



# WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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## Soybean Rust Update

It was just reported and confirmed that there was a new soybean rust find in Florida on kudzu. It is a small patch of about ¼ acre in Jefferson County, the most northerly county in Florida to report SBR so far. It was estimated at 5-8% incidence, which is low. There were rumors this week about rust appearing in Mississippi and Tennessee. **However, these were false rumors.** Keep on top of the latest info by visiting the SBR sites:

[http://www.stopsoybeanrust.com/mc\\_home.asp](http://www.stopsoybeanrust.com/mc_home.asp) and <http://ag.udel.edu/extension/Information/pdc/soybeanrustResources.htm> are good places to start.

Tropical storm Arlene did not turn out to be a big spore distributor. Heavy rain at the source washed spores out of the atmosphere before they could be spread. It would take about 2 weeks to see symptoms, so we will have to wait and see what happens. The dispersal pattern went as far north as southern South Carolina. Be sure to keep checking the forecasting websites for new information: <http://www.sbrusa.net/> and <http://www.ces.ncsu.edu/depts/pp/soybeanrust/>

The southern states are increasing their surveillance as soybeans there are getting closer to the reproductive stages of development when rust is more likely to be seen if it is present.

*Bob Mulrooney*

## Vegetables

Vegetable Crop Insects - *Joanne Whalen, Extension IPM Specialist*; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

### Cucumbers

All fields should be scouted for cucumber beetles and aphids. Fresh market cucumbers are susceptible to bacterial wilt, so treatments should be applied before beetles feed extensively on cotyledons and first true leaves. Pickling cucumbers have more tolerance to wilt, but a treatment may be needed on machine harvested pickles if 5% of plants are infested with beetles and/or showing fresh feeding injury. A treatment should be applied for aphids if 10 to 20 percent of the plants are infested with aphids with 5 or more aphids per leaf.

### Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. With the recent warm weather, we can find mites; however, in most cases populations are still relatively low. Be sure to sample fields carefully, since populations can rapidly explode.

### Peppers

We continue to find corn borer egg masses on pepper leaves and in some cases larvae can be found in petioles and main stems. Be sure to check local moth catches in your area at <http://www.udel.edu/IPM/traps/latestblt.html>. Since the first flowers can be found in the earliest planted fields, be sure to consider a

corn borer treatment. In areas where corn borers are being caught in local traps and pepper fruit is ¼ - ½ inch in diameter or larger, fields should be sprayed on a 7-10 day schedule for corn borer control. You should also check fields for aphids. A treatment may be needed prior to fruit set, if you find 1-2 aphids per leaf for at least 2 consecutive weeks and beneficial activity is low.

### Potatoes

Continue to scout fields for Colorado potato beetle (CPB), corn borers (ECB) and leafhoppers. Small and large CPB larvae can now be found in fields. We continue to see an increase in corn borer egg laying. Be sure to check our website at <http://www.udel.edu/IPM/traps/latestblt.html> for the most recent moth catches in your area. We can find low levels of 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.

### Snap Beans

Continue to scout all seedling stage fields for leafhopper and thrips activity. Once corn borer catches reach 2 per night, fresh market and processing snap beans in the bud to pin stages should be sprayed for corn borer. Sprays will be needed at the bud and pin stages on processing beans. Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7-10 day schedule should be maintained for corn borer control. Since trap catches can change quickly, be sure to check our website for the most recent trap catches and information on how to make a treatment decision in processing snap beans using trap catches (<http://www.udel.edu/IPM/traps/latestblt.html> and <http://www.udel.edu/IPM/thresh/snapbeanecbthresh.html>).

### Sweet Corn

Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample all whorl stage corn for corn borers. A treatment should be applied if 15% of the plants are infested. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check trap catches for the current spray schedule since trap catches quickly

change. We are seeing an increase in the number of corn earworm moths being caught in the state. Trap catches are generally updated on Monday and Thursday nights.

<http://www.udel.edu/IPM/traps/latestblt.html>

and

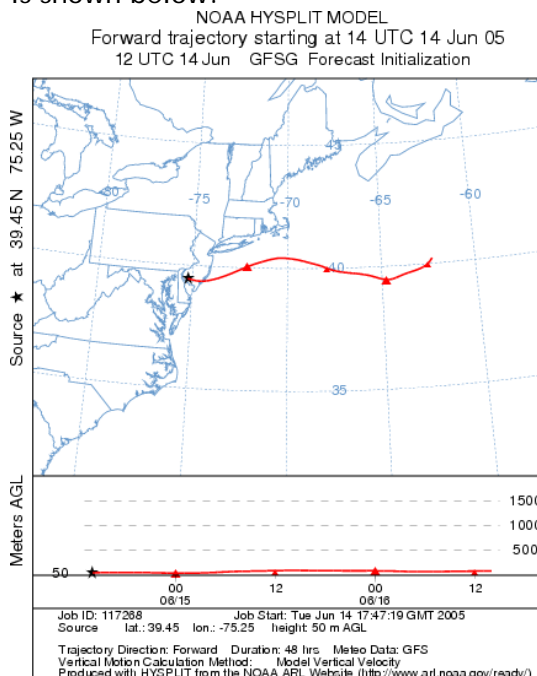
<http://www.udel.edu/IPM/thresh/silkspraythresh.html>



**Vegetable Crop Diseases** - *Bob Mulrooney*,  
Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)

### Downy Mildew on Cucumbers.

Downy mildew was discovered on slicing cucumbers and pickles in Cumberland County, New Jersey this week. The information that we have is that it was most likely transported there on infected transplants from Florida where the disease is present. The infected fields have been sprayed and new growth is not infected. The threat from spread to DE and MD is very low to non-existent at this time. The Downy Mildew Forecast from North Carolina State Univ. has included this find as a source in the prediction model on their website. Use this link <http://www.ces.ncsu.edu/depts/pp/cucurbit/forecasts/c050614.php>, scroll down to the bottom and click on the Cumberland County, NJ current source. This will give you the prediction for this location. The most current spore trajectory map is shown below.



Continue to check the NC State Forecast site for updates. Growers and related industry persons were contacted and apprised of the situation.

Natural spread from the infected areas in Florida and Georgia was not predicted and did not happen, but it apparently took dispersal by transplants to get it to NJ. The hot weather has not be very conducive for infection but with the cooler weather predicted it will be important to check fields regularly and keep informed.

On a related problem the question was asked if we have *Phytophthora capsici* present in DE that is resistant to mefanoxam (Ridomil or Flouranil). This is the fungus that causes Phytophthora fruit rot on cucurbits and crown rot on peppers. We have identified several populations of *P. capsici* in DE that are resistant and this was reported during the winter vegetable meetings. Mefanoxam is a viable choice for fruit rot if you don't have a resistant population. Widespread mefanoxam use in the same field may increase the chances of a resistant populations but it is not guaranteed. Nor is the absence of mefanoxam use a guarantee that if a population is present that it is susceptible. Our survey was limited but we did find several resistant populations one of which had a history of mefanoxam use. One take home message is not to use one product exclusively for control. Acrobat plus Champ or Kocide, Gavel and Tanos are providing similar levels of control of fruit rot in trials in Michigan and Wisconsin. With all these products it is important to get good coverage of the fruit and wait to treat when fruit are 1 inch and again when they are 3 inches according to Dr. Mary Hausbeck at Michigan State. See issue #2 of WCU <http://www.rec.udel.edu/update05/Voume13,Issue2.htm> for more info.

### Sweet Corn Rust

Sweet corn rust is beginning to appear and fungicides such as Headline, Quadris and Tilt are effective and possibly economical if rust appears at whorl stage or earlier on susceptible hybrids. Headline was labeled after the Vegetable Recs went to press and is not in the book.



### PACA - A Valuable Tool for Growers - James R. Frazier, Fruit and Vegetable Programs Agricultural Marketing Service U.S. Department of Agriculture

Producing a crop is only half the job. The rest involves marketing. Too often, however, growers encounter a myriad of difficulties when selling and marketing their produce. Some of the more common dilemmas include buyers who arbitrarily "clip" invoices—or don't pay at all; loads that get rejected at destination without justification; and sales agents who don't properly account for sales and expenses. Any of these can put your entire business at risk. But whom can you turn to when problems like these arise?

#### PACA Can Help

The Perishable Agricultural Commodities Act, or PACA for short, protects growers, shippers, distributors, and retailers dealing in fresh and frozen fruits and vegetables by prohibiting unfair and fraudulent trade practices, and by providing a forum that growers and others can use to settle commercial disputes. PACA is administered by the U.S. Department of Agriculture and is funded almost entirely by license and complaint fees that are paid by companies that buy, sell, or broker commercial quantities of fruits and vegetables. This license requirement is what makes the law so effective. USDA can suspend or revoke the license of firms that don't abide by the law, and hold them liable for any damages that result. Naturally, the type of penalty issued depends upon the seriousness and nature of the violation.

#### Dispute Resolution

What should you do if you encounter problems getting payment from a buyer, or believe that you have suffered damages resulting from unfair trade practices? Your first step should be to call a USDA PACA Branch office to discuss the matter. PACA Branch representatives provide expert, unbiased assistance—whether this involves interpreting a contract term, analyzing an inspection result, or merely providing advice regarding your rights and responsibilities. Frequently, timely guidance is sufficient to avoid any further action on your part. There are instances, however, when disputes are not so

easily settled. In those cases, you'll need to file a claim with a PACA office.

To file a claim, simply submit a letter to any PACA Branch office outlining who you are filing against and the nature of your complaint. Along with your letter, you will need to send copies of any supporting evidence such as invoices, broker's memoranda of sale, accountings, or other paperwork. Also, keep in mind that you must file your claim within 9 months of the date that payment became due, or the date that performance of the contract was required. The cost of filing a claim is only \$60.

Once the PACA Branch office receives your complaint, they will gather the relevant facts from all parties involved in the dispute and assist in reaching a settlement. The PACA Branch handles more than 2,000 such cases each year. We resolve about 75 percent of these claims informally, generally within 8 weeks. However, if informal settlement is not possible, USDA will issue a binding decision and order. Although it costs an additional \$300 to obtain a formal ruling, you can recover this fee from the other party, if you prevail.

### **Sales Agents**

Many growers hire sales agents to sell and market their crop. Although arrangements vary, agents typically receive a percentage of the sales price as their commission, and may also be entitled to deduct other expenses. The PACA requires that agents outline the duties and responsibilities of both parties in writing before the first lot is received. In addition, agents must issue you accurate accountings documenting the sales prices obtained and the expenses deducted from each transaction. Agents are generally required to submit these accountings in 10-day intervals throughout the season, and must promptly pay you the net proceeds due once payment is collected. If you believe your sales agent has not met his responsibilities, you should speak to a PACA Branch specialist. If necessary, you can file a claim and a PACA Branch representative will audit the agent's records to determine whether any additional proceeds are due.

### **Mediation Service**

Mediation is an effective way to resolve disputes, since it places the resolution of the dispute directly in the hands of the interested parties. It provides an outlet for settling differences outside of the legal system, strengthens business relationships, and provides a forum where both parties can air their differences in a neutral atmosphere. All PACA Branch personnel that handle disputes are trained in mediation, and can mediate your dispute upon request provided both parties are agreeable. Mediation sessions can be held face-to-face or over the telephone. Furthermore, there is no additional cost to mediate a dispute beyond the initial \$60 filing fee. To obtain more information about this service, or to arrange for mediation of a dispute, you can contact any PACA Branch office.

### **Trust Protection**

PACA's dispute resolution and mediation services are important tools that produce businesses can utilize to resolve disputes that sometimes occur between trading partners. But what can you do when a customer owes you money and then goes out of business or files bankruptcy? The PACA trust provision requires that dealers maintain a statutory trust on fruits and vegetables received but not yet paid for. In the case of a business failure, the debtor's trust assets are not available for general distribution to other creditors until all valid trust claims have been satisfied. Because of this, suppliers that file for trust protection have a far greater chance of recovering money owed them when a buyer goes out of business.

To preserve your trust rights, the PACA requires that you, within 30 days from the payment due date, provide to the debtor a written notice stating your intent to preserve your trust rights, including in the notice information about the unpaid transaction. Since specific information is needed for the notice to be valid, it would wise to call a PACA Branch office and speak with a representative before you prepare your notice. The requirement for providing written notification to the debtor applies to all who want to preserve trust rights, whether they are a PACA-licensed firm or an unlicensed grower. If you have a PACA license, however, the law allows you to automatically file for trust

protection simply by including the following wording on your invoice: "The perishable agricultural commodities listed on this invoice are sold subject to the statutory trust authorized by section 5(c) of the Perishable Agricultural Commodities Act, 1930 (7 U.S.C. 499e(c)). The seller of these commodities retains a trust claim over these commodities, all inventories of food or other products derived from these commodities, and any receivables or proceeds from the sale of these commodities until full payment is received."

The PACA law is here to ensure fairness and offers many services to assist you. For additional information, call a PACA Branch office or visit our website address at <http://www.ams.usda.gov/fv/paca.htm>.

North Brunswick, NJ  
1-877-471-7720

Manassas, VA  
1-888-639-9236

## Agronomic Crops

**Agronomic Crop Insects** - *Joanne Whalen, Extension IPM Specialist; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)*

### Alfalfa

We can now find both potato leafhopper nymphs and adults in fields. Although both stages can cause damage, once nymphs are detected damage can rapidly occur. 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. If economic levels are present and you are close to cutting, early cutting may be a control option. However, be sure to check fields within a week of cutting for leafhoppers that can quickly damage small plants.

### Field Corn

We have found cereal leaf beetle adults feeding on corn. In most cases, feeding is confined to field edges; however, it may also be seen throughout the field. No controls are needed unless you find 10 beetles per plant throughout the field and 50 percent of the plants are damaged.

### Soybeans

We continue to find bean leaf beetle feeding in the earliest planted fields. A treatment for bean leaf beetle may be needed from plant emergence to the second trifoliolate when you find 2 beetles per ft. row and a 25% stand reduction. You should also watch for grasshoppers, especially in full season no-till fields. We continue to see an increase in activity of small nymphs. The treatment threshold for grasshoppers is 1 per sweep and 30% defoliation. Multiple applications are often needed for grasshopper control. The first spider mites have been detected; however, populations are still extremely low.



**Wheat Diseases** - *Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)*

**Septoria leafspot or blotch** caused by *Septoria nodorum* is rampant in wheat in the northern part of the state. This may lead to some discolored heads if there is enough moisture present. The head infection stage is called glume blotch. Unsprayed susceptible varieties are rapidly drying down; in most areas the wheat is already in soft dough so the yield impact will vary depending how mature the wheat is when the disease takes out the upper leaves. Glume blotch can lead to reduced test weight as well. No mycotoxins are associated with glume blotch.

**Fusarium head blight or scab** is showing up now as well. Heads are bleached entirely or portions of the head are bleached. When enough moisture is present the infected heads have a pink to salmon color from the fungus and spore masses that are present. Infected seed can be discolored and shriveled. White masses of fungus may coat the infected seed. Infection takes place at flowering and the weather during that period determines the amount of infection. There are some varieties that may have some low level of resistance and no fungicides are very effective or consistent in controlling scab. Be aware that mycotoxins are produced by these Fusarium fungi that cause scab and cause problems in non-ruminant animals. It has been shown in some trials that wheat treated with QoI fungicides (strobilurins) can increase mycotoxin

(vomitoxin or DON) levels under certain conditions. With the amount of strobilurin fungicides applied for stripe rust this season if scab is present there may be some problems with foliar fungicide treated fields. This is just a possibility not a prediction of widespread problems for our area.



### **Uneven Corn Growth - Observations -**

*Gordon Johnson, Extension Ag. Agent, Kent Co.;*  
[gcjohn@udel.edu](mailto:gcjohn@udel.edu)

Recently, I have been in several fields with very uneven corn growth. Symptoms have included major differences in height, yellowing, prolonged purple coloration, stunted plants, wilted plants, and dead plants. Root growth was restricted; there was very little root growth below 4 inches; seed remnants were decayed or damaged; and often roots and mesocotyls were damaged. In cases where plants were significantly stunted or growth was significantly reduced, several things were evident: there was a compacted layer at 2 to 4 inches in depth and many grubs were often found.

Why did these fields look so uneven and why was the corn growing poorly in some areas, and not so in other areas? Why are other corn fields in the state so uneven? These are some possible reasons to consider:

#### **Grub Damage**

The grub damage to these fields occurred, even though the corn was treated with the "new generation" seed treatment insecticides (Pancho, Cruiser). These materials have been effective in most fields. So why did they fail in these cases? The first reason to consider is sheer numbers. No seed treatment, at standard rates, will be effective for mass infestations.

Second is the type of grub. Often, we think of Japanese beetle grubs as the most damaging to corn and we have significant research showing the effectiveness of seed treatments for JB grubs. However, we have found fields infested with other types of grubs. In the past 2 years, we have had a few instances of infestations of fields with Asiatic Garden Beetle grubs where

seed treatments "failed". We think of grubs building up in grassy areas, hay fields, sod, and corn in the rotation. Asiatic Garden Beetle can build up in soybeans where significant damage has been found in the past. Identifying soybean fields with this damage will help in decisions on treatments to use for following corn crops (a soil applied insecticide may be needed). Other grub species (May/June, June "bug", Chafer, Oriental, etc.) also can build up in certain fields. Limited research with different grub species has shown more variable results with seed treatments.

Another consideration is the type of damage. In these fields, the grub feeding was not restricted to the roots. With root feeding alone, plants have a chance to grow out of the damage and "catch up" once the grubs pupate. In these fields, feeding occurred on the seed and mesocotyls. This type of damage will permanently stunt corn plants. Again, different grubs may have different feeding habits. It is just not known.

Another factor this year was delayed pupation of the grubs. Normally, grubs will feed and then pupate in late May or early June. This year, grubs have been active longer and thus caused damage over an extended period. Also, different grub species have different times that they pupate and some may just be active over a longer period.

#### **Surface or Shallow Compaction**

It is very common to find extensive shallow compaction in areas of corn fields where plants are growing poorly early in the season. Often you will see a row doing well right next to a row that is stunted. A check of soil conditions shows that there is significant compaction 2-6" deep in affected areas. This compaction can be found in all soil types: sandy loams, silt loams, and heavier soils with more clay. What are the causes? Too much traffic - tractors, tillage equipment, sprayers, applicators, trucks, grain carts, harvesters, manure spreaders, and other wheeled equipment - can be responsible for both shallow and deep compaction. We have had many instances in 2003 and 2004 where traffic across fields occurred under wet conditions thus creating compacted zones. Shallow tillage, especially with disc harrows, also can lead to

compaction in the 2-6" zone (tillage pans). Fields that are in the process of going from conventional tillage to long term no-till also seem to "set up" in the upper part of the soil. This will change with time, but during the initial years, traffic patterns tend to compact the surface areas. To avoid this type of problem it is critical to control traffic patterns on fields.

### Sidewall Compaction

Another culprit causing variable growth can be sidewall compaction. This occurs when the sides of the seed slot are smeared by the seed openers on the planter in overly wet conditions. Row closers can contribute to this compaction depending on what type is used. When sidewall compaction is created by planting in wet soils, and then the soil dries out some, the seedling corn plant roots cannot easily penetrate the sidewalls in the seed slot, so the roots mainly grow down the slot itself. Root growth is limited and plant growth is affected.

### Other Considerations

The yellowing of corn that was seen was often related to poor drainage, both related to field topography (natural low areas) and to temporary drainage problems related to the compaction that was found. When soils stay wet, nitrogen is often lost from the soil to denitrification. In addition, poor root growth, due to lack of oxygen, will limit the ability of seedling plants to pick up mineral nutrients, especially nitrogen and phosphorus. Some varieties will show excessive purple coloration if root growth is restricted by cool, wet, or compacted soils. The mechanisms for this purpling is related to sugar buildup by photosynthesizing plants that is not being used by roots (due to slow or restricted root growth) and then resultant buildup of anthocyanin purple pigment in the plant. Since the anthocyanin occurs in the form of a sugar-containing glucoside, the availability of high concentrations of sugar in the leaves (photosynthesis during bright, sunny days) that is not being transported to the roots, further encourages the pigment formation. Different corn genetics will cause certain varieties to purple more than others under adverse conditions. Another factor on uneven growth is uneven manure application on fields, associated compaction by manure spreaders, and different mineralization rates due to variable soil

temperatures (wetter soils are colder and manure is more slowly mineralized in those conditions, delaying mineral nutrient release). Uneven application of starter fertilizer also can cause variability. This is particularly a problem with no-till starter fertilizer applicators in fields with variable surface compaction.

### Postemergence Soybean Herbicides

Reminders - *Mark VanGessel, Extension Weed Specialist*; [mjv@udel.edu](mailto:mjv@udel.edu)

The following are a few answers I have given to questions regarding postemergence soybean herbicides over the past few weeks.

- Most herbicides need to be applied to weeds before they are 4 inches tall.
- All herbicides can cause some crop response, even glyphosate. Under most circumstances, this is a cosmetic effect and does not hurt yield. With that said, some herbicides have a higher risk of injury than others.
- It is sound stewardship to not rely solely on glyphosate for soybean weed control. Increasing glyphosate rates (or any herbicide) to maintain weed control could be setting up bigger problems in the future.
- Dimethoate is an organo-phosphate insecticide and should not be tank-mixed with Harmony GT, Synchrony, Classic, FirstRate/Amplify, Pursuit (Extreme), or Raptor.
- Manganese products can bind with glyphosate in the spray tank and reduce glyphosate's effectiveness. The form of manganese has an impact. Manganese chelated with EDTA did not affect the performance of glyphosate, but other forms of manganese did. The addition of ammonium sulfate overcame the problem. When using ammonium sulfate be sure to add the ammonium sulfate to the tank first and add the glyphosate last.
- Many stresses can cause crop responses that look like herbicide injury. Be sure to explore all the possibilities when trying to determine the cause of crop injury.

- Most postemergence soybean herbicides have some soil activity and can provide a week or two of residual control.



**Grain Marketing Highlights** - *Carl German, Extension Crops Marketing Specialist;*  
[clgerman@udel.edu](mailto:clgerman@udel.edu)

**Weather Forecast Rallies Commodities Market**  
 A warmer and drier than normal forecast for the next 10 days is largely responsible for the continuing rally in old and new crop corn, soybean, and wheat prices at the Chicago Board of Trade this week. Therefore, the wait 'n see strategy, before advancing corn and soybean sales, has worked thus far. Grain futures are higher this week after a continuing rally that is said to be brought on by fund speculative activity. The funds are basing their futures positions primarily upon the weather forecast. Be forewarned that this means that these markets could turn quickly and fall hard in the event that a prevailing rain develops in the drier portions of the Corn Belt. Meanwhile, the

weekly crop condition reports continue to be normal for this time of year and showed slight improvement for this week over last week.

The soybean market remains skittish over the soybean rust dilemma; [www.soybeanrust.com](http://www.soybeanrust.com) confirmed this morning that soybean rust has been found on kudzu in a fifth Florida county. Thus far, soybean rust is not viewed as having infected this year's U.S. soybean crop. However, we have a long way to go. Look for an immediate rally in new crop soybean futures in the event that rust infestation is confirmed.

**Market Strategy**

Dec '05 corn futures are currently trading at \$2.44, Nov '05 soybeans at \$7.22, and July '05 Wheat at \$3.23 per bushel on June 16th. New crop basis bids delivered into Bridgeville are 10 over Dec for corn, 20 under Nov for soybeans, and 25 under July for Wheat. Those that do not have any pre-harvest pricing done should consider getting some forward pricing done. Contact Carl German, Extension Specialist, Crops Marketing for technical assistance in making grain marketing decisions.

**Potato Disease Advisory #9 - June 16, 2005**, *Bob Mulrooney, Extension Plant Pathologist*

**Late Blight Advisory (18 DSV's Exceeded)**

Disease Severity Value (DSV) Accumulation as of June 15, 2005 is as follows:  
 Location: Joe Jackewicz Farm, Magnolia, DE. Greenrow: May 4, 2005

Date	Daily DSV	Total DSV	Spray Recommendation
6/2	1	17	none
6/2- 6/4	11	28	-
6/4	2	30	5- day
6/5	2	32	5-day
6/6	2	34	5-day
6/8	1	35	5-day
6/9	2	37	5-day
6/10	2	39	5-day
6/11- 6/15	0	39	7-day

Potatoes that have not had a fungicide application by now need to be sprayed. Since the rain event of 6/2-6/4 if late blight is present it should be appearing 7-14 days after this event. Remember that these values are for potatoes that would have about 50% emergence and made a row that you can see on or before May 4<sup>th</sup>. Any potatoes making greenrow after May 24 have also accumulated more than 18 DSV's as well.

The P-day value, which is used to predict early blight and the need for protective fungicides, is now 297. Our threshold for p-day values is 300 (not 500 as I stated in the last report, sorry for the confusion). With the recent heat we now need to think about early blight control as well. See below.

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.

Early blight and black dot. Many fields are flowering or approaching flowering and this is a good time to consider switching to an application or two of Gem, Headline or Quadris (Amistar) for early blight susceptible varieties. This can also be helpful for late season varieties including russets if stress (heat) makes plants susceptible to black dot. Make one or two applications at the end of flowering and repeat 14 days later. Apply mancozeb or chlorothalonil 7-days later between the two applications.

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## Announcements

### Pea Twilight Meeting

Wednesday June 22, 2005 6:00 p.m.

University of Delaware Research & Education Center

Walk through the late pea variety trial (planted April 18) and receive preliminary results from the early trial (planted March 7).

Bob Mulrooney will give an update on what's known about Asian soybean rust on lima and snap beans.

Enjoy food and refreshments (including Chesapeake Bay Crabs) at the conclusion of the walk-through.

No reservations are needed. For more information contact Ed Kee or Emmalea Ernest at (302) 856-7303



### Delaware Organic Food & Farming Association Summer Social

Thursday, June 30, 2005 7:00 p.m.

Richard Swartzentruber Farm, Greenwood, DE

Go on a farm tour of certified organic animal and crop production. See rotational grazing, grass fed cattle, organic dairy, organic poultry, organic field crops, and organic vegetable production. Meet with other organic growers and just enjoy the fellowship.

There will be a brief organizational meeting. Refreshments will be provided. However, you are welcome to bring a snack to share with the group.

**All those interested in organic farming are encouraged to attend!**

For more information please contact Gordon Johnson at (302) 730-4000 or Richard Swartzentruber, President, DOFFA at (302) 349-5544

#### *Directions:*

*Take Rt. 13 to Greenwood. At Greenwood, go East on Rt. 36/16 for 0.5 mile to the traffic light. Turn Left on to Shawnee Rd. (Rt. 36) and go 1.25 mile. The Swartzentruber Farm is on the right, 12468 Country Lane.*



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## Pesticide Safety Training and Testing for Pesticide Applicators Certification

June 28 & 29, 2005

Kent County Extension Office

June 28 is training – 8:30 am – 4:30 pm. Training continues the morning of June 29, from 8:30 am – noon. The exam starts at 1:00 pm on June 29.

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.

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## Weather Summary

<http://www.rec.udel.edu/TopLevel/Weather.htm>

Week of June 9 to June 15, 2005

Readings Taken from Midnight to Midnight

### Rainfall:

0.17 inches: June 10

### Air Temperature:

Highs Ranged from 92°F on June 14 to 86°F on June 10.

Lows Ranged from 75°F on June 14 to 69°F on June 9, June 11, and June 12.

### Soil Temperature:

86°F average.

(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:*

*Emmalea Ernest  
Extension Associate - Vegetable Crops  
University of Delaware*



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