Several new resources have been posted on the Cornell Vegetable Program website, cvp.cce.cornell.edu, under Food Safety.

**On-Farm Cold Storage of Fall-Harvested Vegetables and Fruit Crops: Planning, Design, and Operation**

This is an extensive publication written by Scott Sanford, Agricultural Engineer, University of Wisconsin-Extension, and John Hendrickson, Outreach Program Manager, Center for Integrated Agricultural Systems, University of Wisconsin-Madison. It provides a thorough investigation in the hows and whys of using cold storage from small scale to larger sized operations. Chapters include: Winter storage crop economics, Planning, Storage facility location and layout, Types of storage facilities, Refrigerators, Walk-in and drive-in coolers, Environmental control, Ventilation systems, Refrigeration systems, Humidity control, Ethylene, Energy efficiency, Material handling, Storage containers, Material transport, Food safety issues and additional resources.

This publication is detailed and a great reference. In addition, included are case studies of selected crops relating the experience of real farms who are growing crops for
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The next issue of VegEdge will be published on January 1, 2016.

FDA’s Final Produce Safety Rule Published

The Final Produce Safety Rule was made publicly available in mid-November. The rule officially goes into effect 60 days after publication in the Federal Register on November 27, 2015. To read more about the Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption, visit the FDA website. Cornell University and CVP staff members are assessing these new rules in detail and will be offering training programs for growers in the near future. Updates will also be posted on the Produce Safety Alliance (PSA) website http://producesafetyalliance.cornell.edu/. The PSA is collaboration between Cornell University, FDA, and USDA to prepare fresh produce growers to meet the regulatory requirements included in the United States Food and Drug Administration’s proposed Food Safety Modernization Act (FSMA) Produce Safety Rule.
storage. There is information on the cooler size used, what it cost to run, pricing of the crop, market, and labor considerations. The crop profiles section details the characteristics of crops you need to know for storage. There is information on storage temperature, humidity range, duration in storage, yield numbers, and more all in an easy to read chart.

**Crop Cooler Storage Planner**

Another new tool for figuring out capacity for cooler units has been created by Chris Callahan, Ag Engineer with the University of Vermont. He has put together a spreadsheet with lists of vegetable crops. You type in the amount of estimated harvest of each crop either in pounds or tons. Following the simple instructions will allow you to plug in all of the expected yields that will be stored together at the same time. It then directs you to another page where there is a function button that will run the equations and the output is found lower on the page. Based on the amount of crops listed, the optimum temperature of the cooler, the relative humidity specific for the crops, the results will provide volume of space needed in storage and the BTU requirements to keep this amount of produce cool.

**Sanitizer Dose Calculation Spreadsheet**

The next set of spreadsheets highlight using sanitizers for wash lines. Chris Callahan has one chart that lists the ppm based on tank/tub/basin size. Sanitizer Dosing Lookup Table: This table provides dosing measurements for a range of target part per million (PPM) concentrations and wash tank sizes. You can tailor the table to a specific chemical product concentration by entering that value in the green box. PPM and Tank size are listed in the blue and red bars respectively. The dose is listed in the purple area.

**Cost Calculator: Three Basin Produce Washing**

This tool will give you the breakdown of costs based on the type of sanitizer chosen and will further provide how the costs are divided over each step of post-harvest washing and handling. This spreadsheet is connected to the Sanitizer Dose Calculator. So start off with picking your sanitizer and the volume of your tanks/tubs/basins. The information given will also be kicked into the Cost Calculator for the 3 Basin Produce Washing tool. Follow the instructions for the green boxes and also add your salary per hour (or workers’ pay per hour). This will provide the costs for each of the steps. It is an interesting exercise that will provide valuable financial information concerning the true costs of adding food safety practices on your farm as well as providing awareness of the costs of raising and selling vegetables beyond what it just costs for growing produce.

If you have any questions about how to use these resources, contact Robert Hadad at 585-739-4065.

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**Remembering Robin Bellinder**

*Steve Reiners, Cornell*

On November 13, we received the sad news that our colleague and friend, Robin Bellinder passed away unexpectedly. Robin received her Bachelors from Michigan State University and her Masters and Ph.D. from Virginia Polytechnic Institute and State University. In 1984, she joined the Cornell University Horticulture Department as an Assistant Professor, with a program focused on weed management for vegetable crops. Robin was a national and international leader in her field. She was the author of more than 80 research publications and more than 200 publications focused on growers. She was the past President of the Northeastern Weed Science Society and in 2005, was named the recipient of Cornell’s College of Agriculture and Life Sciences award for Outstanding Accomplishments in Applied Research.

She was mentor to numerous graduate students and advisor to many undergraduates. Despite her busy schedule she even managed to add teaching to her responsibilities and co-taught Commercial Vegetable Production. **She was a tireless fighter for New York vegetable growers, always looking for new tools to manage weeds.** Her research included all aspects of weed management, from traditional herbicides to cultural and chemical alternatives. She pioneered research in the weed suppressive ability of cover crops. A sabbatical leave to Sweden in 1991 introduced Robin to new and innovative European cultivation equipment that she brought back to New York.

Robin worried about people, whether it was poor farmers in southern Asia or hungry families in the Southern Tier. She led the effort at Cornell to provide fresh vegetables from plots at the Homer C. Thompson research farm to the Food Bank of the Southern Tier. Robin realized that rather than fruit and vegetables being put in compost bins, they could wind up on dinner tables and feed hungry families. Since 2004, Cornell has donated more than 1 million pounds of produce from the Thompson farm.

Robin was very involved in international agriculture and traveled throughout Central America and Asia. After a visit to India, Robin pioneered the use of backpack sprayers for small growers. She said, “Anyone who thinks farmers in India should control weeds without herbicides should spend an afternoon in a field there with a hoe.” Her work in India changed lives and she was elected a Fellow of the Indian Weed Science Society for her contributions to Indian agriculture.

Keep Robin’s family in your thoughts and prayers.
VegEdge

From Organic to Conventional – The Latest in Weed Management Strategies
Darcy Telenko, CCE Cornell Vegetable Program

Please join the session on Weed Management: From Organic to Conventional – The Latest in Weed Management Strategies, January 19, 2016 at 3:30 pm, if you are interested in learning about the latest in weed management. This afternoon session will look at current impacts and latest strategies in weed and crop management practices. It will open with weed scientist, John Wallace, from Penn State University. He will describe the current weed management options in organic cropping systems. An update on the IR-4 Program to expand herbicide labels for vegetables will be given and Julie Kikkert, Cornell Cooperative Extension Cornell Vegetable Program, will continue by describing herbicide resistance issues in vegetables in New York and what growers needs to know. We will round out the afternoon with a grower panel on weed management success and failures on conventional, reduces tillage and organic farms featuring Don Branton, Branton Farms, Dan Henry, D.W. Henry & Sons and Michael Wright, D&J Brawdy Farms, Inc. If weeds are a problem on your farm you won’t want to miss this session.

Potato Nutrient Management, New Varieties, and Disease Control
Carol MacNeil, CCE Cornell Vegetable Program

Join us for the Potato Session at the 2016 Empire State Producers Expo at the Oncenter in Syracuse, Tuesday, January 19, to hear experts on potato nutrition, European fresh market varieties, management of serious and emerging diseases, and more.

A key speaker is Carl Rosen, well-respected potato and nutrient management specialist from the University of Minnesota. He’s done many years of potato fertilizer trials, and he’ll be sharing results on how to fine-tune fertilizer use for maximum yields and quality.

Joining us from Canada, is Eugenia Banks, Ontario Ministry of Ag, Food & Rural Affairs (recently retired), to share her results from years of fresh market variety trials, including results with the new European varieties of great interest to growers. Learn which ones perform well under our conditions.

There will be a late blight update from Bill Fry, Cornell, on what strains were most common in NY and the US in 2015, and what we might expect in the future. Cornell plant pathologist Keith Perry, who works closely with potato seed certification, will share what’s known, and what’s not known, about the emerging problem of bacterial blackleg, strain Dickeya, as well as news on Potato Virus Yntn, or tuber necrotic ringspot disease, which has caused serious problems on some yellow varieties. Dan Kepich and Jonathan Jones, USDA APHIS, will give updates on the Golden Nematode Program in NY, and potato cyst nematodes in general in the US and Canada, respectively. Preliminary research on a new soil biofumigant will be presented by Sandy Menasha, CCE Suffolk County.

In addition, there will be updates from the US Potato Board, the National Potato Council, and on NYS grower-funded potato research. The Expo Potato Session will be held from 10:15 am to 5:15 pm on January 19. NYS DEC pesticide credits will be available. For more information on the Potato Session contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Sponsored by the Empire State Potato Growers Association, Inc.

Apples of the World, A Two-Part Series
Dan Donahue and Anna Wallis, CCE Eastern NY Commercial Horticulture Program

Tree fruit experts from around the world will speak about the latest innovations of major production regions worldwide in the two-part series ‘Apples of the World’ at this year’s EX-PO. Speakers from Washington State, Spain, Brazil, and China will offer their perspectives on varieties and marketing in the first of two sessions. In the second, they will describe characteristics of production systems. These sessions will be offered on Tuesday January 19th and Wednesday, January 20th from 1-2:30PM.
Innovative Cover Cropping, Reducing Tillage, and Biofumigation
Carol MacNeil, CCE Cornell Vegetable Program

Muck innovation in soil management practices has been occurring the last few years on Northeastern US vegetable farms. Come hear what three growers are trying and what has worked, Wednesday, January 20th at the Soil Health Session at the 2016 Empire State Producers Expo in Syracuse.

A key speaker will be Rob Johanson, from Goranson Farm in Dresden, ME. They are committed to building soil health. Although they are an organic farm they have adopted reduced tillage techniques, in addition to using a variety of cover crops. They produce a full line of vegetables, small fruit, flowers and meats, and specialize in potatoes and maple products, for sale at their farm stand, by mail order, at farmers’ markets, and to their year-round CSA customers.

Donn Branton, LeRoy, is known for his long-time use of zone tillage and no-till to produce vegetables and field crops. He is now a top innovator in New York in cover cropping, planting and experimenting with many different grasses and legumes, as well as radishes, often in combinations. A current focus is to get a cover crop established in late crops. He’s experimenting with the timing of aerial application and interseeding into corn.

Klaas Martens, Penn Yan, is a well-known organic grower producing vegetables and field crops. He uses many different cover crops: grasses for scavenging nitrogen, legumes for “growing” nitrogen, buckwheat to inhibit weeds, and spring mustard to both inhibit weeds and reduce bean root rot. He is now experimenting with no-till, planting after crimping and rolling a rye cover crop.

Biofumigation with Brassica cover crops, and using cover crops in nutrient management, will be covered by Justin O’Dea, CCE Ulster County, who works with both vegetables and field crops. Carol MacNeil, CCE Cornell Vegetable Program, will present Cornell Soil Health Test results along with soil management histories from 26 vegetable fields in Western NY and the Finger Lakes Region.

The Expo Soil Health Session will be held from 9:00 am to 2:30 pm on January 20. For more information on the session contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Urban Farming to Rural Farms: Exploring New Labor Options
Megan Burley, CCE Erie County

Interested in learning about alternative labor options please join the session on Urban refugees to rural farms, January 20, 2016 at 3:30 pm. Cornell Cooperative Extension of Erie County (CCE Erie) has been piloting an agricultural workforce development project utilizing refugees. While not a solution to the farm labor issue, these projects have provided farmers with another labor option to explore. Refugee Onsite Occupational Training (ROOT) has two goals: to help address the need for farm workers on local New York farms by successfully recruiting and training qualified refugees; and to help refugees, currently residing in the city of Buffalo, to find employment that is more in line with their experience and background.

Several of the refugees participating in this project have also been involved in a project titled Green Shoots for New Americans which is a 1/3 acre Urban Farm in Buffalo NY. Refugees who have been working on this urban farm will be there to discuss their experiences and give you an overview of this project.

Climate Smart Farming: New Practices and Tools to Prepare for Climate Variability and Extreme Weather
Allison Chatrchyan, Laura McDermott, and Darcy Telenko

Have you noticed the increase in extreme rainfall events, the unpredictability of the seasons, or new pests that you’ve never seen before? If you are interested in learning more about the science behind what’s going on with the climate, and what farmers are doing to adapt, then please join the session Climate Smart Farming: New Practices and Tools to prepare for Climate Variability and Extreme Weather, Thursday, January 21, 2016, 9:00-11:00am. This session will provide an introduction to explain the basics of climate science, including the observed increase in temperatures and extreme precipitation, and impacts to agriculture in the Northeast. We will also introduce models and decision support tools developed at Cornell University through NEWA and the Climate Smart Farming program (http://climatesmartfarming.org) to help farmers adapt and take advantage of opportunities. The session will feature a farmer panel with 3 New York State producers who that will discuss the climate impacts they have experienced and practices and tools they are using to increase resiliency.
UPCOMING EVENTS view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu

Finger Lakes Soil Health Grower Discussion Group
December 9, 2015 | 9:00 AM - 1:00 PM
Hansen Farms, 2330 Mott Rd, Stanley, NY 14561

GROWERS interested in improving their soil health for improved farm profitability and soil resilience with changing weather are invited to attend. This discussion group focuses on discussing options and sharing experiences related to reducing tillage, increasing cover crops, improving crop rotations, using manure/compost, and choosing/modifying equipment.

FREE! Lunch will be available to those pre-registered by noon on December 7. Contact Carol MacNeil at 585-313-8796 or email Carol.

Please note that a Western New York Soil Health Alliance of growers is formally organizing. All interested growers will be invited to become members. The goals of the Alliance are to promote the successful application of good soil health practices through shared ideas, experiences, education, research and new technology. You can email the Alliance.

Processing Sweet Corn and Snap Bean Advisory Meeting
December 14, 2014
10:00 AM - 12:00 PM Sweet Corn | 1:00 PM - 3:00 PM Snap Bean
NYS Agriculture Experiment Station, 630 W North St, Jordan Hall, Geneva, NY 14456

Come discuss the 2015 growing season with your industry peers and hear the latest research results. Grower input needed to set future research priorities. FREE and includes lunch. DEC and CCA recertification credits will be available. No need to preregister. The full agendas are available on the Cornell Vegetable Program website. Contact Julie Kikkert at jrk2@cornell.edu with questions.

Processing Pea, Lima Beans, Beet and Carrot Advisory Meeting
December 16, 2015
10:00 - 11:00 AM Pea | 11:15 AM - 12:15 PM Lima Beans | 12:45 - 1:45 PM Beet & Carrot
First United Methodist Church, 8221 Lewiston Rd (Route 63), Batavia, NY 14020

All are invited to discuss the 2015 processing pea, lima beans, beet and carrot season in New York. Hear ideas and concerns from fellow growers and industry members. Your input is needed to set future research priorities. FREE and includes lunch. DEC and CCA recertification credits will be available. No need to preregister. The full agendas are available on the Cornell Vegetable Program website. Contact Julie Kikkert at jrk2@cornell.edu with questions.

2015 Upstate New York Potato Advisory Meeting
December 17, 2015 | 9:30 AM - 3:00 PM
CCE Ontario County, 480 N Main St, Canandaigua, NY 14424

Growers, consultants, processors, packers, extension, college and agency personnel are encouraged to come and discuss the concerns, needs and opportunities of the Upstate NY potato industry. We will begin with a Roundtable for everyone to share their concerns and interests. Growers are asked to bring ideas for needed research, extension programming, and industry projects. The tentative agenda can be found on the Cornell Vegetable Program website. DEC and CCA credits will be available.

$12 for lunch. Preregister by December 10. Call Carol MacNeil at 585-313-8796 or email Carol.

Cover Crop Workshop: Succeeding in our Western New York Climate
December 22, 2015 | 9:00 AM - 12:00 PM
Elba Fireman’s Recreational Hall, 7143 Oak Orchard Rd, Elba, NY 14058

This event is sponsored by the Western New York Soil Health Alliance, a farmer-to-farmer network. Learn more about the Alliance and hear from a farmer panel on what has worked and what didn’t: interseeding in a growing crop, triticale for cover crop AND feed, and cover crop mixes. David DeGoyler, WNY Crop Management Assoc, will share results of extensive interseeding trials. Aaron Ristow from Cornell Soil Health Lab will discuss the results of 79 Cornell Soil Health tests. There will also be a rainfall simulator demonstration. This is FREE. To register, call Orleans Co. Soil & Water at 585-589-5959, or Genesee Co. Soil & Water at 585-343-2362.

2016 Empire State Producers Expo
January 19-21, 2016
Oncenter Convention Center, Syracuse, NY


See pages 4-5 for more details.
UPCOMING EVENTS
view all Cornell Vegetable Program upcoming events at cvp.cce.cornell.edu

January 22-24, 2016
Saratoga Hilton and City Center, Saratoga Springs, NY

The full list of workshops, including several with Cornell Vegetable Program staff presentations, is available at http://www.nofany.org/events/winter-conference Register is open online and continues through January 15. Questions about registration, call Stephanie at 585-271-1979 x509 or email register@nofany.org.

Northeast Beginning Farmer Project Online Courses

The Cornell Small Farms Program is pleased to announce the winter roster of online courses available through its Northeast Beginning Farmer Project. These courses help farmers learn from the latest research-based education.

Winter 2016 Online Course List

BF 102: Markets and Profits - Exploring the Feasibility of Your Farming Ideas, Jan 14 - Feb 28

BF 120: Veggie Farming - From Planning to Planting, Jan 13 - Feb 17. CVP Specialist Darcy Telenko is an instructor.

BF 140: Small-scale Organic Grain Production - Is it Right for Your Farm?, Jan 19 - Feb 23

BF 151: Intro to Maple Syrup Production, Jan 12 - Feb 16

BF 201: Effective Marketing - Sell Smarter, Not Harder, Jan 11 - Feb 21

BF 203: Holistic Financial Planning - Building Profit into the Picture, Jan 20 - Feb 24

BF 231: Grazing Management - Improving Your Triple Bottom Line, Jan 14 - Feb 18

BF 121: Veggie Farming - From Season-Long Care to Market, Feb 24 - Mar 23. CVP Specialist Darcy Telenko is an instructor.

BF 150: Farm-Scale Mushroom Production - For Fun and Profit, Feb 23 - March 29

BF 202: Planning to Stay in Business - Writing Your Business Plan, Feb 4 - March 10

BF 103: Taking Care of Business - Understanding the Business, Regulatory, and Tax Implications of Your Farm, Mar 7 - Apr 11

BF 220: Season Extension with High Tunnels - Know Before You Grow, Mar 22 - Apr 19. CVP Specialist Judson Reid is an instructor.

Each course is $200, but up to 4 people from the same farm may participate without paying extra. See the course description page for more on the course learning objectives, instructors, and outline. Learn which courses would be best for you, read about our team of experienced instructors, see answers to Frequently Asked Questions, and view the calendar of course offerings.

Courses often fill very quickly, so don’t miss your chance to sign up today!
For more information contact: http://www.nebeginningfarmers.org/online-courses/.
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.

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