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

*** CORN EARWORM ALERT***

SOYBEANS AND LATE PLANTED VEGETABLES – Since last Friday, we have experienced a major increase in corn earworm MOTH FLIGHTS in a number of Kent County Blacklight Traps as well as the Greenwood trap. The following are the nightly catches between Aug 28 and Aug 30: Dover – 257, Frederica – 208, Greenwood – 48, Harrington – 118, Little Creek – 25, Milford – 416, Rising Sun - 78, and Wyoming – 240. These catches are as high or higher than catches in 1999 but the peak is occurring later. THIS SHARP increase means that it will be critical to check double crop soybeans and late planted vegetables carefully for earworms during the next 2 - 3 week period. Although we continue to observe earworms laying eggs in soybeans, we have not yet seen a significant increase in larval populations. The predicted warmer weather could result in quick egg hatch. Long term weather forecasts have predicted a warmer and drier September. However, you should still watch for diseased and parasitized worms as well as pod feeding before making a treatment decision. The treatment threshold is 3 per 25 sweeps (narrow rows), 5 per 25 sweeps (wide rows) or one per foot of row.

Peppers.
In areas where corn earworm catches are above 20 per night (all of Kent County, Greenwood and Seaford), sprays are needed on a 4-5 day schedule. In all other areas, sprays can be applied on a 5-7-day schedule.

Lima Beans.
With the significant increase in corn earworm moth flights, we are starting to see a significant increase in corn earworm egg laying, larval counts and pod damage. When possible, fields should be scouted twice a week to effectively time insecticide applications. Controls are needed if you find one larva per 6 foot of row. In many cases, multiple applications (2-4 sprays) may be needed to control newly hatched larvae. If you are using Lannate, the rate will depend on the larval size at the time of treatment. If worms are small, 1.5 to 2 pts. per acre will be adequate. However, if the worm size is mixed at the time of treatment, 3 pts./acre will be needed.

Snap Beans.
Corn borer and corn earworm moths can easily be found laying eggs in snap bean fields. Be sure to watch for corn borer larvae boring into the petioles and stems on small plants. If you notice an abundance of corn borer moths laying eggs in fields before the bud stage, be sure to check plants for flagged leaves and infested petioles. If ECB moth activity is abundant or catches are above 10
per night (Dover, Harrington, Milford, Frederica, and Wyoming), a spray will be needed before the bud spray to prevent larvae from tunneling into stems. Processing snap beans should be sprayed at the bud stage for corn borer control and at the pin stage for corn earworm and corn borer control. In the Dover, Frederica, Greenwood, Harrington, Little Creek, Milford, Rising Sun, and Wyoming areas, sprays are needed on a 3-day schedule from the pin stage until harvest. In all other areas, sprays are needed on a 4-day schedule from the pin spray until harvest.

**Spinach.**
Continue to watch for webworms and beet armyworm in spinach fields throughout the state. The first webworms have been detected on small plants. Spintor, Confirm, a Bt-insecticide, Ambush or Pounce can be used when spinach is less than 3 inches in diameter. Controls for webworms should be applied before significant webbing has occurred. If the beet armyworm is the predominant species, Spintor or Confirm should be used.

**Sweet Corn.**
All fresh market silking sweet corn should be sprayed on a 2-3 day for corn earworm, corn borer and fall armyworm control.

**Crop Profiles For Potatoes, Squash & Peaches**
*Posted for Comments – Susan Whitney, Extension Specialist - Pesticides; swhitney@udel.edu*

The Crop Profile for potatoes in Delaware has been posted on the web at: http://www.udel.edu/pesticide/potatoprofile.html. USDA and EPA will be using this Crop Profile when making pesticide registration decisions under FQPA. Comments on this document are encouraged. Please send suggestions for revision to swhitney@udel.edu. If you would like a hardcopy, please contact Whitney at 302-831-8886.

The Crop Profile for squash in Delaware has been posted on the web at: http://www.udel.edu/pesticide/squashprofile.html. USDA and EPA will be using this Crop Profile when making pesticide registration decisions under FQPA. Comments on this document are encouraged. Please send suggestions for revision to swhitney@udel.edu. If you would like a hardcopy, please contact Whitney at 302-831-8886.

The Crop Profile for peaches in Delaware has been posted on the web at: http://www.udel.edu/pesticide/peach.html. USDA and EPA will be using this Crop Profile when making pesticide registration decisions under FQPA. Comments on this document are encouraged. Please send suggestions for revision to swhitney@udel.edu. If you would like a hardcopy, please contact Whitney at 302-831-8886.

**Vegetable Diseases** - Bob Mulrooney, Extension Vegetable Pathologist, University of Delaware; bobmul@udel.edu

**Downy Mildew on Cucurbits and Lima Beans.**
Downy mildew continues to be found in cucurbit and lima bean fields. Continue to scout fields regularly. See Issues 23 & 21 of Weekly Crop Update for further information about this disease.

**White Mold in Lima Beans.**
White mold is still being found in lima bean fields. Continue to scout fields regularly. Refer to Issues 22 & 20 of Weekly Crop Update for more information about this disease in lima beans.

**Soybeans.** **White mold** caused by *Sclerotinia sclerotiorum* has been diagnosed in soybeans this week. The first symptoms that are often seen are scattered pockets of plants with dead tops or
plants in low areas with dead tops. Leaves often have a gray-green appearance before turning brown. Leaves often stay attached to the stems. Infection often occurs at the stem nodes and the stem lesions often girdle the plant and stop the flow of water and nutrients. Cottony mycelium (fungus threads) is often seen on infected plant parts. The best diagnostic feature is the presence of the hard, black round to irregularly shaped sclerotia (hard overwintering structures of the fungus) that look like rat droppings. These are often found on the stems or hidden in the white cottony fungus growth. Often the sclerotia can also be found in the stem pith, if the stems are split open. Seed can often be contaminated with sclerotia during harvest and can increase seed decay during storage if moisture is present. Sclerotia are also spread within the field and from field to field during combining. Peas, lima beans, and snap beans are all hosts to this fungus. This disease has certainly been favored by the cooler than normal temperatures and abundant rainfall. Try to break the cropping sequence and avoid planting these susceptible crops if possible. Deep plowing before planting can bury sclerotia to prevent spore production during the summer. Flowering of soybeans during periods of cool temperatures and plenty of moisture favors infection. Unfortunately most of the agronomic practices that favor rapid canopy closure which helps to optimize yields and provide good weed control favor white mold development. On the plus side, white mold is only a problem during these unusually cool, wet seasons.

**Vegetable Diseases** - Kate Everts, Extension Vegetable Pathologist, University of Delaware and University of Maryland; evrerts@udel.edu

**Melcast for Watermelons**

EFI Values (Environmental Favorability Index)

Do not use MELCAST if there is a disease outbreak in your field, it is a preventative program. Any questions please call Phil Shields at (410) 742-8788 or e-mail: ps136@umail.umd.edu

<table>
<thead>
<tr>
<th>Location</th>
<th>8/23</th>
<th>8/24</th>
<th>8/25</th>
<th>8/26</th>
<th>8/27</th>
<th>8/28</th>
<th>8/29</th>
<th>8/30</th>
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<td>3</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Laurel, DE (Collins Farms)</td>
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<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
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<td>4</td>
<td>2</td>
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<tr>
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<tr>
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<td>6</td>
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<tr>
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<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>1</td>
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</tbody>
</table>

The first fungicide spray should be applied when the watermelon vines meet within the row. Additional sprays should be applied using MELCAST. Accumulate EFI (environmental favorability index) values beginning the day after your first fungicide spray. Apply a fungicide spray when 30 EFI values have accumulated by the weather station nearest your fields. Add 2 points for every overhead irrigation. After a fungicide spray, reset your counter to 0 and start over. If a spray has not been applied in 14 days, apply a fungicide and reset the counter to 0 and start over. The first and last day listed above can be partial days so use the larger EFI value of this report and other reports for any specific day.

If, for some reason, a serious disease outbreak occurs in your field, return to a weekly spray schedule. More detailed information concerning MELCAST and sample data sheets are available on the web at http://www.agnr.umd.edu/users/vegdisease/vegdisease.htm or http://www.udel.edu/IPM/
**Field Crops**

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

***CORN EARWORM ALERT***

**SOYBEANS AND LATE PLANTED VEGETABLES** – Since last Friday, we have experienced a major increase in corn earworm MOTH FLIGHTS in a number of Kent County Blacklight Traps as well as the Greenwood trap. The following are the nightly catches between Aug 28 and Aug 30: Dover – 257, Frederica – 208, Greenwood – 48, Harrington – 118, Little Creek – 25, Milford – 416, Rising Sun - 78, and Wyoming – 240. These catches are as high or higher than catches in 1999 but the peak is occurring later. THIS SHARP increase means that it will be critical to check double crop soybeans and late planted vegetables carefully for earworms during the next 2 - 3 week period. Although we continue to observe earworms laying eggs in soybeans, we have not yet seen a significant increase in larval populations. The predicted warmer weather could result in quick egg hatch. Long term weather forecasts have predicted a warmer and drier September. However, you should still watch for diseased and parasitized worms as well as pod feeding before making a treatment decision. The treatment threshold is 3 per 25 sweeps (narrow rows), 5 per 25 sweeps (wide rows) or one per foot of row.

Attention All Kent County Farm Operators

**Pre-Harvest Planning Workshops** - Gordon Johnson, Extension Agriculture Agent, Kent County, gcjohn@udel.edu

Sponsored by the Farm Service Agency and University of Delaware Cooperative Extension Office in Kent County

**Topics Will Include:**

Making the Best Use of Farm Programs in Marketing
- Review of the LDP program and new eligibilities.
- Marketing Assistance Loans
- Payment limitations review
- Loan repayments with Commodity Certificates
- Farm Storage Facility Loans

**Review of other available farm programs**

**Temporary grain storage and handling**

**Marketing strategies for harvest and the coming year**

You are welcome to attend this workshop in one of 3 locations and times:

**Workshop 1**
- **Date:** Wednesday, September 6, 2000
- **Time:** 7-9 PM
- **Place:** Lake Forest High School Vocational Agriculture Classroom

**Workshop 2**
- **Date:** Monday, September 11, 2000
- **Time:** 8-10 AM
- **Place:** UD Kent County Extension Office, Rt. 113, Dover, next to DelDOT

**Workshop 3**
- **Date:** Wednesday, September 13, 2000
- **Time:** 7-9 PM
- **Place:** Snow Farms Meeting Place, Whitehall Crossroads, North of Leipsic

All Kent County grain producers and farm operators are encouraged to attend one of three pre-harvest workshops sponsored by the Farm Service Agency and UD Cooperative Extension Office in Kent County.

Personnel from the Farm Service Agency will be on hand to review LDP’s, marketing assistance loans, commodity certificates, and farm storage facility loans. Participants will work through
examples involving LDP’s, payment limitations, storage, loans, and certificate use. The session will then be opened up to questions. Other farm programs will also be reviewed.

Extension personnel from UD will be on hand to talk about temporary grain storage and handling, provide designs, and discuss critical considerations for temporary storage. The UD Extension Marketing specialist will provide information on marketing considerations for the harvest season and the coming year.

Call the Extension Office at (302) 697-4000 or the FSA Office at (302) 697-2600 x 2 if you are planning to attend one of these sessions. Anyone interested is welcome to attend. For further information or special consideration in accessing these workshops contact Gordon Johnson at 697-4000 or Greg Hudson at 697-2600 in advance.

See you there.

Blank Corn Ear Tips - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu

Incomplete kernel set can be caused by numerous factors most of which relate to water and drought conditions (See photo below, courtesy of Ted Haas and Eddie Johnson, University of Maryland). Drought can cause delayed silk emergence. Since silks emerge from the base of the ear out to the ear tip in a sequential pattern, delayed emergence can mean that the ear tip silks emerge after pollen shed is completed. Incomplete kernel set also can be caused by insect (Japanese beetles and Western and Northern corn rootworm beetles) feeding on silks and interfering with pollen fertilization of the ovules (potential kernel).

What’s causing poor tip fill this year when for the most part drought has not been a problem? One possible answer is that the unusually favorable conditions prior to pollination when kernel number and row number are determined allowed an unusually high number of potential kernels per row. According to Dr. Bob Nielsen, longer than normal potential ears often fail to silk completely before the pollen source runs out. The typical harvested ear size is 16 to 18 rows by 30 to 40 kernels long. Many ears this year show fifty or more potential kernels per ear.

One reason for incomplete kernel set could be the interaction of genetics (for specific hybrids) and the unusual growing environment they experienced this year. I also believe that this problem occurred because we have had inadequate sunlight to maximize yield potential so many of the potential kernels were aborted by the plant when the plant could not produce enough sugars to fill the potential kernels. Most of the state has experienced many more days of cloudy weather than is typical during the growing season. Another factor is that corn has not been without stress this year. The stresses range from too much water to too little available nutrients due to excessive leaching from all the rain.

Lastly, my thanks to Ted Haas and Eddie Johnson from the University of Maryland and Dr. R. L. Nielsen at Purdue University for their comments which are incorporated in this article.

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

Commodity Prices Rebound
This past week has seen a marked improvement in new crop corn, soybean, and wheat prices. The recovery is due to three primary reasons: first, the European Union announced a curtailing of wheat exports due to possible crop production reductions in the coming year, further U.S. weekly crop
rating condition reports have declined slightly over the past two weeks. The third and perhaps the most important reason, which relates directly to crop condition ratings, is the 'heat' that entered the corn belt which is rapidly maturing and drying the corn and soybean crop in large portions of the midsection of the corn belt. Commodity prices for corn and soybeans at the CBT currently remain under the loan rate at $1.94 per bushel for corn and $4.99 per bushel for soybeans.

Farm Marketing Strategy
We are entering a period in the marketing year that makes general information more difficult to base marketing decisions on. From here on out, most marketing decisions become an individual consideration, based upon individual options. Some of the decision making process depends on the alternatives individuals have for storing grain. To a lesser extent, as of this writing, is the concern of exceeding the payment limit for the loan deficiency program. Soybean prices, for example, are currently within 37 cents per bushel of the $5.36 local loan rate. The corn loan rate is $2.10 per bushel. For those who have chosen to keep most of their new crop soybeans and 40 to 50 percent of their new dry land corn crop unpriced up to this point in time, there is still no need to be in a hurry for making additional sales. The reason for this is by making sales below the loan rate, even if you think prices will drop during harvest pressure, the potential of forward selling for a cheap price and not getting a loan deficiency payment is there. For example, if one were to forward price soybeans for $4.69 per bushel now and ends up harvesting the beans at a harvest time cash price of $5.36 per bushel, taking the forward contract price now results in achieving a lower per bushel sales price on the contracted bushels due to the deficiency payment being eliminated. In other words, for those who have waited to advance new crop sales up to this point in time why sell now?

Corn Stalk Rots and Root Rots – Derby Walker, Extension Agricultural Agent, Sussex County, derby@udel.edu

With the current weather we are experiencing, root and stalk rots may appear in field corn. To test for root rots, check the quality of the root system by pulling up some corn plants. Areas to check first would be where the corn "dried down" first. A very rapid dry down may have been unnatural, due to a weakened or dead root system. If plants pull up easily and only have a small root system, these plants may root lodge. It is very difficult to harvest root lodge plants because they either pull out of the ground and plug the header of the combine or are easily pushed over by wind.

To test for stalk rot, try crushing the stalk. If the stalk crushes easily, there is a stalk quality problem. If stalk rot or root rot are present, you will need to harvest the corn early to avoid severe yield losses. Wet weather and wind will cause lodging problems. Growers in 1999 lost up to 40 bushels per acre because of red root rot and stalk rots. Corn varieties vary in their resistance to root rot and stalk rot. Now is the time to make notes on which varieties had problems and which ones held up. These notes will aid you in your selections of corn hybrids for next year.

Upcoming Events…

Pesticide Applicator Trainings
Date:      September 5 & 6
Training:  8:15 a.m. to 4:00 p.m.  DAY 1
           8:15 a.m. – Noon  DAY 2
Exam:      1:00 p.m.  DAY 2
Location:  Training for both dates will be held at the University of Delaware Kent County Cooperative Extension Office
For More Information: Contact Susan Whitney at 302-831-8886 or swhitney@udel.edu.
**Success with Small Grains Workshop**

We will go through critical decisions with small grain production during the year from start to finish.

**Date:** Thursday, September 7, 2000  
**Time:** 6:30-9:00 PM  
**Place:** University of Delaware Extension Office, Rt. 113, Dover, Next to DelDOT  
**Dinner:** A light dinner will be provided  
**For More Information:** Contact Gordon Johnson at 302-697-4000 or gcjohn@udel.edu

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**Kent County Farm Operators Pre-Harvest Planning Workshops**

You are welcome to attend this workshop in one of 3 locations and times:

- **Workshop 1**  
  **Date:** Wednesday, September 6, 2000
- **Workshop 2**  
  **Date:** Monday, September 11, 2000
- **Workshop 3**  
  **Date:** Wednesday, September 13, 2000

**For Further Information:** contact Gordon Johnson at 697-4000 or Greg Hudson at 697-2600 in advance

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**University of Delaware Corn Hybrid Field Day**

**Date:** Tuesday, September 12, 2000  
**Time:** 9:00 AM - 1:00 PM  
**Place:** Corn research plots on Scuse Farms, Smyrna-Leipsic Rd near the crossing with Hurd Road.  
**Cooperator:** Mike Scuse  
**Lunch:** A lunch of hotdogs and hamburgers will be provided  
**For More Information:** Contact Gordon Johnson at 302-697-4000 or gcjohn@udel.edu

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**Pumpkin Twilight Meeting**

**Date:** September 21, 2000  
**Time:** 4:30 p.m. Plots available for viewing  
**Location:** University of Maryland’s Wye Research & Education Center, Queenstown, Maryland  
**For More Information:** Contact Bob Rouse at 410-827-8056 or rr36@umail.umd.edu

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**Weather Summary**

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<td><strong>Rainfall:</strong></td>
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<tr>
<td>0.32 on August 24</td>
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<td>0.01 on August 25</td>
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<tr>
<td>0.05 on August 28</td>
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<tr>
<td>0.09 on August 29</td>
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<tr>
<td>0.15 on August 30</td>
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<tr>
<td><strong>Readings taken for the previous 24 hours at 8 a.m.</strong></td>
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<tr>
<td><strong>Air Temperature:</strong></td>
</tr>
<tr>
<td>Highs Ranged from 83°F on August 26 to 80°F on August 28 &amp; 30.</td>
</tr>
<tr>
<td>Lows Ranged from 71°F on August 29 &amp; 30 to 57°F on August 26.</td>
</tr>
<tr>
<td><strong>Soil Temperature:</strong></td>
</tr>
<tr>
<td>76°F average for the week.</td>
</tr>
<tr>
<td>(Soil temperature taken at a 2 inch depth, under sod)</td>
</tr>
</tbody>
</table>

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

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**Compiled and Edited By:**

**Tracy Wootten**  
Extension Associate - Vegetable Crops

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