Cornell University
Cooperative Extension
Cornell Vegetable Program

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

CORNELL VEGETABLE PROGRAM HIGHLIGHTS

APRIL – JUNE 2013

Vegetable Farmer Discussion Groups Off to a Strong Start

Two new area discussion groups were launched in April 2013 for all interested vegetable farmers to regularly interact with the CVP staff and with each other. Growers gather on a local farm to learn about the topic of the month, see various aspects of the host operation, and share their experiences. Participants can also bring vegetable samples to have CVP personnel diagnose diseases, insects, weeds or other problems.

The first group is for growers in and around the Allegany and Cattaraugus County area. This group meets the 2nd Wednesday of each month. The late afternoon meeting is nicknamed Walk & Talk because the group meets at different farms, walks the fields, and discusses current issues. For several hours each month this broad group has the opportunity to come together to learn new information, draw attention to potential problems that might be coming, answer questions in an efficient manner, and share experiences. Fourteen growers have participated in the meetings, to date, giving attention to their needs during the growing season.

Robert Hadad prepares to demonstrate the proper use of a wash station. *Photo: E. Buck, Cornell Vegetable Program*

The Rolling Hills group meets in and around the Wayne, Ontario, and Monroe county area. To date, 68 participants have attended. This group has developed a more social feel to it. They meet the third Tuesday of each month around 5pm and share a pot-luck meal. The meeting location moves to different farms and covers many topics like the Walk & Talk group. Specific topics have included cost of production, and farm food safety wash water training. The response has been great with many farmers giving feedback about how they are putting the information learned to good use on the farm and how they have improved practices and saved money by being on top of issues before they become problems.

Andy Fellenz, grower and host for the May Rolling Hills Meeting (meeting focus: crop establishment equipment and high tunnel production) discussed the merits of various seeders and gave a farm tour. Here he is showing the Jang seeder. *Photo: E. Buck, Cornell Vegetable Program*

Best Management Practices for Season Extension in New York

CVP specialists began to implement this new project which was given $60,000 in funding over a two year period by the NYS Department of Ag and Markets Specialty Crops Grant Program. The aim of this project is to conduct research to support the establishment of Best Management Practices (BMPs) and to increase profitability by having farms adopt these practices. Development of BMP evaluation protocols and recruitment of cooperating trial sites in the Southern Tier and Western New York was initiated this quarter. A soil heat trial was conducted in winter production of spinach in a tunnel at a cooperating farm in Penn Yan, NY. This site also hosted a grafting trial for tomatoes. Seed companies contributed in excess of $1,000 of seed for a cucurbit grafting trial at the Cornell University Willsboro Research Farm. Grafting the top of a prize variety onto a more cold and disease-tolerant rootstock can increase plant survival and yield.

Photo: J. Reid, Cornell Vegetable Program

Flooding on the Muckland

The improvements in water management of muckland growers across the region in the past several years helped them to deal with the excess rain early in the season, but eventually it was not enough in some lower-lying fields, as the rains continued. Ten to 14 inches of rain fell in some areas from May 10 to the end of June, about double the average. The Cornell Vegetable Program has organized meetings over the years bringing muck growers together with their town supervisors, county Soil & Water Conservation District staff, a Cornell Water Management Specialist, and the NYS DEC to brainstorm solutions to the water problem. Some growers have been collaborating on improvements with each other, towns and agency staff, and others focused on their own farms. This included a large grower investment of time and money.

Muckland flooding after 7 inches of rain in 15 days by mid-June. *Photo: C. MacNeil, CVP*

This year farms with: fully operational tile; well cleaned ditches; cleared outlets; deep, well-formed perimeter ditches and gates; adequate and back-up pump capacity; lowered/enlarged farm lane and road culverts; reduced soil compaction (by deep ripping, deep rooted cover crops) so water could reach the tile; regular removal of beavers by NYS DEC and the breaching of dams (where landowners gave permission); and/or the preparation of high planting hills for potatoes, all helped keep water off the crops. Unfortunately, in some cases growers were up against inadequate, high state road culverts, lack of landowner permission to clear outlets or take care of beavers, and erosion from recently worked sloping upland adjacent to muck, which led to flooding. Upland farms across many parts of the region were also affected. Some crops or parts of fields have been lost, while in other cases growers were not able to plant all their intended acreage. The CVP reported to the Wayne County Board of Supervisors about muckland farm losses. A meeting is scheduled August 27th so growers can get together with agency staff to continue working on action. County Supervisors will be invited.

Carrot Weed Management Trial Aims to Reduce Grower Losses

There's a war against weeds raging on the black soils of the Potter muckland in Yates Co. As soon as the fragile carrot seedlings emerge, right alongside erupt the vigorous pigweed and ragweed seedlings that have laid dormant in the soil for as many as 50 years. It used to be that sprays of the herbicide linuron would knock out the weeds, while leaving the carrots unharmed. Not so anymore as researchers from the Cornell Vegetable Program and Cornell University have demonstrated that some of those weeds are now resistant to the herbicide applications. To growers of the roughly 400 acres of carrots on the Potter muck, even a 10% loss in yield from weed competition would equal a loss of $120,000 in profit. The effects can be even more devastating as one grower found out last year when yield in a 50 acre field was reduced by 50%. Until a solution can be found, growers are spending thousands of dollars on multiple linuron applications, cultivations, weed wiping and hand-weeding. The CVP along with Cornell University weed scientists are conducting a weed management trial in a commercial carrot field on the Potter muck in which 13 different herbicide treatments are being tested. Dramatic differences are already being seen (photo). Final data will be collected at harvest time in September. The data will be used to obtain new products registrations for use on carrots in New York. A similar trial is underway at the Cornell Research Farm in Freeville, NY on mineral soils. As a testimony to our work, the cooperating grower had this to say: *"The Vegetable Program at Cornell is a vital part of New York's survival in the vegetable business. We as growers feel they are one of the very few really working on the unique issues that affect New York, specifically. They are also leaders in solving problems that affect the industry as a whole."*

Commercial carrot field with the Cornell herbicide trial in the foreground. Note differences in weed control. The weedy plot in the center is the untreated control. Surrounding plots have different herbicide treatments. *Photo: J. Kikkert, Cornell Vegetable Program*

Reduced Tillage Trials

Side-by-side reduced tillage vs conventionally tilled transplanted cabbage and seeded winter squash trials have been established on two farms in Monroe County. In-row compaction, plant stand, early season plant weight, and harvest yield and quality will be compared by small plot sampling and grower records. Zone or strip tillage equipment has several components that result in tillage/seedbed preparation in ~8 inch strips rather than across the entire field which is done with conventional tillage. This saves time and fuel, reduces organic matter breakdown and erosion, limits field traffic/compaction to areas away from the crop row, and provides a narrow, deep channel for root growth and water drainage. The ripper makes the narrow channel over which the crop will be planted, and may also place fertilizer. The fluted coulters work up the 8 inch wide by 6 inch deep seedbed. The baskets break up soil lumps to improve seed-soil contact and seed emergence. Planters for reduced tillage typically have row cleaners mounted on the front to sweep root clumps and soil lumps out of the planting row.

Reduced tiller components (left to right): ripper, fluted coulters and basket. *Photo: C. MacNeil, CVP*

Onion Growers Reaping Benefits of Chateau Herbicide for Weed Control

Onions are very poor competitors against weeds and herbicide use is a critical first line of defense in large-scale production on muck soils. As a result of the Chateau demonstration trial conducted by the CVP last year in Wayne County, most of the large-scale onion growers in the CVP region used Chateau on at least a portion of their onion acreage this spring. Reports include achieving excellent post-emergent control of pigweed, PA smartweed, nutsedge, various species of mustard seedlings, purslane, spotted spurge and popular seedlings with Chateau, although growers note that it is critical that the weeds be small for some of these species for best control, as well as anecdotal evidence of Chateau's pre-emergent activity. Although a formal survey has not yet been conducted, anonymous comments from onions growers include:

- ~ *"Thanks to adding Chateau to my herbicide program, I achieved the best control of weeds on my farm ever, despite heavy weed pressure this spring!"* – Elba grower
- ~ "*We treated 75 acres with Chateau this year and it smoked mustard seedlings that I have not been able to control well in the past with other herbicides"* – Sodus grower
- ~ *"I applied Chateau to a carpet of PA smartweed and it smoked it, saving me $20,000 in hand-weeding expenses on these 40 acres"* – Elba grower
- ~ *"I don't know what kind of weeds I had… doesn't matter now, Chateau smoked them all!"* – Orange Co. grower

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:

- Challenge Grant "Inter-row cover crops for plasticulture vegetables" funded by AMG for $6400 (Reid)

- **Together, over 965 farm visits and phone/email consultations were made by our Vegetable Specialists**
- **11 educational events were organized by the Cornell Vegetable Program during this quarter**
- **Over 1,200 people attended meetings where presentations were made by our Vegetable Specialists**

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