



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 20, Issue 16

July 6, 2012

Vegetable Crops

Vegetable Crop Insects - *Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu*

Lima Beans

Be sure to scout fields for leafhoppers, spider mites as well as plant bugs and stink bugs. As soon as pin pods are present, be sure to watch carefully for plant bug and stinkbug adults and nymphs. As a general guideline, treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. The higher rates of labeled products will be needed if stinkbugs are the predominant insect present.

Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. The first beet armyworm (BAW) larvae have been detected in melon fields. As a reminder, both cucumber beetles and beet armyworm feed on rinds. Since BAW are difficult to control, be sure to select a material that is labeled for beet armyworm (BAW) on melons such as Coragen, Avaunt, Intrepid, Radiant, Synapse/Belt or Vetica. The pyrethroids will not provide effective BAW control.

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 to 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/latestblt.html>. You will also need to consider a

treatment for pepper maggot. Beet armyworm larvae can be found in fields and can quickly defoliate plants. Be sure to use a material that provides beet armyworm control -- the pyrethroids will not effectively control this insect.

Potatoes

Continue to scout fields for Colorado potato beetle (CPB), aphids and leafhoppers. Controls will be needed for green peach aphids if you find 2 aphids per leaf during bloom and 4 aphids per leaf post bloom. This threshold increases to 10 per leaf at 2 weeks from vine death/kill. If melon aphids are found, the threshold should be reduced by half.

Snap Beans

Continue to scout for leafhopper and thrips activity in seedling stage beans. We are seeing a significant increase in leafhopper activity in seedling stage beans. Sprays will be needed for corn borer at the bud and pin stages on processing beans. As earworm trap catches increase, an earworm spray will also be needed at the pin stage. Additional sprays may be needed after the pin spray on processing beans. Since trap catches can change quickly, be sure to check our website for the most recent trap catches and information on how to use this information to make a treatment decision in processing snap beans after bloom

(<http://ag.udel.edu/extension/IPM/traps/latestblt.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 all fields from the whorl through pre-tassel stage for corn borers, corn earworms and fall armyworm. We have started to see an increase in fall armyworm damage in whorl stage corn. A treatment should be considered when 12-15% of the plants are infested. Since fall armyworm feeds deep in the whorls, sprays should be directed into the whorls and multiple applications are often needed to achieve control. The first silk sprays will be needed for earworm as soon as ear shanks are visible. Be sure to check both blacklight and pheromone trap catches for silk spray schedules since the spray schedules can quickly change. Trap catches are generally updated on Tuesday and Friday mornings (<http://ag.udel.edu/extension/IPM/traps/latestblt.html>) and (<http://ag.udel.edu/extension/IPM/thresh/silksp raythresh.html>). You can also call the Crop Pest Hotline (in state: 800-345-7544; out of state: 302-831-8851).

High Evapotranspirational Demand in Vegetable Crops - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Vine crop growers have commented that they are having a hard time keeping enough moisture in their beds. Certainly, irrigation system concerns need to be accounted for (emitter volume, emitter spacing, length of run, etc.). However, high evapotranspirational demand (water taken up by the plant and evaporated from the soil) may make providing enough irrigation water a challenge.

This is particularly the case when there are high temperatures and clear skies during June and early July when day lengths are long and when

plant water uptake is peaking. In 2012 during this period we have had consistently higher solar radiation and higher evapotranspirational demand compared to 2011.

Sunburn in Fruits and Fruiting Vegetables - Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

High temperatures, clear skies and high light radiation, and long daylengths are a recipe for developing sunburn in fruits and fruiting vegetables. We commonly see sunburn in watermelons, tomatoes, peppers, eggplants, cucumbers, apples, strawberries, and brambles (raspberries and blackberries).

There are three types of sunburn which may have effects on the fruit. The first, sunburn necrosis, is where skin, peel, or fruit tissue dies on the sun exposed side of the fruit. Cell membrane integrity is lost in this type of sunburn and cells start leaking their contents. The critical fruit tissue temperature for sunburn necrosis varies with type of fruit. For cucumbers research has shown that the fruit skin temperature threshold for sunburn necrosis is 100 to 104°F; for peppers, the threshold is 105 to 108°F, and for apples the critical fruit skin temperature is 125-127 °F. Fruits with sunburn necrosis are not marketable.

The second type of sunburn injury is sunburn browning. This sunburn does not cause tissue death but does cause loss of pigmentation resulting in a yellow, bronze, or brown spot on the sun exposed side of the fruit. Cells remain alive, cell membranes retain their integrity, cells do not leak, but pigments such as chlorophyll, carotenes, and xanthophylls are denatured or destroyed. This type of sunburn browning occurs at a temperature about 5°F lower than sunburn necrosis (115 to 120° F in apples). Light is required for sunburn browning. Fruits may be marketable but will be a lower grade.

The third type of sunburn is photooxidative sunburn. This is where shaded fruit are suddenly exposed to sunlight as might occur with late pruning, after storms where leaf cover is

suddenly lost, or when vines are turned in drive rows. In this type of sunburn, the fruits will become photobleached by the excess light because the fruit is not acclimatized to high light levels, and fruit tissue will die. This bleaching will occur at much lower fruit temperatures than the other types of sunburn.

Genetics also play a role in sunburn and some varieties are more susceptible to sunburn. Varieties with darker colored fruit, those with more open canopies, and those with more open fruit clusters have higher risk of sunburn. Some varieties have other genetic properties that predispose them to sunburn, for example, some blackberries are more susceptible to fruit damage from UV light.

Control of sunburn in fruits starts with developing good leaf cover in the canopy to shade the fruit. Fruits most susceptible to sunburn will be those that are most exposed, especially those that are not shaded in the

afternoon. Anything that reduces canopy cover will increase sunburn, such as foliar diseases, wilting due to inadequate irrigation, and excessive or late pruning. Physiological leaf roll, common in some solanaceous crops such as tomato, can also increase sunburn.

In crops with large percentages of exposed fruits at risk of sunburn, fruits can be protected by artificial shading using shade cloth (10-30% shade). However, this is not practical for large acreages. For sunburn protection at a field scale, use of film spray-on materials can reduce or eliminate sunburn. Many of these materials are Kaolin clay based and leave a white particle film on the fruit (such as Surround, Screen Duo, and many others). There are also film products that protect fruits from sunburn but do not leave a white residue, such as Raynox. Apply these materials at the manufacturer's rates for sunburn protection. They may have to be reapplied after heavy rains or multiple overhead irrigation events.

Potato Disease Advisory #18 - July 6, 2012 - Phillip Sylvester, Kent Co., Ag Agent; 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
6/4-6/6	0	71	355	10-days
6/7-6/11	0	71	395	10-days
6/11-6/14	8	79	424	7-days
6/15-6/18	0	79	460	10-days
6/19-6/21	1	80	478	10-days
6/22-6/25	2	82	507	10-days
6/25-6/27	0	82	524	10-days
6/28-7/2	0	82	549	10-days
7/3-7/5	0	82	561	10-days

The spray interval recommendation is 10 days. The hot and dry weather we continue to experience should reduce the threat of late blight. There have been no reports in Delaware. Visit <http://www.usablight.org/> to see where late blight has been found on potato and tomato in the region.

Commercial fungicide recommendations can be found in the 2012 Delaware Commercial Vegetable Recommendations Guide at <http://ag.udel.edu/extension/vegprogram/pdf/potatoes.pdf>.

Fruit Crops

Section 18 for Brown Marmorated Stink Bug (BMSB) Management on Stone and Pome Fruit Approved - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Our Section 18 request for the use of dinotefuran (Trade Names: Venom from Valent U.S.A. Corporation; Scorpion from Gowan Company, LLC) to control BMSB on stone and pome fruits has been approved by EPA. This use expires on Oct 15, 2012. Please refer to this link: <http://agdev.anr.udel.edu/weeklycropupdate/wp-content/uploads/2012/07/12DE0708authorization.pdf> for more information on use rates and restrictions. You should also have a copy of the label in your possession before making an application so please contact either David Pyne at the Delaware Department of Agriculture (David.Pyne@state.de.us) or Joanne Whalen (jwhalen@udel.edu) for more information.

Agronomic Crops

Agronomic Crop Insects - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Alfalfa

With the recent weather, leafhopper populations have significantly increased so be sure to keep a close watch for adults and nymphs. We are seeing economic levels in fields throughout the state and in a number of cases yellowing has already occurred. Remember, the nymphs can quickly cause damage and once yellowing is present significant damage has already occurred both in season as well as to the long term health of the stand. With the hot, dry weather, you should consider reducing treatment thresholds by at least one-third.

Field Corn

We are starting to see an increase in Japanese beetle and have found the first rootworm beetles feeding on corn silks. Although beetles feeding on silks can potentially interfere with pollination, research indicates that silk feeding does not reduce pollination if they cut the corn

silks after pollination has already taken place. As a general guideline, an insecticide treatment may be needed if two or more Japanese beetles and/or corn rootworm beetles are present per ear and silks are clipped to less than ½ inch prior to pollen shed.

Soybeans

We continue to see a wide variety of defoliators present in full season soybeans including Japanese beetles, yellow striped armyworm, green cloverworm and grasshoppers. The best way to make a treatment decision in full season soybeans is to estimate defoliation. Before bloom, the defoliation threshold is 30%. As full season beans enter the reproductive stages, the threshold drops to 15% defoliation. Remember that double crop soybeans can not tolerate as much defoliation as full season beans so be sure to watch newly emerged fields carefully.

Continue to scout for spider mites in full season and double crop soybeans. Economic levels can be found in fields throughout Kent and Sussex Counties. With the current hot, dry weather, economic populations are being found field wide so be sure to scout the entire field because edge treatments may not be effective. At this time of year any rains we receive will allow beans to grow and then allow treatments to be more effective. If egg populations are high at the time of application, a second application will mostly likely be needed. Labeled materials include dimethoate, Lorsban (chlorpyrifos), Hero (zeta-cypermethrin + bifenthrin) as well as a number of stand-alone bifenthrin products. All of these products need to be applied before mites explode. Be sure to read all labels before making an application since there are restrictions on the total number of applications allowed, rotation between materials as well as the minimum number of days needed between applications.

Grain Marketing Highlights - Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu

Drought Continues to Reduce U.S. Crop Prospects

USDA will release their July Supply and Demand report on Wednesday, July 11. The report will

publish the usual pre-report industry and USDA's 'official' crop yield estimates. It will be very difficult to establish estimates that turn out to be accurate depending to a large degree on whether the drought continues to linger. A review of the U.S. drought monitor this morning seems to indicate that the drought continues to worsen across the country now encompassing almost the entire area of the Midwest Corn Belt, the Southeast, Southwest, as well as the Mid-Atlantic regions

<http://droughtmonitor.unl.edu/>. The weather pattern remains hot and dry in the near term, but the long-term forecast is showing some hints of better weather eight to 12 days out. Crop conditions released on Monday afternoon dropped another 8 percent with 48% of the nation's corn crop now rated as good to excellent, and another 25% of the crop rated as poor to very poor. A quarter of the crop was noted as silking, well ahead of average. Crop conditions have now dropped nearly 30% in six weeks.

The impact of the drought is being reflected in soaring commodity prices with new crop corn reaching a new life-of-contract high at \$7.08 per bushel in yesterday's trade. There is an old adage in commodity trading "the bulls sometimes profit, the bears sometimes profit, but the hogs always get slaughtered". Current crop conditions would suggest that the bulls are not happy because even though they waited on higher prices, they likely have little to no crop to sell unless it is irrigated or sitting in a production area receiving timely rains. The bears are not happy because they've sold early and at lower prices with the likelihood of no remaining crop to sell. Meanwhile, the hogs have no crop sold and no crop to sell. Obviously, the current situation is no laughing matter concerning anyone - bulls, bears, or hogs.

Market Strategy

The corn market softened overnight due to a rumor circulating that EPA could cut the ethanol mandate by 20 percent (Source: DTN). Even so overall current conditions suggest that advancing new crop sales should be placed on hold. We will need to see the production estimates in next Wednesday's report before considering further sales decisions for the current and/or next

marketing year. New crop Dec '12 corn futures are currently trading at \$6.95; Nov '12 soybeans at \$15.08; with July SRW wheat at \$8.00 per bushel. Dec '13 corn futures are trading at \$6.07; Nov '13 soybeans at \$13.00; with July '13 SRW wheat futures at \$8.26 per bushel.

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

Announcements

Agronomic Crops Field Meeting

Wednesday, July 18, 2012 5:30 p.m.
UD Cooperative Extension Demonstration Site
Marl Pit Rd. (approx 1 mile east of Rt. 301/71)
Middletown, DE

Program includes agronomic crop updates and results of small grain variety trials conducted by Bob Uniatowski.

Refreshments will be served at the conclusion of the meeting. Please bring a lawn chair.

1st Annual Eastern Shore Potato Field Workshop

Tuesday, July 10, 2012 4:00 - 7:00 pm
Delmar, MD

Participants will learn about new varieties, agronomic practices for optimizing yield and quality, Colorado potato beetle and other potato insects and disease management for potato production in Maryland and the Delmarva Peninsula.

Come, see and feel new potato genotypes of table stock and processing tubers in varying colors of purple, red, and yellow.

Anyone who is growing potatoes or interested to grow potatoes should attend this meeting.

Agenda:

4:00 – 4:15 Registration

4:15 – 4:50 **Colorado potato beetle management; pesticide efficiency trials results** - Dr. Galen Dively, Emeritus IPM Specialist, University of Maryland

4:50 – 5:00 **Farm to Food Bank** - Amy Cawley

5:00 – 5:30 **Agronomy of new potato lines and variety development program trial results** - Sudeep Mathew, Agent, University of Maryland Extension

5:30- 6:15: **Irrigation scheduling for managing crop water requirements** - James Adkins, University of Delaware

6:15 – 6:45 **Update on potato late blight and fungicide spray programs** - Dr. Kate Everts, Vegetable Pathologist, University of Maryland

6:45 – 7:00 **Evaluations, Q & A, tour plots and dinner**

Attendees will earn Maryland, Delaware & Virginia pesticide re-certification credits.

Location: Delmar, MD
(approx. 1/4 mile past Mardela High School)

Directions:

MD: Traveling Eastbound on Rt. 50 towards Delmar, MD, turn left onto Barren Creek Road, follow Barren Creek until you get to the stop sign. Turn left at stop sign and the farm will be the first farm lane on the right.

MD: Traveling Westbound on Rt. 50 towards Delmar, MD, turn right onto Barren Creek Road, follow Barren Creek until you get to the stop sign. Turn left at stop sign and the farm will be the first farm lane on the right.

DE: Traveling south on Rt. 13, turn right onto Rd 419/MD-DE Line Road/E State St. Continue on E. State St., then bear right onto Delmar Road. Follow Delmar Road until you pass Barren Creek Road on the left. Farm will be first farm lane on the right.

GPS coordinates: 38.465149,-75.735326

*This event is free and open to the public. **Register by July 6th.** Contact Rhonda Barnhart at 410-228-8800 or rbarnhar@umd.edu for registration, or questions about details and directions.*

“It is the policy of the Maryland Cooperative Extension Service that no person shall be subjected to

discrimination on the grounds of race, color, gender, disability, religion, age or national origin.”

If you have a disability that requires special assistance for your participation in this program please contact the University of Maryland Extension Office at (410) 288-8800 prior to July 5, 2012.

Weather Summary	
Carvel Research and Education Center Georgetown, DE	
Week of June 28 to July 4, 2012	
Readings Taken from Midnight to Midnight	
Rainfall:	
0.11 inch: June 30	
0.17 inch: July 2	
Air Temperature:	
Highs ranged from 100°F on June 29 to 89°F on July 3.	
Lows ranged from 74°F on July 4 to 59°F on July 28.	
Soil Temperature:	
82.2°F average	
Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and http://www.rec.udel.edu/TopLevel/Weather.htm	

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.