 weeks before last frost			
Onions	65 – 80	60 – 70	45 – 55	4 weeks before last frost			
Celery	60 – 70	65 – 75	55 – 65	After last frost			
Tomatoes	70 – 80	70 – 80	60 – 65	After last frost			
Peppers	75 – 85	70 – 80	60 – 70	After last frost			
Eggplant	75 – 90	70 – 80	65 – 70	When night temperatures above 50°F			
Cucumber	75 – 95	70 – 90	60 – 70	1 week after last frost			
Muskmelon	75 – 95	70 – 90	60 – 70	1 week after last frost			
Watermelon	75 – 95	70 – 90	60 – 70	1 week after last frost			
Summer Squash	75 – 95	70 – 90	60 – 70	1 week after last frost			
** Reduce day temperatures by 5 to 10 degrees F when the weather is cloudy.							

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Adapted from Elsa Sánchez and Pete Ferretti. 2002. Vegetable Planting and Transplant Guide. <u>https://extension.psu.edu/vegetable-planting-and-transplanting-guide</u>

The Growing Degree Day Tool (<u>http://climatesmartfarming.org/tools/</u>) has finally shown movement off the 0 baseline today (Fig. 1). This tool can be used to show how the current season is compared to the period of record (gray area), 30-year normal (purple line) and 15-year (blue line). The tool can also project conditions for the next 6-days. In addition, the current upper 2-inch soil temperatures in western NY range from 38-47°F based on an April 23 map (Fig. 2).



Two-inch Soll Temperature (F) April 23, 2018

**Figure 1**. The Growing Degree Day Tool can be used to show how the current season (green line) is compared to the period of record (gray area), 30-year normal (purple line) and 15-year (blue line).

Figure 2. The upper 2-inch soil temperatures in WNY range from 38-47°F. <u>http://www.nrcc.comell.edu/industry/grass/html/</u> soiltemp.html

## Two Major Vegetable Diseases of Importance in WNY are Tracked by National Programs

#### Darcy Telenko, CCE Cornell Vegetable Program

Our team receives regular updates from two national programs designed to help monitor and predict major diseases on vegetable crops in the United States. These include:

 USAblight – A National Project on Tomato & Potato Late Blight in the United States (<u>https://usablight.org/</u>). This site is now up and running for 2018, it is a national information portal for late blight occurrence. The website allows you to observe disease occurrence maps, and sign up for text disease alerts. There are also useful links to a decision support system, and information about identification and management of the disease.

Already this season late blight has been confirmed on potato and tomato in five counties in Florida. In all reported cases here, the pathogen genotype was US-23. Dr. Amanda Gevens, Plant Pathologist, University of Wisconsin is reporting that her lab has recently received a potato sample from northeastern FL that has been genotyped US-8. This may pose additional concern for management this season as isolates from this genotype have been found resistant to mefenoxam (phenylamide fungicides – group 4). We will keep a close on this and keep you updated as the season continues.

Cucurbit Downy Mildew Forecasting – is a national program that provides updates on cucurbit downy mildew (CDM). The website (<u>http://cdm.ipmpipe.org/</u>) provides up to date reports/maps of CDM, forecasts and risk assessment of where the epidemic will spread, information on detection, and control recommendations. This site is not up and running yet for 2018, but we will continue to monitor and update you once forecasts are available for 2018. ●

## Pre-Cooling Trials to Start This Season

Robert Hadad, CCE Cornell Vegetable Program

Reducing field heat from fresh produce is both a quality issue and a food safety issue. Warm fruit and vegetables can have reduction in quality the longer it takes to cool down from being out in the heat of the sun. Simply placing boxes or pallets into a cooler doesn't drop the temperature quick enough. Reduction in flavor, crispness, and shelf life can begin rather quickly. Very warm fruit can take between 48-72hrs to drop from 85F to 36F in a cooler. The pre-cooler looks to drop the field heat in just 2 hours or less.

The Cornell Vegetable Program will be conducting on-farm trials with smallscale portable forced air vacuum precoolers this season. In a collaborative project between the CVP and the University of VT through a NESARE grant, prototype models of pre-coolers will be tested in WNY. The tests will be looking to quickly cool produce coming out of the field and reduce their internal temperatures to be closer to ideal storage temperatures.

The other factor, besides quality, is food safety. If warm produce (such as tomato, pepper, melons, and apples) come in contact with dunk tank water and the water is more than 10 degrees colder than the core fruit temperature, infiltration can occur. Infiltration is the process where due to temperature differential, colder water can get sucked into the fruit with the warm core temperature. The water can enter through stem cuts, wounds, or cracks in the fruit. If the water is contaminated with bacteria, this can get inside of the fruit.

The pre-cooler tests will be with a smaller "produce box" size. This unit can hold 4-6 vegetable cartons. The other unit will be able to fit a pallet of produce cartons. The tests will look at ease of use, measure the time to drop the temperature as needed, and get feedback from growers. Anyone who might be interested please contact Robert Hadad <u>rgh26@cornell.edu</u> 5857394065.



Internal view of pre-cooler prototype. Photo: R. Hadad, CCE CVP 0

## UPCOMING EVENTS

view all Cornell Vegetable Program upcoming events at

#### FSMA 7-Hour Grower Training Course plus optional Farm Food Safety Plan Writing Workshop

May 2, 2018 | 8:00 AM - 5:15 PM NYS Ag Experiment Station, A134 Barton Hall, Collier Dr, Geneva, NY 14456

This program is for fruit and vegetable growers who need Food Safety Modernization Act (FSMA) certification or GAPs/HGAPs (Good Agricultural Practices/ Harmonized Good Agricultural Practices) training required by buyers (i.e. 3rd-party food safety audits based on a written food safety plan) or if you are just interested in learning about produce safety.

Over the course of the training, certified Produce Safety Alliance trainers will cover 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

Cost: \$70 for a maximum of 2 attendees/farm. Pre-registration is required by April 30.

An optional farm food safety plan writing workshop is offered on May 3, 9:00 AM - 3:00 PM. Separate registration required. Cost: \$75 for a maximum of 2 attendees/farm. Pre-registration is required by April 30.

More information and online registration is available at https:// lof.cce.cornell.edu/event.php?id=929 . Alternatively, a printable registration form is available for those that want to mail in their payment. Vegetable producers with questions can call Robert Hadad at 585-739-4065. (Fruit growers can call Craig Kahlke at 585-735-5448.)

#### **Respirator Fit Testing Clinic, DEC Region 8**

May 15-17, 2018 | by appointment only (1 hr each) CCE Ontario County, 480 N Main St, Canandaigua, NY 14424

The New York Center for Agricultural Medicine and Health (NYCAMH) is providing respirator fit testing clinics in DEC Region 8, Finger Lakes (Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates). During the clinics NYCAMH will provide medical evaluations; respirator fit tests; and WPS complaint trainings on how to properly inspect, put on, take off, fit, seal check, use, clean, maintain, and store respirators. Clinic appointments are 1 hour long, and groups of 4 workers can be seen at a time. Medical evaluations, fit tests, and trainings are available in both English and Spanish.

You must schedule an appointment to attend. You may contact NYCAMH between April 16 and May 11 to schedule your appointment. Call 607-547-6023 or 800-343-7527, Mon-Fri 8:00 AM - 4:30 PM and ask to speak with the farm respirator clinic scheduler. When calling to schedule an appointment, please have the following information available: total number of people attending from your farm, name of each person being scheduled, language spoken by each attendee, and make and model of each respirator to be tested. If a worker wears more than one respirator style, including filtering facepieces, they must be fit tested for each one.

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#### Cornell Cooperative Extension Cornell Vegetable Program

480 North Main Street Canandaigua, NY 14424





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

#### VEGETABLE SPECIALISTS

**Robert Hadad** | 585-739-4065 cell | rgh26@cornell.edu food safety & quality, organic, business & marketing, and fresh market vegetables

Christy Hoepting | 585-721-6953 cell | 585-798-4265 x38 office | cah59@cornell.edu onions, cabbage, potatoes and pesticide management

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

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

Darcy Telenko | 716-697-4965 cell | 716-652-5400 x178 office | dep10@cornell.edu soil health, weed management, fresh market vegetables, and plant pathology

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

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Cornell Cooperative Extension Cornell Vegetable Program

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