



The BLUEBERRY BULLETIN

A Weekly Update to Growers

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At a glance. Insect and disease problems that should be considered this week.

PEST/DISEASE	WEEK OF AUGUST 3	WEEK OF AUGUST 10
Anthracnose Abound, Cabrio, or Captan	Continue anthracnose schedule on susceptible cultivars.	Continue anthracnose schedule on late cultivars.
Blueberry Maggot Only on late varieties See list from previous newsletter	Monitor traps 2X/week Treat every 7-10 days if on a calendar schedule. Don't spray if monitoring and nothing is found.	Monitor traps 2X/week. Treat if needed. Should only be concerned with Elliott fields.

Culture

Dr. Gary C. Pavlis

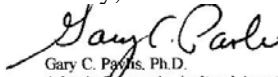
County Agricultural Agent

The blueberry harvest is wrapping up with some farms still picking 'Elliott'. Numerous visits to 'Duke' fields have turned up some plantings in pretty bad shape. Some of the cane death is stem blight but most is not. There is a general lack of leaves, with dead canes and in many cases, entire bushes have died. I have dug up a few of these bushes and the problem is not grubs, and it is not root rot. It is interesting to note that 'Bluecrop' bushes in the adjoining row look fine. This is due to the fact that 'Duke' has the tendency to produce fruit even when the plant is under stress. We have seen young plants produce so many flowers that no leaves are produced. In some cases the plant will actually kill itself. Early on we realized that all flowers on this variety must be removed the first two years. The same kind of thing is going on with the plants I saw this week. They did not have the root system to carry the fruit load that was on them. In one case, extreme weed pressure was robbing the 'Duke' plants of nutrients and water. When these plants were dug up the root system only went down 6-8 inches due to a hard layer of gravel. Between the weeds and the

shallow root system, these plants weren't getting the water and nutrients to carry the fruit load. The grower will not usually realize that there is a hard pan until year 4 or 5, when the yield dramatically increases. By that time, the remedy for the situation is difficult. (Please call me if you find yourself in this situation and would like to discuss it.) Certainly, keeping competing weeds out of the planting is a minimum requirement. At this point, there isn't much that can be done except to keep the plant out of any further stress. Dead is dead so what we are trying to do is to bring back the plants that are weak. Timely watering is the best remedy. It is too late now for any soil applied nitrogen fertilizers however in some cases I believe a foliar application of N might give the plants a little "pick-me-up". Pruning out stem blighted canes is always a good practice.

I believe the take home message is that in many cases, there was a rush to plant 'Duke' fields without doing the required pre-plant checks. It would be prudent to take a back hoe into the field before planting and dig a hole. It doesn't have to be deep, three feet would do it

to see what layers of soil are there, is there a hard pan, where is the seasonal high water table, and what are the pH values? As more and more of these young 'Duke' plantings come into fruiting I am concerned that we will see more and more of this.

Sincerely,

 Gary C. Pappas, Ph.D.
 Atlantic County Agricultural Agent

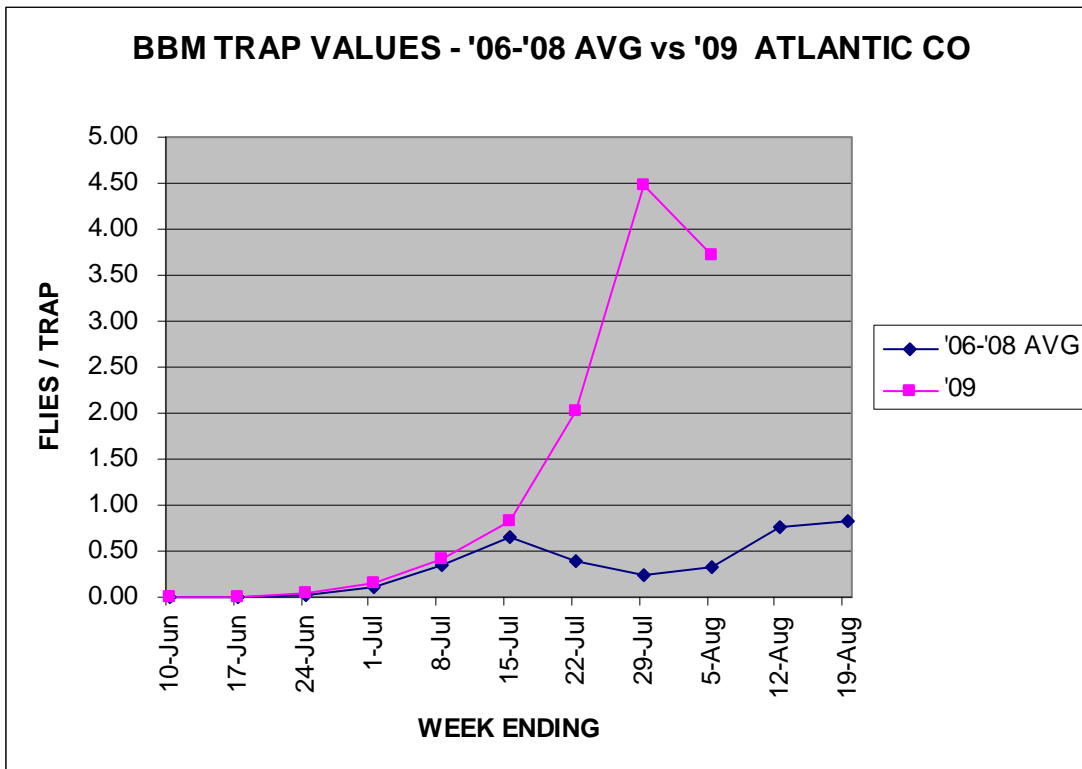
Editor – Blueberry Bulletin
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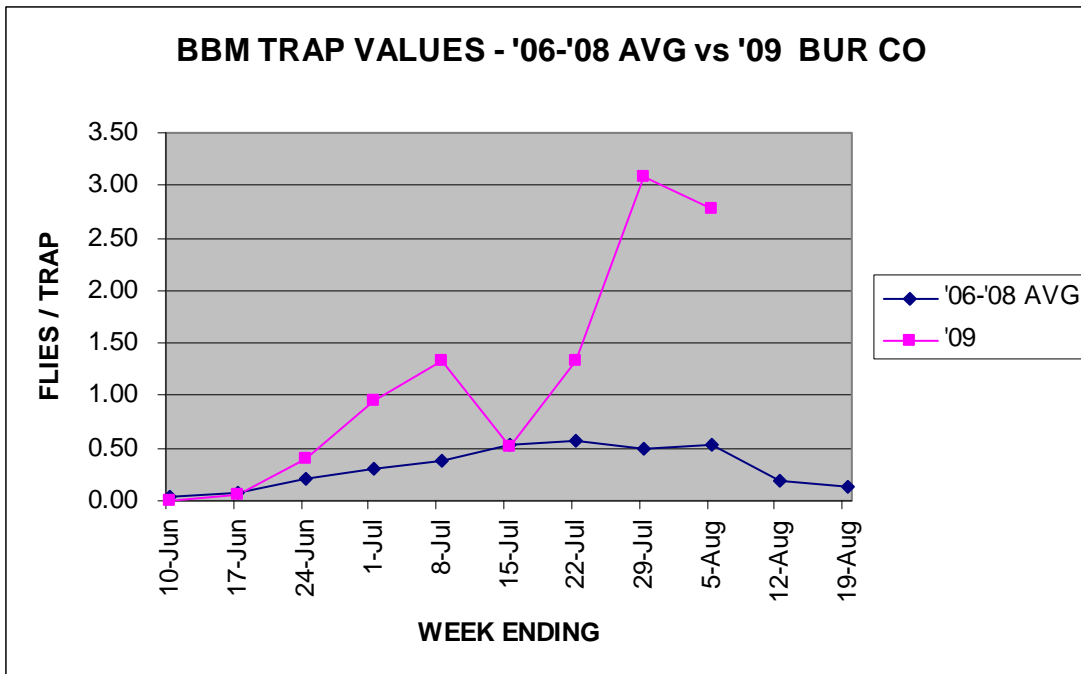
INSECTS

Dr. Cesar Rodriguez-Saona,
Extension Specialist in Blueberry Entomology
Rutgers University
Mr. Dean Polk, IPM Agent – Fruit
Mr. Gene Rizio, IPM Program Associate – Fruit

Blueberry Maggot (BBM): Although trap counts are slightly lower this week we are still seeing unusually high numbers of this pest in our traps. The average BBM trap count for July 26 represented the peak for this season, and was one of the highest counts we have seen in recent

years. The two graphs below show the trap catches of 2009 compared to the average of the past three seasons for both Atlantic and Burlington Counties.



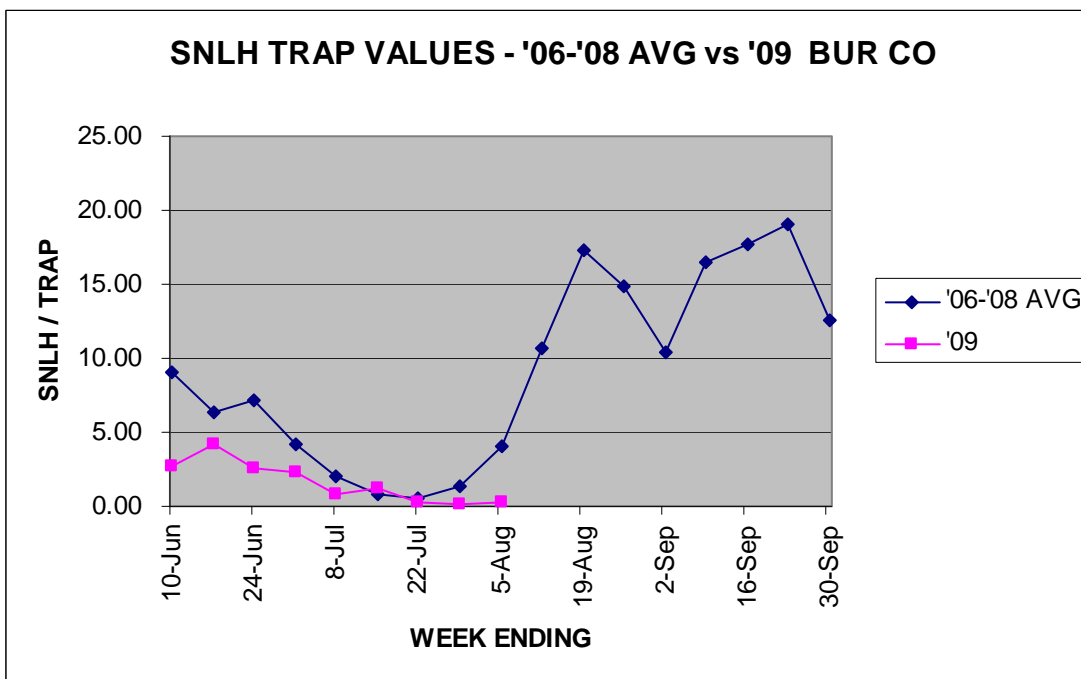
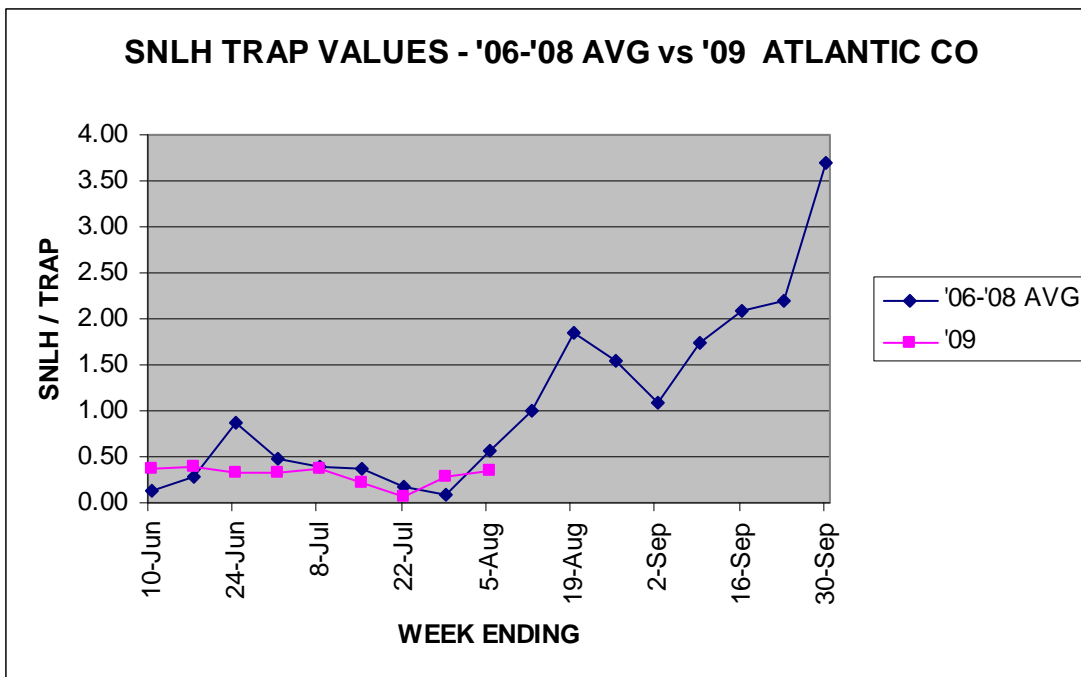


Aphids: Very few locations are showing any aphids and, if present at all, are usually single or small colonies. Predators are being seen often.

Leps. and Leafrollers: Almost no leafroller worms are being seen in blueberries at this time but some locations are showing moderate levels of blueberry leafminer larvae. These small worms may be found either in the mines or tepee shelters at the shoot terminals. In the past where this pest has been abundant, the small larvae can get into the fruit trays and bins and thus may need to be removed on the packing line.

Sharpnosed Leafhoppers (SNLH): Trap counts are slightly higher this week but we expect most of the activity in late August through September. Growers who want to keep Stunt disease in check will benefit from trapping

this pest. The two graphs below depict the 2009 trap activity thus far compared to the average of the past three seasons for both Atlantic and Burlington Counties. The data for the past three seasons are typical for this pest and clearly show that late season activity (2nd generation), which begins in early - mid August and increases in September, thus treatment should be delayed until that time (see more on the SNLH life cycle and treatment options below). It is important to note that the graphs are averages for several farms, and thus may not reflect SNLH populations in your individual farm. For example, some of our farms in Atlantic and Burlington County do not catch any SNLH until mid – late Sept. If a grower wishes to spray once for this late season pest it is best that they use traps at their site to determine peak activity.



Life cycle – SNLH feeds and reproduce on blueberry, huckleberry, cranberry, and other related plants. SNLH feeding causes little direct damage but it transmits the phytoplasma that causes **stunt disease** in blueberries. They are small brown insects with a pointed head (Figure 1 on next page). SNLH picks up the disease while feeding on infested bushes and carries it to other plants in subsequent feedings. Usually only

adults will carry the disease from plant to plant, since nymphs are wingless and can't fly (Figure 2 on next page). This insect completes two generations in New Jersey. Adults are abundant in the woods, where many alternative hosts are present, and may move to commercial blueberry fields in the spring. Eggs overwinter inside fallen leaves and hatch in mid-May. Nymphs

complete 5 instars. Nymphs from the first generation reach adult stage in mid-June, while nymphs from the second generation reach adulthood in early August. Adults move back to the woods in the fall. Monitoring these generations is critical for timing of control strategies.

Monitoring and control – **This insect is the ONLY regular target for post harvest sprays.** Adults can be monitored using yellow sticky traps. First generation SNLH is often controlled with sprays targeted for plum curculio, aphids, and cranberry fruitworm. Treatment decisions for the 2nd generation should be based on individual population levels, as well as any history of stunt disease on your farm. Because adults migrate from woods, monitoring should be intensified in, and sprays should be directed to, the perimeter of fields to control migrants carrying the disease. Insecticides are usually applied just prior to peak flight, which will

probably be sometime near the end of August to early September. Note that Burlington County farms often have higher populations of SNLH than farms in Atlantic County. In Burlington County with high SNLH populations, treatments may be needed by the middle of the month, and possibly again during the first half of September. If you are in Atlantic County, or have low SNLH populations, then 1 application should be applied late August to early September, if needed. We recommend use of Assail 30SG @ 3-5 oz, Actara @ 3-4 fl oz, Provado @ 6-8 fl oz, Platinum @ 5-8 fl oz, Lannate LV @ 1.5 pt, or Malathion LV @ 10 oz per acre. It is also important to remove all plants that show symptoms of stunt disease. Removal of bushes should be done after insecticide treatment to avoid movement of leafhoppers from infested to healthy plants, thereby facilitating spread of the disease.

Figure 1. Sharpnosed leafhopper adult top view and adult side view. Notice the mottling on the wings and the sharp point of the head.



Figure 2. Sharpnosed leafhopper nymph (wings not present) vs. adult.



EPA Announces 60-day Comment Period on Guthion Phaseout for Blueberry

Dr. Rufus Isaacs, Department of Entomology, Michigan State University

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University

A proposal has been made to the US Environmental Protection Agency (EPA) to slow down the speed of restrictions in the Guthion phaseout, so blueberry, apple, and cherry growers have more time to develop and adopt effective and economical alternative programs. Anyone with interest in this proposed change is encouraged to make their opinions known by commenting to EPA over the next two months. The manufacturer of Guthion (MANA) made a formal request to the EPA to keep the maximum seasonal limit of Guthion 50 WP for blueberries at 2 pounds per acre, and to extend aerial application in Michigan through the end of 2012. This would change the current phaseout plan that has reduction to 1.5 pounds maximum for 2010-2012, and a ban on aerial Guthion after Sept 2009. This does not change the plan to cancel all use of Guthion in blueberry after September 30, 2012. In response to the request from MANA, the EPA has announced a comment period with a September 21, 2009 deadline. If you would like to make a comment on this proposal, details of the announcement and the instructions on how to comment can be found here: <http://www.epa.gov/fedrgstr/EPA-PEST/2009/July/Day-22/p17398.htm>. Comments can be submitted by mail, email, or through the www.regulations.gov website. All correspondence should include the docket ID number EPA-HQ-OPP-2009-0365.

INSECT TRAP COUNTS

Blueberry Trap Counts – Atlantic County

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
4/5		19.9				
4/12		55.1				
4/19		72.0				
4/25		69.4				
5/2		71.6				
5/9	.009	43.6				
5/16	0.07	7.9	0.00			
5/23	0.2	1.6	0.02			
5/30	0.1	0.3	9.6			
6/6	0.2	5.8	19.5	0.4		
6/13	0.03	39.4	18.8	0.4		0.00
6/20	0.1	48.2	12.8	0.3	47.0	0.03
6/27	0.5	56.3	6.4	0.3	253.0	0.16
7/4	0.1	46.0	5.3	0.4	565.3	0.42
7/11	0.0	24.5	3.7	0.2	315.4	0.83
7/18	0.0	8.5	1.0	0.1	124.6	2.03
7/25	0.0	6.1	2.7	0.3	71.0	4.48

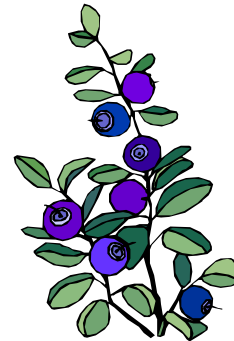
Blueberry Trap Counts – Burlington County

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
4/5		9.3				
4/12		22.6				
4/19		19.2				
4/25		25.1				
5/2		38.0				
5/9	.1	16.2				
5/16	0.1	3.4	0.0			

5/23	0.2	0.4	1.3			
5/30	0.7	0.0	6.5			
6/6	1.9	0.5	20.4	2.7		
6/13	0.3	16.4	20.1	4.5	15.0	0.07
6/20	1.1	33.5	15.2	2.6	42.0	0.41
6/27	1.0	45.5	10.4	2.3	516.9	0.94
7/4	0.1	33.0	8.4	0.9	449.3	1.67
7/11	0.1	26.7	1.2	1.3	130.0	0.59
7/18	0.1	5.8	0.2	0.3	80.1	1.27
7/25	0.0	2.1	0.8	0.1	37.4	3.08

FOOD FOR THOUGHT.....

The New Jersey State Board of Agriculture terms of W. Scott Ellis, Vegetable Industry and Ann Dorsett, Equine Industry will expire in July of 2011. All required commodities will be represented. Therefore, the candidates from the South and North can be from any commodity group (hint: Fruit Industry?) for the State Board Class of 2015. For more information, contact your County Board of Agriculture.



FOOD SAFETY BILL APPROVED BY HOUSE

Articles regarding the bill can be found at the following resources listed below.

- "This Week In Farm Bureau" – Issue No. 30, August 1, 2009
- "Bloomberg News" – http://www.bloomberg.com/apps/news?pid=20601070&sid=atWb_s1oJzW0
- "AGWEEK" http://www.agweek.com/articles/?id=5355&article_id=14782&property_id=41