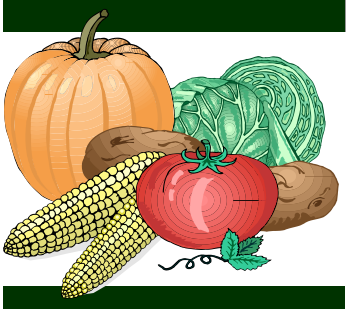

Veg Edge
Your Trusted Source for Research-Based Knowledge

Cornell University
Cooperative Extension
Cornell Vegetable Program

November 2013 Volume 9, Issue 27

CVP Develops New Tomato Grafting Resources

Judson Reid, Cornell Vegetable Program

As soil-based production of tomatoes continues in tunnels and greenhouses, risk of root-zone diseases, insects and nutrient imbalances increase. Grafting, the combination of two separate cultivars into one plant, is one management approach to these challenges.

In our studies grafting has significantly increased tomato yields and increased plant resistance to soil-borne diseases. In our trials we have demonstrated an average increase of 4.7 lbs tomato fruit per plant; an increase of nearly 3,000 lbs per greenhouse! The per acre increase in revenue could reach $60,000! However, labor, heat and materials increase the cost of grafted transplants. We estimate the cost of a grafted transplant to be $1.50/plant vs. ungrafted transplants at $0.36/plant. That's 4 times as much! Therefore, to be profitable with this technique, a high graft survival rate is required. After several years' experience, our survival rate now approaches 100% with certain rootstock/scion combinations and our goal is for commercial growers to reach this level of success.

Two new videos that describe the motivation and benefits of grafting; as well as a step-by-step tutorial, have been created by our team and are posted to the CVP YouTube channel. Regular progress of the project is posted to other social media feeds such as Twitter and LinkedIn. A factsheet, with details to ensure success, has been developed and is available on the Cornell Vegetable Program website: cvp.cce.cornell.edu. If you would like a print copy of the factsheet, contact Judson Reid at 585-313-8912.

continued on page 3

GRAFTING RESOURCES

Why should you consider grafting?

Watch our Grafting Tomatoes video to learn more about the motivations and benefits of grafting tomatoes.

Ready to try grafting? Learn how!

Our How to Graft Tomatoes video takes you through the supplies you'll need to get started and gives you helpful hints throughout the grafting process.

Want more information about how to graft?

We've created a factsheet detailing the steps you'll need to take to ensure grafting success!

For more information or to request a print copy of the factsheet, contact Judson Reid at 585-313-8912.

Veg Edge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 11 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 specialists, and Cornell University faculty.

We're interested in your comments. Contact us at:
Cornell Vegetable Program
480 North Main Street
Canandaigua, NY 14224

Email: cce-cvp@cornell.edu

Web address: cvp.cce.cornell.edu

Editor
Carol MacNeil, CCE Cornell Vegetable Program

Contributing Writers
Robert Hadad
Christy Hoepting
Julie Kikkert
Carol MacNeil
Judson Reid

Publishing Specialist/Distribution/Sponsors
Angela Parr

Veg Edge is published 28 times per year (5 monthly issues from January - May, 20 weekly issues during the growing season, returning to the monthly format for the remaining three months of October - December). 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 *Veg Edge* by emailing Angela Parr at aep63@cornell.edu. Total readership varies but averages 700 readers.

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 N Main St, Canandaigua, NY 14424.

Cornell University
Cooperative Extension
Cornell Vegetable Program

Contents

Building Strong and Vibrant New York Communities
Cornell Cooperative Extension provides equal program and employment opportunities.
Contact Cornell Cooperative Extension if you have special needs.

continued from cover - CVP Develops New Tomato Grafting Resources

A quick update from 2013: We are using determinate varieties as scions and are still harvesting our trials. But, out experience to date with determinate varieties has re-directed us to indeterminate varieties. The indeterminate production system allows for more pruning which harnesses the rootstock vigor. Left unchecked, as in determinate production, excess foliage can actually increase disease incidence. Stay tuned, in print or online, for more updates. ■

Correction: Ridomil, Late Blight, and Surfactants, and Possible Reasons for Late Blight Development After Applying Ridomil

Carol MacNeil, CCE Cornell Vegetable Program

Clarification regarding the issue of late blight control with Ridomil, and the use of surfactants:

> *From Jeff Zelna, Syngenta, 10/13/13: For the Wayne County growers with the late blight problem only, I recommended a penetrating surfactant, and not a sticker. Making this change could help with effectiveness of Ridomil against late blight. For all other growers, the Ridomil label does not require a surfactant, but if a surfactant is to be used, the grower should not use a binder/sticker. Instead, use a surfactant that allows a systemic fungicide to enter into the plant.*

The 2013 growing season had some of the wettest, most favorable weather for late blight (LB) in many years. In early September two Wayne County potato growers reported lack of control of LB in specific fields in close proximity in spite of using Ridomil formulations in the label -recommended manner as soon as they detected disease (~2-5% infection). Good fungicide spray programs with recommended "late blight fungicides" had been used prior to finding LB in their fields. After the problem was detected, the growers struggled to limit spread of LB with the use of other, highly rated "late blight fungicides" for the rest of the season, but yield and size suffered. These growers did not have a LB control problem on their other farms.

A third Wayne County grower from a different area came forward reporting poor LB control with Ridomil a couple of weeks later but his fungicide spray schedule before detecting LB was stretched, and the level of LB in his field was 5-10% infection when Ridomil was first applied. No other growers in Wayne or other CVP county reported a lack of LB control after using Ridomil.

A week after collecting the LB samples from the two original farms, 12 additional LB samples from fields/gardens adjacent to the problem fields were collected, tested and all the LB samples collected in that area were identified as US-23, which has to date been sensitive to Ridomil throughout the US. Preliminary lab tests at Cornell indicated that the samples were sensitive to Ridomil, but definitive tests require growing the LB in pure culture, inoculating plants, and testing LB lesions for sensitivity to Ridomil. Final results on the Ridomil sensitivity of the LB samples from the problem fields are expected soon.

As we tried to make sense of this problem *Cornell plant pathologist Bill Fry offered this*: "Years ago we did experiments on the effect of timing of Ridomil on the suppression of LB [on a sensitive LB strain]. The three treatments included metalaxyl/Ridomil, mancozeb, or no fungicide. We began applications at ~0.5% disease or at 2-5% diseased [foliage]. The effects of Ridomil were apparent within a day or two, but the effects of mancozeb were not visible for at least one week. LB increased explosively in the mancozeb and untreated plots for the first week. Subsequently, mancozeb did slightly suppress disease relative to the water control. The effect of Ridomil was dramatically different with an immediate observable effect in [reducing disease development]. Nonetheless, the amount of disease in the Ridomil plots continued to increase gradually for the next four weeks. When we initiated Ridomil applications at 0.5% disease the final level of disease was less, and the rate at which disease increased was less, than when we began at 2-5% diseased foliage. Thus, once disease is established, it's really difficult to totally stop this pathogen. I suspect that given the wet weather and favorable conditions we've had in 2013, any fungicide may have been challenged."

On-farm detection of LB at no less than 2 -5% infection, at least for a portion of the field, is quite common, unless someone is scouting extremely diligently. The excellent fungicide spray programs of the original two growers led me to question whether there was an effect of the surfactant in the performance of Ridomil in these cases. I contacted Cornell plant pathologists, and Jeff Zelna, Syngenta, regarding the possible effect of a surfactant on the performance of Ridomil. Of the two original growers, one used no surfactant and the other used a spreading surfactant. The third grower used a sticker but he also began applying Ridomil later than is advised. Ridomil is a systemic fungicide which needs to get into the leaf to move into the vascular system and throughout the plant. Stickers are formulated to attach the pesticide to the leaf surface. Some systemic insecticides, for example, have provided significantly poorer control of thrips on onions in Cornell tests when a sticker is used than when a penetrating surfactant is used. There is no general university recommendation, however, that penetrating surfactants be used with systemic pesticides. Also, the Ridomil label does not specify anything on the use of surfactants.

Thus, two potential reasons for less than expected LB control include fungicide application when there's more than 5% of the foliage infected, and the use of a sticker adjuvant with a systemic fungicide. If you have questions regarding late blight, Ridomil, or surfactants, contact Carol MacNeil at crm6@cornell.edu or 585-313-8796, or Jeff Zelna, Syngenta, at: jeff.zelna@syngenta.com ■

Garlic Post-Harvest Trial Results

Crystal Stewart, CCE Eastern New York Commercial Horticulture Program

Post-harvest handling is a yearly challenge for garlic growers in the Northeast. Often the success of the crop continues to be dependent on the weather even after it is out of the ground, with drying going well in dry years and poorly in rainy years. We set the goal of determining the optimal handling to dry garlic through three on-farm post-harvest trials in 2012 and three more in 2013. Through these trials we were able to determine that garlic can tolerate more light, heat, and pruning during the drying process than was previously demonstrated, and that we can create a more effective drying environment regardless of the weather using high tunnels.

Choosing post-harvest treatments -
Treatments were chosen based on what growers throughout New York indicated worked well for them and through the advice of the Garlic Seed Foundation. The following options were chosen:

- Drying occurred either in a high tunnel with shade cloth, or in an open air structure such as a shed or barn;
- Roots were either left on the bulb until drying was completed, or were cut off immediately (leaving the basal plate intact);
- Tops were either left on until drying was completed, or were cut off at various heights during or directly after harvest; and,
- Garlic was washed immediately after harvest, or was left unwashed.

These treatments were combined in every possible way on each of the three farms.

Effects of treatments on bulb quality, disease incidence, drying time, and final weight

High tunnel vs. open air: Across the trials garlic in high tunnels dried an average of three days faster than garlic in open air structures. Garlic dried in high tunnels had slightly better wrapper quality (tighter, less discoloration) than garlic dried in open-air structures at one site during both years. Garlic dried in tunnels also had slightly lower disease incidence (*Aspergillus, Embellisia* and *Botrytis)*, though disease was not severe in any site or treatment in either year. No garlic treatments showed damage from being dried in the high tunnel.

The environment in the high tunnel needs to be carefully managed in order to be most effective. Technically temperatures can reach 121° F before waxy breakdown occurs, the physiological disorder resulting from high temperatures. However, to account for uneven heating in the high tunnel and possible delays in dropping temperatures through ventilation, the grower cooperators agreed that 110° F was a safer limit. Thermometers to monitor the temperature were located at the same height as the garlic.

Limiting temperature is just one aspect management. Maintaining air movement in the high tunnel through the use of internal fans helps even out the temperature and humidity, particularly if drying racks are stacked. The grower cooperators also agreed that running dehumidifiers at night and whenever the high tunnel was closed was beneficial, as it removed up to 20 gallons of water from the air during an eight-hour period and kept conditions closer to optimal. Without closing the tunnel and running dehumidifiers the humidity in the tunnel can reach up to 100%, which pauses or reverses the drying process.

Garlic dried in a high tunnel as part of the post-harvest trial. Fans help keep air temperature and humidity uniform in the tunnel even when its closed.
Photo: C. Stewart, ENY Commercial Horticulture Program

Roots trimmed vs. roots untrimmed: No statistically significant differences were observed between these treatments in regards to bulb quality, weight, or disease incidence in either year. Root pruning is considerably more difficult and time consuming on wet roots than dry roots.

Tops trimmed vs. tops untrimmed: Trimming the tops mechanically in the field using a sickle-bar mower greatly increased the speed of harvest and reduced the space needed for drying. Top trimming did not have a significant effect on disease incidence in dried bulbs, but there were differences in bulb weight at two of the farms in year one, with un-cut bulbs being slightly heavier (Table 1). It was unclear if this difference was due to weight loss or to double bulbs, since the number of bulbs is greater in the treatments with lower weights. Because of this question, relatively uniformly sized, non-doubled bulbs were chosen for the samples during year two instead of taking every bulb from a plot, including doubles, as had been done in year one. In addition to this change, additional cutting lengths were also added to determine if leaving some stem would affect weight or disease incidence. During year two, the pruning length did not affect the dried weight of bulbs significantly (Table 2). Furthermore, there were no significant differences in disease incidence across any of the trimming treatments.

Table 1. Treatments and average weights aggregated from three trial sites, each with three replications per treatment.

Treatment	Average weight/head	Count
Cut at 6”	0.113lbs	1036
Uncut	0.130lbs	972

Table 2. Treatments, aggregated weights of treatments across replications, counts, and average weights per head from year two. Data was combined from all three sites.

Trim Treatment	Weight/ treatment	Count	Average weight/head
1.5 inch	23.7lbs	183	0.129lbs
6 inch	22.7lbs	186	0.122lbs
10 inch	24.4lbs	206	0.118lbs
Uncut	39.4lbs	302	0.130lbs

Washed vs. unwashed**:** Washed garlic initially had very clean, tight wrappers, but became more discolored than the unwashed garlic during the drying and curing process. Most discoloration could be removed by removing 1-3 wrapper leaves, but this extra step is time consuming. Disease incidence, particularly *Aspergillus* and *Embellisia,* was slightly higher in washed garlic. This treatment was discontinued after year one of the study because the returns from the process were deemed too low.

Discussion of results and next steps: These trials have demonstrated that it is possible to dry garlic quickly and effectively by creating a warm, dry environment. Garlic can be dried at 110° F without damage to the bulbs. Furthermore, one to two layers of shade cloth provides enough protection for bulbs to prevent damage from the sun.

These trials have also demonstrated that trimming the tops of the garlic while it is in the field rather than drying the whole plant intact does not increase disease issues or reduce bulb weight. This finding is particularly useful to growers who find that they have too much garlic for their drying area, as they can remove the tops without concern that the garlic will become unmarketable or lose value as a result.

Notably, all of these trials were conducted in years that were relatively dry during the harvest and drying period. We might expect that if the season had been wetter, differences between high tunnel and open-air drying systems would have increased. The worse the outside conditions for drying, the more important it becomes to be able to control the environment. High tunnels offer more significant opportunities for control than most barn systems.

Not every grower will be able to use a high tunnel system to dry garlic, or will want to cut the tops. These recommendations do not need to be followed exactly for success, but if a grower is struggling with disease and post-harvest breakdown, applying the principles of limiting humidity and increasing temperature while drying should prove beneficial, whether accomplished in a high tunnel, a hay mow, etc.

To follow-up on these studies, we would like to address growers' questions about the effects of these treatments on longer-term storage and on quality factors such as sulfur compound concentration, and would like to determine what the best environment is to store garlic for one, three, or 6 months. If there are questions about how to apply these treatments to a specific post-harvest system, please contact Crystal Stewart at cls263@cornell.edu or 518-775-0018. *This project was made possible through the support of Northeast SARE.* ■

New Vegetable IPM Educator

Mary Woodsen, NYS IPM Program

The New York State Integrated Pest Management Program (NYS IPM) at Cornell University is pleased to announce that Marion Zuefle, M.S., has joined its staff as the vegetable IPM educator. Zuefle will work closely with growers and researchers around New York and the Northeast. Marion has taken responsibility for the sweet corn pheromone trap network, a resource for farmers, extension educators, and consultants throughout the state. She's improved the network's web interface for reporting results and created resources to help cooperators set out traps and identify catches for accurate results and recommendations. And she's obtained funding for research to help determine whether spotted wing drosophila, a known pest of small fruit, also poses a threat to tomatoes.

Marion Zuefle, NYS IPM Vegetable Educator
Photo: B. Brown

Zuefle's interests and expertise includes research that helps understand and cope with newly arrived invasive species. Right now she has her antennae out for two potentially new diseases and one insect pest of tomatoes. She's also helping research new ways of using soil temperature readings that suggest when different weeds are likely to germinate.

"Marion has the depth of curiosity and the responsiveness that can make for a topnotch educator," says Abby Seaman, IPM's vegetable coordinator. "Everything she does, she does well. I'm delighted that Marion has joined our team." Zuefle holds a Masters of Science in entomology and applied ecology from the University of Delaware. For more information contact: Abby Seaman at 315-787-2422 or ajs32@cornell.edu ■

Helping Farmers Keep Cool Across NY

Robert Hadad, CCE Cornell Vegetable Program

Over 60 farms across the state of NY have become recipients of money to fund the addition of cooling equipment for their produce and other agricultural products. A group of Cornell Cooperative Extension (CCE) educators came together last year and submitted a grant through NYS Consolidated Funding. The project, the NYS Agricultural Produce Cooler Project, was chosen to receive $207,000 to assist family farms add the benefit of refrigeration to their operations in order to enhance their capacity and ultimately improve profitability. The idea came about when small farmers were asked about hurdles that are limiting profitability. The CCE group includes: Maire Ullrich, Orange County, Sandy Buxton, Farm Business Management, Albany County, Craig Kahlke, Cornell Lake Ontario Fruit Team, Elizabeth Claypoole, Wayne County, and Robert Hadad, Cornell Vegetable Program.

The goal of this project is to decrease farm waste, expand product shelf-life, product quality, food safety, and profitability on farms in NY. These dollars have been allocated to improve agriculture and farm economies, hence the questions on the size and economic impact of your farm. *Funding has been received from NYS Department of Agriculture and Markets as part of the regional economic development councils.*

Many types of farms have applied for and received grant money. These include fruit and vegetable growers, meat producers, as well as flower and small dairy cheese artisans. Phil and Sandy Munson, Fisher Hill Farm, Canandaigua, are building a new cooling facility for their vegetable crops to maintain the quality of their produce after harvest. Fred and Sue Forsburg, Honeyhill Farm, Livonia, are rebuilding a cooling unit for their greens and root crops.

Another one of the recipients, Tom Szulist, Singer Farm Naturals, Olcott, grows a lot of garlic: 60 types of garlic on several acres. He applied to the program and received funding to construct an insulated cooler room that also acts as his controlled environment drying area for garlic before going into storage. Szulist explained, "In the past, drying was dependent on the weather. With one week hot and the next week rainy, garlic dried unevenly and some varieties really suffered." In fact, Tom's softneck garlic often had upwards of 50-60% loss from poor drying and storing.

"Now that has all been alleviated", he noted, "this season our loss was less than 10%." The garlic was harvested then placed in the cooler at temperatures around 60°F. Dehumidifiers and fans were set up and the moisture was wicked out of the bulbs while the cool temperature inhibits bacteria from getting started. In a week or so, the garlic was dried to the right level and the cooler temperature was set lower to keep the bulbs fresh until sale or planting in the fall. "This cooler/dryer set up has really made a huge difference to the bulb quality. This ultimately will mean more sales and improved profitability," Szulist said.

Tom Szulist of Singer Farm Naturals in the cooler/drying room, showing the cooling unit and the dehumidifier. *Photo: R. Hadad, CVP*

Note the space for air movement around the garlic in Tom Szulist's facility.
Photo: R. Hadad, Cornell Vegetable Program

(Editor's note: This article describes a new, unconventional way to dry garlic, different from that described in "Garlic Post-Harvest Trials" in this issue. Very important principles are the same, however. In both articles the use of circulation and exhaust fans and dehumidifiers is mentioned. The garlic shown in the photos is not stacked deep and there's lots of room for air movement all around the garlic. It's very important when trying to dry garlic that there not be areas with poor air movement, and that there be a means for exhausting warm, moist air from the structure. Garlic brought in for drying with lush top growth and roots will be more difficult to dry, especially rainy, humid weather. Slower drying often results in more disease. C. MacNeil, CVP) ■

Crop Rotation and Cover Crop Effects on Potato Diseases

Carol MacNeil, CCE Cornell Vegetable Program (taken from American Phytopathological Society journal articles)*

Crop rotation and cover crop trials have been conducted over the past several years in Maine to determine effects on potato yield and potato diseases by Robert Larkin, Timothy Griffin and Wayne Honeycutt, USDA ARS, of the New England Plant, Soil and Water Lab in Orono, ME. While the potato production system, climate and soils are somewhat different from those in NYS there is much that NY growers can learn from this work.

A long-term, two year potato rotation trial, including barley/clover, canola, green bean, millet/rapeseed, soybean, or sweet corn, followed by potatoes, and also including continuous potatoes, was followed for 10 years to determine any effects on soil-borne potato diseases and potato yield. Most plots were split in half the last four years with a no-till rye cover crop planted on half.

Canola and rapeseed in the rotation reduced Rhizoctonia canker and black scurf, and common scab, by 18 - 38%, compared to continuous potatoes. The rye cover crop reduced black scurf and common scab by 12.5% and 7.2%, respectively, for all rotations. The canola or rapeseed rotations, with the rye cover crop, reduced black scurf by 35 - 41%, and common scab by 20 - 33%, compared to continuous potatoes with no cover crop. Canola in the rotation resulted in 6.8 - 8.2% higher potato yield than continuous potatoes. A rye cover crop resulted in 4% higher potato yield than no cover crop. However, this study showed that 2-year rotations are not adequate protection against disease, because all rotations resulted in increasing common scab and Verticillium wilt over the time of the trial.

A three year potato rotation trial, including sweet corn-canola, canola-sweet corn, sweet corn-soybean, green bean-sweet corn, soybean-canola, soybean-barley, or barley-clover, each followed by potatoes, and also continuous potatoes, was planted in Presque Isle, ME, in 1998. Most rotations compared to continuous potatoes reduced Rhizoctonia stem/stolon canker and black scurf. Potato crops following canola, barley or sweet corn provided the lowest levels of Rhizoctonia disease. Potatoes following clover or soybean resulted in disease problems in some years.

* The two year rotation study is from *Rotation and Cover Crop Effects on Soilborne Potato Diseases, Tuber Yield, and Soil Microbial Communities,* **Plant Disease,** The American Phytopathological Society, December 2010, Vol. 94, No. 12, Pgs. 1491-1502. The three year rotation study is from *Effects of Different 3-Year Cropping Systems on Soil Microbial Communities and Rhizoctonia Diseases of Potato,* **Phytopathology,** The American Phytopathological Society, January 2006, Vol. 96, No. 1. ■

Upcoming Meetings

Cornell Potato Breeding Line Show & Tell

Wednesday, November 6, 2013

Tentative Schedule: 11:30 AM - Lunch
12:00 - 3:00 PM - Show & Tell

Plant Breeding Field House
Caldwell Rd, Cornell, Ithaca

Cornell potato breeder Walter De Jong has scheduled his very popular discussion on the best breeding lines coming out of the Cornell Potato Breeding Project. An annual report is provided documenting yield, tuber quality and important horticultural characteristics. Small quantities of seed of the most promising lines have been grown on farms across the state. All fresh market and processing potato growers are invited. Grower and processor comments on the newer lines are invited, whether you plan to attend or not. **Pre-register:** Walter De Jong at: wsd2@cornell.edu or 607-254-5384; Don Halseth at: deh3@cornell.edu or 607-255-5460; or, Carol MacNeil at crm6@cornell.edu or 585-394-3977 x406.

Planning for Farm Succession Series

Workshop series offered at 3 different locations across Western NY (see description for locations & times) for agricultural businesses transitioning to a new generation

Register by sending your name(s) and contact info, with a check payable to *Cornell Cooperative Extension* to:
Cathy Wallace
Genesee Co. CCE/NWNY Team
420 E. Main St, Batavia, NY 14020.

Or register on-line with credit card using the links provided for each location.

CCE Seneca County, 308 Main St Shop Centre, Waterloo
Wednesdays: November 6, November 20, and December 11, 2013; 6:30 - 9:00 PM
http://nwnyteam.cce.cornell.edu/event.php?id=65

CCE Monroe County, 249 Highland Ave, Rochester
Thursdays: November 7, November 21, and December 12, 2013; 12:30 - 3:00 PM
http://nwnyteam.cce.cornell.edu/event.php?id=66

CCE Wyoming County, 401 N Main St, Warsaw
Thursdays: November 7, November 21, and December 12, 2013; 6:30 - 9:00 PM
http://nwnyteam.cce.cornell.edu/event.php?id=67

Dr. Bernie Erven, Ohio State University, well-known for his enlightening and entertaining educational presentations on farm and human resource management in family businesses, will be one of the speakers. Members of each generation involved in the farm business should attend the meeting series. Accommodations for persons with disabilities may be requested by calling Sharon Wolcott at 585-786-2251. Cost: $60/farm business/family for all three sessions. Questions: 585-991-5438 or 585-343-3040 x138.

Tomato School

Thursday, November 7, 2013

8:00 AM - 4:45 PM

NYSAES, Jordan Hall
630 W North St, Geneva, NY 14456

Note: A satellite site is being offered at CCE Cattaraugus County. To register for the satellite site, contact Lynn Bliven at lao3@cornell.edu or 585-268-7644 x18.

Cultural and chemical pest and disease control options will be presented, with an emphasis on understanding biological concepts. Attendees will learn how to develop successful, integrated management systems. Growers will share their knowledge and experiences raising transplants and field tomatoes. A tomato buyer's panel will offer insight into working with restaurant and re-sale venues. Specialty topics like precision nutrient management, site-specific late blight forecasting, and high tunnel considerations will be discussed. *Sponsored by Harris Seeds and Siegers Seed Company.* 4.75 DEC credits and 5.5 CCA CEU credits are available.

Cost: $50 for CVP enrollees; $60.00 all others. More info or register online at http://cvp.cce.cornell.edu/event.php?id=97 or call Karen Krysa at 716-433-8839. **Pre-registration ASAP** as space is limited.

Squash School

Friday, November 8, 2013

8:45 AM - 4:30 PM

CCE Monroe County
249 Highland Ave, Rochester

The Squash School is designed to cover both winter and summer squash production for large and small growers. There will be a heavier focus on winter squash and pumpkin production. Cultural and chemical control options will be discussed as part of designing proactive pest, weed and disease control programs. Crop production topics like fertility management, pumpkin production, curing and storing squash, reduced tillage adoption and the use of supplemental beehives will be covered. *Sponsored by Harris Seeds, Helena Chemical Company, and Siegers Seed Company.* 4.25 DEC credits and 4.5 CCA CEU credits are available.

Cost: $40 for CVP enrollees; $50.00 all others. More info or register online at http://cvp.cce.cornell.edu/event.php?id=98 or call Karen Krysa at 716-433-8839. **Pre-registration ASAP** as space will be limited.

5th Annual Cover Crop Workshop & Tour

November 14, 2013

USDA-NRCS Plant Materials Center
3266 Rt 352, Big Flats, NY 14814

USDA-NRCS Plant Materials Center (PMC), 3266 Rt 352, Big Flats 14814*. See cover crop plantings: time of seeding; diverse mixes; PA State no-till row crop interseeder; and, cover crops for nitrogen production and cycling. Hear farmers and equipment dealers on best use of no/zone till equipment. Hear from PA No-till Alliance farmers, dedicated to improving soil quality/ productivity with success in no-till through shared experiences and technology. Meet with them after the meeting. Hear Cornell and PA State speakers. For info, or special needs, contact Paul Salon at: paul.salon@ny.usda.gov or 607-562-8404. *USDA is an equal opportunity provider and employer.* To register, go to: http://events.constantcontact.com/register/event?llr=7ex5qzeab&oeidk=a07e7rk7tzz1075eaf0 *Directions: Take Rt. 17/I-86 to Exit 48 (E. Corning/Rt. 352). Follow Rt. 352 east 1.5 mi. Plant Material Center is on the left. *Map this location.*

Processing Beet, Carrot & Peas Advisory Meeting

Tuesday, December 3, 2013

Batavia First United Methodist Church
8221 Lewiston Rd (Rt 63), Batavia

A complimentary lunch will be included. DEC and CCA credits will be available. No registration is required and the meetings are FREE.

For more info, contact Julie Kikkert, 585-394-3977 x404 (office), 585-313-8160 (cell) or jrk2@cornell.edu.

Upstate NY Potato Advisory Meeting

Wednesday, December 4, 2013

9:30 AM - 3:00 PM

CCE Ontario Co
480 N Main St, Canandaigua

Annual roundtable discussion on concerns of fresh market and processing potato growers and processors, reports on research, and agency updates. All potato growers are invited. *(Note: Walter DeJong, Cornell, has scheduled his Potato Breeding Line Show & Tell for Wednesday, November 6, at Cornell, Ithaca.)*

Cost - $10. Pre-registration for the Potato Advisory Meeting and lunch required by Friday, November 29. Contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

High Tunnel Schools

Day 1: Winter Greens and Tour
December 4, 2013

Day 2: Tunnel Basics & Warm Season Crops
December 5, 2013

9:30 AM - 3:30 PM

CCE Genesee County
420 East Main St, Batavia

Growers are welcome to come both days or just one!

DAY 1: Winter Greens and Tour
A variety of season extension techniques such as high tunnels can help growers generate revenue 12 months of the year. Crop plans and markets are critical to success, but holistic planning is the basis for a sustainable system. Morning speakers include Paul and Sandy Arnold, Pleasant Valley Farms and Jud Reid, Cornell Vegetable Program. The afternoon will consist of a tour of Bowman and Hill Micro Farm to see their winter greens production system and learn scouting techniques. DEC and CCA credits will be available.

DAY 2: Tunnel Basics and Warm Season Crops
Designed for commercial growers that are new to high tunnels. NRCS cooperating farms are particularly encouraged to attend. All who are interested in improving their crop yield, quality, and profitability by using high tunnels are welcome. DEC and CCA credits will be available.

Cost: $25 per person, per day; OR $40 to attend both days. Registration includes lunch. **Pre-register by December 1** at cvp.cce.cornell.edu (or use the live links above) or call CCE Yates County at 315-536-5123. Payment must be received in advance of the event to reserve your space.

For more information about the High Tunnel School, contact Judson Reid at jer11@cornell.edu or 585-313-8912.

Funded in part by a Specialty Crops Research Initiative block grant through the NYS Department of Ag & Markets.

Upcoming Meetings - continued

Farm Food Safety Trainings with GAPs

8:30 AM - 3:00 PM both days

December 10-11, 2013
Fire Training Center
Street Address, Batavia

December 18-19, 2013
CCE Wayne County
1581 Rt 88N, Newark

January 6-7, 2013
CCE Ontario County
480 N Main St, Canandaigua

February 27-28, 2013
Steuben County

Cornell National GAPs Program, Cornell Vegetable Program, Cornell Lake Ontario Fruit Team, and Cornell Cooperative Extension, along with assistance from NYS Dept. Ag & Markets, will be presenting farm food safety training/GAPs (including Harmonized GAPs) this winter. *These workshops are funded through a grant by the Genesee Valley Regional Marketing Authority.*

This training is for those farmers who are being required by buyers to provide third party verification of their food safety practices and for farmers thinking about moving in this direction.

The first day of training will focus on the details of what GAPs is, how it works and what it means for your farming operation. The second day will be devoted to helping you write a food safety plan as required for audit certification. A laptop computer is required for the second day.

After attending the 2-day workshop, growers are invited to a mock audit during the growing season so they know what to expect from a third party audit.

Registration info will be up approximately 4-6 weeks before the workshops. For more info, contact Craig Kahlke at cjk37@cornell.edu or 585-735-5448.

Processing Sweet Corn, Snap & Lima Bean Advisory Meeting

Wednesday, December 11, 2013

Jordan Hall Auditorium, NYSAES,
630 W. North St, Geneva

A complimentary lunch will be included. DEC and CCA credits will be available. No registration is required and the meetings are FREE.

For more info, contact Julie Kikkert, 585-394-3977 x404 (office), 585-313-8160 (cell) or jrk2@cornell.edu.

Contact the Cornell Vegetable Program

Cornell Vegetable Program (CVP) Staff

Robert Hadad
Extension Specialist
Food safety; Western region fresh market vegetables; marketing; organic

Phone: (716) 433-8839 x228
Cell: (585) 739-4065
Email: rgh26@cornell.edu

Julie Kikkert*
Extension Specialist
Processing crops: sweet corn, snap beans, peas, beets and carrots

Phone: (585) 394-3977 x404
Cell: (585) 313-8160
Email: jrk2@cornell.edu

Judson Reid
Extension Specialist
Greenhouse production; small farming operations; Eastern region fresh market vegetables

Phone: (315) 536-5123
Cell: (585) 313-8912
Email: jer11@cornell.edu

Christy Hoepting
Extension Specialist
Onions, cabbage, field research and pesticide training

Phone: (585) 798-4265 x38
Cell: (585) 721-6953
Email: cah59@cornell.edu

Carol MacNeil
Extension Specialist
Potatoes, dry beans and soil health; Editor of Veg Edge

Phone: (585) 394-3977 x406
Cell: (585) 313-8796
Email: crm6@cornell.edu

Elizabeth Buck, Field Technician
Phone: (607) 425-3494
Email: emb273@cornell.edu

John Gibbons, Field Technician
Phone: (585) 394-3977 x405
Email: jpg10@cornell.edu

Courtney Hill, Field Technician
Phone: (585) 813-5136
Email: ch733@cornell.edu

CVP Administration

Mark Giles*, Regional Ag Team Leader
Cornell University
Phone: (607) 255-6619
Email: fmg4@cornell.edu

Angela Parr, Admin. & Comm. Lead
Veg Edge, Enrollment, & Sponsorships
Phone: (585) 394-3977 x426
Email: aep63@cornell.edu

Steve Reiners*, Co-Team Leader
Cornell University
Phone: (315) 787-2311
Email: sr43@cornell.edu

** Member of the Cornell Vegetable Program Administrative Management Team*

Visit our website at http://cvp.cce.cornell.edu

Veg Edge
Your Trusted Source for Research-Based Knowledge

SUCCESS FACTORS IN FARMING
giving you the long-term edge with wisdom from your fellow farmers

Engage with the neighbors, for your own good.

Andy Fellenz has become the face of successful organic farming in the Finger Lakes. Fellenz Family Farm greatly expanded the idea of a CSA (Community Supported Agriculture) in our region. As Chair of the Agriculture Enhancement Board and past president of Ontario County Farm Bureau, Andy has had the opportunity to draw lessons from many other farmers as well as his own farm.

How well a farm fits into the surrounding community is determined by the farm owner. Rather than keeping their distance from the neighbors, prosperous farmers look for ways to introduce themselves, build familiarity and maintain positive relations. They have the same 24 hours a day as every other farm owner. The difference is that they make good neighbor relations a priority.

"If you want to be successful in the business of farming, you have to get along with the neighbors. You can't be an island, surrounded by your community but not engaged with it."

If you want to avoid the tension or stress of feeling in conflict with the folks who live and work nearby, it might be time to start up a conversation. Ask questions and listen closely. If you pay attention to what the neighbors are saying to you, they will pay attention to your needs in turn. It is worth the small investment of time and attentiveness.

Success Factors in Farming provides tips and advice from the vast collective knowledge found among farmers in our area. These thought-provoking commentaries have been collected by Extension agent Jim Ochterski, and are presented exclusively in the Cornell Vegetable Programs award-winning newsletter, *Veg Edge*, to offer real-life insights about sustainability and long-term success in agriculture.