Garlic is maturing ahead of schedule—check yours now

Normally we think of garlic harvest time being somewhere around mid to late July, but very little about this year is normal! Garlic is maturing considerably ahead of schedule, with some growers on light soil or plastic already beginning to pull some varieties. In some cases the plants are not dying back on schedule with the bulb, so don’t use that as your only indicator. If you have had any foliar disease or thrips feeding, the foliage may be ahead of the bulbs. If your garlic has been kept very healthy and well watered the leaves may actually be behind. I have been pulling a fair amount of garlic in the last few days which only has a couple of yellowed leaves but which will probably be ready to harvest early next week.

If leaves aren’t the best indicator of maturity, how else can you tell? The best indicator is how the cloves are filling the wrapper leaves. Take a couple of average looking plants from each variety, and cut them in half perpendicular to the stem so that you are cutting through all of the cloves. Each clove should be tight in its wrapper leaves. If there is any give when you squeeze the bulb, or the wrapper leaves seem a little loose around the cloves the garlic will continue to expand for a little while longer (see image at right) A few of the outer wrapper leaves will probably be breaking down. That is normal.

You can also look at the shape of each clove. Cloves start out being more or less round, and expand to more of a wedge shape (again, see image). As garlic reaches full maturity, the cloves will pull very slightly away from the scape on hardneck varieties.

If you let the garlic stay in the ground too long, too many wrapper leaves will decay and the cloves will continue to expand until the garlic actually splits open. At this point the garlic becomes virtually unmarketable. Make sure that you check your garlic every few days, especially as we move into another warm stretch of weather.

As you are harvesting, keep in mind that you want to reduce the amount of water that you bring into your drying area and you want to avoid scalding your garlic during harvest. If you can harvest early (before 11 noon) on a dry day, then clean in the shade during the afternoon, you should have the best results possible. Allowing garlic to sit out in the field exposed to the sun can result in sun scalding, which will cause affected cloves to break down. If you have to harvest in wet weather try to remove as much mud as possible and get any foliage you leave on the plant as dry as possible before moving it into the curing area. The higher the relative humidity is in your curing area, the slower the garlic will dry down. The slower the garlic dries, the more potential there is for disease. Dry garlic means lower relative humidity right from the start! -CLS

Garlic cut through all cloves. As cloves mature they completely fill the wrapper leaves.

“Serving the research and educational needs of vegetable and small fruit growers in Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, & Washington Counties”
General Vegetable Update

Early sweet corn harvest began late last week and tomatoes from high tunnels are also starting to hit the market. Green and yellow squash harvest is well underway in the area and yields look good to excellent so far. There is however good and bad news to report. First, the bad news; late blight and cucurbit downy mildew are being reported in states all around us. The good news is that we have not detected any here in the Capital District yet, but be assured that we are keeping a keen eye on these crops. Unfortunately I have a feeling that we will be seeing some of these diseases moving into our area sometime in the near future, so stay vigilant.

Late Blight: Late blight continues to move closer and closer to us with the disease being confirmed in processing tomatoes in Salem County, New Jersey on Saturday. There have also been more confirmations in Pennsylvania and Long Island in the last week. The last couple of days has been pretty good for late blight to move into the area and get a foothold, especially in those areas that keep getting those sporadic showers that seem to keep foliage wet for a while. We cannot impress upon you enough to call one of us if you suspect late blight in your fields. This is on potatoes or tomatoes. –CDB

Sweet Corn Update

European Corn borer moth counts have really plummeted the last two weeks, but I am still finding live larvae in tassels and most recently a little bit of feeding injury on the outside husk of an ear. From Peter Jentsch, Extension Associate at the Hudson Valley Lab in Highland, NY reminds us that “ECB threshold for larva in early tassel and tassel are 15% with silk through harvest thresholds at 5% larva infestation. The pyrethroids are negatively temperature dependent and will be less effective as temperatures increase above 75F (as larva will more readily detoxify the insecticide) with larger larva more difficult to manage. Higher volume and surfactants to reduce surface tension may assist in moving material into the whorl. Check for larva by pulling apart the whorl to be sure your applications are effective.”

We are finding a few more Corn earworms this week in some of our traps and trap catches to our south (Kingston and Long Island) are on the rise. With this week’s crazy weather pattern and fronts moving through, I suspect we will see our numbers also start to increase this week and next.

<table>
<thead>
<tr>
<th>Location</th>
<th>ECB-E</th>
<th>ECB-Z</th>
<th>Corn Earworm</th>
<th>Fall Armyworm</th>
<th>W. Bean Cutworm</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Washington</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C. Washington</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N. Rensselaer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Albany</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C. Fulton</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N. Columbia</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>W. Montgomery</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Diagnose pest and disease problems using color pictures: http://vegetablemdonline.ppath.cornell.edu/
Cornell Guidelines for fruit and vegetables: http://www.nysaes.cals.cornell.edu/recommends/
Cucurbit Downy Mildew forecast: http://www.ces.ncsu.edu/depts/pp/cucurbit/
USDA Fruit and Vegetable Market News: www.marketnews.usda.gov/portal/fv
Vine Crops Update

Vine crops: On Friday I also received a text message from the Cucurbit Downy Mildew forecasting alert system that Downy Mildew was reported within a 200 mile radius of my base location which I have set as Troy, NY in Renssleear County. The alert indicated that Cucurbit Downy Mildew (CDM) had been found on cucumbers in Mercer County, New Jersey. Added to this site were more CDM confirmations in Ohio, Maryland, Pennsylvania and Delaware in the last 10 days, all on cucumbers. The good news is that the forecasting program is indicating that spore movement and survival will be very minimal so no immediate threat is upon us for now but continue to scout your vine crops, especially cucumbers and give me a call if you suspect something is up.-CDB

Squash vine borer: Time for Management!

By Abby Seaman, Vegetable IPM Coordinator, NYS IPM Program

Many smaller scale farms have problems with squash vine borer year after year. While cultural practices can help, especially disking in abandoned crops to prevent larvae from maturing and overwintering, a trial conducted last season showed that two products allowed for organic production, a Bt aizaiwi product (we used Agree, Xentari is another option) and Entrust both provided reasonably good control. Agree reduced damage to an average of 12% infested plants, and Entrust to 18% compared with 60% damage in the untreated control.

Squash vine borer is not on the label for any of these products, so you must have a 2(ee) recommendation in your possession for a legal application. Download the 2(ee) recommendation here: http://www.nysipm.cornell.edu/news/SVB2ee.pdf.

Conventional growers have additional options, including several pyrethroid products. The trick is to time insecticide applications to prevent newly hatched larvae from boring into the stems and feeding, which causes wilting and eventual plant death for non-vining type varieties. We applied three weekly applications during the moth flight period, which starts around 1000 base 50 degree day accumulation or when chicory starts to flower. This year we’re repeating the trial so we have pheromone traps set up to trap adult male squash vine borer. We caught the first moths in Geneva last Thursday, June 21st, and we’ll put on our first spray sometime this week.

Tomato and Pepper Update

This week we received two calls from two different high tunnel growers regarding tomatoes and peppers wilting. We were able to diagnose Sclerotinia White Mold or Timber rot (Sclerotinia sclerotiorum). On the peppers, the SWM could be found right in the leaf axils and stem joints and on the tomatoes it was easily seen on the lower stems. It appears as a light tan, bleached area and will begin to develop these small, hard black round things called sclerotia, either on the surface or within the stem. These sclerotia are the overwintering structures for the disease so it is very important to remove as many as possible. According to our colleague Jud Reid with the Cornell Vegetable Program in Western NY, “Pruning wounds are often the entry point for the disease, which hollows out the stem, producing more sclerotia. The plant then wilts. This final collapse often occurs as the plant is maturing fruit and water demand is at its highest. The bad news with this disease is that infected plants cannot be saved. The good news is that the infection does not move from plant to plant at this stage.

To reduce white mold:
- Prune suckers as small as possible to reduce wound size.
- Trellis with clips instead of twisting twine around the stem.
- Mulch uncovered soil in the spring with straw or ground cover to prevent sclerotia germination.
- Manage for low relative humidity.
- Remove infected plants without spilling sclerotia.”

(Source: Veg Edge Weekly, Volume 8, Issue 14)
I recommend that you take a large garbage bag and pull these plants out very carefully as to not spill any of those sclerotia out onto the rest of your soil as you move around your high tunnel or field. There is a biological fungicide that has shown some reasonable control of SWM called Contans. However, now is not the time to use it. It should be applied 3-4 months prior to the onset of the disease. It attacks the sclerotia as they germinate in the soil. It needs to be incorporated 1” – 2” deep before transplanting. Crop rotation is difficult as Sclerotinia species can infect over 400 different plant species including many of the different vegetable crops we grow including the brassicas, carrots, tomatoes, peppers, eggplant, beans, lettuce, vine crops etc. -CDB

Potato update

Potato leafhoppers are increasing rapidly in potato and bean fields. You need to start scouting immediately and apply necessary insecticides. There are a number of different insecticides that can be used. For organic leafhopper control, several growers have reported good results with mixing PyGanic with Surround (kaolin clay). My suggestion is that if you use PyGanic, apply it late in the evening as it degrades quickly in the sun. Also, you will probably need to reapply several days later as one application is usually not enough.

“Structuring” – A Small Business Trap

If you run a business that generates a lot of cash, like a farm stand, you may be aware that cash bank deposits in excess of $10,000 require reporting to the IRS. And you may be tempted to break up large deposits into multiple bank accounts or make deposits over multiple days to avoid the reporting requirement. Don’t! What few people are aware of, is that “structuring” deposits to avoid the IRS reporting requirement is in fact, illegal. Big time. Penalties can include the forfeiture of hundreds of thousands of dollars and even jail time, even if no underlying crime or tax evasion is found.

The IRS Currency Transaction Report, required for deposits (or withdrawals) over $10,000, rarely attracts attention. It’s automatic, and more than 16 million are filed every year. There’s nothing illegal about making large cash transactions. In contrast, the mere practice of structuring deposits to avoid the reporting threshold is itself a federal crime, even if no other illegal activity is found. Things that trigger suspicion include making several cash deposits between $5,000 and $10,000 into multiple accounts and/or multiple banks, or repeated deposits close to, but not over $10,000. Banks send the feds over 300,000 “suspicious activity reports” (required by law) each year flagging potential structuring or money laundering. Unlike the Currency Transaction Report, these do attract attention. And you won’t know until it’s too late and a federal agent shows up at your door.

The law goes back to the Bank Secrecy Act of 1970, intended to prevent money laundering and tax evasion. Strengthened as part of the USA Patriot Act of 2001, the law requires banks to file a Suspicious Activity Report for any cash transaction(s) where the customer seems to be trying to avoid IRS reporting requirements. An SAR must also be filed if the customer’s actions suggest that he is laundering money or otherwise violating federal criminal laws. Banks are not permitted to disclose to clients that they have filed an SAR about them. The idea is that the $10,000 reporting requirement helps federal investigators pursuing illegal activity, and that it would be too easily circumvented if repeated $9,000 cash deposits were not banned.

The problem is that the law casts a wide net, and otherwise law-abiding small businesses are sometimes caught up in it, usually without them even knowing they had broken any laws. There are some reports of increased enforcement recently. Nationwide, small businesses that typically have large cash deposits have run afoul of the law and paid stiff fines. This law can pose a challenge to small businesses that make frequent cash deposits between $5,000 and $10,000. If you fall into that category, be sure to consult an attorney for guidance in complying with federal structuring laws.

Farm Credit East: Knowledge Exchange Program.
Prepared by: Chris Laughton 860.741.4380; Robert Smith 518.296.8188 More information can be found at FarmCreditEast.com
Nitrogen Management in Blueberries for Organic and Conventional Farms

By Emily Cook, Organic Vegetable and Fruit Extension Educator, Ulster County

We are approaching the end of the optimum time to fertilize blueberries! Blueberries have a low demand for nutrients compared to other fruit crops so require little additional fertilization, and are sensitive to too much fertility. However, blueberries tend to display deficiency symptoms only after acute nutrient shortages, so growers should rely on regular soil and leaf tissue analysis to determine if amendments are necessary. Fertilize blueberries in early spring when root growth begins and late spring when root growth peaks. Highest nutrient demand is during green shoot growth and the beginning of the fruiting period. Apply fertilizer within the dripline of the bush, where over 90% of the roots are located. If mulching, try to apply nutrients before the mulch and double nitrogen rates if applying over fresh wood chip mulch, as decomposing wood chips will tie up nitrogen. Annual nitrogen application is recommended. These are annual nitrogen fertilizer rates, it is recommended to make a split application, April and June (between bud break and 6 weeks after.) If using a slow release material, such as compost, make one application.

**Urea is the preferred material if pH is below 5.0.**

**If you are using another nitrogen source, figure rate based on the actual nitrogen column above and divide by the %N in the fertilizer source you are using.

<table>
<thead>
<tr>
<th>Plant Age (years)</th>
<th>Actual Nitrogen per Acre</th>
<th>Rate per Acre using Ammonium Sulfate</th>
<th>Rate per Acre using Urea</th>
<th>Rate per Acre using Blood Meal (13% N)</th>
<th>Per Plant rate using Bloodmeal (800 plants/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>15</td>
<td>75</td>
<td>35</td>
<td>115</td>
<td>0.14 lbs.</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>95</td>
<td>45</td>
<td>150</td>
<td>0.19 lbs.</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>100</td>
<td>60</td>
<td>190</td>
<td>0.24 lbs.</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
<td>130</td>
<td>80</td>
<td>270</td>
<td>0.34 lbs.</td>
</tr>
<tr>
<td>6</td>
<td>45</td>
<td>215</td>
<td>100</td>
<td>350</td>
<td>0.44 lbs.</td>
</tr>
<tr>
<td>7</td>
<td>55</td>
<td>260</td>
<td>120</td>
<td>420</td>
<td>0.53 lbs.</td>
</tr>
<tr>
<td>8+</td>
<td>65</td>
<td>310</td>
<td>145</td>
<td>500</td>
<td>0.63 lbs.</td>
</tr>
</tbody>
</table>

Strawberry Renovation Revisited

By Cathy Heidenreich and Marvin Pritts, Cornell University

Laura’s Note: In light of last week’s article on strawberry renovation, and the calls that followed that article, we have included the information below for growers to consider. I would strongly encourage growers to evaluate their current berry stands for thrifty-ness and vigor and potential to bounce back from renovation. The information below may help you tailor your renovation for each planting. Please call me if you have any questions – 518-791-5038. The article below is edited. For the complete article please visit [http://www.fruit.cornell.edu/nybn/](http://www.fruit.cornell.edu/nybn/).

Renovation, a routine practice in matted row strawberry production occurring immediately after harvest, is one key to retaining plant vigor and fruit size. Recently, several growers have expressed concerns that their standard renovation procedures that they have successfully used in the past seem to be reducing plant stands. Renovated plantings come back slowly and often lack in vigor and/or do not survive the winter well, resulting in poor yields the following year. It may be worth reevaluating renovation practices to assess what impacts they may be having on strawberry plant health.

**Considerations to Renovation Basics**

*Irrigate planting to provide adequate soil moisture prior to mowing.* Fruit production is a period of extreme stress for strawberry crowns when their moisture and nutrient reserves are depleted in order to mature fruit. Providing excellent soil moisture during harvest helps minimize this stress on crowns. Efforts to maintain soil moisture should not stop there, however. It is equally important to maintain soil moisture after harvest and just prior to renovation in order for crowns to go through the renovation process successfully. This is especially true for later season varieties which tend to be mowed off immediately after harvest; early and mid-season varieties at that point have had time to recoup some of their losses before mowing.

*Mow off the old leaves.* *Note:* Fields with significant damage to root systems (rootworms, white grubs, root weevils, various root rots) or fields under water stress should not be mowed off as plants may not be able to produce another set of healthy leaves. (See the earlier paragraph on root/shoot balance.) Growers with fields in this condition should seriously consider plowing under and replanting and/or rotation out of strawberries for these fields as the likelihood of them producing economically substantial strawberry crops in the immediate future is slim.

(Continued on page 6)
Fertilize. Plantings in the first fruiting year or older are typically top dressed at renovation with 70 lb. actual N/A at renovation in the form of ammonium nitrate, urea, or calcium nitrate. Consider adding an additional 20 – 30 lb. actual N/A in late summer depending on stand density and vigor. **Note:** Both preferred sources of nitrate nitrogen for strawberries (ammonium nitrate and calcium nitrate) are in short supply and/or unavailable due to increased governmental regulation. Growers using urea as an alternative to these products are reminded it is subject to volatilization during warm humid weather and may cause plant injury (leaf blackening). It should be applied on cooler, overcast days whenever possible. Another alternative nitrogen source some growers have turned to is CAN (calcium ammonium nitrate) which apparently is of much less regulatory concern and more widely available.

Sweep runners into rows. **Note:** Those runners not rooted by September are not likely to produce fruit the following season, so it will not hurt yield to till them into the row middle if narrowing the rows again in fall.

Narrow rows/cultivate, and Irrigate. **Note:** All renovations efforts may be negated at this point if soil moisture does not remain adequate. Failure to provide adequate soil moisture will result in decreased runner production and flower bud initiation, which in turn means less yield next season.

**Backpack Sprayer Videos: Learn to Use Sprayers More Efficiently**

Learn how to better use modified backpack sprayers to save time and money, and improve safety, by watching the 7 videos created by Rutgers Research Farm. This may be a helpful resource for small, organic and urban farmers, both beginning and experienced. To watch the videos, visit [http://snyderfarm.rutgers.edu/snyder-backpack-sprayers.html](http://snyderfarm.rutgers.edu/snyder-backpack-sprayers.html). Source: Cornell Small Farms Program

**Cabbage Looper Adults Sighted**

Cabbage Looper adults are flying so it will be a short time and the larvae will be feeding on your cruciferous crops. Looper larvae hatch 3 to 6 days after eggs are laid. Adults are a mottled brown/grey and are a little less than 1 inch long. Larvae are bright green with a 4 stripes; 2 wider stripes on their back and a thinner one on each side. The body tapers to the head and contains three pairs of slender legs near the head. There are also three pairs of thick prolegs at the hind end of the caterpillar. No legs exist in the middle section of the looper. This region generally humps when the insect moves and causes a "looping" movement. Larvae feed for 2 to 4 weeks as they pass through their immature phases. There are several natural enemies that survive in New York, but heavy infestations can be economically damaging. There are several Bt products that are labeled for control. **Larvae should be easily controlled with spinetoram like Radiant or spinosaid in Entrust. Remember these (Bt & spinosaid variants) chemicals do not provide a contact kill but require ingestion to be effective. Therefore, feeding and activity may not stop for some hours after treatment. Usually, feeding stops within 12 hours and most are dead by 48 hours. Local experience has shown diminished effectiveness when using contact killers, like pyrethroids, especially for larger larvae.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany</td>
<td>151.3</td>
<td>232.0</td>
<td>927.5</td>
<td>0.06</td>
<td>12.15</td>
<td>17.91</td>
</tr>
<tr>
<td>Bennington, VT</td>
<td>131.7</td>
<td>824.2</td>
<td>773.0</td>
<td>1.24</td>
<td>12.41</td>
<td>14.01</td>
</tr>
<tr>
<td>Clifton Park</td>
<td>153.0</td>
<td>958.0</td>
<td>838.0</td>
<td>0.02</td>
<td>12.86</td>
<td>18.30</td>
</tr>
<tr>
<td>Glens Falls</td>
<td>141.6</td>
<td>839.6</td>
<td>772.0</td>
<td>0.81</td>
<td>13.29</td>
<td>15.83</td>
</tr>
<tr>
<td>Guilderland¹</td>
<td>160.0</td>
<td>953.5</td>
<td>872.5</td>
<td>0.02</td>
<td>5.89</td>
<td>15.62</td>
</tr>
<tr>
<td>Granville</td>
<td>140.5</td>
<td>894.5</td>
<td>761.0</td>
<td>1.12</td>
<td>14.39</td>
<td>13.55</td>
</tr>
<tr>
<td>Hudson</td>
<td>164.0</td>
<td>1132.5</td>
<td>853.5</td>
<td>0.94</td>
<td>10.47</td>
<td>18.49</td>
</tr>
</tbody>
</table>

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.

Cornell Cooperative Extension provides equal program and employment opportunities.