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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

Last week featured a roller coaster of temperatures from the light frost a week ago to temperatures in the high 80's, even this far north. It was very dry and windy until a front came through on Saturday with thunderstorms and a good, soaking rain that lasted a couple of days. Temperatures plummeted to the high 40's and 50's to start this week, but things are expected to moderate later this week. The much-needed soak should spur a surge in growth once the sun comes back out this week. Get ready for an onslaught of weeds and bugs!

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

Our wishes for some rain finally came true however some areas experienced some severe thunderstorms late last week. The rains Sunday into Monday have been perfect in terms of intensity and amounts. But, cooler temperatures are expected for a majority of the remaining week. Peppers, tomatoes and cucurbits were going in like crazy last week and as expected a few pests have shown up, especially Striped Cucumber Beetle! Make sure you are scouting every other day or so if you did not use treated seed or insecticide application at seeding/transplanting. Flea beetles have also remained steady, thriving in the dry, hot conditions of the last couple weeks. Also, as small grains are starting to dry and growers are cutting them for straw, be prepared to see thrips moving into crops as well, especially onions!

Mid-Hudson Valley—Columbia, Dutchess, Greene, Orange, Putnam and Ulster Counties

Many early and cool-season crops, including radish, spinach, lettuce and other leafy greens are being harvested and brought to market. Summer squash planting has been in full swing for the last couple weeks while pumpkin and winter squash planting is now getting underway. Sweet corn continues to go into the ground with early plantings currently reaching heights of about 1 foot. A few cool-season crops such as carrots and radishes experienced some burn due to the early-season high temperatures and lack of precipitation but should bounce back as we receive rain and temperatures drop back to seasonal norms.

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, Putnam, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

Considerations When Planting Sweet Potatoes

I know that many of you have your sweet potato slips scheduled for this week and some of you might have started even last week! Those of you that planted last week are probably sure happy to have this rain and those ready to plant this week are probably also happy to have the rain! In the meantime, I thought it might be worthwhile to review a couple things to make sure your sweet potatoes are at their best:

- Try to plant them as soon as you receive your plants—do not try to hold on to them for more than a couple of days.
- If you can't plant them right away, **do not put them in a cooler**—keep them in a cool, shady area. Coolers can be too cold and result in the plants getting injured.
- If possible, open the boxes and spread your slips out if you can't get them planted right away.
- Do not “soak” your plants in water! This does not help and usually only makes them slimy and encourages bacterial breakdowns. If you need to hold your plants for more than 3 or 4 days, place them standing up in shallow trays filled with sand or potting mix and keep the media moist.
- Make sure the beds you are planting in are moist and maintain good moisture for at least 7—10 days after planting to ensure the plants start to root well.
- Planting is probably one of the most labor consuming issues with this crop. Using a waterwheel is a great way to plant, but in my experience if you are using a standard spike it is too big and leaves too much area open and allows weeds to get started in the holes. If you can retrofit one of your wheels with either smaller spikes this will help reduce the weeds in the holes.
- The deeper the hole when you plant the better! Make sure your slips are planted as deep as you can get them without burying the growing point. Each node along the stem is potential for more yield!
- Spacing: everyone uses different spacing but research we conducted several years ago indicated that when using beds mulched with black plastic (30—36” wide), using a single row down the middle of the bed 12—15” apart or a double staggered row (like for peppers) at 18” apart in the row and 12” between the rows worked best.
- Sweet potatoes can actually tolerate a wide range of pH levels, with the optimum between 5.8 and 6.3.
- Most research indicates that 50 pounds of actual nitrogen is plenty and more than that we end up with more growth cracking and rough root appearances. Some varieties such as Beauregard and Covington are less sensitive to the nitrogen levels, but still do not require much more than the recommended 50 lbs.
- Sweet potatoes require a lot of potassium: rates are 120—150 pounds of actual potassium. Potassium helps ensure uniform roots and has been indicated in improving flavor and storability.
- Sweet potatoes require moderate amounts of phosphorous with 60 pounds per acre as the general recommendation. However, these levels should be adjusted to your soil type and frequent soil nutrient testing.
- The last bit of information that I'll leave you with is while doing some recent reading, it was brought to my knowledge that sweet potatoes actually do not fair well in soils with high levels of organic matter. High levels of organic matter have been linked to root staining and some overall poor root quality such as long spindly roots. -CDB

Check Your Garlic

Leek moth larvae are active and the easiest place to find them now is in the newest leaves of garlic. They are leaf miners, so in onions you find the larvae inside the hollow leaves. But garlic has flat, folded leaves. On garlic they are easiest to find in the fold of the newest leaves. The damage where they've been is also easy to spot (see photo).

These larvae will be pupating soon and the next generation of moths will lay eggs near the base of tender onion and shallot foliage. As soon as the eggs hatch the larvae tunnel into the hollow leaves and remain there until they pupate. The third generation often moves to leeks where they can cause considerable damage in September.

Anyone who suspects they have leek moth is urged to contact Amy Ivy at adi2@cornell.edu or call (518)570-5991. We're very interested to know the movements of this new pest. So far it's been confirmed in the northernmost counties of New York and the north and west sections of Vermont. For more information visit <http://web.entomology.cornell.edu/shelton/leek-moth/> - AI



Photo by Amy Ivy

Pruning Cucumbers

Cucumbers thrive under the protected conditions of a high tunnel. To avoid pollination concerns, use parthenocarpic varieties when possible (such as Manar, Sweet Success, Socrates, etc) that are self-fertile, so no bees are needed. To make the best use of valuable space in a tunnel or greenhouse, cucumbers are given a mesh trellis to climb up or are trained to a single leader, similar to the way indeterminate tomatoes are trained.



Cucumber trial comparing single leader training to mesh trellis system. Photo by ADI.



Greenhouse cucumber trained to a single leader. The nodes are circled where the fruit set occurs and the side shoots have been removed. Photo by ADI

It may seem as though training cucumbers to a single leader wouldn't be worth the time and effort. But in a study we did last year comparing yield and labor between the two methods of support, we found that single leader plants yielded 20% more fruit than the trellised plants of the same variety. The overall labor including planting, trellising and harvesting differed by only 5% between the two methods, with the single leader plants taking less labor.

One important caveat when pruning cucumbers to a single leader. This method only works on the parthenocarpic varieties because they produce a flower, a leaf and a shoot all at the same node, so it's easy to prune out the shoots and leave the flowers.

Regular field type cucumbers (Marketmore 76, Dasher, etc) produce their flowers along those runner shoots. So training field cucumbers to a single leader means you end up pruning off all their flowers, so no fruiting is possible.-ADI

Time To Put Up Sweet Corn Traps

Trapping moths is a useful tool for monitoring flights of sweet corn Lepidoptera pests, assessing pest pressure and timing sprays, or releasing parasitoids. European Corn Borer (ECB) activity has been reported in New Jersey and in the earliest sweet corn, you may have to take action earlier than you think. ECB moths are attracted to the most advanced corn plantings, often this is corn grown under plastic or rowcover. In our region ECB overwinter in corn stalks or in weeds in field borders, they typically emerge late May to early June. Most areas have both strains of ECB: Iowa-E-I and NY-Z-II. Next week we will begin reporting trap catches throughout the region in this weekly newsletter; meanwhile, if you are interested in placing traps on your farm (which is ideal), you can order net and bucket traps as well as pheromone moth lures from Great Lakes IPM, (www.greatlakesipm.com) or Gemplers (www.gemplers.com) Typically, we put out three heliothis net traps, two for each of the ECB strains and one for Corn Earworm which will be flying up from the south in a few more weeks. You may also want to monitor for Western Bean Cutworm and Fall Armyworm. Green bucket traps work well for these moths. If you need help ordering these items feel free to email me tr28@cornell.edu or call 845 691-7117.- TR



ENYCHP Veg Educator Kevin Besler sets traps in Orange County Blackdirt region. For best results, the ECB E and ECB Z traps should be set at least 50 feet from each other and do not cross contaminate pheromone lures when servicing traps. Photo-TR

Over the years, IPM techniques and recommendations for the control of insect pests on sweet corn have developed from research by Cornell faculty, Cooperative Extension educators and growers trying different ideas. For early corn (Corn maturing before the first week of August), the IPM recommendation is to scout the field, and if over threshold, apply a control when the corn is just coming into tassel. Sweet corn growers found out the hard way this technique did not work with row-cover/plastic sweet corn. Because the row-cover/plastic corn is so much more advanced than all other corn around, ECB adult moths are attracted to that corn first. Larvae are deep in the plant and even if it is scouted,

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signs of the larvae is nearly impossible to find. **If row cover/spastic corn is sprayed at tassel, it is too late and larvae damage will be found on the corn.** It makes sense to time sprays on the corn when insect activity is present. By having pheromone traps next to fields and monitoring those traps, it is possible to know when ECB moths are laying eggs. Normally the eggs hatch three to six days after deposition. The goal is to make a spray application when the eggs hatch but before the larvae dig deep into the plant. If you know when the ECB flight is heavy then it is possible to predict when the most number of eggs will be hatching on the corn plants.

Excerpted from NYS IPM "Season Insect Control in Sweet Corn when using Row Cover", By John Meshanic-2004

What's That Weed?



Photo by Marie Ullrich

Field Pennycress (*Thlaspi arvense*) seemed particularly problematic this year. For whatever reason, perhaps related to soil conditions, it was a strong winter annual this year being fully grown and producing seed pods by early-mid-May. It is in the mustard family so

consider that when reviewing control methods.

Notes on the Weed: Like many members of the mustard/crucifer family, Field Pennycress leaves are edible by humans. Seeds are toxic to horses and many other livestock causing everything from intestinal distress to abortions and death. Seeds have a very bitter taste and a few seed pods in grain flour can spoil the lot. Consumption by dairy cattle will cause off-flavors in the milk for hours to days.

It is native to Europe and was introduced in traded goods. It is certainly invasive but does not pose a great threat to native ecology. It is listed as noxious in a few mid-west states. Current uses include leaves consumed as a food for humans or for the seeds as an oil source for biodiesel.

Identification:

- The basal leaves of the rosette are hairless, narrowly egg-shaped, margins can be smooth, lobed or toothed. These leaves do not survive to maturity.
- The leaves on the stem are oblong to lanceolate with smooth surfaces and toothed for the entire margin.
- Flowers are white. Blooming continues from some time as plant grows and continues to put on more flowers as seed pods are visible below.

- The most distinctive trait is the fruit or seed pod which is flat and circular to elliptical with a notch in the center. Each pod can contain 2-16 seeds. A single plant can produce 900-20,000 seeds.
- Similarly Shephard's Purse, Pepperweed and Virginia Pepperweed also have stemmed seed pods that are shaped like coins/hearts on the stem. However, all have different size/shaped pods and or distinctively different flowers. They all are in the mustard family



Note distinctive seed pods

Photo by Marie Ullrich

and have similar habitats/cultural and chemical control options so exact identification may not be necessary.

Cultural Controls:

Mowing or plowing/dicing before plant has time to flower/produce seed. This could be quite early as this season has shown. Seeds can germinate as early as February in Zone 6 and March in Zone 5. Planting highly competitive grasses on disturbed but fallow soils will decrease populations.-MU

Sources:

Uva, Richard, Joseph C. Neal and Joseph M. DiTomaso. Weeds of the Northeast, Ithaca: Comstock Publishing, 1997. Print.

Alaska Natural Heritage Program Facsheet <http://aknhp.uaa.alaska.edu>

Post-emergence Yellow Nutsedge Control in Vegetables:

Yellow nutsedge has become a problem in many fields following the recent precipitation events. Pre-emergent herbicides work best to control this stubborn weed, but there are also several post-emergent options available to growers. - KB

The following was written by Andrew Senesac and excerpted from the Long Island Fruit & Vegetable Update, No. 8, May 21, 2015, Cornell Cooperative Extension of Suffolk County

Yellow nutsedge is perennial sedge (not grass) that emerges in early May from a small tuber or 'nutlet'. The plants will begin to form new tubers in July and August, so it is important to manage it before this occurs. In general, between-row cultivation will not control emerged nutsedge well, but only move the plants down the row with the cultivator and spread it in the field. However, in fallow fields, regular tillage (disking) during the season can manage this weed well for future crops.

There are a few post-emergence herbicide options that are now available. Sandea (and other trade names) (halosulfuron) is an herbicide that is registered on a variety of vegetable crops. It is in the sulfonylurea class of herbicides and is effective at very low rates. It is important that application equipment be well calibrated to avoid over

-application. Sandea can be applied pre-emergence or post-emergence in several crops. The crops that Sandea can be used on include asparagus, sweet corn, tomatoes, peppers, beans, rhubarb, cucumbers, pumpkins and some melon types. For pumpkins, applications can be made to direct seeded crops after seeding but before 'cracking'. Post-emergence applications should not be made until the crop has two to five leaves. A nonionic surfactant, or a crop-oil, should be added for optimal control.

Another option for nutsedge control is the use of Basagran - labeled for peas, beans and sweet corn. Apply when the nutsedge is 6-8 inches tall. Best results are obtained by treating when temperatures and relative humidity are very high. Two applications will probably be needed for good control. Basagran will control many broadleaf weeds but will not control grasses.

Non-selective control with glyphosate is an option in fallow fields or other non-crop growing areas. Although nutsedge is thought by some to be resistant to glyphosate, that is not the case. Glyphosate can provide good to excellent control of this weed. The use of an additive to increase penetration into the tough leaves is one way to boost its activity. Spray grade ammonium sulfate can increase control if the weeds are drought stressed.

Food Safety and Wholesale Marketing

Food safety is undergoing rapid change in the fresh produce industry. It can be difficult to keep up with all the changing demands from buyers and regulators, especially when there are multiple food safety standards being used by different agencies for different purposes. It is important for wholesale producers to realize that food safety requirements on the part of buyers may be increased as a response to government regulation being put out by the FDA under the Food Safety Modernization Act. Large wholesale buyers in New York that don't currently require food safety plans and food safety audits likely will begin to do so within the next year or two. The government regulations will NOT be requiring the buyers to ask for food safety, but buyers are likely to increase their stringency on the issue because the new law will bring the issue of food safety to the forefront. As consumers are

becoming more conscious of the importance of food safety in fresh produce, retailers will naturally want to meet the demand for higher food safety standards. The precedent has already been set by many of the supermarket chains such as Wegmans, Whole Foods, and Hannafords, and it is expected that this trend will continue to become more widespread. Farms who are wholesaling produce should be taking the necessary steps now to stay ahead of the curve, especially as some of the changes will likely take more than a single season to implement. We offer a variety of workshops, trainings, and one-on-one consultation services to assist growers in reducing food safety risks and preparing for audits.

Contact our food safety coordinator, Erik Schellenberg at 845-344-1234

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.

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.

2015 Weather Table—The weather information contained in this chart is compiled using the data collected by Network for Environment and Weather Applications (NEWA) weather stations and is available for free for all to use. For more information about NEWA and a list of sites, please visit <http://newa.cornell.edu/> This site has information not only on weather, but insect and disease forecasting tools that are free to use.

2015 Weekly and Seasonal Weather Information						
Site	Growing Degree Information Base 50^o F			Rainfall Accumulations		
	2015 Weekly Total 5/25 - 5/31	2015 Season Total 3/1 - 5/31	2014 Season Total 3/1 - 5/31	2015 Weekly Rainfall 5/24 - 5/31 (inches)	2015 Season Rainfall 3/1 - 5/31 (inches)	2014 Total Rainfall 3/1 - 5/31 (inches)
Albany	159.1	553.9	371.0	0.60	3.36	6.86
Castleton	149.1	522.8	353.4	1.06	3.54	7.25
Clifton Park	144.6	531.5	333.4	2.01	4.00	8.19
Fishkill	148.2	529.0	Na¹	0.25	4.01	Na¹
Glens Falls	141.7	443.3	362.5	1.18	3.89	10.89
Griffiss	132.1	390.7	309.0	0.88	9.44	13.33
Guilderland	135.0	477.1	350.5	0.61	3.76	Na²
Highland	149.9	574.2	418.8	1.24	7.14	10.92
Hudson	154.7	570.4	399.0	0.79	4.86	8.53
Marlboro	143.9	524.3	371.7	1.24	6.16	11.15
Montgomery	146.7	538.3	384.5	1.90	6.22	10.96
Monticello	125.1	389.3	256.5	0.69	7.09	6.65
Peru	128.9	412.2	295.5	0.87	3.66	8.11
Red Hook	148.8	529.3	409.4	1.11	6.39	2.97³
Shoreham, VT	139.8	458.8	302.5	0.90	4.92	7.54
Wilsboro	131.8	390.7	273.3	1.55	5.80	4.13
South Hero, VT	124.1	403.4	275.5	2.34	6.29	9.13
N. Adams, MA	132.5	381.9	264.5	0.95	4.38	7.77
Danbury, CT	137.2	455.3	320.5	1.22	5.89	11.94

Na¹: The Fishkill site is new for 2015 so there is no historical data to report.

Na²: The Guilderland weather station was not properly reporting precipitation data in 2014 so no data will be shown for this site.

³: Precipitation data for this site did not began until May of 2014.

Eastern NY Commercial Horticulture Website

For event announcements and registrations, previous issues of our newsletters and more, please visit the Eastern NY Commercial Horticulture Team's website at <http://enych.cce.cornell.edu/>.