

# Re ● view



The Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serves the vegetable, greenhouse, potato and dry bean industries in an 11-county region of Western New York. Our region accounts for more than half the acres of the New York vegetable industry, with 1,017 vegetable farms and an estimated farm gate value of more than \$250 million.

- Our team made more than 2,900 farm visits and crop consultations
- Our six specialists organized and gave presentations in 108 educational meetings with nearly 4,700 attendees
- 66.75 DEC pesticide recertification credits and 56 certified crop adviser credits were offered at our events

## 2014 YEAR IN REVIEW

*“The Western New York Cornell Vegetable Program has been a valuable part of our vegetable enterprises...I think the whole team does an excellent job of communicating with growers, ensuring that we have as many of the best tools we can use to grow the very best vegetables.”*

— Peter Call, My-T Acres, Inc, Genesee County

*“We are grateful for the help we get from the Cornell Vegetable Program. It is important to our success as small-scale mixed vegetable growers.”*

— Denny Reynolds, Quest Farm Produce, Allegany County





Photo: Christy Hoepfing

Scouting onions for onion thrips, an important step in an integrated pest management program.

## Big Savings to Onion Growers Who Adopt the Cornell Insect Management Program

Onion thrips are the most economically important insect pest of onions, and when not managed the feeding damage that they cause can reduce bulb weight by 30 to 50%. Cornell Vegetable Program Onion Specialist, Christy Hoepfing and Cornell University Entomologist, Dr. Brian Nault developed and implemented an integrated pest management program (IPM) for onion thrips. The IPM program includes the use of scouting and spray thresholds, resistance management practices, proper use of adjuvants and avoiding non-compatible tank mixes with fungicides. In 2014, the program was tested for three muck and two upland onion growers. Since onion thrips pressure was low in 2014, there was a tremendous opportunity to reduce insecticide use. Excellent management of onion thrips was achieved with the scouted fields needing 1 to 4 sprays compared to the 6 to 11 sprays that would have otherwise been applied in weekly programs. On average, the growers saved \$204 per acre in insecticide costs.

## Rainy Season Favors Late Blight – Cornell Vegetable Program Responds

The wet season was favorable for the rapid development and spread of late blight, a destructive disease of tomatoes and potatoes. The Cornell Vegetable Program identified the disease so growers could take immediate action, collected samples for strain identification, and sent alerts in VegEdge newsletter with recommendations on scouting, identification, and protective sprays.

In addition, the Cornell Vegetable Program encouraged Cornell Cooperative Extension agriculture and home horticulture staff in 18 Western New York and neighboring counties to send late blight samples to Cornell for analysis. Strains of different mating types can cross, producing new strains which could potentially over-winter, vastly increasing the threat of future epidemics. Fifty-four late blight samples were submitted from the 18 county area, well over twice what was sent in from the rest of upstate New York. As a result of this effort two new late blight strains were identified, giving early warning of this potential threat.



Photo: Jim Monahan

Examining a potato leaf for potential late blight infection.



Photo: Angela Parr

Inspecting lima bean spots to assist in disease diagnosis and provide management options.

## Cornell Vegetable Program Aides Processing Vegetable Industry in Identification and Management of Crop Diseases

Each year, more than 35,000 acres of vegetable crops are planted in New York for the canning and freezing industry. These crops which include green peas, snap and lima beans, sweet corn, carrots, beets and spinach are valued at more than \$32 million. Processing vegetables are typically planted in fields ranging from 10 to 80 acres in size, where losses from pests can mount into the thousands of dollars per field. Working with Cornell Plant Pathologists, Cornell Vegetable Program staff members assist the industry each year in diagnosing disease issues and recommending management programs. The 2014 growing season was generally wetter than average. This favored bacterial brown spot and white and gray mold in beans. Numerous fungal diseases were detected in spinach in the fall. We researched fungicide resistance in beets and the cause of various leaf spots in lima beans.



Cornell Vegetable Program Specialists make farm visits to identify problems as they appear.

## Cornell Vegetable Program Responds to Growing Need for Pest Monitoring and Identification

Fresh market farms often grow more than a dozen different types of vegetables, all of which are susceptible to a plethora of pests. To make matters more challenging, the extremely wet and cool growing season led to an explosion of pest issues, some of which had not previously been a problem to our seasonal growers, including many fungal and bacterial diseases, insects and loss of weed control. Cornell Vegetable Program fresh market Vegetable Specialists spent much of the summer receiving calls and making farm visits to identify problems as they popped up around Western New York. Proper identification of the problem is key to shape management tactics. Educational materials and on-farm summer workshops were also provided to assist growers in managing pests. The Cornell Vegetable Program cooperates in several pest monitoring programs and is often the first to report pest sightings. Crop pest information was also distributed weekly during the season in VegEdge newsletter.

## Cornell Vegetable Program is a Key Player in the National Soil Health Initiative

With ten years of experience in grower education and on-farm research to improve soil health, the Cornell Vegetable Program is in a key position to partner with the USDA National Resources Conservation Service and county Soil and Water Conservation Districts on the new, national Soil Health Initiative. The Initiative seeks to help producers learn about and implement soil health management systems. Improving soil health can help growers counteract the effects of extreme weather, such as the excessive rainfall experienced in the region this growing season. Over the past year, Cornell Vegetable Program Specialist Carol MacNeil was a speaker or organizer for 8 meetings/workshops on soil health, held from Lockport to Syracuse, and attended by nearly 650 growers, consultants and agency people.



A soil pit demo shows a high population of earthworms (holes marked in orange) where the grower used reduced tillage and cover crops.



Yields can be increased in high tunnels with the use of containers.

## Promising Results from Industry Sponsored Research

Tomatoes benefit from the protected culture of a high tunnel, but cropping year after year degrades the soil. Decreasing soil organic matter, increasing salinity, nutrient imbalances, compaction, and disease pressure all limit yield potential. Working with a container manufacturer, the Cornell Vegetable Program evaluated the potential of different makes and sizes of containers as an alternative to repeated in-ground cropping. Our early results indicate yields can be increased by over 5 lbs per plant, a potential revenue increase of \$3,000 per greenhouse bay!

## Helping Farms Test Varieties of Vegetables for Ethnic Markets

Interest is growing in new types of vegetables for ethnic markets. In response to this market trend, the Cornell Vegetable Program established an on-farm trial of more than a dozen types of ethnic vegetables to gain production experience. To obtain market insights, the Cornell Vegetable Program encouraged one farm to test the new vegetables in their Community Supported Agriculture (CSA) and at two farmers markets. Edible gourds, wild looking cucumbers, bunched kale greens, Asian coriander and cilantro root were all in high demand. Customers agreed that new varieties really made this farm stand out.

The farm noted that sales jumped with the added diversity. The Cornell Vegetable Program will continue to educate producers on how to effectively tap into the ethnic market opportunity.

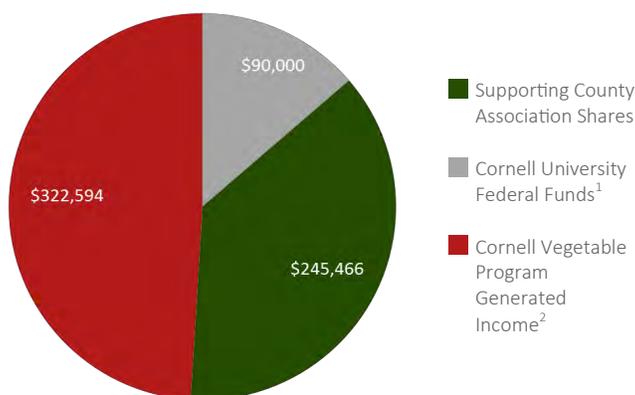


A display of edible gourds and cucumbers from the Cornell Vegetable Program ethnic vegetable research trial.

The Cornell Vegetable Program is one of the premier regional agricultural Cornell Cooperative Extension programs in New York, serving a large multi-county region in the western part of the state. The team's Vegetable Specialists work together with Cornell faculty and extension educators statewide to address the issues that impact the industry. The Cornell Vegetable Program provides educational programs and information to growers, processors and agri-business professionals, arming them with the knowledge to profitably produce and market safe and healthful vegetable crops, contributing to the viability of farms and the economic wellbeing of New York State. Specifically, our program focuses on food safety, variety evaluation, market development, pest management, and cultural practices.



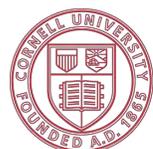
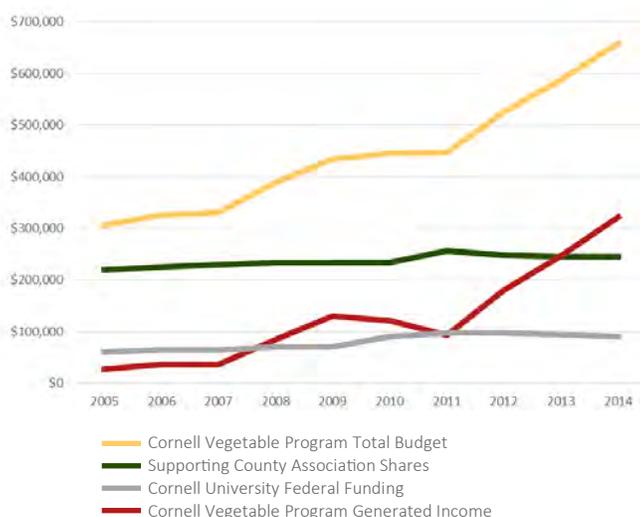
## 2014 OPERATING BUDGET



<sup>1</sup> USDA National Institute of Food and Agriculture Smith Lever Funds

<sup>2</sup> Includes funds from industry, state and federal grants, event registrations, sponsor support, and Cornell Vegetable Program reserve accounts

## FUNDING TRENDS



**Cornell University**  
**Cooperative Extension**  
**Cornell Vegetable Program**

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

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