



CORNELL VEGETABLE PROGRAM HIGHLIGHTS

JANUARY – MARCH 2014

What Makes Processing Vegetable Farms Sustainable?

As a partner in a large multistate USDA Specialty Crops Research Initiative (SCRI) grant, the Cornell Vegetable Program (CVP) is helping to develop the matrices that define farm sustainability. This quarter, grower and processor surveys, originally developed by the University of Wisconsin and National Institute for Sustainable Agriculture, were reviewed and modified by the CVP, Cornell faculty and New York Vegetable Processors. The surveys which focus on sustainability of whole farms and specific components of processing snap bean production were then taken out to approximately 150 farms in New York at the time processors were setting up their contracts for 2014. The completed surveys have been sent to the University of Wisconsin for analysis. The results will establish baseline data for sustainability, identify needs for research and education, and be used to monitor progress of the industry over time. Buyers of canned and frozen vegetables require processors and farms to conduct sustainability audits. This research is a proactive approach to give the local farms a voice in the process.



Growers of the 20,000 acres of processing snap beans in New York must pass rigorous sustainability audits from buyers. *Photo: Julie Kikkert, Cornell Vegetable Program*

CVP Specialist is a Key Player in the New National/Local Emphasis on Improving Soil Health

Growers in the Cornell Vegetable Program area now have more opportunity than ever to learn about the benefits of adopting good soil management for improved soil health. Timing is critical to meet the challenges posed by a pattern of rainfall and temperature extremes. The CVP, with ten years of experience in educational programs and applied research with growers on reduced tillage, cover crops and soil health, is in a key position to advise and work with NRCS and SWCD on USDA's new Soil Health Initiative. CVP Specialist Carol MacNeil spoke at grower meetings on the benefits of cover crops, and organized meetings with top speakers on reduced tillage, cover crops and soil health, attended by over 450 growers, consultants and agency people, at 7 events from Lockport to Syracuse. NRCS soil scientists were invited to the meetings to conduct soil/water demonstrations showing the superior performance of well managed soils under simulated rainfall compared to conventionally managed soils. One grower left a meeting determined to leave behind many years of over-working his soil to adopt reduced tillage practices and cover crops. Two CVP growers, along with the Carol MacNeil, serve on the State Interagency Soil Health Work Group, which provides guidance for soil health activities statewide. In addition, Carol serves on the planning committee for a joint SWCD/NRCS/CVP Soil Health Field Day to be held in WNY in August. Anu Rangarajan, Cornell, recently surveyed 70 Reduced Tillage vegetable growers (30% from the CVP) on RT benefits. The respondents (33%) had from 4 to 3,000 acres. The majority reported improved soil health: half needing 40% less irrigation (improved soil water-holding capacity); most reported less soil compaction, averaging 50%. One grower was "very impressed with the good soil drainage obtained with RT in a very wet year." Respondents reported equal or better crop yields, and the intent to increase RT acreage in 2014. Financial incentives will be available to growers for adoption of better soil management practices, and the cost of the Cornell Soil Health Test will be covered. With years of experience the CVP is ready to assist more vegetable growers in improving their soil health and crop production.



Soil management (left to right): forest, conventional, and no-till/cover crops. Conventionally managed soils dissolve with rainfall, resulting in ponding, run-off and crusting. *Photo: Carol MacNeil, Cornell Vegetable Program*

Cabbage Session at Empire State Producers Expo Provided Solutions to Manage Pests

Three pest problems dominated in cabbage during the 2013 growing season: black rot, downy mildew and slugs. All of these pests can result in significant economic losses due to reduced yield and quality. At the Empire State Producers Expo, these pest threats were featured during the cabbage session, which was organized by CVP's Christy Hoepfing. It was attended by 94 growers and allied industry representatives. A record-breaking 77% of the survey respondents rated the session as excellent. Cornell Plant Pathologist, Chris Smart gave a detailed overview about what her use of DNA-fingerprinting technology has revealed about black rot in New York, which directed her research program to focus on managing black rot during transplant production. When asked what new piece of information was learned at the meeting, 48% cited various details about managing the black rot disease. More importantly, 33% indicated that they planned on implementing Cornell's recommended management strategies for black rot on their farms. Choosing less susceptible varieties, ensuring clean seed and transplants, using weekly copper sprays to minimize spread of black during transplant production and early identification can reduce the risk of a black rot epidemic considerably. Cornell research shows that weekly applications of copper can reduce severity of black rot by as much as 80%.



Cabbage infected with black rot. Although the infection starts as yellow lesions at the tips of the leaves it travels into the head resulting in blackened and rotten tissue.
Photo: Chris Smart, NYSAES

Many Farmers Educated at Cornell Vegetable Program Hosted Workshops

More than 230 farmers attended eight CVP-organized educational meetings designed for fresh market growers. Those in attendance gathered new information that will boost their knowledge in vegetable production/practices that will ultimately influence their profitability. The biggest concern on growers' minds was farm food safety and looking for new marketing ideas.

Three of the workshops were GAPs Food Safety Training with more than 40 attendees devoting 2 days to learning how to improve the practices of reducing risk as they grow fresh produce. About a dozen farmers were looking for the training because of buyer demand. Without audits and certification they would be closed out of markets. Without our training these farmers would, conservatively, lose access to nearly \$100,000 in sales or more.

Another workshop held this quarter was Introduction to Storage Crop Vegetable Production for Winter Sales: What We Have Learned in the Past Five Years. It was five years ago where the first production workshop was launched by the CVP covering the topic of storage crops. Long-season and winter farmers markets were just opening in the Rochester area. Providing produce for this new type of marketing offered new potential for growers.

Following on the heels of the "locally grown" movement, "eating in season" has caught on quickly. There are now 4-6 long season and full winter markets plus many growers offering winter shares CSAs. One farmer stated that with growing storage crops for winter sales means he has income nearly every week of the year instead of relying on just the spring/summer season. Another grower noted that since he has added winter sales he has made more than \$15,000 extra which has really improved his way of life. With more than 30 growers participating in some sort of winter sales of produce (storage crops, season extended growing, and value-added), this works out to close to a half-million dollars in sales for our regions growers.

The other workshops held included: Crop Planning For Market and Rotation (Allegany County area), Storage Grant Project Cooler Tour (Ontario County), Niagara County Winter Grower Meeting, and Farm Food Safety Webinar (Allegany and Cattaraugus).



Highland Park Winter Farmers Market, 2012. The Highland Park Winter Market is now called the University of Rochester Winter Market, located in the Flaum Atrium on the U of R campus.
Photo: highlandwintermarket.com

Produce Auction Meetings Highlight Cornell Vegetable Program Resources

First quarter 2014 saw one of the busiest meeting seasons in recent memory. In particular, the Cornell Vegetable Program organized the educational programs for 5 of the state's 6 produce auctions, including the newest in Allegany County. These meetings highlighted the team's resources with CVP specialist presentations on basic weed management, research updates from several CVP projects and synergy with HarvestNY as Food Safety updates prepared the auctions to remain current and competitive in the market place. Over 250 people attended these events worth 5 DEC recertification credits.



Produce ready for sale at the Finger Lakes Produce Auction. Photo: Angela Parr, CVP

Newly Funded Grants

Each year, the Cornell Vegetable Program is tasked with generating a certain percentage of our operating funds, or Program Generated Income (PGI), through research grants, sponsorships, and meeting registration revenue. This quarter, we are pleased to have received the following grant funds:

- Western bean cutworm (NYS Dry Bean Endowment), Carol MacNeil – PI, \$2,000, 7/1/14 - 6/30/15
- Late blight Decision Support System (DSS) Training (Bill Fry, Cornell), \$1,500, 1/1/14 - 12/30/14
- Advancing Living Mulch in Plasticsulture Vegetables-NESARE Partnership, \$15,000. This project was developed with funding from an AMG 'Challenge Grant'. Replacing bare row middles with living mulch will reduce herbicides and labor while improving harvest conditions on Northeast vegetable farms. This project will evaluate and demonstrate cover crops (living mulch) between rows of plastic mulched vegetables. Hosting trials on two commercial farms, we'll evaluate living mulch in a 'real-world' setting and generate scientific data. One of farm will host a demonstration meeting to be attended by 50 farmers for peer-to-peer learning. Project information will be synthesized into formal presentations to be shared with 300 farmers at events such as the Empire State Producers Expo and similar winter meetings. Results will also be shared via the Cornell Vegetable Program website, YouTube Channel and Twitter accounts. Two articles will be developed for the VegEdge newsletter, reaching nearly 700 people in 24 NY counties and 6 states.
- Expanding Use of Brassica Cover Crops in Onion Production (NESARE Partnership Grant), Hoepting, \$14,932, 4/1/14 – 3/31/15
- Problem Weed Management in Onions (Onion Research and Development Program), Hoepting and Buck, \$6,700, 4/1/14 – 3/31/15
- Understanding Nitrogen Dynamics in Cabbage (Cabbage Research and Development Program), Hoepting and Reiners, \$7,000, 4/1/14 – 3/31/15

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- **Together, over 600 farm visits and phone/email consultations were made by our Vegetable Specialists**
 - **23 educational events were organized by the Cornell Vegetable Program during this quarter**
 - **Nearly 2,000 people attended meetings where presentations were made by our Vegetable Specialists**
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For more information about our program, contact Julie Kikkert at jrk2@cornell.edu or 585.394.3977 x404 or visit our website

<http://cvp.cce.cornell.edu>



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