



Cornell University
Cooperative Extension
Cornell Vegetable Program

*Serving Allegany, Cattaraugus,
Erie, Genesee, Monroe, Niagara,
Onondaga, Ontario, Orleans,
Seneca, Wayne & Yates Counties*

CORNELL VEGETABLE PROGRAM HIGHLIGHTS

OCTOBER – DECEMBER 2012

Mystery Solved: Disease Management Failure in Table Beets is Explained

The Cornell Vegetable Team was called to investigate a rampant case of *Cercospora* leaf blight in an 80 acre field of red beets in western New York. The grower questioned why after investing more than \$5,000 on three applications of azoxystrobin fungicide it did nothing to stop the disease. When the CVP specialist visited the field with a Plant Pathologist from Cornell University, the disease was completely out of control with an average of 28 disease lesions per leaf. The team collected disease samples and discovered through laboratory and field testing that the disease causing fungus was completely resistant to the azoxystrobin fungicide that had been applied. Leaves are needed to nourish the plants and to pull the beets from the soil at harvest. This is the first reported case of beet *Cercospora* disease resistance to azoxystrobin in New York. The CVP/Cornell University team is working with growers to have alternative products registered and to advise growers on resistance management.



Beet field infected with *Cercospora* leaf blight.
Photos: J. Kikkert, Cornell
Vegetable Program

Growers Successfully Adopt Advanced Late Blight Forecast Tool

In the 12-county Cornell Vegetable Program region there are 460 farms that grow potatoes and field tomatoes, accounting for 6, 310 acres of production and an average annual value of ~\$34 million. *Phytophthora infestans*, the late blight fungal pathogen, has cost growers in the Cornell Vegetable Program region many millions of dollars in lost crops and higher fungicide costs since new, aggressive strains of the disease appeared in the 1990s. Our team has a long history of educational and diagnostic assistance related to late blight in/adjacent to CVP counties, with county staff and Master Gardener coordination, in addition to growers and agribusiness reps, with the goal of successful control, while limiting environmental effects. Over the past 3 years about 130 growers and associated industry reps attended CVP-taught local educational meetings on late blight management and online trainings on the new Late Blight Decision Support System forecast. Potato and tomato growers on 12 farms in Western and Central New York successfully used the advanced Late Blight (LB) Decision Support System (DSS) forecast tool in 2012 to more effectively and efficiently time fungicide sprays.



Preliminary diagnostic photo sent by D. Reynolds, Allegany County, triggered a farm visit by the Cornell Vegetable Program, confirming late blight.

Point forecasts for the farm/field location giving several days of advance warning about the need to apply a fungicide, and the choice of dozens of varieties with varying late blight susceptibility, are attractive features. Recent upgrades to the DSS increased the likelihood of grower adoption, with a large choice of fungicides, and the automated email or text alert system. Growers and consultants left the trainings with DSS accounts and passwords, with varieties and field locations designated, ready for the season. Follow-up by the CVP consisted of email and phone communication, some farm visits, and *Veg Edge* articles. Adopters used the DSS early in the season or most of the season. Some were safely able to stretch fungicide sprays during the dry weather. Farms were all conventional, ranging in size from small to very large. Another online workshop on the late blight Decision Support System will be held March 19 at CCE – Monroe Co.

Content Developed for New Cornell Guidelines: Greenhouse Vegetable and Herb Production

Recognized for expertise in greenhouse vegetable culture, the CVP took a major role in production of the first ever “Cornell Pest Management Guidelines for Greenhouse Vegetable and Herb Production”. Funded by a grant from the New York State Integrated Pest Management Program, the guide will cover pest management concerns for several crops that can be grown in greenhouses and high tunnels. The CVP wrote and edited sections on cultural practices and insect management for tomatoes, peppers, cucumbers and spinach. Additional information on these and other crops was provided by faculty and other Extension Educators across the state, with CCE-Suffolk County taking the lead on overall production. The publication is scheduled to be released in March 2013. Production of greenhouse vegetables and herbs has grown significantly in the past decade, with New York now a national leader in winter farmers markets. Until now there was ambiguity over which materials were registered for greenhouse and high tunnel use. This guide will help growers apply pest management materials in a safe, responsible and legal fashion.



Cornell Vegetable Program Specialist Judson Reid spraying greens in a high tunnel.

Photo: K. Klotzbach, Cornell Vegetable Program

Cost of Production and Profitability Analysis Workshops

The Cornell Vegetable Program ran two workshops on cost of production analysis for vegetable growers. Forty-seven farmers have the skillset and tools to run the financial numbers of their operation to ultimately see how profitable they really are. They were able to see each major crop’s cost of production, set accurate selling prices, keep inventory tracking in line, find their costs for labor, production, and marketing, and evaluate how well they are doing for each season. Twelve farmers have reported that they have adjusted some facet of their operation due to being able to understand their financial situation because of the training they received from this course. Each stated that they believe they will have improved profitability (+10-20%) for the next season due to the changes they will make.

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:

- **Best Management Practices for Season Extension in New York.** NYSDAM 2012 Specialty Crop Block Grant Program: \$57,998 (Reid).

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- **Together, over 360 farm visits and phone/email consultations were made by our Vegetable Specialists**
 - **9.5 DEC pesticide recertification credits were offered at events organized by the Cornell Vegetable Program**
 - **10 Certified Crop Adviser (CCA) credits were offered at Cornell Vegetable Program events**
 - **Over 400 people attended meetings hosted by our team**
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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>

