### AT A GLANCE....INSECTS AND DISEASE PROBLEMS THAT SHOULD BE CONSIDERED THIS WEEK.

<table>
<thead>
<tr>
<th>PEST/DISEASE/CULTURE</th>
<th>JUNE 3- JUNE 10 FRUIT DEVELOPMENT</th>
<th>JUNE 10- JUNE 17 FIRST PICKING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APHIDS</strong></td>
<td>Monitor for aphid colonies, and treat if over 10% of terminals are infested.</td>
<td>Treat if over 10% of terminals are infested.</td>
</tr>
<tr>
<td>Admire, Assail, Actara</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CRANBERRY FRUITWORM (CBFW)</strong></td>
<td>Treatment timing if one application is used.</td>
<td>Treatments should be done.</td>
</tr>
<tr>
<td>Assail, Avaunt, Altacor, Delegate, or Imidan</td>
<td></td>
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</tr>
<tr>
<td><strong>PUTNAM SCALE</strong></td>
<td>Use Esteem as soon as possible if crawlers are present, or there was a problem last year that remained untreated.</td>
<td>Monitor with black sticky traps for crawler emergence.</td>
</tr>
<tr>
<td>Esteem or Diazinon</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PLUM CURCULIO</strong></td>
<td>Monitor for fresh egg scars &amp; treat if needed.</td>
<td>Treatments should be done.</td>
</tr>
<tr>
<td>Avaunt, Imidan, pyrethroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ANTHRACNOSE</strong></td>
<td>Finish applications on Bluecrop this week</td>
<td></td>
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<tr>
<td><strong>SCORCH</strong></td>
<td>Remove infected plants, kill crowns with herbicide</td>
<td></td>
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<tr>
<td><strong>PHYTOPHTHORA ROOT ROT</strong></td>
<td>Have root samples tested and treat affected fields</td>
<td></td>
</tr>
<tr>
<td><strong>STEM BLIGHT</strong></td>
<td>Remove symptomatic canes by pruning below infected (brown) stems</td>
<td></td>
</tr>
<tr>
<td><strong>RHIZOCTONIA</strong></td>
<td>Check propagation beds for dying plants</td>
<td></td>
</tr>
<tr>
<td><strong>NUTRITION</strong></td>
<td>Continue to apply N-P-K</td>
<td></td>
</tr>
</tbody>
</table>
CULTURE

Dr. Gary C. Pavlis, Ph.D.
County Agricultural Agent

Grower visits this week throughout Hammonton did not reveal any major problems. I saw my first blue ‘Duke’ on June 5th but I still think that harvest is at least a week away, maybe 10 days. Overall crop size looks good but not extremely large. We experienced a mild winter in NJ and that usually translates into a big crop however I do not feel that is the case this year. The ‘Bluecrop’ does look a little heavier than the ‘Duke’ so the total may be larger than I think. As usual at this time of the year, I am seeing plants throughout NJ with new growth which is very light green and or reddish green. This is a nutrient deficiency, usually nitrogen, but it is normal. The plants are rapidly growing and doing so faster than the nutrients can be taken up. This will clear up in a few weeks as growth slows down.

Last applications of N-P-K should be going on over the next two or three weeks. After July 1 I do not recommend applying nitrogen. Our research at Rutgers shows that late applications of nitrogen increase stem blight, increase aphid numbers, and decrease winter bud hardiness.

Lastly, this is an excellent time to scout your fields for any problems that may exist. After harvest begins most growers are too busy to look for problems so now is the time to ID problems and address them. If you need any help do not hesitate to call me.

Sincerely,

________________________
Gary C. Pavlis, Ph.D.
Atlantic County Agricultural Agent

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

Aphids: The frequency of positive shoot samples as well as infestation levels have increased since the previous week. Sampling shows that 83% of shoot samples were positive, and that 31% of the samples are above the 10% infestation level. This is about 3 times the infestation level previously seen, and indicates that aphids remain the number one insect target at this time, unless recently treated.

Cranberry Fruitworm (CBFW): Overall most farms do not seem to have pressure, but trap catches have increased in certain areas that have been problem spots in the past. One site in Burlington County had 38 adults in a 1 week count, and this was the 1st catch there this season. No fruit injury has been seen. If treatments have not been applied for CBFW, they effective insecticides should be used in the next cover, especially where trap counts are high.

Putnam Scale: Tape traps monitored on Tuesday June 4 showed the start of crawler activity in the Hammonton area. There are 2 generations per season of this insect. If growers had scales present on the fruit during 2012, or known infested sites, then, treatment can be initiated for this 1st generation. Esteem has a 7 day PHI and is best used when crawlers first emerge. High volume coverage provides the best control.
Life history: Scales feed on plant sap, decreasing plant vigor and fruit yield. Adult scales are protected from insecticide sprays by a waxy covering. These insects are common in older canes when not removed, and located mostly under loose bark. In New Jersey, the Putnam scale has two generations a year. It overwinters as second-instar nymphs under loose bark. Spring activity begins in early February. Eggs from the first generation are laid in late April, and immature “crawlers” typically begin to appear in mid-May. Peak crawler emergences occur in late May and early June (this time of the year). Peak crawler emergences for the second generation occur in early to mid-August.

Monitoring and Management. Growers who had a scale problem last year can treat the first generation crawler stage now with Esteem (35W or .86EC, 7 day PHI), or wait until peak crawler emergence and use Diazinon (7 day PHI). Diazinon can only be used once in-season, and waiting until peak crawler emergence may put you too close to harvest, at least with early varieties. The second generation can be treated later in early August. Crawlers can be monitored by wrapping black electricians’ tape covered by double-sided sticky tape around canes. Use a hand lens to see crawlers on the sticky tape.

Plum Curculio (PC): Only 1 PC adult was seen in 105 beating tray samples – or about 1% positive. This is a sharp drop since previous week. For the week ending 5/12 this value was 7% positive, the week after was 6%, followed by 4%. These 3 averages were taken from samples that had not as yet been treated with insecticides. The most recent value of 1% does reflect treated fields. However, known active sites including organic fields were sampled on 6/3 without any catch. Therefore PC activity is over for the season, and no longer needs to be treated on most farms. In total, we have seen a considerable amount of PC injury. Field fruit samples show that 52% of samples are positive for some level of pc injury. Growers should be aware of this as they pack the first Duke in a few weeks.

Spotted Wing Drosophila (SWD): Traps were collected and examined for the third time this season. No SWD adults have been captured in these traps as of this writing.

Leafrollers and Other Leps: There has been little change since the last newsletter. Sampling indicates that 11% of shoot samples were positive for low levels of larvae. None of the levels seen exceed the 5% threshold.
## INSECT TRAP COUNTS

### Blueberry Insect Trap Counts - Atlantic County

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>RBLR</th>
<th>CBFW</th>
<th>OBLR</th>
<th>SNLH</th>
<th>Cr. Beetle</th>
<th>BBM</th>
<th>BMSB</th>
</tr>
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<tbody>
<tr>
<td>4/13</td>
<td>116</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>4/20</td>
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<td>4/27</td>
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<tr>
<td>5/4</td>
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<td>5/11</td>
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### Blueberry Insect Trap Counts - Burlington County

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>RBLR</th>
<th>CBFW</th>
<th>OBLR</th>
<th>SNLH</th>
<th>Cr. Beetle</th>
<th>BBM</th>
<th>BMSB</th>
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<tr>
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<tr>
<td>5/4</td>
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<tr>
<td>6/1</td>
<td>0.2</td>
<td>2.1</td>
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Food Safety Modernization Act
Meredith Melendez and Wesley Kline

Over the last few months we have provided Q&A from the Food and Drug Administration conference calls as it relates to the proposed rule for the Food Safety Modernization Act. Following are three additional calls on specific subparts of the proposed rules. To hear the recorded tapings of these conference calls visit: [http://producensafetyalliance.cornell.edu/psa.html](http://producensafetyalliance.cornell.edu/psa.html). For additional questions and answers go to [http://1.usa.gov/Xcdq6o](http://1.usa.gov/Xcdq6o).

HEALTH, HYGIENE AND TRAINING Subpart D

1. In the case of farms who sell entire fields of produce, pre-harvest, who is responsible for food safety? If the ownership of the product in the field changes hands then the responsibility from that point forward belongs to the new owner. Just because the ownership of the crop transferred does not absolve the previous owner’s responsibility for the field production when it was under their ownership.

2. What constitutes a visitor? Would a sales rep be considered a visitor? Any person other than personnel is considered a visitor. There is no set time limitation to designate who is a visitor. Growers should consider the potential for contamination from any visitors to the farm.

3. Will testing workers, now or in the future, for asymptomatic diseases be a part of this ruling? No

4. Is there a recommendation as to the type of soap used in hand washing? No, soap is the minimum requirement.

5. Is warm water required for hand washing? No, there is no temperature requirement.

6. When work crews are hired to work on a farm, who is responsible for their food safety training? The company that manages the work crew is responsible for worker food safety training, not the farm. The farm should obtain documentation from the work crew company to verify worker food safety training.

7. What is the requirement for holding onto worker health and hygiene documentation and records? A minimum of two years past the date of creation.

8. How strict is the rule regarding eating in the field? The rule does not cover this specifically, but is covered by hygienic practices and will be a focus of guidance documents.

9. Does eating constitute a break? Yes. Farm workers must wash their hands after any type of break.

10. Is alcohol based sanitizer acceptable? No, soiled hands prevent the effectiveness of alcohol based sanitizers. Hand washing has been proven to be much more effective.

11. Can break areas be a separate area, but not necessarily walled off? Yes
Domestic and Wild Animals Subpart I

1. The phrase is used “growers will act appropriately” regarding potential contamination from animals on the farm. This phrase is very vague; will there be guidance from the FDA detailing what is “appropriate” action? We did not want to give concrete metrics because we wanted there to be flexibility within the rule for growers. Currently we have a company contracted to prepare technical data which the FDA will then use to prepare guidance documents.

2. If a grower does not “act appropriately” what will the penalties be? Growers are expected to take all measures reasonably necessary to prevent cross-contamination. Unsanitary conditions are a violation of the act. Section 401-A1 contains pathogen compliance information and section 402-A4 contains information on the course of action should unsanitary conditions be found. Inspectors will not be looking for deer or birds but will be looking for fecal material that is left by them. Will this fecal material come in contact with or be likely to come in contact with the product? Growers should avoid this situation.

3. Will there be an opportunity for input into the governing guidance document? Yes, we are tracking questions now and this will help inform the rule making and inform the guidance documents. The guidance documents are non-binding and can be easily changed. Comments will always be accepted on the guidance documents.

4. When will these guidance documents become available? Soon after the final rule is published.

5. Deer droppings are not always evident, how do you monitor large areas of land? We want to leave it up to your judgment; you should deem what is appropriate.

6. Will thresholds be developed, such as number of pellets per acre acceptable? No. We do not want to do this; we are looking at the potential for commodity contamination. We suggest that you review commodity specific guidance documents (leafy greens, green onions, fresh culinary herbs, etc.) that are already in existence and apply them to your situation. Obviously if fecal material is observed in direct contact with the produce it should not be harvested.

7. Is product testing required? No product testing is required.

8. When the guidance document is released will it first come as a draft? Yes, it will be released as a draft through the federal register.

Equipment, Tools, Buildings and Sanitation Subpart L

1. Are cats permitted in packing houses? They serve as effective rodent control. There is no rule that cats cannot be used for rodent control but you must consider the potential for contamination of product or product contact surfaces by the cat.

2. Where does OSHA come into play with the Food Safety Modernization Act? The FDA used 29CFR (OSHA standards) as guidance for toilets and handwashing stations. However, the rule is not exactly the same as OSHA.

3. Is a household toilet facility OK if it is in compliance with OSHA regulations? Yes, that is OK, but it should be supplied with soap, single use paper towels, toilet paper and a trash can. Cloth towels should not be used.
4. Are cement floors required in a packing house? No

5. Should hand washing stations be located inside of a portable toilet? Yes they should but it is not mandated. FDA would like comments on whether the handwashing station should be located outside the portable toilet.

6. What guidance is given regarding rodents? The FDA wanted to take a holistic approach with rodent control, so that growers can take care of problems as they occur. No specifics are given as to the methods of rodent control so that it can work with existing systems already in place.

7. Are there specifics on how to clean equipment in a packing shed? The goal is to prevent contamination of product and product contact surfaces. Guidance will be coming on this topic after the final rule is written.

8. Are instruments required for testing to determine how clean equipment is maintained? No testing is required.

9. Do wooden tables need to be sanitized? Wooden bins, tables, etc. need to be sanitary not sanitized.

10. How about wood surfaces where produce is cut or packed? Product contact surfaces must be sanitized – how an operation gets to that point is up to them.

11. When picking buckets are emptied, cleaned and returned to the field how should they be transported (upside down on the wagon, right side up, stacked)? The grower must consider the likelihood of contamination and reduce that likelihood.

12. What is recommended for the disposal of grey water from a hand washing station? The rule states that it should be disposed of in a way that prevents it from becoming a potential contaminant.

13. What pest control methods are required for packing sheds that are not fully enclosed or enclosed at all? Measures should be taken to prevent pests from becoming established. These areas should be monitored and if pests are noticed they should be removed and prevented from posing additional problems.

14. Can harvest bins be stored in the field overnight? Yes, measures should be taken to prevent contamination such as covering the bins. Bins should be inspected before their use and not used if contamination is evident.

15. How stringent is the rule regarding seams of equipment or tools? Seams should be smoothly bonded or maintained so that they do not pose a contamination risk. In older equipment retrofits may be required.

16. Alternative methods are discussed repeatedly in the rule, and during the last Q&A it was suggested that alternative methods would be applied to groups. Can alternative methods be applied to individual growers? Alternative methods are appropriate for groups as well as individuals provided they are science based.

17. Vegetable washers often have brushes or sponges that are tough to take apart and clean, what should be considered in this situation? The FDA would like comments on specific washing practices and equipment. Close attention should be paid to the equipment used for washing produce to determine the potential for it to contaminate produce.
June 3, 2013

BLUEBERRY BULLETIN

If you have any comments about this newsletter, please make them in the space below and mail to:
Dr. Gary C. Pavlis, County Agricultural Agent
Rutgers Cooperative Extension of Atlantic County
6260 Old Harding Highway, Mays Landing, NJ 08330

I would like to see an article on the following subjects:______________________________

I would like to comment on the following articles:

Title:__________________________ Date:________________________

Comment:__________________________________________________

The Blueberry Bulletin
Weekly Newsletter
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