

Think that the pathogen that causes late blight is killed by freezing? Think again! New

research indicates that the pathogen can overwinter.

PAGE 1



Managing bacterial speck in tomatoes is an important consideration for getting top dollar

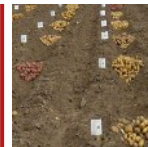
for your box of tomatoes.

PAGE 3



The market for table beets is increasing in NYS. Weed management in beets cannot be overlooked because they can directly reduce yields.

PAGE 4



There are some promising Canadian and European varieties of fresh market potatoes being trialed in Ontario, Canada.

PAGE 9

VEGE^{Edge}

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

● Volume 12 | ● Issue 03 | ● March 1, 2016



Cornell University
Cooperative Extension
Cornell Vegetable Program

Photo: Judson Reid

Late Blight Survives Freezing Temperatures

Judson Reid, CCE Cornell Vegetable Program

Troubling news has emerged on the ability of Late Blight to survive winter. A team of researchers from the University of Wisconsin-Madison have published data demonstrating that the pathogen that causes Late Blight of tomato and potato can overwinter in northern climates and that percentage survival is higher with warmer conditions.

It has generally been thought that freezing winter conditions prevented survival of the asexual form of the Late Blight pathogen *Phytophthora infestans*. But (similar to NYS), researchers in Wisconsin have noticed persistent outbreaks of Late Blight over the last several years. The newer clonal lineages of *P. infestans*; US-22, US-23, and US-24 were cultured on tomato seed medium to determine the survival under temperatures of 64.4, 39.2, 32, 26.6 and 23°F for 11 time points (1 to 112 days).

The research found that US-22, -23, and -24 isolates survived for 14 days at 26.6°F. US-23 appeared to be the cold hardiest and survived longer at 26.6 and 23°F than US-22 or US-24. The team predicted that *P. infestans* would survive



Late blight sporulation on tomato leaf.
Photo: Judson Reid, Cornell Vegetable Program

continued on page 3



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 12 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

Web address: cvp.cce.cornell.edu

Editor

Carol MacNeil

Contributing Writers

Robert Hadad
Christy Hoepfing
Julie Kikkert
Carol MacNeil
Judson Reid
Darcy Telenko

Publishing Specialist/Distribution/Sponsors

Angela Parr

VegEdge is published 25 times per year, parallel to the production schedule of Western New York growers. Enrollees in the Cornell Vegetable Program receive a complimentary electronic subscription to the newsletter. Print copies are available for an additional fee. You must be enrolled in the Cornell Vegetable Program to subscribe to the newsletter. For information about enrolling in our program, visit cvp.cce.cornell.edu. Cornell Cooperative Extension staff, Cornell faculty, and other states' Extension personnel may request to receive a complimentary electronic subscription to VegEdge by emailing Angela Parr at aep63@cornell.edu. Total readership varies but averages 700 readers.

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.

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.



Cornell University
Cooperative Extension
Cornell Vegetable Program

Contents



Contact Us

Cornell Vegetable Program 10

Crops

Beets: A Review of Herbicides Available for Use in Table Beets in 2016 04
Potato: Canadian and European Varieties for the Fresh Market 09
Potato/Tomato: Late Blight Survives Freezing Temperatures 01
Tomato Price, Disease Management and Season Extension..... 03

General

Help Wanted: Vegetable Field Research Assistant Position in WNY 05
Help Wanted: Student Research Internships with the CVP..... 07
Improving Soil Health with Good Soil Management Practices 06

Events

DEC Pre-Exam Training and Certification Exam (Orleans) 02
Farm Food Safety with GAPs Training 08
2016 Auction Growers Production Meeting (Chautauqua)..... 08
2016 NYS Dry Bean Meeting 08
Vegetable School (Chautauqua) 08
Vegetable School (Cattaraugus) 08

The next issue of VegEdge will be published on April 1, 2016.

DEC Pre-Exam Training and Certification Exam to Become a Certified Pesticide Applicator



Training Classes – March 15 and March 17 | 8:00 AM - 12:00 PM
CCE Orleans County, 12690 Rt 31, Albion, NY 14411

Register now to ensure manuals are ordered in time! Call 585-798-4265 x26. Workshop cost is \$50 (additional costs for manuals and exam). Registration begins at 7:45 AM. Agriculture Specialists Mike Stanyard from the NWNY Dairy, Livestock, and Field Crops team and Debbie Breth from the Lake Ontario Fruit Program will review core concepts and commodity specific items in preparation for the Pesticide Applicator exam. No DEC recertification credits are offered. For more information and to download a registration form, visit http://cceorleans.org/portfolio/applicator_training/

Certification Exam – March 24, 2016 | 11:00 AM for Qualified Applicants
CCE Orleans County, 12690 Rt 31, Albion, NY 14411

Fee for the exam is \$100. Bring a check payable to NYSDEC the day of the exam. It is permissible to bring lunch with you but please be sure not to get food or fingerprints on the test form.

To register for the exam or if you have questions regarding the Certification Process, contact Mike Searles at the Avon DEC office at 585-226-5424.

in 5% of tomato seed for 16 days at 23°F. By examining historical soil temperatures it appears that survival of *P. infestans* in 5% of infested tomato seed would occur at 39% of the location–year combinations at 4 inches soil depth. This new research challenges the thought that *P. infestans* cannot survive over the winter season by asexual means in Northern latitudes.

The complete citation for this research article is:

Frost, K. E.; Seidl Johnson, A. C. and Gevens, A. J. 2016. Survival of Isolates of the US-22, US-23, and US-24 Clonal Lineages of *Phytophthora infestans* by Asexual Means in Tomato Seed at Cold Temperatures. Plant Disease. January 2016, Volume 100, Number 1. Pages 180-187



Late blight infection on tomato fruit.
Photo: Judson Reid, Cornell Vegetable Program

Implications for NYS growers? Eradication of volunteer tomato seedlings is imperative! In-season control of Late Blight infestations remains critical to reduce the amount of potentially overwintering structures. Infected plantings should not be abandoned, but rather killed immediately. This news also stresses the importance of following CVP field updates in VegEdge to be aware of when and where Late Blight appears in 2016. 🍅

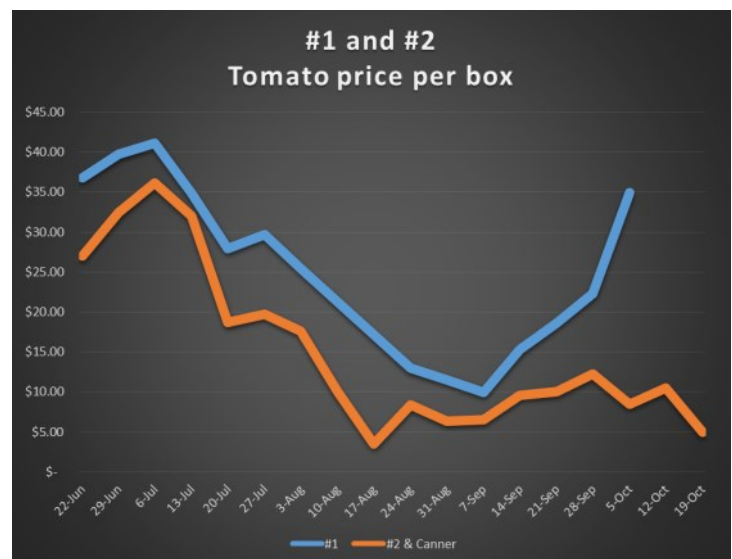
Tomato Price, Disease Management and Season Extension

Judson Reid, CCE Cornell Vegetable Program

As we continue to analyze data from the 2015 growing season, we find interesting results from a subset of tomato sales at wholesale auction. Early in the season the price for #1 and #2 tomatoes were within 10% of each other; \$34.88 for a 25 lb. box of #1's vs \$32.00 for #2's on July 13th. Over time the price trends downward for both categories, but then in mid-September the difference between #1 and #2 widens considerably. By October 5th a box of #1 tomatoes is worth more than 4 times a box of #2's (\$35 vs 8.5)!

Why do we see such a difference in price? Because there was an excess of #2 fruit on the market and a scarcity of #1. Widespread Bacterial Speck (caused by *Pseudomonas syringae*) in the region influenced the poor fruit quality. There are a number of best management practices to prevent Bacterial Speck including crop rotation, sanitization of stakes and in-season sprays with copper products. If you had an outbreak of Bacterial Speck last season, we do not recommend re-using those stakes. Compare the replacement cost of stakes to that of sanitizing and handling, storage, additional fungicide sprays, reduced yield of #1 fruit and the price differential for blemished fruit. New stakes pay for themselves!

Greenhouses and high tunnels could also be considered a Best Management Practice as Bacterial Speck is unheard of inside. By eliminating rain and soil splashing onto the leaves, high tunnels can extend not only the harvest window but also the premium price window. 🍅



Bacterial Speck Control

- Rotation away from tomatoes for 2-3 years.
- Sanitize or dispose of stakes.
- Copper, mixed with:
 - mancozeb(5d PHI)
 - Tanos (3d)
 - Gavel(7d)
 - Ziram (5d)
 - Actigard (14d)



A Review of Herbicides Available for Use in Table Beets in 2016

Julie Kikkert, CCE Cornell Vegetable Program (with information from Dr. Robin Bellinder)

The market for table beets is increasing in New York State. Weeds are a huge management issue in beets, because they can directly reduce yields through shading and competition, and they also increase the risk for plant pathogens. Furthermore, weeds interfere with mechanical harvest as they jam up the equipment. As a last resort, weedy fields are mown off just above the beets prior to harvest. However, weeds allowed to pollinate in the field, generally continue down the path of seed production, creating huge weed seed banks in the soil. For instance a single lambsquarters or pigweed plant can produce over 70,000 seed, perpetuating the problem for years to come. Hand-weeding costs can be in excess of \$100/acre depending on the weediness of a field.

Herbicides are one tool for conventional beet growers. Recent years have seen several products lost, including Pyramin herbicide, which is no longer registered in NY. Betanex, Betamix and Alphanex are in a registered-discontinued status, but can still be used this season. Most notably, the company renewed the label for Alphanex for two years, but growers should try to use up stocks this season. Ro-Neet was not sold for a few years, but should be available this season, with a NY registration through 9/30/2017.

Nortron and UpBeet herbicides are both 24C SLN (special local needs) registrations. Applicators need to have copies of both the 24C and full labels in order to use the products because the 24C's do not have information regarding application details, planting restrictions, and cautionary statements. Copies of the labels are available under the Special Registrations Section of the Cornell PIMS web site (<http://pims.psur.cornell.edu>).

A weed management plan for conventionally-grown table beets in New York should include:

- A whole farm plan where weed issues are managed in rotational crops and with weed suppressing cover crops in the years prior to planting beets.
- Pre-plant incorporated and/or Pre-emergence herbicides. Note the potential for crop injury with these products under certain environmental conditions.
- Cultivation
- Post-emergence herbicides. There are no good stand-alone products, so combinations of SpinAid, Nortron, UpBeet and Betanex/Alphanex (if available) should be applied when beets and weeds are small. Stinger and Select Max can also be used when specific weeds need to be controlled.

Further information on the available herbicides for 2016 can be found in the text that follows and online at http://rvpadmin.cce.cornell.edu/uploads/doc_405.pdf. Make sure to read the labels for full details.

RO-NEET 6-E

This herbicide is available once again in New York, with a registration date through 9/30/2017. Ro-Neet is a pre-emergent herbicide that is typically used pre-plant in beets in NY. The label also says that it can be applied at planting or immediately post-planting. It must be incorporated immediately to prevent loss of the herbicide. The new label states that crops should be planted or seeded immediately after application, except for fall application; whereas the old label recommended delayed planting. We do not have recent experience in Cornell trials with planting date of beets relative to Ro-Neet application. The previous recommendation for delayed planting may have to do with concern over crop injury. A colleague in Texas reports that he has not seen any crop injury in his trials. Furthermore, he says that weed control is generally very poor after about 3 weeks. Thus, waiting to plant may reduce the efficacy of the herbicide by as much as 30%. If you have used Ro-Neet in the past, you should proceed cautiously before changing the timing of your



Mowing weedy beet field.
Photo: Julie Kikkert, Cornell Vegetable Program

planting relative to herbicide application. Use 2.0 – 2.67 qt/acre for table beets. The lower rate should be used on sandy soils, in hot weather, or on dry soils. Annual broadleaf weeds will only be controlled if the application is made when conditions are favorable for germination. It will not control established or germinated weeds present at the time of application.

DUAL MAGNUM 7.62EC

Dual Magnum is one of the most widely used pre-emergence herbicides in vegetable crops. It predominantly controls annual grasses but also some key broadleaf weeds as well, e.g. redroot pigweed, hairy galinsoga, and eastern black nightshade. Yellow nutsedge is also significantly suppressed. Under cold, rainy conditions beets can be stunted as they emerge and occasionally stands are reduced.

NORTRON 4SC

This herbicide has both pre-emergence and post-emergence activity largely on annual broadleaf weeds. Some important weeds that are controlled or suppressed include wild buckwheat, smartweed species, pigweeds, and the foxtails. Pre-emergence applications do not require incorporation and can have residual activity of 5 to 6 weeks. Cornell research in the 1990's tested 1.0 and 2.0 quart rates and generally injury was low and rapidly outgrown at the higher rate. Injury observed included some loss of stand, stunting, and occasional downward

continued on next page

cupping of early leaves. Weed scientists in Oregon and Michigan have reported more significant injury with the 2.0 quart rate and frequently attribute this injury to soils having high amounts of sand. The 24C SLN for New York lists 60 fl. oz (2.1 quart) for the pre-emergence rate.

Post-emergence applications are intended to be applied together with Spin-Aid, UpBeet, Stinger, and formerly, Betanex/Alphanex. The current sugar beet label states that Norton should NOT be applied alone. These 2 and 3 product mixtures are called 'micro-rate' applications. They are intended to be applied when the weeds are very tiny, cotyledon to 2 true leaves and are to be applied when the beets have 2, 4, and 6 leaves, roughly every 7 to 10 days. The rates for use in NY are 5.25 to 10.5 fl. oz depending on the size of the beets at the time of application. Also, specific to NY's 24C is the restriction to making no more than 2 applications per acre per season. Thus, Norton could be applied pre-emergence and followed by one post-emergence application later or it could be applied twice to emerged weeds with the other post-emergence herbicides. Adjuvants are not used in mixtures that include Spin-Aid or Betanex/Alphanex as these products are emulsifiable concentrates. If applied with UpBeet or Stinger, then adjuvants are recommended. See labels for specific details. The label does not list a PHI for this product.

UPBEET 50WG

UpBeet has only post-emergence activity and provides excellent control of several broadleaf weeds. This herbicide will be of interest to growers who have had problems with velvetleaf. Other weeds controlled include wild mustards, wild radish, and smartweeds. Like post-emergence Norton, control of multiple weeds increases when UpBeet is applied together with the other post-emergence herbicides at the 2, 4, and 6 leaf stages. It is applied at 0.5 oz/A when weeds are tiny, cotyledon to 2 true leaves, and also requires adjuvants when applied with Norton and/or Stinger but not with Spin-Aid. The PHI for this product is 30 days.

SPIN-AID 1.3EC

Spin-Aid is a key component of the sugar beet 'micro-rate' application program mentioned above. The rates used range from 1.5 to 3 pints/A depending on the number of beet leaves present. Occasionally beets will show slight injury, leaf chlorosis or tip burn after application, but recovery occurs within a week or two. Weeds are most successfully controlled when they are tiny, cotyledon to 2 true leaves. Spin-Aid is one of the only beet herbicides with significant activity against common lambsquarters. Some of the other well controlled weeds include: common chickweed, c. purslane, c. ragweed and annual sowthistle. This herbicide does

not require the use of adjuvants. The PHI for beets is 60 days.

STINGER 3L

Stinger has a fairly narrow spectrum of weed species controlled and should only be used if those species are problematic in a given field (based on scouting). Stinger has primarily post-emergence weed control activity but does remain in the soil for an extended period of time and due to this has specific crop rotation restrictions. It is important to review these on the product label. Stinger is noted for excellent control of common ragweed, galinsoga, nightshade species, wild buckwheat, prickly lettuce and annual sowthistle. It also does a good job of suppressing Canada thistle and dandelion. Stinger may be applied twice per season, to beets having 2 to 8 leaves at rates of 0.25 to 0.5 pint/A with a total of 0.5 pint being applied. The product label states that adjuvants are not required for applications of Stinger; however, they are sometimes used when mixed with Norton and UpBeet. The PHI for Stinger is 30 days.

SELECT MAX

Select Max is a post-emergence herbicide with activity against many annual grass species. The use rate is 12 to 16 fl. oz, with no more than 0.5 lb a.i./A per season. NIS at 0.25% (v/v) is recommended. The PHI for Select Max is 30 days. ●



VEGETABLE FIELD RESEARCH ASSISTANT POSITION in WNY

The Cornell Vegetable Program seeks an individual to assist in research trial implementation, data collection and harvest. Work in commercial vegetable fields, primarily in onions and Cole crops in Orleans and Genesee Counties, but also includes some work in the Southern Tier and Finger Lakes. Full-time, year-round position with benefits. Minimum Associate's degree in Ag Science, plus one year experience. The position will be available in late May, but an earlier start date can be negotiated.

More information and application instructions for this position are posted on our website at <http://cvp.cce.cornell.edu> under Announcements on the home page.

Improving Soil Health with Good Soil Management Practices

Carol MacNeil, CCE Cornell Vegetable Program

Good soil health has become increasingly important for profitable crop production because of more frequent extremes of weather. If soils are in good health excess rainfall will readily percolate down through the soil pores and earthworm channels. In addition, if soils are in good health roots will grow deep, reducing the negative effects of long dry periods. Many growers in the CVP region are working hard to improve their soil health.

Good soil management improves soil health. It includes the use of many of the following:

- Functional tile drainage, first!
- Diverse crop rotation, including small grains and/or hay
- Use of cover crops - Keep fields green year-round, to feed soil organisms
- Reduced tillage
- Manure (within food safety limits)
- Soil nutrient/pH analysis every 3 years.

The CVP facilitated the organization of two Grower Soil Health Discussion Groups. A Western NY group of about 30 farmers met a few times in 2013 - 2014. They have since formed the Western NY Soil Health Alliance, a Farmer-to-Farmer Network. Their first event was a Cover Crop Workshop in Elba last December. For information on the Alliance, email: wnysoil-health@gmail.com. A Finger Lakes group, with about 20 growers has met twice over the past year (contact Carol MacNeil for details: crm@cornell.edu or 585-313-8796). These groups have resulted in significant grower-to-grower sharing and learning about cover crops, crop rotation, tillage, equipment and fertilizers.

The Cornell Vegetable Program (CVP) was awarded an NRCS Conservation Innovation Grant for 2015-16 to "Accelerate Adoption of Good Soil Health Practices by Farmers" in the Lake Ontario watershed.

This project included sampling for Cornell Soil Health Assessments in vegetable fields, and providing growers with interpretation of the results. Vegetable farms in the Lake Ontario Watershed who didn't participate in 2015 may be eligible for a free Cornell Soil Health Assessment in 2016. Contact Carol MacNeil at crm6@cornell.edu or 585-394-3977 x406.

Cornell Soil Health Assessments

Twenty-six fields were sampled, and compaction was tested, on 13 farms in Niagara, Monroe, Genesee, Wayne, Ontario and Yates Counties. Worm counts were also done at the 10 sampling sites in each field. All farms grew vegetables, or vegetables and field crops. Most growers cover cropped at least some of their fields. Farms ranged from 130 acres to a few thousand acres. Seven growers used some or all reduced/zone or no till. Four farms used manure. Four of the 13 growers produce some or all of their crops organically.

While many of the growers' fields had several serious constraints to good soil functioning and crop growth there were a handful of fields where soils tested better, either on the biological tests, or on the soil aggregate stability test. These growers generally used intensive cover cropping, diverse crop rotations including soil building crops, and/or frequent manure applications, and some used reduced tillage. The growers with the best soils generally used at least two of these practices.

Select Cornell Soil Health Assessment Results and Soil Management

Soil management practices in the 26 fields were summarized for the two years prior to sampling for the Cornell Soil Health Assessment. Table 1 relates soil management practices to two biological indicators of soil health: Active Carbon and Respiration. Results from 12 of the 26 fields are shown. Table 2 relates soil management practices to % Water-stable Soil Aggregates (for 12 of 26 fields). Farms with overwintering cover crops, small grains, hay, and/or manure tended to be the six highest ranking fields in both tables. Row crops were more common in the six lowest ranking fields. The tests below, plus compaction testing, are the most revealing of soil health, in my opinion.

Active Carbon (C) is a chemical measure of the quantity of carbon-containing residues in the soil that are readily available for microbial decomposition and nutrient release. Examples are live or recently dead plant materials, arthropods, microbes, etc. High Active Carbon indicates that there will be food for microbial activity for many weeks.

Respiration (Resp) is the quantity of carbon dioxide (CO₂) released over a 4 day incubation, which is an indicator of current microbial activity. Neither soil respiration, nor earthworm activity, will remain high without sufficient Active Carbon from regular additions of fresh organic matter, however. (Compost does not contain fresh organic matter as it is already quite highly decomposed. High Respiration and low Active Carbon results could mean that the Active Carbon is nearly depleted.

Average Worms is the average worm count from 10 sampling sites per field. Each site was 6" x 6" x 7" deep. Fields varied a lot in soil moisture during sampling. Soil moisture, in addition to crop residues/"worm food", affects worm counts. The drier the soil, the fewer worms present in the topsoil.

% Water-stable Soil Aggregates (%Agg Stab) is the percent of soil aggregates which remain on a screen after a simulated hard 1" rain. Unstable soil aggregates dissolve and are washed away. In the field this results in soil erosion, plugged soil pores and/or crusting. Aggregate Stability is dependent on regular additions of fresh crop/cover crop residues. Microbial by-products of fresh residue decomposition include sticky polysaccharides and waxy glomulin, which, along with fungal hyphae and fine plant roots, stabilize soil aggregates. Thus the recommendation to keep

continued on next page

your fields green 365 days a year is not only good for reducing erosion, but is also good for soil biological and physical health.

Compaction testing is done with a penetrometer (available on loan from some CCE and SWCD offices). Compaction of 300+ lbs./sq. in. (psi) prevents root growth. Testing should be done prior to spring tillage, when soil has good but not excess moisture. As soils dry out they become harder. A penetrometer can't measure the beneficial effect of root channels and earthworm holes on drainage and crop rooting, however.

Key to Soil Health Test Ratings

Green = Very good soil functioning;

Yellow = Medium – less than optimal soil functioning;

Red = Low – Significant constraint to soil functioning.

The order of test results from top to bottom, ranges from better to worse, based on Active Carbon results, or Aggregate Stability results.

Table 1. Soil Management Practices vs Active Carbon and Respiration

Farm	Active C	Resp	Ave Worms	Management
6	531	0.37	8	mod till, manure+, small grain, clover, corn, mustard
4	509	0.49	4	Till, manure, veg, sm grain, clover
4	468	0.54	9	ZT/till, manure, sm grain, clover, veg, grass/leg cover
3	466	0.77	6	Till, 2 yrs legume/grass hay
5	466	0.71	3	ZT, manure, corn, corn
4	460	0.56	6	ZT/till, manure, corn, grass cover, veg, grass cover
13	344	0.34	too dry	ZT/NT, sm grain, legume/grass/radish cover, corn
9	341	0.25	0.1	Till, 2 yrs veg, grass/crucifer cover
1	340	0.48	0.3	Till, veg, grass cover, veg, oat cover
13	313	0.34	5.3	ZT/NT, sm grain, legume/grass cover, corn
8	301	0.29	0.3	Till, soy, corn
1	176	0.41	2	ZT/till, 2 yrs veg, oat cover

Table 2. Soil Management Practices vs % Water Stable Soil Aggregates

Farm	%Agg Stab	Management
3	39	Till, 2 yrs legume/grass hay
12	38	Till, idle, grass cover, corn
6	32	mod till, legume/grass hay, legume hay
10	31	Till, corn, fallow, grass/legume cover
5	30	ZT, manure, corn, corn
3	29	Till, legume/grass hay, idle
2	10	Till, corn, corn
4	9	Till, manure, sm grain, clover, veg, sm grain
1	9	ZT/till, 2 yrs veg, oat cover
1	8	Till, veg, grass cover, veg, oat cover
8	6	Till, soy, corn
4	6	ZT/till, manure, sm grain, clover, veg, grass/leg cover

See the **Cornell Soil Health home page**, <http://soilhealth.cals.cornell.edu/index.htm>



STUDENT RESEARCH INTERNSHIPS with the CVP

The Cornell Vegetable Program is looking to hire two student research interns this summer to assist in scouting fresh market vegetables in WNY. The internship will start in May, working alongside Darcy Telenko, as part of the iPiPE CAP (Integrated Pest Information Platform for Extension and Education, Cooperative Agricultural Project) internship program. iPiPE is committed to investing in the coaching and development of future agricultural scientists/extension educators through a limited term internship experience in an applied environment. The purpose of the program is to learn how to scout for pests in the field and contribute observations to the iPiPE platform. These positions are 5-month appointments (39 hours/week) and will be located in the CCE Erie County Office (East Aurora, NY).

More information and application instructions for these positions are posted on our website at <http://cvp.cce.cornell.edu> under Announcements on the home page.

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

Farm Food Safety with GAPs Training

March 7-8, 2016 | 9:30 AM - 4:00 PM each day

CCE Erie County/Roycroft Print Shop, Dard Hunter Hall, 21 S Grove St, East Aurora, NY 14052



Attendees will receive detailed instruction about food safety on the farm for Day 1. For those needing or interested in a third party audit for certification, Day 2 will help you write a food safety plan needed for audit. Open to all fresh market produce farmers, especially those who may want to sell through the Eden Valley Food Hub.

Cost: \$60 for first farm member, \$15 for each additional member from the same farm. Pre-registration is required. Register online at https://cvp.cce.cornell.edu/event_preregistration.php?event=482 by March 3. For more info, contact Robert Hadad at 585-739-4065 or rg26@cornell.edu. Organized by the Eden Valley Food Hub, Harvest New York, the Cornell Vegetable Program, and Cornell Cooperative Extension.

2016 Auction Growers Production Meeting (Chautauqua)

March 10, 2016 | 10:00 AM - 2:00 PM

Dutch Village Restaurant, 8729 E Main St, Clymer, NY 14724



Cornell Vegetable Program Specialists will educate growers on disease and pest management, varieties and marketing issues in open field and high tunnel vegetables. Topics include bird control in sweet corn, vine crop pest management, a cover crop and crop rotation discussion, high tunnel tomato disease management, the Food Safety Modernization act and the impact on auction growers, and swede midge management. Disease resistant varieties, cultural management and appropriate spray options will be discussed.

DEC credits will be available. Cost: \$15/person. Pre-registration required by March 8. Contact Katelyn Walley-Stoll at CCE Chautauqua County at kaw249@cornell.edu or call 716-664-9502 x202 or [register online through CCE Chautauqua County](#).

2016 NYS Dry Bean Meeting

March 16, 2016 | 9:00 AM - 3:00 PM

LeRoy Country Club, 7759 E Main Rd/Rt 5, LeRoy, NY 14482



This meeting will not only cover recent dry bean research results, but also news on [2016 – The International Year of Pulses: Why they are the Future of Food!](#) Reports on dry bean breeding and variety evaluation, weed control, white mold and Western bean cutworm management, and the health of WNY soils, but also reports on national efforts to promote dry beans, dry peas, lentils and garbanzos. Progress in increasing dry bean consumption in NY schools will be shared, as will a delicious and healthy dry bean dish.

1.75 DEC pesticide and CCA credits will be available. Preregistration is required by March 10 and provides \$5 discount. Cost: \$20 CVP enrollees; \$30 all others. Register online at https://cvp.cce.cornell.edu/event_preregistration.php?event=520 or contact Carol MacNeil at crm6@cornell.edu or 585-394-3977 x406 for more info and to pre-register.

This event is sponsored by New York Bean LLC and Genesee Valley Bean. (More lunch and coffee sponsors are sought. Contact Angela Parr if you wish to sponsor this meeting – aep63@cornell.edu or 585-394-3977 x426.)

Vegetable School (Chautauqua)

March 17, 2016 | 12:45 PM - 4:15 PM

CCE Chautauqua County, Frank W. Bratt Agricultural Center, 3542 Turner Rd, Jamestown, NY 14701



Meet the CCE Cornell Vegetable Program Specialists and learn about their programs supporting Western NY vegetable growers: disease and weed management in fresh market vegetables, what does the Food Safety Modernization Act mean for your farm, new developments for managing insect pests and diseases in Cole crops, high tunnel and season extension, improving soil health, and issues affecting processing vegetable crop production. DEC credits will be available.

2.5 DEC credits will be available. Cost: \$15 Cornell Vegetable Program enrollees; \$20 all others. [The agenda](#) is posted on our website cvp.cce.cornell.edu. Contact Katelyn Walley-Stoll at CCE Chautauqua County at kaw249@cornell.edu or call 716-664-9502 x202 or [register online through CCE Chautauqua County](#).

Vegetable School (Cattaraugus)

March 23, 2016 | 12:30 PM - 4:10 PM

CCE Cattaraugus County, 28 Parkside Dr, Ellicottville, NY 14731



Meet the CCE Cornell Vegetable Program Specialists and learn about their programs supporting Western NY vegetable growers: disease and weed management in fresh market vegetables, what does the Food Safety Modernization Act mean for your farm, new developments for managing insect pests and diseases in Cole crops, high tunnel and season extension, improving soil health, and issues affecting processing vegetable crop production. DEC credits will be available.


2.5 DEC credits will be available. Cost: \$15 Cornell Vegetable Program enrollees; \$20 all others. [The agenda](#) is posted on our website cvp.cce.cornell.edu. Contact Darcy Telenko at 716-697-4965 or dep10@cornell.edu or [register online](#).

Canadian and European Potato Varieties for the Fresh Market

Eugenia Banks, Ontario Ministry of Agriculture & Food (retired), and Ontario Potato Board, Ontario, Canada; presented at 2016 Empire State Producers Expo Potato Session, Syracuse

Potato breeders are always busy trying to develop fresh market varieties with traits that enhance farm sustainability: resistance to diseases, and attractive, tasty tubers preferred by consumers. Every year, potato-breeding programs evaluate advanced clones at several locations to determine how well the new clones perform under different weather patterns and soil conditions. There are key traits that a new fresh market variety should have:

- **Attractive Appearance:** Smooth, bright skin are traits requested by buyers. Good examples are the yellow fleshed variety Colomaba (European) and the white fleshed Envol (Quebec).
- **Early Maturity:** This is a plus for fresh market growers. Envol is the earliest white flesh variety grown in Ontario, but it has to be grown in soils not infested with common scab.
- **Yield:** A profitable marketable yield is essential for farm sustainability.
- **Consistency & Predictability:** Once you are familiar with the variety, you should be able to determine how much nitrogen fertilizer and other nutrients are required to obtain good yields with the tuber size profile you need for your market. Another example of consistency and predictability is performance under tough conditions such as wet or hot summers.
- **Disease Resistance:** Resistance to common scab is an important trait in areas where this soil-borne disease is a problem. Fresh-market producers with scab problems in their fields need to trade off some of the above mentioned traits for common scab resistance.

To see the most promising Canadian and European varieties being trialed in Ontario go to: http://rvpadmin.cce.cornell.edu/uploads/doc_404.pdf 



Fresh market potato variety trials. Photo: Eugenia Banks

VEGEdge SPONSORS



American Takii, Inc.
831-443-4901 | www.takii.com
180 years Creating Tomorrow Today



Vegetable Seeds for Professionals
315-789-4155
www.bejoseeds.com



Crop Production Services
585-589-6330 | www.cpsagu.com
"Profit from our Experience"



Growmark FS - Filling Your Crop Needs
Elba Muck 716-474-0500 | Caledonia 585-538-6836
Knowlesville 585-798-3350 | Batavia 585-343-4622



Call 800-544-7938 for sales
or visit www.harrisseed.com
A Grower Friendly Company



PEOPLE...PRODUCTS...KNOWLEDGE...
Albion, NY...(585) 589-4195
Geneva, NY...(315) 789-4450



SEEDWAY Vegetable Seeds
800-952-7333 | www.seedway.com
We are focused on quality seed and service!



Blake Myers, 585-303-3252
vegetableseeds@aol.com
www.siegers.com



Our Vision... "To be the first choice for
growers in all of our marketplaces."
www.StokeSeeds.com



Cornell University
Cooperative Extension
Cornell Vegetable Program

480 North Main Street
Canandaigua, NY 14424

VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

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

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 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, and carrots)

Carol MacNeil | 585-313-8796 cell | 585-394-3977 x406 office | crm6@cornell.edu
potatoes, dry beans, and soil health

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, plant pathology

PROGRAM ASSISTANTS

John Gibbons | 716-474-5238 cell | jpg10@cornell.edu

Cordelia Hall | ch776@cornell.edu

Nelson Hoover

ADMINISTRATION

Peter Landre | ptl2@cornell.edu

Angela Parr | 585-394-3977 x426 office | aep63@cornell.edu

Steve Reiners | sr43@cornell.edu

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



Cornell University
Cooperative Extension
Cornell Vegetable Program