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Cooperative Extension

Eastern NY Commercial Horticulture Program

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Weekly Vegetable Update

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Tree Fruit & Grapes

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Regional Updates:

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

We've finally had a few sunny days which have made a huge difference for crops in tunnels and transplant seedlings. Be sure to vent your tunnels, especially on sunny days. One tunnel hit 115 degrees by noon last Sunday even though it was 26 degrees outside that morning. We had extremely high winds late last week, rowcover on low hoops over young crops helps protect them from being wind-whipped or burned. Cucumbers especially like the cover held up on hoops, winter and summer squash don't mind it laid right on top of the leaves.

Leek moth traps went out in onions last week and already 7 overwintering adults were trapped near Watertown, much earlier than we expected. Traps are in place across northern NY and findings will be reported here periodically throughout the season. So far we haven't found leek moth south of Essex County (Willsboro) in eastern NY.

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

Potato seed has been delivered and is being cut in many locations. Early potatoes should be planted in the next week or so. There seem to be a lot of HT tomatoes being planted in the last week. Remember to watch the cold night temperatures (see catfacing article).

Rye is really greened up and has started to grow. It will go from being a nitrogen source to a nitrogen sink very quickly as temperatures rise and growth speeds up. It will also become more difficult to control. See the rye article for more information.

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

Seeded onions are "rowing-up" and planting continues. Some very short-season crops have started harvest. We had some growth progress with the few warm days we had but not as much as had been hoped, especially with the cold nights during the past weekend. Transplanting of lettuces and greens continues though growth has been slow and some are showing cold injury especially on unprotected field plantings. The most advanced sweet corn is under plastic at the three–four leaf stage. Bare soil sweet corn planted on April 9 has germinated but not yet poked through the surface.

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

Catfacing in Greenhouse Tomato Production

Temperatures have been unseasonably cold so far this spring resulting in many expensive fuel deliveries for greenhouse growers. Nonetheless, to get quality tomato fruit, growers must remain vigilant in maintaining optimal temperatures in the greenhouse. A serious problem that can result from low greenhouse (or field/high tunnel) temperatures in tomato production is catfacing.

Catfacing is a condition that distorts fruit growth at the blossom end. The fruit develops deep, scar-like indentations that can extend the length of the fruit. In catfacing, fruit develops abnormally due to low temperatures during flowering. Extended periods of cool daytime temperatures (60-65°F) and cool nighttime temperatures (50-60°F) can lead to catfacing. Cultivars also vary considerably in their susceptibility to catfacing, with large-fruited varieties being most susceptible.

High levels of soil nitrogen and excessive pruning aggravate the problem. Accidental exposure to herbicides can also lead to malformed fruit. Good growing practices, especially temperature control, should be followed in greenhouse production. Night temperatures should be maintained between 60-62°F and not exceed 72°F. Optimal growth is obtained with day temperatures between 80-85°F. Ventilate to keep temperatures below 95°F.

Make sure your heating system is sized to provide adequate heat during cold spells. The best way to



Catfacing on second cluster greenhouse tomato.

Image: Teresa Rusinek

distribute heat is to use 8 or 10 inch poly tubes (with holes) alongside walls and below gutters. This delivers heat at plant level rather than close to the roof as with the traditional fan jet systems. Thermostats should be placed in the center of the greenhouse at plant level. Shade the thermostat so the sun is not allowed to shine directly on it which would result in a higher temp reading. Install a high/low thermometer near the thermostat to assure reliability. -TR

Disposal of Pesticide Containers

Remember it is now illegal to burn any pesticide jugs, bags or other pesticide containers in NY. Check to see if your supplier takes them back. If not, triple rinse and puncture the jugs, put them in a plastic garbage bag (I would choose one that you cannot see through) and put them in the dumpster with the trash for pick-up. Paper bags should be fully emptied into your sprayer, then put in plastic garbage bags and disposed of with the trash. Most household recycling services will not take pesticide containers, so don't expect them to be picked up with your bottles and cans.

What about packaging materials the jugs/bags came in? Burning of any plastic is now outlawed in NY. I heard at least one DEC representative say that boxes that were used as outer containers to hold jugs and bags of pesticides also cannot be burned, so it is best to recycle them. Do the right thing and dispose of containers properly and promptly. Don't allow them to accumulate!

Excerpt from April 17, 2013 Tree Fruit Grower Alert Message, Mike Fargione, CCE Ulster County/ENY Hort Program

Controlling Spring Rye

Most rye is at least 6 inches tall by now, with some reaching nearly a foot tall. Controlling rye as soon as possible, and ideally before it is much more than 8 inches tall, will yield the most results in terms of nitrogen release to the crop and will reduce the chance of your next crop being suppressed by the residue. While rye is still small it can be controlled with an herbicide like glyphosate or through light disking. After a week or two the rye should be broken down enough that it won't suppress your upcoming crops, and it will release between 30 and 50 lbs/A of nitrogen, which you can deduct from the amount of fertilizer you apply.

It may seem counterintuitive, but letting rye get bigger does not result in more nitrogen being made available. The amount of available nitrogen actually decreases after the plant gets taller than 8 inches. At that point nitrogen gets used up breaking down the woodier rye plant. Additionally, there is more risk that the rye will suppress the next crop if you allow it to get bigger. If your rye does get away from you, you can theoretically control it by mowing or crimping when the tillers are past the boot stage but before the seed heads are out (see Image 1). However, it is better to control it now and get benefit from the release of nitrogen.

Rye vs Annual Rye: We have received a few questions about the difference between the two types of available

rye, rye (grain rye) and Annual Rye (ryegrass). Both may be planted in the fall, and both will scavenge nitrogen and improve the soil, but annual rye is a smaller plant at full maturity, and it may or may not overwinter, depending on the variety. If annual rye does overwinter, it is important to control it before it reseeds itself. Annual rye is best controlled in warm weather. The directions for the Cornell Cover Crop website are as follows: "The timing of herbicide applications is important to control ryegrass. Apply glyphosate at 3 pt/ac when the grass is 6-9 inches tall, day temperatures are greater than 50°F, and the weather is sunny. A second or third application may be necessary to burn down ryegrass. Simazine can be added to the tank mix but requires rain to activate; Atrazine should not be tank-mixed with other herbicides. Apply 14-21 days after the glyphosate. Atrazine also needs rain to activate." Annual rye may also be controlled as early as possible by disking. The sod may be quite thick, presenting some difficulty.

Like regular rye, you can deduct 30-50 lbs (some sources say even more) of nitrogen from your fertilizer plan based on what becomes available from the annual rye. —CLS

For more information visit the Cover Crop Website: <http://www.hort.cornell.edu/bjorkman/lab/covercrops/annual-ryegrass.php>



Image 1: Grain at boot stage. Seed heads are not emerged from leaves at this point.

Image 2: Regular cereal rye in spring. Leaves are dull blue-green with some hairs.

Image 3: Annual rye or ryegrass. Plants form a dense but relatively low sod. Leaves are bright green and shiny. Seed heads form lower than on cereal rye and seed is significantly smaller.

Shore Flies and Fungus Gnats

The populations of shore flies and fungus gnats have been rising in some greenhouses around the region. Here are a few tips on controlling them.

Identification and Damage

Shore flies are a small fly (much smaller than a house fly) that feed on algae and are a problem in greenhouses with standing water on or beneath the benches. They prefer to breed in standing water with high saline content, which is exactly what is found in run-off from fertilizing. Shore fly excrement can leave marks on flowers and fruits that can be noticeable when populations are high.

Fungus Gnats are also in the “fly” family but look more like a beefy mosquito. Fungus gnats are considered a cosmetic problem in most situations, but larval feeding on plant roots may also be associated with root rots. Fungi are a major part of their diet. In the absence of a fungal food source fungus gnat larvae will feed on healthy plant roots, making entry wounds for diseases such as *Pythium*, and *Fusarium*. Fungus gnats are a common problem on greenhouse crops growing in media that contains high organic matter. The adults are weak fliers and are often seen at rest on soil or leaves.

Both insects prefer moist to wet soil and greenhouse surface conditions.

Monitoring

The best way to monitor these insects is by using sticky cards to trap adults. However, when infestations become intense you can see and feel them flying. This can become disruptive to workers. Prevention and early detection are the keys to controlling these insects, reducing losses from their presence. There are ways to monitor for larvae too.



Shore Fly on a Sticky Card. *Courtesy Univ. of Conn.*

Cultural, Biological & Chemical Management

Fungus gnat and shore fly populations may be partially suppressed by sanitation practices that reduce breeding areas.

- Standing pools and wet areas under benches, in corners and on pathways should be eliminated if possible by controlling the use of water or changing the construction of the floor. Accumulations of soil, media, or decayed plants under benches should be avoided.
- Potting media should be pasteurized before use if possible, especially if it has been exposed to outdoors where eggs could have been laid.
- Thoroughly inspect all incoming plant material.
- Eliminate algae as best you can. There are several chemicals for conventional and organic use. Cultural controls such as reducing moisture are also very effective.
- Several biological control organisms are available for control of fungus gnats and shore flies. Some are other insects/mites and some are microbes/nematodes applied to the soil. Most do a good job of controlling one pest while they do little to control the other. If this is a route you would like to pursue some research is necessary to find the best biological for your situation.
- There are organic and conventional chemical treatments to treat the insects. If applications are made to the pots it is important that the chemical is “sprenced (sprayed/drenched)” in enough to come in contact with larvae but not so much as to pass beyond where the larvae reside. -MRU



Fungus Gnat on sticky card. *Courtesy Univ. of FL*

Weed Control in Asparagus

Asparagus will be emerging from the ground soon in many locations. Before that happens, you need to control your weeds. The list below is not a complete list, but more of the effective materials as discussed with Robin Bellinder, Cornell Weed Specialist. Please consult the labels for rates. Take careful note of the timings on each product.

Dual Magnum (pre spear emergence) - annual grasses, yellow nutsedge, hairy galinsoga, suppression of other broadleaf weeds. A single application may be made to dormant, established beds in the spring prior to crop emergence. Choose rates based upon soil type. Because this label is a New York State's multi-crop 24(c) Special Local Need (SLN) supplemental label, you must acquire an indemnification from Syngenta in order to use this product. Syngenta has created a new means of acquiring this indemnification. The required product label and indemnification can only be obtained through the "special labels" link found at www.farmassist.com and must be obtained by the 'end-user'. If difficulties are encountered in using the website call the Syngenta Customer Resource Center at 866-796-4368. Be sure to use the Dual Magnum formulation as that is the product that is labeled for asparagus (do not use Dual II Magnum).

Clarity 2.5 EC (pre and post spear emergence)- sowthistle, mustard spp., redroot pigweed, Russian thistle, common chickweed, field bindweed. Apply Clarity to emerged and actively growing weeds **immediately after cutting the field but 24 hr before the next cutting**. Multiple applications may be made per season but may not exceed a maximum of 16 fl oz per acre per year. If spray contacts emerged spears, twisting may result. Label recommends 40 – 60 gallons of water/acre be used.

Prowl H2O (pre-spear emergence). Application must be made prior to spear emergence or remove emerged spears prior to making the application, however there is a 14 day PHI. Do not apply post emergent or injury will likely occur. Do not apply more than 2.4 pints if grown on sandy soils.

Lorox 50DF (pre and post) Broadleaves and grasses. **Lorox may be applied preemergence (minimum of 15 gallons/acre) and post emergence (minimum of 25 gallons/acre)** on newly planted crowns or established beds. See label for recommended use of activated carbon with applications to new crowns. Three applications of 1-4 lbs can be made annually with a maximum use of 4 lb/yr.

Sandea (pre and post) - Pre-emergence applications: galinsoga, lamb-quarters, mustard/radish species, redroot pigweed, ragweed, velvet-leaf. **Post-emergence applications:** yellow nutsedge, galinsoga, redroot

pigweed, mustard/radish species, ragweed, velvetleaf. Apply post emergence to established beds. May be applied during harvest season (1 day PHI) May be applied at the end of the harvest season but it is recommended to use a nonionic surfactant or COC with drop nozzles to maximize coverage of weeds while minimizing fern contact and injury to the asparagus. Do not exceed 2 oz/A/season.

Callisto (pre spear and post harvest) - annual broadleaf weeds. Callisto controls largely broadleaf weeds and has soil residual as well as postemergence activity on sensitive species. Use 3.0 fl. oz. for postemergence control and 6.0-7.7 fl. oz. for preemergence control. **May be applied twice per season but may not exceed a total of 7.7 fl. oz, so be sure to take into account any pre-emergence applications.** See the label for adjuvant instructions.

Chateau WDG (pre spear and post harvest) — annual broadleaf weeds Chateau SW should be applied at least 2 weeks prior to spear emergence or to dormant asparagus after harvest. There is the possibility of injury if Chateau is applied less than two weeks before spear emergence. Chateau may be used for residual weed control as well as to assist in postemergence burndown of some annual and perennial weeds in dormant asparagus. To control weeds postemergence use 0.25% v/v non-ionic surfactant and a spray grade nitrogen source.

Karmex DF (pre spear and post harvest) - annual broadleaves and grasses. **For use on established beds.** Apply early spring before spear emergence. Repeat after harvest if annual weeds persist. Since Karmex is not active on emerged weeds, they must be killed by tillage before or after application. Do not exceed 3 lb per season. Moisture after application will improve control. Switch from Karmex to Lorox the last 2 years a field is in production to reduce herbicide carryover and increase follow crop options. -CDB



Courtesy of http://academics.hamilton.edu/foodforthought/Our_Research_files/asparagus.pdf

Meetings and Notices

Health Insurance Questions

As 2014 approaches, many producers are asking about how the Affordable Healthcare Act will impact their businesses. What do they have to do to be in compliance? What will be the fines for non-compliance?

Answers to these and MANY more questions and links to additional agencies for information (such as DOL and IRS) are available at: <http://www.sba.gov/healthcare/>

Grower Classifieds

Wanted: BCS (model 732 or larger would be great) two wheel tractor or Grillo 107D. I'm looking for a larger model, something to put a rotary plow/flail mower/rototiller on.

If you have a lead on one, call Jes (845) 380-9183.

For Sale: A large walk-in cooler, 18 feet x 30 feet by 10 feet, modular design, insulated panels, evaporators and compressor. This is used equipment, originally from a grocery store. Current location is Monroe in Orange County. Ideal for storing fruit or vegetables. \$2500 obo. Call Brendan (914) 309-3252.

Weekly and Seasonal Weather Information						
	Growing Degree Information Base 50^O F			Rainfall Accumulations		
Site	2013 Weekly Total 4/16—4/22	2013 Season Total 3/1 - 4/22	2012 Total 3/1—4/22	2013 Weekly Rainfall 4/16—4/22 (inches)	2013 Season Rainfall 3/1—4/22 (inches)	2012 Total Rainfall 3/1—4/22 (inches)
Albany	12.4	22.0	172.0	0.77	4.70	4.18
Castleton	17.6	29.2	175.9	0.06	0.90	4.56
Chazy	11.6	11.6	137.5	0.09	2.93	3.64
Clifton Park	7.1	13.2	164.0	0.94	4.68	5.47
Clintondale	22.5	44.5	149.0	0.78	4.36	3.57
Glens Falls	13.4	15.4	103.0	1.01	5.54	3.48
Granville	12.0	14.0	123.5	1.13	5.35	5.34
Guilderland	12.0	17.0	145.0	0.19	0.52	3.41
Highland	24.7	50.3	215.5	0.95	2.15	3.73
Lake Placid	3.0	3.0	NA	0.55	3.33	NA
Montgomery	26.5	49.5	170.5	0.78	3.94	2.94
Monticello	16.2	31.5	118.5	0.02	0.06	0.62
Redhook	19.5	34.8	185.0	0.78	3.05	3.60

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

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