Vegetables

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

**Melons.**
Continue to sample fields on a weekly basis for cucumber beetles, aphids and spider mites. Populations of all three insects can be found and economic levels are spotty in fields.

**Watermelons.**
Economic levels of aphids and spider mites continue to be found in fields. With the recent cool weather and predicted warmer conditions you can expect to see an increase in both pests, especially aphids. Kelthane, Capture, Danitol or Agri-Mek should be used for mite control. The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. If populations of mites have exploded and adult mites are the predominant life stage, Capture, Danitol or Kelthane should be used. If the population is a mixture of eggs, immature mites and lower levels of adult mites, Agri-Mek should be used at 8 oz/acre. A second miticide application may be needed in 3-7 days depending on the population level at treatment time. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. Actara, Fulfill, Lannate and Thiodan are labeled on melons and will provide melon aphid control. Remember, Agri-Mek, Actara and Fulfill are all translaminar products. The most effective control will be achieved when translaminar insecticides are able to penetrate the leaf surface. Combinations with "sticky fungicides" such as Bravo Weather-Stik or spreader-stickers have been shown to prevent movement into the leaf. Data from Syngenta indicates that the addition of a non-ionic surfactant (an 80:20 material) to a mixture of Actara or Fulfill plus Bravo will resolve this issue. No data is available for Agri-Mek so it should be combined with Quadris.

**Potatoes.**
Economic levels of CPB adults and small larvae can still be found in fields were Admire, Platinum or Tops MZ Gaucho were not used at planting. Actara, Spintor or Provado will provide control. ECB egg masses continue to be found; however, no stem tunneling has been detected. Be sure to check our website [http://www.udel.edu/IPM/traps/latestblt.html](http://www.udel.edu/IPM/traps/latestblt.html) for the most recent moth catches in your area. If trap catches are being used to time sprays, the first application will be needed 3-5 days after peak catch. Ambush, Baythroid, Furadan, Penncap, Pounce or Spintor will provide control. If you are scouting for infested terminals, the first treatment should be applied when 20-25% of the terminals are infested. Furadan or Monitor will provide the best control if you are waiting until you see infested terminals. Continue to sample for potato leafhopper adults and nymphs. As a general guideline, controls should be applied if you find ½ to one adult per sweep and/or one nymph per every 10 leaves. A pyrethroid, Actara or Provado will provide control.
**Sweet Corn.**
Continue to watch the earliest planted fields for European Corn Borer larvae. We are starting to see our first larvae in whorl stage sweet corn. A treatment should be applied if 15% of the plants are infested. The best timing for a treatment is just as the tassels are emerging from the whorls. In recent years, the best corn control has been achieved with Ambush, Pounce, Penncap or Warrior. In addition, sweet corn under plastic has started to silk. Since earworms are flying, a treatment should be applied as soon as ear shanks are visible.

**Lima Bean Weed Control** - Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

Lima bean planting will begin very soon. Getting a good stand is an important first step towards obtaining a good yield. Growers are reminded that 3-4 plants per foot has proven to be the optimum population in 30 inch rows.

Since 1988, the standard weed control program has been a pre-emergence combination of Dual Magnum 7.62E and Pursuit 2SC or Pursuit 70DG. On sandier soils, the rate should be 1.25 pints of Dual and 3 ounces of Pursuit 2SC or 1.1 ounces of the Pursuit 70DG. Dual could be increased to 1.75 pints on heavier soils.

Command is labeled on a wide range of beans, but we **DO NOT** recommend it on lima beans, due to potential phytotoxicity. We have not seen any injury on other types of beans.

**Vegetable Diseases** - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

**Potatoes.**

**Late Blight Advisory**

Disease Severity Value (DSV) Accumulations as of May 22, 2002, are as follows:

Location: Joe Jackewicz Farm, Magnolia, DE. Greenrow: April 10, 2002

Remember that 18 DSV’s is the threshold to begin a spray program for late blight.

<table>
<thead>
<tr>
<th>Date</th>
<th>Total DSV</th>
<th>Spray Recommendation</th>
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<tbody>
<tr>
<td>5/1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>5/11</td>
<td>19</td>
<td>5 days, low rate</td>
</tr>
<tr>
<td>5/19</td>
<td>23</td>
<td>10 days, low rate</td>
</tr>
<tr>
<td>5/22</td>
<td>23</td>
<td>10 days low rate</td>
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</tbody>
</table>

Potatoes that have reached greenrow (50% emergence) by April 20 have all reached more than 18 DSV’s. Fields that reached greenrow after April 22 have not accumulated 18 DSV’s yet and would not need to be sprayed.
Growers should apply at least 1-2 sprays of Dithane or Bravo before plants canopy. Late blight has not been a problem here in Delaware for many years, and unless you have seed from an unknown source the risk of late blight is very low.

If **pink rot** or **leak** has been a problem in the past and you did not apply a fungicide in the furrow for control, the first foliar application of Ridomil Gold MZ, Ridomil Gold/Bravo or Fluoronil should be made between when tubers are nickel-sized and flowering then repeated 14 days later. Apply the fungicide in as much water as possible. Try to get some coverage of the soil for root uptake as well. Pink rot generally occurs in poorly drained areas or where water stands due to compaction from spray rows.

Do not overlook **lesion nematodes** as a possible cause of stunted potato vines. If the cause of the stunting is unknown, root samples of infected plants can be very revealing. Dig ten plants at random in the affected area and remove the tops. Be careful to include as much root and stolons as possible. Place the ten root systems in a plastic bag and refrigerate the sample until it can be taken to the County Extension office. County staff will arrange to get the sample to the Nematode Assay Program in Newark.

Scattered frosts early in the week have killed or damaged potato foliage in some fields. Often this damaged tissue can get colonized by opportunistic fungi that ordinarily would not cause damage to healthy leaves. If you have fields with frost damage, a fungicide application of Dithane or Bravo would be recommended to protect frost damaged plants.

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**Field Crops**

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

**Alfalfa.**
Continue to sample fields for potato leafhopper adults, especially on spring seedings and within one week of cutting for established stands. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa.

**Field Corn.**
As armyworms increase in size, you will begin to see larvae moving from small grain fields into field corn. However, large larvae are often difficult to control. The treatment threshold for armyworms in corn is 25% infested plants with larvae less than one-inch long. We continue to find fields with wireworm and grubs problems.

Unfortunately there are no rescue treatments for these 2 insect pests. If you suspect a soil insect problem, be sure to determine which insect is causing the problem. If seed corn maggot caused the problem, you should not see additional damage. In addition, most of the grubs we are finding are now getting ready to pupate. However, wireworms will be present all season and cause damage. Since it is getting late to make a re-plant decision, be sure to do an accurate job of taking a stand count. In many cases, plant populations have been adequate to maintain the stands.

**Small Grains.**
Continue to sample barley and wheat for armyworm populations. We have seen an increase in the number of barley fields with economic levels of armyworms. Larvae range in size from 1/4 to one-inch in size. Since barley is starting to quickly mature, it will be most susceptible to damage in the next week. The treatment threshold on wheat is two per foot of row and on barley the threshold is one per foot. On wheat, Warrior, Mustang, Lannate or Parathion can be used. On
barley, Lannate or Parathion can be used. If worms are large at the time of treatment, 2 pt/A of Lannate should be used. Warrior has a 30-day wait until harvest, Mustang a 14-day wait, Parathion a 14 day wait and Lannate a 7 day wait.

**Soybeans.**
In no-till fields, a hopper box treatment of Kernel Guard Supreme or KickStart VP should be used until early June for seed corn maggot control. For those who have soybeans just emerging from the ground, be sure to scout for grasshoppers. The treatment threshold for grasshoppers is 1 per sweep and 30% defoliation. We are starting to find the first small grasshoppers along field edges and in fields with soybean stubble from last season. Asana, Furadan, Lorsban or Warrior will provide control, although multiple controls may be needed. As a general guideline, non-crop areas should be treated if you find 20 or more grasshoppers per square yard. If the weather remains cool and wet at emergence, slugs will also be a problem. If slugs start to feed on soybeans, the metaldehyde baits should be considered.

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

**Crop Progress Continues to Lag in the Eastern Corn Belt**
Planting and emergence continue to lag for the nation's corn and soybean crops. Soybean planting progress currently is reported to be as expected, but emergence remains a real concern, running well behind last year's levels. Just 30% of the U.S. soybean crop was planted as of May 19th, 20 points behind the 1997-2001 average. The states of Illinois, Ohio, and Indiana are all at least 50 points below their respective averages.

U.S. corn planting and emergence rates are reflective of the 1993 crop year, when 71% of the crop was planted at this time of year. Slow emergence is also an issue for corn with this week's reading running about half of the 60% average for the past three years. Several key states: MN, IL, IN, OH are currently running 30 to 40% behind their normal emergence reading.

**China Gets Back in the Game**
Earlier this week, USDA announced the sale of 110,000 tons of U.S. soybeans to China, half old crop and half new crop. China had placed a hold on shipping U.S. soybeans while putting GMO regulations into effect. Since March 20, China has bought several cargoes of old crop soybeans, but hasn't shipped much.

**Corn Acreage Will Drop**
U.S. corn acres are likely to drop from USDA's planting intentions report of 79 million acres. Although the extent of the size of the drop in acres is not known at this time, it is interesting to note that a drop to 77 million acres planted would result in a sizeable reduction in the ending stocks for corn, something more near 1.063 billion bushels which represents a stocks-to-use ratio of only 10.5%. Last year's ratio was 16.5% and it was 19.4% in 2000/01. In 1993, the stocks-to-use ratio was 10.6% and the U.S. average farm price was $2.50 per bushel. Assuming this scenario develops, the corn market is fundamentally under priced.

Another, more likely, scenario is that 78.5 million acres of corn acres are planted resulting in ending stocks of near 1.4 billion bushels and a season average farm price ranging from $1.95 to $2.25 per bushel. In this event the market is still likely to present some better sales opportunities from the current price level.

**Marketing Strategy**
The weather continues to be a major factor in this market, even though commodity prices softened somewhat this week. The reason for the slackening in prices is that the market has 'bought the rumor and sold the fact'. A 500,000 acre reduction in U.S. corn plantings has been discounted into this market, a 2 million acre reduction in corn acres has not. A floor trader at
the Chicago Board of Trade believes that the second of the two scenarios presented above is the one most likely to occur. Advancing sales for new crop corn, soybeans, or wheat is not warranted at this time. Dec corn futures are trading at $2.22, Nov soybeans at $4.70, and July wheat at $2.67 per bushel.

**Cold Temperatures –**

We have experienced unusually cold temperatures this week. Low temperatures recorded here at the Research & Education Center for the week were:

- May 17 - 65°F
- May 18 - 43°F
- May 19 - 43°F
- May 20 - 38°F
- May 21 - 37°F
- May 22 - 36°F

Many have experienced patchy frost on various crops, especially in no-till situations. When examining plants, remember to look at the growing point. If the growing point was not affected, the crop should come back. Nutrients that are present are not being utilized by the plant because they are not growing at such low temperatures. Most crops should start to look better as the temperatures rise this weekend.

**Ag Fact**

The average annual household food spending in the United States is $5,031.

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**Weather Summary**

<table>
<thead>
<tr>
<th>Week of May 17 to May 22, 2002</th>
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<tbody>
<tr>
<td><strong>Rainfall:</strong></td>
</tr>
<tr>
<td>May 18: 0.47 inches</td>
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</table>

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

**Air Temperature:**
- Highs Ranged from 82°F on May 17 to 59°F on May 21.
- Lows Ranged from 65°F on May 17 to 36°F on May 22.

**Soil Temperature:**
- 62°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](http://www.rec.udel.edu)

**Compiled and Edited By:**

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*Extension Associate - Vegetable Crops*

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