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

Cabbage.
Be sure to sample fall planted fields for diamondback and cabbage looper larvae. We can find both insects in recently planted fields. If both species are present, Avaunt (3.5 oz/acre), a Bt, Proclaim (3 oz/acre), or Spintor (4-5 oz per acre) will provide control. If cabbage looper is the predominant species, a pyrethroid, Intrepid (8 oz/a) or Confirm (8 oz/acre) will also provide control.

Lima Beans.
As soon as pin pods are present, scout fields for lygus bugs and stinkbugs. Treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. Lannate, Capture or Warrior can be used if both species are present. A higher rate of Capture (4 oz/A), Mustang (4.3 oz/A) or Warrior (3.84 oz) will be needed if stinkbugs are the predominant insect present. At the end of last week, corn earworm moths catches significantly increased in a number of pheromone trap locations and the first corn earworm larvae have been found in lima beans. A treatment is recommended if you find one worm per 6 foot of row. Materials labeled for earworm control include Capture, Mustang MAX, Lannate and Warrior.

Melons.
Continue to scout all melons for aphids, cucumber beetles, and spider mites. A treatment will be needed for spider mites if you find 20-30% of the plants infested with 1-2 mites per leaf. Melon aphid populations continue to increase. The treatment threshold for aphids is 20% of the plants infested with at least 5 aphids per leaf. Fulfill, Lannate and Thiodan are labeled on melons and will provide melon aphid control. A penetrating surfactant (e.g. LI-700 or AD-100) should be used with Fulfill. Be sure to watch for bees foraging in the area and avoid insecticide applications on blooming crops. Be sure to follow all label restrictions regarding insecticide applications during bloom. Cucumber beetle populations have also started to increase and rindworms (larvae of the cucumber beetle) can be found in fields. A cucumber beetle spray should be applied if you find more than 2 beetles per plant or you can find damage to the rind. Dimethoate or a pyrethroid will provide control; however, dimethoate provided the best control early this season.

Peppers.
At the present time, all peppers that have fruit ½ inch in size or larger should be sprayed on a 5-7 day schedule for corn borer, corn earworm, fall armyworm and pepper maggot control. Beet armyworm can also be found in peppers. Remember Orthene or Address will not provide satisfactory earworm control. A pyrethroid or Lannate will be needed to be combined with Orthene for earworm control. Also, Lannate or a
pyrethroid will not provide effective beet armyworm control. Avaunt, Spintor or Intrepid will provide the best beet armyworm control.

**UD IPM Black Light and Pheromone Trap Counts**

*Average Number of Moths per Night: August 12 to August 14, 2003*

<table>
<thead>
<tr>
<th>Trap Location</th>
<th>European Corn Borer Black Light</th>
<th>Corn Earworm Black Light</th>
<th>Corn Earworm Pheromone Trap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kent County</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dover</td>
<td>2</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Harrington</td>
<td>4</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Killens Pond</td>
<td>2.5</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Little Creek</td>
<td>1</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Milford</td>
<td>2</td>
<td>2.5</td>
<td>7</td>
</tr>
<tr>
<td>Rising Sun</td>
<td>4</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Wyoming</td>
<td>4</td>
<td>1.5</td>
<td>1</td>
</tr>
<tr>
<td><strong>Sussex County</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridgeville</td>
<td>3</td>
<td>9</td>
<td>6.5</td>
</tr>
<tr>
<td>Concord</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>Georgetown</td>
<td>2</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>Greenwood</td>
<td>4.5</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Laurel</td>
<td>1</td>
<td>5.5</td>
<td>4</td>
</tr>
<tr>
<td>Seaford</td>
<td>1</td>
<td>2</td>
<td>9.5</td>
</tr>
</tbody>
</table>

*Numbers can change quickly.* For the most recent trap counts, access the website at (http://www.udel.edu/IPM/traps/latestblt.html) or call 1-800-345-7544 (in-state); 1-302-831-8851 (out-of-state). Counts are updated on Monday and Friday.

**Snap Beans.**

Corn borer sprays should be applied at the bud and pin stages on processing snap beans. With the increase in corn earworm activity, a pyrethroid should also be added to the pin spray. After the pin spray, sprays will be needed on a 5-day schedule until harvest. Since this 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 (http://www.udel.edu/IPM/traps/latestblt.html and our link to http://www.udel.edu/IPM/thresh/snapbeanecbthresh.html). As soon as pin pods are present, fresh market beans should be sprayed on a 5 to 7-day schedule. Lannate, Capture, Mustang or Warrior should be used.

**Sweet Corn.**

Fresh market silking sweet corn should be sprayed on a 2-3 day schedule throughout the state. Be sure to check the IPM website for the most recent BLT catches in your area (http://www.udel.edu/IPM/traps/latestblt.html). If fall armyworm were present in whorl stage corn, a combination of Lannate or Larvin plus a pyrethroid will be needed for the early silk sprays.

**Field Crops**

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

**Soybeans.**

We continue to see an increase in green cloverworm populations. The threshold prebloom is 30% defoliation and 15/foot of row. Once fields begin to bloom, the threshold is 15% defoliation and 20 per foot of row. This insect is a defoliator and often confused with loopers, which are difficult to control. Green cloverworm are light green with two white stripes running the length of the body. The number of prolegs near the center of the body can distinguish Cloverworms from Loopers. Cloverworms have three pairs. Loopers have one or two pairs of prolegs. The pyrethroids and Lorsban will provide good control of cloverworms.

We are also seeing an increase in soybean aphid populations, especially in New Castle County.
Weather conditions have been favorable for aphid development and beneficial activity has been low. If economic populations develop, timing of the insecticide application will be very critical. The critical stage for treatment appears to be late vegetative to R2 stage. Current guidelines from the Midwest say treat if you find 25 or more aphids per leaflet. The following products are registered and have provided effective control: Asana, Furadan, Lorsban, Mustang MAX, Penncap-M, Pounce and Warrior.

You should also scout the earliest planted fields as soon as blossoms are present for corn earworm. Low levels of corn earworm and a few beet armyworm have been found in fields on the lower shore. Although reports from the VA corn survey indicate moderate to high populations (lower compared to 2002) and therefore potential for problems in soybeans, our population is generally lower than 2002 -- 12-15% of the ears infested compared to 25% last season. This means that migratory populations could cause damage in our area. As Ames Herbert from VPI indicated in his last newsletter, "we always hedge our prediction based on the weather conditions in August. That is, the outcome of next corn earworm generation will be heavily influenced by the amount of rainfall fields receive in August. In years with a lot of heavy rains, many of the pupae that are in the soil will drown, moths will not fly well, eggs and small larvae will wash off of plant leaves and stems, and predator populations will thrive – all of which work to reduce pest numbers and could result in lower than predicted levels of pest pressure. If, on the other hand, weather turns dry, survivorship of all pest stages will increase and infestations could even exceed predictions." So it will be important to scout fields to determine when and if a treatment is needed. The treatment threshold for corn earworm is 3 per 25 sweeps in narrow fields and 5 per 25 sweeps in wide row fields (20-inches are greater).

The following materials will provide corn earworm control in soybeans: Ambush, Baythroid, Asana, Mustang MAX, Pounce, Warrior (all pyrethroids) Steward, or Larvin. Larvin acts by ingestion on both small and large larvae. Remember that if you are using a pyrethroid, the primary mode of action on large larvae will be ingestion. Earworms will need to feed to cause death, so you will not see much activity from the contact action. Once they ingest the product, they immediately stop feeding. Therefore, fields should not be evaluated for control until 4 days after application. Small larvae are generally killed by contact as well as ingestion. It is important that you do not look at fields 1-2 days after spraying and assume control failure if large worms are present. This could result in unnecessary re-sprays. We are also finding a few beet armyworms in fields. If the predominant pest is beet armyworm, the pyrethroids will not provide control. Steward would be the preferred material. It now has a 2ee label for use on soybeans in Delaware.

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

Weather to Dominate Commodity Markets.
As soon as USDA released the August Crop Report commodity traders turned their attention to weather and crop developments. The need for rain in large parts of the soybean production areas is critical to late planted '03 crop corn and soybeans over the next thirty days. The potential for the large crops that USDA projected in this month's report is very possible. However, the actual size of the U.S. corn and soybean crops will be influenced by the type of growing conditions that occur in the corn belt over the next month. Overall, the August report can be viewed as price positive for corn, soybeans, and wheat.

Corn Gains 10 Cents on Production Forecast.
U.S. corn production is now projected at 10.064 billion bushels, a reduction of 206 million bushels from the July forecast. Ending stocks are projected at 1.184 billion bushels, as compared to 1.339 a month ago. USDA raised usage estimates overall
that somewhat offset the impact of the lower production forecast. Domestic Usage estimate changes balanced out with Feed and Residual use increasing by 25 million bushels, while Food and Seed use decreased by 25 million bushels. The hit on usage came in the forecast for U.S. corn exports, reduced 50 million bushels from last month's report, now projected at 1.8 billion bushels. Dec. corn futures gained about 10 cents per bushel the day following the report and has thus far held steady at $2.30 per bushel.

U.S. Soybean Production.
USDA's estimate for '03 soybean production is now at 2.862 billion bushels, 23 million bushels less than last month and 29 million bushels less than the 2.891 billion bushel crop harvested last year. Ending stocks, projected at 220 million bushels, were reduced 40 million bushels from last month. Nov. '03 soybeans, trading at $5.50 per bushel this morning, are holding firm since the release of the report largely due to weather. The weekly export report for soybeans issued this morning was viewed as dismal for U.S. soybeans.

Marketing Strategy.
With the anticipation of a good to better corn crop on the Eastern Shore and the slightly record setting U.S. corn production estimate, it is now a good time to bring pre-harvest corn sales to the 50% (+) level of anticipated production. It is also time to begin scaling up new crop soybean sales with the goal of getting to the 50% level of intended production, within the next two to four weeks. The weather may continue to cause some play in both the corn and soybean markets from now until harvest, however, it is important to remember that at this stage no one is anticipating any kind of crop production disaster. The primary concern among the bulls and the bears in the trading pits at this juncture is likely to be the eventual actual size of two very large crops.

Weed Control in Seedling Alfalfa - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Getting seedling alfalfa off to a good start is critical for a long-term quality stand. The following herbicide suggestions are for pure alfalfa stands. Gramoxone or Roundup can be used prior to planting to kill emerged weeds. Balan or Eptam can be used pre-plant incorporated for control of small-seeded broadleaves such as pigweed or lambsquarters and most annual grasses. Residual control of either Balan or Eptam is only a few weeks. Butyrac, Buctril, Pursuit and others can only be used after the alfalfa has emerged and developed trifoliate leaves. Fall postemergence treatments include Butyrac 200 (2 to 4 alfalfa trifoliates), Buctril (at least 4 trifoliates), Kerb, Poast Plus, Select, or Pursuit (at least 2 trifoliates). Pursuit provides the broadest spectrum of control, and can be tank-mixed with Buctril or Butyrac to improve control. The addition of Buctril to Pursuit will improve German moss, lambsquaters, and henbit control. Kerb will provide the best common chickweed control, but it must be applied when soil temperatures are 50 degrees or less and requires rainfall for activation. Applications to small weeds are critical for effective control. Poast Plus and Select are effective only on grasses, and cannot be used on alfalfa plus grass stands. Most of the labeled herbicides can cause some crop injury to the alfalfa.

Weed Control for Grass or Mixed Pastures - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Weed control options are very limited for establishing a grass or mixed stand pasture. There are no products to use pre-plant incorporated or preemergence that will provide residual control and not injure the crop. Early postemergence options are also very limited. Ally, Banvel, Crossbow, or 2,4-D can be used for pure grass seedlings (they will kill clovers and alfalfa), but
grasses need to be well established at time of application. Ally can injure fescue and ryegrass. Fescue injury can be reduced if Ally is tankmixed with 2,4-D. Pursuit is labeled for established mixed pasture stands (broadleaf plus grass pastures).

**Options for Harvest Aid Treatments** - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

A harvest-aid may be a consideration to dry down vegetation prior to harvesting and to reduce foreign matter in the harvested grain. For corn Defol (sodium chlorate) is labeled for applications 14 days prior to harvest and it can be applied by air. Defol will dry down plants, but it does not have herbicide activity. Dry down is slow; expect at least 14 days for dry down. Also, 2,4-D amine is labeled, but it must be applied by ground rig, which provides challenges for getting it where it is needed. Apply after the hard dough or dent stage. Air temperatures over 85°F can increase the risk of volatility. Glyphosate (Roundup, Touchdown, Glyphomax) is labeled, but must be used with care due to potential injury to desirable vegetation. Apply glyphosate at 35% moisture or less and when black layer has formed. Allow 7 days between application and harvest. Gramoxone Max recently received a label for a broadcast treatment. Application rates are 0.8 to 1.5 pts/A and must be applied at least 7 days prior to harvest. The above treatments are applied too late to have an impact on seed production. To reduce seed production, Gramoxone Max has a label for a directed application, where spray is directed to the lower one-third of the corn plant. Be sure to read the label for all precautions.

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**UPCOMING EVENTS:**

**Wicomico Farm & Home Show**

August 14, 15 & 16, 2003
Rt. 50 & Hobbs Road (Winterplace Park)
Salisbury, Maryland 21804
www.wicomicofarmandhomeshow.com

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**Weather Summary**

[Link to weather summary]

**Weeks of August 7 to August 14, 2003**

**Rainfall:**
- 1.77 inches: August 7
- 0.12 inches: August 9
- 0.02 inches: August 10
- 0.26 inches: August 12
- 0.01 inches: August 13

Readings taken for the previous 24 hours at 8 a.m.

**Air Temperature:**
- Highs Ranged from 90°F on August 14 to 76°F on August 7.
- Lows Ranged from 77°F on August 8 to 68°F on August 7.

**Soil Temperature:**
- 77°F average for the week.
- (Soil temperature taken at a 2 inch depth, under sod)

Web Address for the U of D Research & Education Center:
http://www.rec.udel.edu

Compiled and Edited By:
Tracy Wooten
Sussex County Extension Educator - Horticulture

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2003 University of Delaware Wheat and Barley Variety Performance Summary Available in your local County Extension Office.

New Castle County Office – 302-831-2506; Kent County Office – 302-730-4000; Sussex County – 302-856-7303

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