Cornell University
Cooperative Extension

Eastern NY Commercial Horticulture Program

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Weekly Vegetable Update

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Regional Updates:

North Country—Clinton, Essex, northern Warren and Washington counties

The rollercoaster continues. We had light frost on May 27 then highs of 90 degrees on the 29th-31st. Records in both extremes. No wonder we're hearing so many complaints about poor germination, poor transplant establishment, washed out young plantings, delayed plantings, wind beaten plants, you name it. If you're having any of these problems, you are not alone.

Weeds are exploding. Try to make time now to do some shallow cultivation while the weed seedlings are small; it will really pay off. With so many things to do at once this month, it's easy to push that job to the side. But you will accomplish more now in less time than if you let those seedlings get established and then try to deal with them.

Capital District—Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, southern Warren and Washington counties

Many growers are re-planting cucurbit transplants this week after serious storms damaged crops in the Mohawk Valley especially. We are still seeing flea beetles, cucumber beetles, and more recently Colorado potato beetles. No corn moths, Spotted Winged Drosophila, or Brown Marmorated Stinkbugs have been trapped yet.

Rainfall totals have been extremely variable, with some growers experiencing washouts and others hardly having field work interrupted. Those growers who have received a lot of rain may want to think about sidedressing earlier than usual, since pre-plant fertilizer may have washed past the root zone.

Mid-Hudson Valley—Columbia, Dutchess, Greene, Orange, Sullivan and Ulster counties

Environmental conditions have been very variable this spring. Within this past week alone, we had highs in the 90's, lows in the mid 30's and some serious wind to boot. This has taken a toll on crops, especially unprotected transplants. Tomato transplants in particular look pretty rough just about everywhere I go, but after a few days new growth coming on looks very good.

Upcoming Events:

June 21st: Food Entrepreneurship workshop, Kingston
June 24th: Small Grain Production Field day, Red Hook

-more info on events is available on page 5

Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Rensselaer, Saratoga, Schoharie, Schenectady, Sullivan, Ulster, Warren and Washington Counties

Garlic Update

Overall, the garlic crop in Eastern NY has rebounded nicely from any drought stress after widespread soaking rains in the last two weeks. Bulbs are starting to form and scapes are just starting to emerge on early garlic. The focus for this month is on making sure that the garlic plant that you have already grown is able to put all of its available energy into a strong, healthy bulb. Controlling weeds, maintaining adequate field moisture, and scaping will all help to maximize yield. Continued field culling will maximize quality, an especially important factor in seed garlic production.

Weed control: Continue to control weeds in the garlic planting for at least the next few weeks. Weeds will compete for moisture and will make it more difficult to harvest garlic. Most growers will want to complete at least one more cultivation pass on bare ground, and may need to hand-weed mulched beds.

Maintain Field Moisture: Garlic needs adequate moisture as it forms the bulb to maximize size. If you can, supply one inch of water per week to the garlic if we are not receiving rain. Plasticulture growers and those with heavy straw mulch should keep checking moisture levels under the mulch, though they may need to water less than bare ground growers. Keep watering until a couple weeks before harvest, as needed.

Garlic with tip burn.
Image: Teresa Rusinek

Scaping: Removing the scape may provide up to a 30% yield boost, depending on soil conditions and weed competition. If you can sell the scape to recoup the cost of labor used to remove it, even better! If you can't sell them, snap them and leave them in the field to speed up the process.

Field Culling: Continue to walk the garlic field and pull plants which are unusually wilted on warm, dry days; plants that are distorted or curled; and plants that are an off color (yellow or bright green, usually) and discard them. All of these plants will either have a physical defect such as feeding injury or will have a disease such as Fusarium. *This is a particularly important step if you plan to save your garlic for seed or to sell it as seed.* Even sickly garlic will often still make a small bulb. Once it is cured, a small bulb with disease issues can look remarkably like a healthy small bulb, though the disease inoculum is still present. Field culling is your best quality control option.

What you should not be worried about: YES! There are some abnormalities that you might see which you don't need to worry about. The biggest one this year is **tip burn**. Garlic across the region has more tip burn than we usually see. It might be from the period of dry weather; it might be because the garlic was exposed to some very cold temperatures this spring after it was actively growing. Either way, it isn't affecting the quality of the bulbs, and can be disregarded. You might see some black mold (aspergillus) begin to form on the dead tips. This is also normal; aspergillus is an airborne mold which regularly colonizes dead tissue under some environmental conditions. I'd prefer not to see it anywhere on the plants, since it can also be a problem later in storage, but even so it isn't going to effect garlic growth now. I'll write more about creating an environment that doesn't favor aspergillus growth while curing in a few weeks.

Garlic across the region is also showing a fair amount of **silver blotching on the leaves**. If you see this blotching, you should scout the garlic to make sure that you don't have thrips. To do this, gently pull back a few leaves from the stalk and look for tiny (less than 1 mm), cigar-shaped insects which range in color from yellow to brown. You might want to have a magnifying glass handy. Check at least 10 plants, and check field edges. The good news, however, is that in all the garlic I have scouted throughout the region I have only found thrips in a handful of garlic plantings. Mostly the blotchiness is part of garlic's not-so-usual, usual growth.

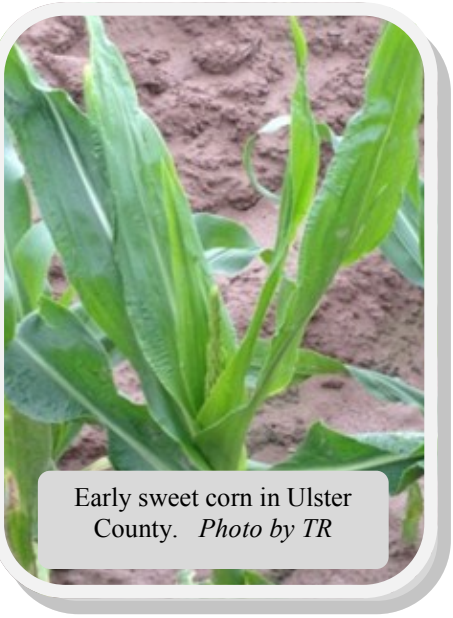
As always, if you have questions about your garlic as we head for harvest, please feel free to contact Crystal at cls263@cornell.edu or 518-775-0018. *-CLS*

Sweet Corn Update

The earliest planting of sweet corn in the area has emerging tassels. We caught a total of 8 ECB NY over the past week. The ECB will be seeking out early corn so keep an eye on trap counts and scout your early corn. The following is a guideline from the NYS IPM program on Managing ECB in transplanted, plastic and row cover corn:

The usual scouting and threshold recommendations do not apply for row cover, plastic, or transplanted sweet corn that is close to tassel emergence during the first generation flight of European corn borer (ECB). In these early plantings, larvae don't feed in the whorl and emerge in the tassel as they do in bare ground corn. Below are suggestions for timing sprays in season extension corn.

Moths will be most attracted to, and deposit the most egg masses in, the most advanced corn, especially fields started under plastic or row cover. Corn that is in late whorl to tassel emergence stage when egg masses are being laid does not show the typical larval feeding in the emerging tassel that we see in bare ground corn that is in the whorl stage during the flight. For this reason, tassel emergence scouting and thresholds have not been successful in plastic and row cover corn. Target newly hatching larvae using the moth trap catches or scout for egg masses to determine when sprays are needed. Growers have had good results when pheromone trap catches were used to time sprays for the first generation ECB in row cover or plastic corn. Growers waited until there was a significant increase in the ECB trap catches in their area and then timed sprays to coincide with egg hatch. ECB eggs require 100 degree days (base 50) from oviposition to hatch. Two to three applications bracketing the peak moth flight are generally effective



Early sweet corn in Ulster County. *Photo by TR*

Degree day calculations for many locations may be found on the NEWA website: http://newa.cornell.edu. *-TR*

Onion Update – Orange County

Some onion fields have uneven growth and or decreased plant populations where barley was heavily sown. It would appear as though during the cool weather the barley competed with onion growth and onions in the same field can range from 2 leaves (where cover is dense) to 5 leaves (where cover is light). In some fields this is even more exaggerated due to later kill of windbreak; again, due to weather and high winds threatening seedlings.

Other fields are showing signs of mite and maggot damage, in spots. It would appear that there were insecticide failures due to weather-related reasons such as too wet or too dry.

Products	Action Threshold
Radiant SC	3 thrips per leaf
Agri-Mek SC	1 thrips per leaf
Movento	1 thrips per leaf
Lannate LV	1 thrips per leaf

Transplanted Onion Spray Schedule*		
Application #	**Product**	**Action threshold/ Timing of spray to consider**
1	Movento	1 thrips larva per leaf
2	Movento	7 to 10 days after 1st Movento spray if needed
3	Agri-Mek SC	1 thrips larvae per leaf
4	Agri-Mek SC	7 days after 1st Agri-Mek spray
5	Radiant SC	3 thrips larvae per leaf
6	Radiant SC	3 thrips larvae per leaf

Thrips – Thrips are active in transplants and several farms have applied a first, and possibly second, insecticide application.

Use thrips per leaf as a threshold in relation to the chemical you will choose*

Charts selected from *GUIDELINES FOR MANAGING ONION THRIPS ON ONION,* Brian A. Nault and Anthony M. Shelton, Department of Entomology, Cornell University, New York State Agricultural Experiment Station, Geneva, NY 14456

Tomato Leaf Mold

By Ray Range, CCE Orange County

Tomato Leaf Mold, *Fulvia fulva* is a fungus that only affects tomatoes. It is most often a problem in greenhouse and high tunnel production although it is sometimes seen under certain field conditions. Warm, damp, extended wetting and low/poor air circulation conditions are optimal for leaf mold development.

The first symptoms noticed are randomly scattered, light-green or yellowish spots on the upper surface of older leaves. The underside of the leaf will also develop spots that appear to be velvet-like beginning as an off-color tan and the coloring will, eventually, mature to a darker olive-brown color. As the disease progresses, multiple lesions on leaves cause the leaves to turn yellowish-brown, wilt, and finally drop off prematurely.

These underside leaf lesions will produce large numbers of spores that are easily spread to other plants. Splashing water, tools, air currents and worker clothing are the most common ways leaf mold spreads throughout your crop. Optimal environmental conditions for leaf mold development are humid conditions (85%), warm temperatures (71-78°F) with poor air circulation. Symptoms appear about 10 days after inoculation with spores forming a few days later.

The management of leaf mold starts with lowering the sources of inoculum, continues with managing the environmental conditions and finally fungicides should be used immediately when leaf mold is detected.

Clean seed and resistant varieties - Have confidence that your seed source will provide you with clean seed. Choosing leaf mold resistant varieties is a good idea however, new virulent races can develop in just a few years, Don't be surprised when a variety that is resistant this year may be susceptible next year.

Sanitation - Make sure all crop debris is removed and destroyed. The houses should be properly sanitized and steamed (135° for 6 hrs.).

Keep humidity down – Avoid overhead watering. If overhead watering is necessary, water earlier in the day so the foliage dries before night.

Keep the air moving - Use enough fans to keep the air in the house moving. Row spacing,w your plant support system, and canopy density can hamper air movement and can create shady areas.

Fungicides can help - Fungicides need to be applied as soon as the first symptoms are detected. Re-apply fungicides according to the label directions as long as environmental conditions favor disease development. Materials like maneb or copper compounds can be used to help control leaf mold.

Funding is Available to Offset Energy-Efficient Farm Improvements

NYSERDA has released another round of funding for energy efficient improvements to the farm. The following information is taken from the summary available on the NYSERDA website, and should be used as a quick reference. Complete information is available on the website, or contact the individuals listed below. **Please note: funding is first come, first served.** This isn't a great time to be worrying about applications, but a rainy day spent investigating this program might be well worth the time!

–CLS

The NYSERDA Agriculture Energy Efficiency Program (AEEP) offers assistance in identifying and implementing electric and natural gas energy efficiency measures to eligible farms and on-farm producers, including but not limited to: orchards, greenhouses, vegetables, and vineyards. Farms must contribute to the Systems Benefit Charge (SBC).

Under AEEP, you may apply for an energy audit, project incentives, or both.

All technical questions should be directed to: Jessica Zweig, 518-862-1090 ext. 3346, jlz@nyserda.ny.gov

All application requests and application assistance questions should be directed to: aeep@nyserda.ny.gov or NYSERDA's contractor - EnSave, Inc. at 800-732-1399

All contractual questions should be directed to: Venice Forbes, 518-862-1090 ext. 3507, vwf@nyserda.ny.gov

Incentives are:

- Available to offset the cost of equipment or projects, including energy efficient facility and productivity improvements and expansions, that support electric and natural gas efficiency improvements
- Provided on a cost-shared basis up to $250,000 per farm
  - at a level of 75% of project costs based on the results of a site specific analysis or audit
  - farms must contribute at least 25% cash cost-sharing toward the project (grants or incentives from other programs do not count as cash cost-sharing)

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- Based on the installed project's invoice(s) total as billed to the farm – internal labor costs will not be included as project costs
- Capped at 6-month payback based on the result of a site specific analysis on the farm
- Projects must have a simple payback between six (6) months and 18 years
- Paid upon project completion and the approval of all necessary deliverables

Projects are not available for:

- projects completed prior to application
- renewable energy projects
- power quality or power factor improvements
- fuel switching projects

Examples of Energy Efficient Measures:

- High Pressure Sodium Lighting
- T-8 Lighting
- Other Efficient Lighting Systems and Controls
- Efficient Ventilation Fans
- Natural Gas Efficiency Measures:
  - High Efficiency Furnaces and Boilers (≤300,000 British Thermal Units per hour (Btu/h) rated input capacity)
  - High Efficiency Boilers (>300,000 Btu/h rated input capacity)
  - Water Heating Equipment
  - Space Heating Equipment
  - Commercial Kitchen Equipment
- Individual Heating, Ventilation, and Air Conditioning (HVAC) Measures:
  - Packaged Terminal Air Conditioning (PTAC) and Packaged Terminal Heat Pumps (PTHP)Equipment
  - Unitary HVAC and Split Air Systems
  - Air-to-Air Heat Pump Systems
- Electric Chillers and commercial refrigeration
- Premium Efficiency Motors
- Other Variable Speed Drives
- Commercial Kitchen Equipment
- Commercial Washers

Meetings and Notices

June 24th, 10:30 a.m. -2:30 p.m.: Re-Inventing the Hudson Valley Breadbasket Field Day in Red Hook

Join Cornell Cooperative Extension of Ulster County Monday, June 24th from 10:30am – 2:30pm at Migliorelli Farm in Red Hook, NY for a field day showcasing Cornell's regional Hudson Valley wheat and barley variety trials in the Hudson Valley and a discussion of market opportunities in baking, brewing and distilling.

The field day will feature Cornell's Dr. Mark Sorrels and his research team, who will discuss Cornell's initiative to develop regionally-adapted small grain varieties for local and specialty markets, and production considerations for the humid northeast. The field day will also feature a discussion panel with individuals representing a growing market of local artesian bakers, craft beer brewers, micro-distillers, and a NYC-metro market hungry for the freshest grain around.

Registration: $25, if registered by 6/20, $30 afterwards. Registration fee includes lunch. Please register by 6/22. A registration form is available online at http://www.cceulster.org/printable%20registration%20forms.html or contact Carrie Anne at 845-340-3990 x311.

June 21st 9 a.m-noon. Food entrepreneurship workshop. Hear from Elizabeth Keller Sullivan of Cornell University Food Venture Center in Geneva, New York. Keller will discuss the basics of starting a food business – pickles, sauces and jams in particular.

Keller will speak to regulatory issues with foods, food safety and sound manufacturing practices as well as safe processing techniques. There will also be a session on developing a marketing plan, setting goals and implementing best practices. Additionally, John Luker, who serves as assistant director for the New York State Department of Agriculture & Markets' Food Safety & Inspection Division, will be on hand to present and answer questions about state regulations, required licensing and overall questions around food safety.

The fee for this session is $15 per person. Click here for a registration form or visit www.cceulster.org and click Registration Forms. For more information contact CCEUC Nutrition Educator, Janie Greenwald at at 845-340-3990, ext. 326 or via email at jhg238@cornell.edu.

Meetings and Notices

Meetings and notices on page 5 this week

Weekly and Seasonal Weather Information

Site	Growing Degree Information Base 50^{O} F			Rainfall Accumulations		
	2013 Weekly Total 5/28—6/04	2013 Season Total 3/1 - 6/04	2012 Total 3/1—6/04	2013 Weekly Rainfall 5/28—6/04 (inches)	2013 Season Rainfall 3/1—6/04 (inches)	2012 Total Rainfall 3/1—6/04 (inches)
Albany	144.0	453.8	613.5	1.23	11.43	11.63
Castleton	148.5	441.0	617.6	2.02	7.96	11.82
Chazy	132.1	417.8	643.2	0.91	9.18	8.62
Clifton Park	135.8	423.6	566.8	2.16	13.65	12.77
Clintondale	160.1	504.9	391.0	0.63	NA	9.60
Glens Falls	127.5	388.7	467.0	1.14	10.2	10.06
Granville	127.0	NA	415.5	1.49	11.92	12.67
Guilderland	136.5	405.0	520.5	0.71	2.29	5.10
Highland	157.4	515.9	654.0	0.47	5.41	9.46
Lake Placid	91.7	237.6	NA	1.67	11.05	NA
Montgomery	149.5	449.9	546.0	0.10	6.94	NA
Monticello	126.4	338.8	442.0	0.00	0.00	0.73
Redhook	153.4	450.9	603.5	1.10	5.92	9.17