Soybean Rust Update

Nationally scouting continues on kudzu patches from Florida northward to southern Illinois, and westward to Texas and Nebraska. Many of the soybean sentinel plots have been planted throughout the country with the most advanced ones in the South starting to fill pods. Currently, there are no reports of rust on newly planted soybean in 2006, including volunteer plants. Rust has been confirmed in five counties in Alabama, 11 in Florida, four in Georgia, and one in Texas. (From National SBR Commentary 5/24).

Locally sentinel plots are growing and range from V1 to VC growth stages. Soybean planting is progressing and many soybeans are emerging and in the VC growth stage (unifoliate leaves emerged). Once again visit the national PIPE site http://www.sbrusa.net for more information.

Bob Mulrooney

Vegetables

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

Melons
Continue to scout all melons for aphids, cucumber beetles, and spider mites. Economic levels of aphids can be found and in many cases these plants were infested in the greenhouse.

Therefore, be sure to check plants as soon as they are set in the field. In general, cucumber beetle levels have been low. However, with the predicted warmer weather be sure to watch carefully for an increase in populations. Although I indicated in the last newsletter that Kelthane will be phased out this year, please be aware that there will be plenty of existing stocks for the 2006 season.

Peppers
Fields should be sampled for thrips and corn borers. On young plants, corn borer larvae can bore into the stems and petioles. In areas where peppers are isolated or corn is growing slowly, moths are often attracted to young pepper plants. Therefore, you should watch for corn borer moths laying eggs in all fields. As a general guideline, treatment may be needed if there is no corn in the area or you are using rye strips as windbreaks. You should also look for egg masses. At this time of year, thrips can damage peppers by vectoring tomato spotted wilt virus and by causing direct plant damage. Although there are no available thresholds, a treatment may be needed if you see populations increasing.

Potatoes
With the predicted warmer weather, be sure to watch for an increase in Colorado potato beetle adult activity and egg laying. A treatment should be considered for adults when you find 25 beetles per 50 plants and defoliation has reached the 10% level. Once larvae are detected, the threshold is 4 small larvae per plant or 1.5 large larvae per plant. If adults are
the predominant stage, Assail, Leverage, Actara, or Provado should provide control. Once eggs hatch and larvae are present, the previous materials as well as Avaunt + PBO, cryolite, Rimon, or Spintor have provided control. Be sure to read all labels to select the correct rate, maximum number of applications and observe resistance management statements on the labels. We are starting to see an increase in corn borer activity and the earliest planted fields will be attractive to egg laying moths. A corn borer spray may be needed 3-5 days after an increase in trap catches or when we reach 700-degree days (base 50). Avaunt, Baythroid, Furadan, Monitor, Penncap, permethrin or Spintor are labeled for corn borer control. If you are scouting for infested terminals, the first treatment should be applied when 10% (fresh market) or 20-25% (processing) of the terminals are infested with small larvae. Furadan or Monitor will provide the best control if you are waiting until you see infested terminals.

**Snap Beans**

All seedling stage fields should be scouted for leafhopper and thrips activity. The thrips threshold is 5-6 per leaflet and the leafhopper threshold is 5 per sweep. If both insects are present, the threshold for each should be reduced by 1/3. If both insects are present, Lannate, Capture (bifenthrin), Proaxis and Warrior are labeled for both insect pests on snap beans.

**Sweet Corn**

Continue to sample for cutworms and flea beetles. As a general guideline, treatments should be applied if you find 3% cut plants or 10% leaf feeding. In order to get an accurate estimate of flea beetle populations, fields should be scouted mid-day when beetles are active. A treatment will be needed if 5% of the plants are infested with beetles. Small corn borer larvae can be found in the whorls of the earliest planted fields. A treatment should be applied if 15% of the plants are infested. The first silk sprays will be needed for corn borer and corn earworm as soon as ear shanks are visible. Be sure to check trap catches since the spray schedules can quickly change. You can call the Crop Pest Hotline for the most recent trap catches -- in state: 1-800-345-7544; out of state: 302-831-8851.

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**Pea Harvest Begins** - Ed Kee, Extension Vegetable Specialist; kee@udel.edu

Peas harvest began this week. Despite the dry spring, yields look good and quality is exceptional. Little or no disease pressure has been evident, due to the dry conditions. Growers have done a good job of irrigating, and many pea fields look to be in excellent condition. Of course, as one experienced grower said, “They don’t look pretty until the check is in the bank.”

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**Pickle Planting** - Ed Kee, Extension Vegetable Specialist; kee@udel.edu

Most growers have made 4 or more plantings of pickling cucumbers. Stands look good despite the cool weather. Of course, the big concern as the season progresses is downy mildew. It’s early and current dry conditions are not conducive to downy at all, but it is important to watch the diseases development in the South. Currently, four sites have been identified in Florida and the disease does not seem to have spread very far. There is also a reported site in northern Mexico. The North Carolina State website does a great job of reporting outbreaks and predicting possible movement. The address is [www.ces.ncsu.edu/depts/pp/cucurbit](http://www.ces.ncsu.edu/depts/pp/cucurbit), or simply Google “Cucurbit Downy Mildew” and the site should appear.

Last year, good control was achieved with Previcur Flex + Bravo alternated with Tanos + mancozeb. Detailed information is available in the Vegetable Recommendation Book; last year’s test results are also available from my office. We will be conducting trials again this year, incorporating some newly labeled materials as well.
Potato Disease Advisory #5 - May 24, 2006, Bob Mulrooney, Extension Plant Pathologist

Disease Severity Value (DSV) Accumulation as of May 24, 2006 is as follows:
Location: Byfield Farms field east of Magnolia, DE. Greenrow: April 23, flower buds present May 24.

Remember that 18 DSV’s is the threshold to begin a spray program

<table>
<thead>
<tr>
<th>Date</th>
<th>Daily DSV</th>
<th>Total DSV</th>
<th>Spray Recs</th>
<th>Accumulated P days*</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/23-4/30</td>
<td>1</td>
<td>1</td>
<td>none</td>
<td>115</td>
</tr>
<tr>
<td>4/30-5/10</td>
<td>0</td>
<td>1</td>
<td>none</td>
<td>131</td>
</tr>
<tr>
<td>5/11-12</td>
<td>1</td>
<td>2</td>
<td>none</td>
<td>140</td>
</tr>
<tr>
<td>5/13-14</td>
<td>1</td>
<td>3</td>
<td>none</td>
<td>147</td>
</tr>
<tr>
<td>5/14-15</td>
<td>2</td>
<td>5</td>
<td>none</td>
<td>155</td>
</tr>
<tr>
<td>5/15-16</td>
<td>1</td>
<td>6</td>
<td>none</td>
<td>171</td>
</tr>
<tr>
<td>5/16-24</td>
<td>0</td>
<td>6</td>
<td>none</td>
<td>220</td>
</tr>
</tbody>
</table>

* P days - We use the predictive model WISDOM to determine the first fungicide application for prevention of early blight as well. The model predicts the first seasonal rise in the number of spores of the early blight fungus based on the accumulation of 300 physiological days (a type of degree-day unit, referred to as P-days) from green row. To date, **220 P-days** have accumulated at the site near Magnolia. Once 300 P-days have accumulated, the first fungicide for early blight control should be applied. This usually occurs when rows are touching.

The weather has not been favorable for DSV accumulations this past week. Cool weather and low humidity have been very favorable for potato growth.

If **pink rot or leak** is a concern and no pink rot fungicide was applied at planting consider applying one of the following when potatoes are nickel-sized and repeating 14 days later. Apply in as much water as possible (20-30 gal/A): Mefanoxam/chlorothalonil (Ridomil/Bravo or Flouranil) 2 lb/A, or Ridomil Gold/Copper 2 lb/A, or Ridomil Gold/MZ 2.5 lb/A.

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**Agronomic Crops**

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

**Alfalfa**
Be sure to check all fields for leafhopper adults and nymphs within one week of cutting. With the predicted warm weather, we could see an increase in populations as well as the first nymphs, which often cause damage very quickly. You should also sample all spring planted fields since they are extremely susceptible to damage. Once the damage is found, yield loss has already occurred. 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**
Be sure to sample no-till fields for true armyworms feeding in the whorls of plants where a grass cover or volunteer small grains were burned down at planting. The treatment threshold for armyworms in corn is 25% infested plants with larvae less than one-inch long.

**Soybeans**
As the earliest planted fields emerge, be sure watch for grasshopper and bean leaf beetle feeding on the cotyledons and first true leaves.
A treatment for bean leaf beetle will be needed from plant emergence to the second trifoliate when you find 2 beetles per foot of row and a 25% stand reduction. The treatment threshold for grasshoppers is 1 per sweep and 30% defoliation. Multiple applications may be needed for grasshopper control.

Agronomic Crop Diseases - Bob Mulrooney; Extension Plant Pathologist; bobmul@udel.edu

Barley
Leaf diseases have been minimal so far this season. The spot blotch form of net blotch can still be found on many varieties, but will cause little to no impact on yield, judging by the relatively low level of infection. Barley scald was seen this week causing little to no damage on Pennco, Price, Doyce, and two numbered lines. Under favorable conditions I have seen scald cause considerable leaf loss. It is way too late for it to affect yields this year.

Wheat
As mentioned last week, I can’t remember seeing so little disease in wheat, which is great. That doesn’t mean there is none out there, but irrigated wheat and areas that may have received more rain will be worth watching. No signs of scab yet in our variety trials and since it was so dry before flowering we might not see any. The one disease I did see at an extremely low level was leaf rust in one variety near Middletown. If we get rain this weekend we may see increased levels, but it should be too late to affect yields.

Scout Your Corn Fields Now - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

With the spotty rains we have had, a lot of non-irrigated fields have not had enough rain to “activate” the herbicides. So be sure to look at your fields and decide if a postemergence spray is going to be necessary. The following table is a partial list of herbicides available for postemergence spraying and gives an idea of the importance of applications to small weeds. Maximum height for morningglory control (based on manufacturer’s label) is 6 inches with Liberty, while all other herbicides list morningglory size of 4 inches or less.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Lambsquarters</th>
<th>Morningglory (annual spp.)</th>
<th>Pigweed</th>
<th>Common ragweed</th>
<th>Velvetleaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim (1/3 oz)</td>
<td>3</td>
<td>3-lf</td>
<td>s-4</td>
<td>s-4</td>
<td>18</td>
</tr>
<tr>
<td>Atrazine (2.4 pt)</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>s-4</td>
</tr>
<tr>
<td>Banvel/Clarity (1/2-1 pt)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Basagran (2 pt)</td>
<td>2</td>
<td>s-4</td>
<td>-</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Beacon (3/4 oz)</td>
<td>s-1.5</td>
<td>3-lf</td>
<td>s-1.5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Callisto (3 oz)</td>
<td>5</td>
<td>s-5</td>
<td>5</td>
<td>s-5</td>
<td>5</td>
</tr>
<tr>
<td>Harmony GT (1/12 oz)</td>
<td>4</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Liberty (28 oz)</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Option (1.5 oz)</td>
<td>2</td>
<td>s-3</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Permit (2/3 oz)</td>
<td>s-2</td>
<td>-</td>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Resource (6 oz)</td>
<td>s-3</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>12</td>
<td>3</td>
<td>18</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Stinger (1/2 pt)</td>
<td>-</td>
<td>-</td>
<td>5-lf</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
To continue the description of soybean growth stages, we now move on to the ‘First Node’ growth stage. Again, you should refresh your memory of the definitions covered in the first of this series so you will understand what a fully developed leaf is. V1 begins when the leaflets of the first trifoliate leaf to emerge have unrolled sufficiently that the leaflet edges do not touch (Photo 1 below). The stage continues until V2 or the ‘Second Node’ stage when the first trifoliate leaf becomes a fully developed leaf (Photo 2).

Photo 1. Soybean plants in the V1 or First Node stage at which time the leaflets on the first trifoliate leaf to emerge have unfurled enough so the leaflet edges no longer touch. This means that the unifoliate leaves are now fully developed leaves.

Usually by the V1 or V2 stage, you can identify small nitrogen fixing nodules on the soybean roots but they will generally be quite small. If soil pH is high and soil extractable manganese (Mn) is low, you also can begin to see interveinal chlorosis on the newest emerging leaves. Although the plants are very small and it may be difficult to have much Mn uptake by the plant if applied as a foliar spray at this young stage, adequate Mn is critical for rapid growth and eventual yield potential. When Mn deficiency symptoms appear at this early stage, two applications of foliar Mn will be needed for maximum yield. The first can go on with the first application of glyphosate but there are some precautions to follow to prevent Mn from interfering with weed control. Tests have shown EDTA Mn to be safe when mixed with Roundup sprays but other Mn products can reduce weed control if not handled properly. Always add ammonium sulfate at a rate of 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons before either adding the glyphosate or techmangam. This will prevent the Mn products from binding to glyphosate and reducing its performance.

Photo 2. Close-up of soybean plant in the early V2 or Second Node stage. At this stage both the unifoliate and the first trifoliate leaves are fully developed. The plant is entering a period when enough leaf area is present that if adequate moisture, nutrients, and sunlight are available that growth will become very rapid.

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

Energy and Metal Markets Soften Commodity Prices
The answer to last week’s question is now apparent. The current slackening in energy and metal prices is attributed to the decline that we’ve seen in commodity futures prices for corn, soybeans, and wheat this past week. The question now becomes, how long will the slackening in energy and metal prices last? There also is a fundamental question looming in these markets which pertains to their respective
supply and demand balance sheets. We will spend countless hours the next few months attempting to ascertain the impact that weather patterns are having on U.S. crop development.

Non-commercial funds have taken to long-liquidation this week and that one factor is perhaps the biggest reason for this week's commodity price decline. At this writing it is speculative to say just what the non-commercials may do next. The non-commercials are still holding substantial net-long futures positions in corn, with support for July at $2.44 and December at $2.71. The wheat market was indicated earlier in the week to be overbought which led to some profit taking on the part of commodity speculators. Initial support for July CBOT wheat is at last week's low of $3.96, with longer-term support at $3.86. Initial support for the front-month July contract is near $5.80 per bushel.

For the time being, it appears that long-liquidation of non-commercial traders is the order of the day. Weather will now play a major, if not dominant, role, influencing commodity price bidding throughout the summer. The weather will eventually become the deciding factor in determining just how supply and demand in the U.S. and World balance out? Non-commercial trading, and the energy and metal markets are likely to help keep commodity prices volatile over the summer months.

Weekly Export Sales
U.S. corn and soybean sales were reported to be well above the level needed to stay on pace with USDA's projections for the '05/'06 marketing year. U.S. old crop wheat exports were well below the level needed to stay on pace with USDA's '05/'06 marketing year projection. However, new crop sales were reported at a mid-range level.

The next U.S. and World Crop Production and Supply/Demand Revisions will be issued on June 9th. U.S. Acreage and Quarterly Grain Stocks will be reported on June 30th.

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**Announcements**

**Pea Twilight Meeting**  
Tuesday June 13, 2006  
5:00 p.m. – 7:30 p.m.  
Carvel Research and Education Center  
Georgetown, DE

Meeting will include a tour of the late pea variety trial and updates on current pea research projects followed by refreshments (including Chesapeake Bay Crabs and bratwurst).

For more information contact:  
Emmalea Ernest or Ed Kee at (302) 856-7303.

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**Pesticide Safety Training and Testing for Pesticide Applicators Certification**  
June 6 & 7, 2006  
Del Tech Terry Campus, Dover, DE  
Room 427 Corporate Training Center

June 6th is training – 8:30 a.m. – 4:30 p.m. Training continues the morning of June 7th, from 8:30 a.m. – noon. The exam starts at 1:00 p.m. on June 7th.

Be sure to bring your Workbook! You don’t have to register for training, but you must register for the exam. Call DDA (302-698-4500) one week in advance to register for the exam. All the exams are closed book!! Bring your calculator for the calibration questions.

For more information go to:  
[http://ag.udel.edu/extension/pesticide/certappinfo.htm](http://ag.udel.edu/extension/pesticide/certappinfo.htm)
### Weather Summary

**http://www.rec.udel.edu/TopLevel/Weather.htm**

**Week of May 18 to May 24, 2006**

**Readings Taken from Midnight to Midnight**

<table>
<thead>
<tr>
<th>Weather Parameter</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Rainfall:**     | 0.08 inch on May 18  
0.08 inch on May 19 |
| **Air Temperature:** | Highs Ranged from 76°F on May 18 to 66°F on May 19.  
Lows Ranged from 53°F on May 18, May 19 and May 20 to 41°F on May 23. |
| **Soil Temperature:** | 66°F average.  
(Soil temperature taken at a 2 inch depth, under sod) |

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*The Weekly Crop Update is available online at [http://www.rec.udel.edu/TopLevel/Publicat.htm](http://www.rec.udel.edu/TopLevel/Publicat.htm)*

*Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Associate - Vegetable Crops*

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