



# WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 20, Issue 12

June 8, 2012

## Vegetable Crops

**Vegetable Crop Insects** - Joanne Whalen,  
*Extension IPM Specialist*; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

### Cucumbers

Cucumber beetles continue to be active so be sure to scout for beetles as well as aphids. Fresh market cucumbers are susceptible to bacterial wilt, so treatments should be applied before beetles feed extensively on cotyledons and the first true leaves. Although pickling cucumbers have a tolerance to wilt, a treatment may still be needed for machine-harvested pickling cucumbers when 5% of plants are infested with beetles and/or plants are showing fresh feeding injury. A treatment should be applied for aphids if 10 to 20 percent of the plants are infested with aphids with 5 or more aphids per leaf.

### Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. Although aphid populations are still relatively low, populations can quickly explode. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. We continue to find fields with spider mites at economic levels. The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Cucumber beetles continue to be an economic problem as well. Since beetles can continue to re-infest fields as well as hide under the plastic, be sure to check carefully for beetles as well as their feeding damage. Multiple applications are often needed to achieve effective control. When fields are

blooming, it is important to consider pollinators when making an insecticide application:

<http://extension.oregonstate.edu/catalog/pdf/pnw/pnw591.pdf>.

### Peppers

As soon as the first flowers can be found, be sure to consider a corn borer treatment. Depending on local corn borer trap catches, sprays should be applied on a 7-10 day schedule once pepper fruit is ¼ - ½ inch in diameter. Be sure to check local moth catches in your area by calling the Crop Pest Hotline (instate - 800-345-7544; out of state- 302-831-8851) or visiting our website at <http://ag.udel.edu/extension/IPM/traps/latestbit.html>.

### Potatoes

Continue to scout fields for Colorado potato beetle (CPB), corn borers (ECB) and leafhoppers. Adult CPB as well as the small and large larvae can now be found. A treatment should be considered for adults when you find 25 beetles per 50 plants and defoliation has reached the 10% level. Once larvae are detected, the threshold is 4 small larvae per plant or 1.5 large larvae per plant. As a general guideline, controls should be applied for leafhoppers if you find ½ to 1 adult per sweep and/or one nymph per every 10 leaves.

### Snap Beans

Continue to sample all seedling stage fields for leafhopper and thrips activity. The thrips threshold is 5-6 per leaflet and the leafhopper threshold is 5 per sweep. If both insects are present, the threshold for each should be

reduced by  $\frac{1}{3}$ . As a general guideline, once corn borer catches reach 2 per night, fresh market and processing snap beans in the bud to pin stages should be sprayed for corn borer. Sprays will be needed at the bud and pin stages on processing beans. After the pin spray on processing beans, the spray schedule will be determined by a combination of both moth catches and field scouting:

<http://ag.udel.edu/extension/IPM/traps/latestbit.html> and

<http://ag.udel.edu/extension/IPM/thresh/snapbeanecbthresh.html>.

Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7-10 day schedule should be maintained for corn borer control.

### Sweet Corn

Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample whorl through pre-tassel stage corn for corn borers and corn earworms. A treatment should be applied if 15% of the plants are infested with larvae. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check both black light and pheromone trap catches since the spray schedules can quickly change. Trap catches are generally updated on Tuesday and Friday mornings:

<http://ag.udel.edu/extension/IPM/traps/latestbit.html> and

<http://ag.udel.edu/extension/IPM/thresh/silksp raythresh.html>. You can also call the Crop Pest Hotline for the most recent trap catches (in state: 1-800-345-7544; out of state: 302-831-8851).

---

**Pruning Tomatoes** - *Gordon Johnson, Extension Vegetable & Fruit Specialist;*  
[gcjohn@udel.edu](mailto:gcjohn@udel.edu)

Commercial determinate tomatoes may require pruning of "suckers", those shoots that develop at lower nodes. Removal of one or more of these shoots up to the first fork, just below the first flower cluster, can improve fruit size, quality, and marketable yield on some varieties. Varieties that are very vigorous and tall with a

lot of foliage such as BHN589 are the best candidates for pruning. Pruning will increase fruit size, increase early set, and reduce disease pressure by improving air movement and spray coverage. However, fruit numbers will be reduced. Pruning is best carried out prior to first stringing when shoots are small (2 to 4 inches long). They can be removed by bending the shoot backward where it easily snaps off. Later pruning with larger shoots may require the use of hand pruners to avoid excessive tearing. A second trip through the field after stringing may be required to remove late developing suckers. Always prune when foliage is dry to avoid spreading diseases. The amount of pruning required will vary by variety. Some varieties require little or no pruning or removal of ground suckers only (those coming from the cotyledon node); vigorous varieties may require the removal of ground suckers plus two additional suckers. Check with your seed-persons for pruning recommendations for the varieties you are using. Over-pruning can result in reduced yields and increased sunburn, blossom end rot, fruit cracking, and catfacing.

---

**Watch for Striped Cucumber Beetle and Squash Bugs at Base of Cucurbit Plants** -  
*Jerry Brust, IPM Vegetable Specialist, University of Maryland;* [jbrust@umd.edu](mailto:jbrust@umd.edu)

I talk about this every year it seems, but I still see cucumber beetle and squash bug problems at the base of growers' cucurbit plants. So far this has been a 'good' year for striped cucumber beetle and squash bug populations in just about every cucurbit field. Some fields have been hit particularly hard with beetles causing 5-10% plant loss due just to their feeding. The biggest problem with these pests, and why control sprays have not worked well, is that they are consistently hiding at the base of the plant where they are feeding on the stem. Most of the time we look for the foliage damage to tell us how well our spray program is working. Sprayers are set up usually to cover a lot of leaf canopy and do not do a very good job of putting chemical along the base of the stem. This stem feeding can be severe enough on small plants that either pest alone could cause some wilting,

but with both feeding on this relatively small area of the stem they are causing considerable damage (Fig. 1). Even on larger plants the feeding can still cause significant damage (Fig. 2). It is hard enough to kill squash bug adults with a good cover spray, but when only small amounts of spray are reaching them on the lower stem they will not be controlled. Often it is possible to walk by plants and even inspect them and still see no beetles or squash bugs, as they will stay down at the base of the plant and only move when the base is exposed. In a couple fields about 10% of the plants were wilting (Fig. 3) due to squash bug and cucumber beetle feeding. These pictures are from a squash field but the same problem is occurring in watermelon and cantaloupe fields with both striped cucumber beetles and squash bugs feeding at the base of a plant. Growers need to check to see if this type of feeding is occurring in their fields and if so insecticide applications (pyrethroids such as Asana, Warrior, etc.) must be directed at the base of the plant.



Figure 1. Striped cucumber beetle feeding damage at base of a small squash plant



Figure 2. Larger cucurbit plant with feeding at its base by cucumber beetle



Figure 3. Wilted squash plant due to squash bug and cucumber beetle feeding at its base

**Potato Disease Advisory #10 - June 7, 2012** - Phillip Sylvester, Kent Co., Ag Agent; [phillip@udel.edu](mailto:phillip@udel.edu)

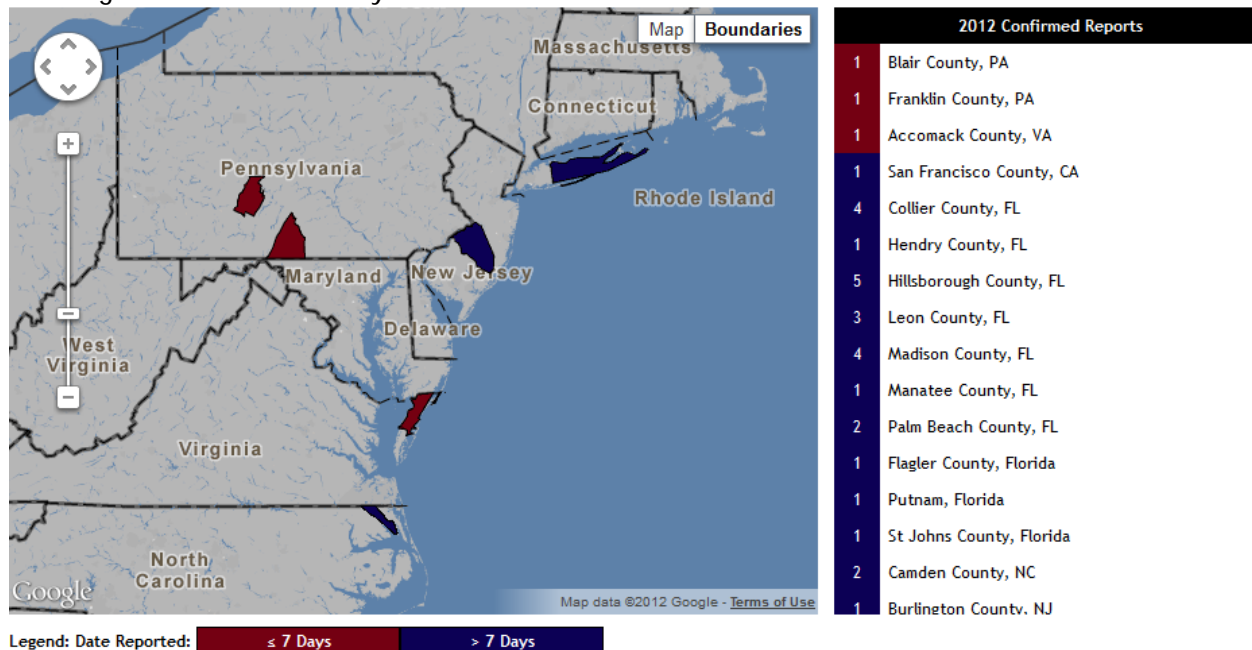
**Late blight Advisory**

Location: Art and Keith Wicks Farm, Rt 9, Leipsic, Kent County, Delaware

Greenrow: April 20

Date	DSV	Total DSV	Accumulated P-Days	Spray Interval Recommendation
5/20-5/22	11	55	229	5-days
5/22-5/23	2	57	238	5-days
5/24-5/28	8	65	279	5-days
5/28-5/30	3	68	294	5-days
5/31-6/3	3	71	331	7-days
6/4-6/6	0	71	355	10-days

The spray interval recommendation is now 10 days. The forecast is predicting warm and dry weather which should reduce the threat. Late blight has been reported in Virginia and Pennsylvania over the past seven days. The map below shows confirmed reports of late blight. The red shaded areas indicate the report was made in the past seven days while the blue shaded areas indicate an older report (more than seven days ago). You can visit this map at <http://www.usablight.org/>. There have been no reports of late blight in Delaware this year.



Continue to scout for late blight symptoms in local potato fields. Please notify and submit samples with symptoms to your local county extension office (Kent: 302-730-4000 Sussex: 302-856-7303) or contact the UD Plant Diagnostic clinic (302-831-1390) to have the sample confirmed. You may also email Nancy Gregory at [ngregory@udel.edu](mailto:ngregory@udel.edu) or Phillip Sylvester at [phillip@udel.edu](mailto:phillip@udel.edu) if you have a sample to submit.

**Early Blight**

A total of 355 P-days have accumulated at this site as of Wednesday, June 6. Protectant fungicide applications targeted at early blight are recommended at this time. Commercial fungicide recommendations can be found in the 2012 Delaware Commercial Vegetable Recommendations Guide at <http://ag.udel.edu/extension/vegprogram/pdf/potatoes.pdf>.

# Agronomic Crops

**Agronomic Crop Insects** - Joanne Whalen,  
*Extension IPM Specialist*; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

## Alfalfa

Continue to sample for potato leafhoppers on a weekly basis. We continue to find adults and nymphs in fields. Although both life stages can damage alfalfa, the nymphs can cause damage very quickly. Once plants are yellow, yield loss has already occurred. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa.

## Field Corn

In addition to thrips feeding, we are finding a few fields with cereal leaf beetle adult feeding. Although cereal leaf beetle problems were low in most small grain fields this season, beetle adults can be found moving out of untreated small grains and feeding on the edge of corn fields. Although we do not have any firm thresholds for this insect on corn, as a general guideline controls may be needed on corn if you find an average of 10 beetles per plant and 50% of the plants exhibit feeding damage. In the Midwest, it has been reported that the adult beetle is a vector of maize chlorotic mottle virus (MCMV) that causes corn lethal necrosis disease. Thresholds for beetle feeding would be much lower if this disease is an issue. As of last season, we have not seen this virus in Delaware corn fields. However, please let us know if you suspect a problem.

We are continuing our stink bug survey of corn fields next to wheat to evaluate movement of stink bugs from wheat into corn. Just this past week, we have found a few stink bugs in corn along field edges adjacent to wheat. Although we have not developed thresholds for our area, the following information developed in the South (North Carolina and Georgia) should provide guidance for management in our area:

(a) Until the V6 stage, the economic threshold is four stink bugs per plant.

(b) "Corn is most susceptible to stink bug injury during ear formation before the tassel stage (VT). Bugs feed through the sheath, causing a dead spot on the ear. As the ear expands it becomes distorted and curves, usually outward. Feeding during silking and pollen shed (R1) will also kill kernels on the ear. Once the ear has elongated, stink bug feeding during the blister and milk stages can blast individual kernels usually causing them to abort."

(c) When the ear is forming, during ear elongation, and during pollen shed, the treatment threshold used in the South is one stink bug per four plants (25% infested plants).

(d) From the end of pollen shed to blister/milk stage, the threshold is one stink bug for every two plants (50% infested plants).

## Soybeans

Be sure to sample seedling stage beans for bean leaf beetles, grasshoppers, thrips and spider mites.

**Grasshoppers:** Population levels are starting to increase, especially in full season no-till soybeans. As barley is harvested and soybeans are planted, these fields will be especially susceptible to attack by grasshoppers which can cause stand loss. If stand reductions are occurring from plant emergence to the second trifoliolate, a treatment should be applied. Although no precise thresholds are available, a treatment maybe needed if you find one grasshopper per sweep and 30% defoliation from plant emergence through the pre-bloom stage.

**Bean Leaf Beetle:** As a general guideline, a treatment may be needed for bean leaf beetle if you observe a 20 - 25% stand reduction and/or 2 beetles per plant from cotyledon to the second trifoliolate stages. These treatment thresholds should be reduced if bean pod mottle virus is present in your area or you suspected virus the previous season.

**Thrips:** At this time, soybean thrips and other thrips species are present in seedling stage fields. Thrips can feed and reproduce on the leaves and buds of soybean seedlings. Their feeding creates bleached-out lesions along the

leaf veins and gives a silvery/bronzed appearance to the leaf surface when damage is severe. These insects are very small (less than  $\frac{1}{10}$  inch) and are torpedo shaped. While thrips always occur on seedling stage soybeans, it is only during outbreak years that they cause concern. In particular, during dry weather and on earlier planted full-season soybeans, thrips populations can explode when plants are growing slowly. Under these circumstances thrips injury will occasionally kill seedlings. Other stressors, such as nutrient deficiencies and herbicide injury, can add to thrips damage and cause plant loss. Yellowing can occur from thrips but there are also a number of other factors that can cause yellowing so it is important to scout fields to identify what is causing the yellowing. Although no precise thresholds are available, as a general guideline, treatment may be needed if you find 4-8 thrips per leaflet and plant damage is observed.

**Spider Mites:** The first spider mites have been found in seedling stage soybeans so be sure to scout fields as soon as plants emerge. Early detection and control is needed to achieve spider mite suppression. Dimethoate, Lorsban (chlorpyrifos), Hero (zeta-cypermethrin + bifenthrin) as well as a number of stand-alone bifenthrin products are available for spider mite control in soybeans. All of these products need to be applied before mites explode. Be sure to read the labels for use rates and restrictions - there is a limit on the number of applications as well as the time between applications on all of the materials labeled for spider mite control.

---

**Grain Marketing Highlights** - *Carl German, Extension Crops Marketing Specialist;*  
[clgerman@udel.edu](mailto:clgerman@udel.edu)

### **Commodity Markets Remain in a Highly Volatile Situation**

Corn, soybean, and wheat futures prices have struggled this week to regain some of their recent losses that were brought on by poor performance in the equity markets. However, the tone changed somewhat in Wednesday's trade with rumors abounding throughout the European and U.S. economies about possible actions that might be taken in the Euro and U.S.

economies. In the U.S. the Federal Reserve Chairman, Ben Bernanke, spoke today with the markets said to be anticipating some type of action in order to bolster the economy. Just what might be done, if anything at this point in time, is not known since no specifics were given. Meanwhile, dry conditions in the Eastern Corn Belt continue to provide support to commodity prices.

### **USDA Export Sales Report 06/07**

Pre-report estimates placed weekly corn export sales at 15.7 to 31.5 million bushels. Total export sales were reported at 15.7 million bushels with 9.9 million bushels scheduled for '11/'12. This was below the 14 million bushels needed this week to stay on pace with USDA'S demand projection of 1.7 billion bushels. Weekly shipments of 28.9 million bushels were below the 37.1 million bushels needed this week. This report was viewed as bearish.

Pre-report estimates for weekly soybean exports ranged from 18.4 to 36.7 million bushels. Total export sales were reported at 18.2 million bushels with 8.1 million bushels scheduled for '11/'12. Year-to-date sales are now at 1.336 billion bushels, above USDA's export projection of 1.315 billion bushels. Shipments of 16.2 million bushels were above the 13.4 million bushels needed this week. This report was viewed as bullish.

Pre-report estimates for weekly wheat exports ranged from 11 to 18.4 million bushels. The final weekly report of the '11/'12 marketing year placed old-crop export sales at 1.1 million bushels. This puts year-to-date sales at 1.026 billion bushels. USDA's export demand projection for U.S. wheat in the current marketing year was 1.025 billion bushels. However, weekly shipments of 19.5 million bushels were well below the 66.2 million bushels needed this week to reach USDA's target. This report was viewed as bearish.

### **Market Strategy**

The next USDA Monthly Supply/Demand report will be released on Tuesday, June 12th. It will be followed by the Planted Acreage report to be released on June 12th. In the event that huge acreage increases for U.S. corn and soybean production are confirmed, possibly above the

March 31st Planting Intentions numbers, we could see new crop prices (particularly for corn) moving much lower than current levels. In order to take prices higher from current levels we'd likely need to see a weather scare occur this summer in the Corn Belt.

Currently in e-trade, Dec '12 corn futures are bid at \$5.28; Nov '12 soybeans at \$13.27; and July SRW wheat at \$6.36 per bushel. Last week it was suggested that one might want to ride the weather market before advancing new crop corn and soybean sales. A weather market could continue to help in bringing on better pricing opportunities. However, it might be wise to consider taking some protection on remaining sales needs.

For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

## Announcements

### LEADelaware Program Applications Due June 15

LEADelaware is an agricultural and natural resource leadership program designed to help build the next generation of leaders within the food and fiber industries that influences our food system, our economy, and our environment.

Leadership is a critical component for any industry to respond to the political social and economic issues it faces on a day-to-day basis. Agriculture and related industries need experienced and trained advocates to provide a voice and a direction for the future. The business of agriculture has grown in new areas with new technology and production strategies. The need to translate the needs of this industry to the public and policy makers is critical

The need for leadership within the agricultural sector is essential. The philosophy of LEADelaware is to build leadership capacity in agriculture and natural resources in Delaware by investing in a class of emerging leaders. In our framework, leaders are not born nor can we

simply make someone a leader by teaching them a set of skills. However, we can invest in emerging leaders by imparting knowledge, skills, and opportunities to lead.

The LEADelaware Program will seek to recruit a class of 10 – 15 leaders in Delaware and take them through a two-year program.

For more information on the LEADelaware program, or to apply, go to <http://sites.udel.edu/leadelaware/>.

Weather Summary	
Carvel Research and Education Center Georgetown, DE	
Week of May 31 to June 6, 2012	
Readings Taken from Midnight to Midnight	
<b>Rainfall:</b>	
0.01 inch:	May 31
0.17 inch:	June 1
0.25 inch:	June 2
0.11 inch:	June 4
0.03 inch:	June 5
<b>Air Temperature:</b>	
Highs ranged from 84°F on May 31 to 67°F on June 5.	
Lows ranged from 63°F on May 31 to 48°F on May 6.	
<b>Soil Temperature:</b>	
73.8°F average	
Additional Delaware weather data is available at <a href="http://www.deos.udel.edu/monthly_retrieval.html">http://www.deos.udel.edu/monthly_retrieval.html</a> and <a href="http://www.rec.udel.edu/TopLevel/Weather.htm">http://www.rec.udel.edu/TopLevel/Weather.htm</a>	

*Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Associate - Vegetable Crops*

Cooperative Extension Education in Agriculture and Home Economics, University of Delaware, Delaware State University and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Delaware Cooperative Extension, University of Delaware. It is the policy of the Delaware Cooperative Extension System that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age or national origin.