



# WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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## Soybean Rust Update

There have been no new reports this week of Asian Soybean Rust in the US.

### Upcoming Sprayer Clinics for Soybean Rust Control

We will be having three meetings to discuss how to set up ground sprayers to control soybean rust for growers and commercial applicators. If you feel you need some information on critical issues such as nozzle selection, ground speed, spray gallonage, boom height, or other issues concerning application of fungicides come out and participate. Spray coverage will be important to get the most from your fungicides. Ample time will be scheduled for questions and answers as well.

The presentation will feature Ray Kaczmarczyk, Application Technology Engineer from DuPont Crop Protection. Ray has a wealth of hands-on experience on the application of crop protection chemicals including fungicides, and we are delighted that he will be sharing this information with us. Mark your calendars now, more information will be sent from the county Extension offices as well. The program will be the same for all three meetings.

- Tuesday, May 31, 2005 6:00 - 8:00 PM  
Kent County Robert Garey Sr. Farm 4191  
Hopkins Cemetery Rd, Felton

- Thursday, June 2, 2005 6:00 - 8:00 PM Sussex County University of Delaware Research and Education Center Farm on RT 9 near Georgetown DE. Meet at the Farm Machinery Shed.
- Wednesday, June 8, 2005 5:15 PM New Castle County UD Extension Demonstration Farm, Marl Pit Rd. This will be combined with the Twilight Crop Update.

## Vegetables

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

### Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. You should also watch for beneficial insects. In some fields, populations of beneficial insects are increasing. However, with the continued cool weather predators may lag behind aphid populations. Fulfill, Lannate and Thionex are labeled on melons for melon aphid control. The Fulfill label states that the addition of a penetrating type spray adjuvant is recommended to provide optimum coverage and penetration.

The first low levels of spider mites have been detected in melons. In addition to Acramite,

Agri-Mek, Capture (bifenthrin), Danitol and Kelthane, a new miticide was recently labeled on melons. Bayer CropScience recently received a Section 3 registration for Oberon (active ingredient spiromesifen) for spider mite control in cucurbit vegetables. The label states that for best control an application should be made to a building population and before damaging populations become established. The label also states that it is effective against the egg and nymphal stages so applications should be directed at those stages. We have not worked with this product so we plan to gather data this season and will keep you posted on the results. At this point, Delaware also has a state label, so it can be applied in Delaware. Before application, growers in other states will need to check with their Department of Ag to be sure you have a state label. The following is a link to the federal label:

<http://www.cdms.net/ldat/ld74A000.pdf>

### Peppers

Fields should be sampled for thrips and corn borers. On young plants, corn borer larvae can bore into the stems and petioles. Since corn is growing slowly and will not be as attractive to moths, you should watch for corn borer moths laying eggs in all fields. You should also check local moth catches in your area at <http://www.udel.edu/IPM/traps/latestblt.html>

As a general guideline, treatment with a pyrethroid labeled on peppers may be needed if corn borer moth catches exceed 10 moths per night, especially if there is no corn in the area or you are using rye strips as windbreaks. You should also look for egg masses. In general, 2 applications may be needed to achieve effective control. Thrips can cause damage in 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. Baythroid (except *Thrips palmi*), Capture (bifenthrin), Spintor and Warrior (except Western Flower thrips) are labeled for thrips control on peppers.

As indicated in the first newsletter this season, the following clarifications should be noted in the 2005 Vegetable recommendations:

### *Orthene 97 on Non-Bell Peppers*

The label states that the maximum rate on non-bell peppers is ½ pound (8 oz) per acre per application and a maximum of 1.0 lb per acre/season. This is the aphid rate so European corn borer control is not listed on the label for Non-Bell Peppers. Therefore, under European corn borer control in the Vegetable Recommendation Book, the rates listed are for Bell Peppers only. In addition, under green peach aphid the same rate/A (½ pound) and maximum rate (1 lb/A/season) applies for non-bell peppers.

### *Avaunt 30WDG for European Corn Borer Control*

The latest Avaunt label now lists European corn borer under peppers but it also states - bell peppers only. It should also be noted that the label states that "for best results begin applications of Avaunt following two applications of an organo-phosphate insecticide labeled for European corn borer in bell peppers such as acephate (e.g. Orthene)." Avaunt is labeled for beet armyworm and loopers on bell and non-bell peppers.

<http://www.cdms.net/ldat/ld4BD016.pdf>;

<http://www.cdms.net/ldat/ld4BD017.pdf>

### Potatoes

We continue to see 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. In general, corn borer catches remain low except in the Harrington area where trap catches have increased to 6 per night and in the Concord area where trap catches are at 7 per night. Since corn is growing slowly and will not be as attractive to moths, the earliest planted potatoes will be more 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). Be sure to check our website at <http://www.udel.edu/IPM/traps/latestblt.html> for the most recent moth catches in your area. Avaunt, Baythroid, Furadan, Penncap, permethrin or Spintor will provide 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) 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. You should also sample all whorl stage corn for corn borers. A treatment should be applied if 15% of the plants are infested.



### **What a Difference a Year Makes - Ed Kee, Extension Vegetable Specialist; [kee@udel.edu](mailto:kee@udel.edu)**

At this time last year, pea harvest was into its 10<sup>th</sup> day. This year it hasn't even started as of this date. Last year it was a dry spring and growers were irrigating peas.

Pickle planting is moving slowly due to cool weather. While many watermelons have been transplanted, cool wet weather has delayed their progress.



### **Lima Bean Planting to Begin - Ed Kee, Extension Vegetable Specialist; [kee@udel.edu](mailto:kee@udel.edu)**

Lima bean planting is just starting. Our recommendation for single crop lima beans calls for 60 to 80 pounds of nitrogen per acre. This can be applied broadcast, or split into applications of broadcast, at-planting, or side-dressed; or some combination of all three. Research data and commercial experience has not consistently demonstrated a clear advantage of one timing over another.

The recommendation for nitrogen for lima beans planted after peas is 0 to 20 pounds per acre, because of the significant residual nitrogen from the peas.

Phosphorus and potassium should be applied according to soil test recommendations.



### **Control Strategy for Downy Mildew on Pickling Cucumbers - Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)**

I wanted to pick up where Ed Kee left off last week talking about downy mildew control. It is important to continue to monitor disease development by visiting the NC State website <http://www.ces.ncsu.edu/depts/pp/cucurbit/> which can also be reached with a Google search by typing in "Cucurbit Downy Mildew." The N.C. State website will be the first one listed. Tracking the progression and reported outbreaks will be important to achieve timely control prior to infection if the organism moves north towards Delaware and the Eastern Shore of Maryland.

Ed made some other important points that need repeating:

1. If the organism reaches a neighboring state, begin control programs. Defining a neighboring state depends on the level of risk a person is willing to accept. For us and our geography, I would say if it appears in North Carolina, growers should *consider* beginning to spray.

2. Understand that fungicide control strategies are **preventative**; the key to control is for the materials to be on the plants prior to the chance for infection. Hence, the importance of tracking the disease.

I wanted to expand on the fungicide choices for downy mildew control based on results from two tests last fall. One test was in North Carolina conducted by Gerald Holmes and the second was on the eastern shore of Virginia at the Painter station conducted by Christine Waldenmaier. What I gleaned from their tests is that the top performing products for downy mildew control in cucumbers were:

Previcur Flex 1.2 pts + chlorothalonil 2.0 pts  
Tanos 8 oz. plus 2.0 lb mancozeb alternated with 3.2 oz Curzate + Bravo  
Gavel 2 lbs alternated with chlorothalonil 2 pts.  
Ranman (Hero) which is not registered yet.

Chlorothalonil (Bravo, Equus, Echo) and mancozeb (Dithane, Manzate, Pencozeb) are very good tank mix partners or rotation partners with the above products.

Several other facts could be taken from these tests. It was not very clear how much Curzate was adding to the control. Curzate (cymoxanil) is present in Tanos (famoxidone + cymoxanil) and was alternated in that treatment. Curzate was not applied alone so it is difficult to say, but it looks like it is adding to the level of control. Please note that Curzate was inadvertently omitted from the Vegetable Production Recommendations and should have been listed. The other strobilurin products tested, such as Quadris, Cabrio and Pristine as well as Ridomil Gold/Bravo, did not perform well. In previous years all these products performed very well.

On a different note BASF recently reported that they were able to detect a gene mutation for reduced sensitivity to the Qol (strobilurin) fungicides. Four samples of the downy mildew fungus, *Pseudoperonospora cubensis*, from North Carolina, Florida and Georgia from areas where downy mildew pressure was high and product performance was less than expected were tested and found to have reduced sensitivity. There is no way to know how extensively this mutation is distributed given the small sample number or explain fully the lack of performance by the Qol

products. The Qol products that are registered for cucurbits that are affected by this discovery are Amistar (Quadris), Cabrio, Flint, Pristine, Reason 500, and Tanos. BASF is recommending that if these products are used for downy mildew control there is a potential for reduced level of control and if used they should be tank-mixed with a non Qol mode of action fungicide such as chlorothalonil or mancozeb.



### **Weed Control in Watermelon Row Middles** -

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

Weed control in row middles is very important. Use of a hooded sprayer will allow for an application of paraquat (Gramoxone) to control emerged weeds and allow for delayed application of residual herbicides such as Curbit, Sandea, or Sinbar. Delayed applications allow for improved weed control later into the growing season. Curbit and/or Command are labeled for grass control in row middles. Sandea will provide control of numerous broadleaf species plus nutsedge. However, Sandea will not control morningglory. Sinbar should be included if morningglory control is needed.



### **Uneven Growth of Sweet Corn** - *Gordon*

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

A question was posed recently about sweet corn that emerges well but then grows very unevenly. While uneven emergence can be explained by many factors, uneven growth after emergence is a little more difficult. However, several possibilities exist. One possibility would be insects or diseases attacking seedling roots - those plants affected will grow more slowly. Another possibility is uneven starter fertilizer application. If fertilizer applicators do not apply at an even depth, starter will be at different distances from the seed thus causing variable growth. A more likely possibility is variable compaction which can occur during seedbed preparation and during planting. Sidewall compaction in wetter areas would be a good

example. Even with good emergence, those plants with roots exposed to compaction will grow more slowly. Poor seed placement is another issue. If uneven planting distances occur, those plants with wider spacing will grow better than those with narrower in-row spacing. This occurs with improperly adjusted planting units and with too high of planting speeds.

## Agronomic Crops

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

### Alfalfa

Be sure to check all fields for leafhoppers within one week of cutting. 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. We are starting to find the first nymphs which often cause damage very quickly. 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.

### Wheat

Although you need to continue sampling fields for cereal leaf beetle, aphids, armyworms and sawflies, at this time aphids are the predominant insect pest being found in wheat. With the cool weather, we continue to see an increase in populations and have started to find aphids feeding in the grain heads. Although beneficial insects can crash populations, aphid populations will continue to increase during periods of prolonged cool weather (especially cool, dry spring weather) and beneficial insect populations often lag behind. So far this spring, beneficial insect activity has been low in many small grain fields. Aphids feeding in the grain

heads have been shown to decrease test weight and in some cases have reduced yields. In addition, aphids can damage wheat until the mid to hard dough stage of development, especially if there is poor predator/parasite activity. Aphids usually are clustered as colonies among bracts of the grain heads and may move slightly when disturbed. Once grain heads emerge, the threshold is 20-25 per head, with low beneficial insect activity. As a general guideline, a ratio of one or more predators per every 50 aphids should be sufficient to achieve biological control. If a mixture of insects are present, Lannate (7 day PHI), Mustang MAX (14 day PHI), Proaxis (30 day PHI) and Warrior (30 day PHI) are labeled on wheat; however, the higher labeled rates will be needed for aphid and grass sawfly control. Additional materials labeled for aphid control on wheat include dimethoate (35 day PHI; may not give acceptable control below 60°F) and PennCap-M (15 day PHI). Be sure to read the labels for use rates, application restrictions and days from last application to harvest (PHI).

### 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 trifoliolate when you find 2 beetles per ft. row and a 25% stand reduction. A pyrethroid, labeled on soybeans, dimethoate, Lorsban or Sevin have provided control. The treatment threshold for grasshoppers is 1 per sweep and 30% defoliation. Asana, dimethoate, Furadan, Lorsban, Sevin or Warrior have provided control. Multiple applications may be needed for grasshopper control.

### Barley

Although armyworm levels have been relatively low this season, we are starting to get reports of economic levels of armyworms in barley in Sussex County. In general, the larvae being found are ranging in size from ¼ to 3/8 inch in length; however, there are also larger worms in some fields. Remember, armyworms tend to clip heads faster in barley so the treatment threshold is one per foot of row. Lannate (7 day PHI) and PennCap-M (15 day PHI) are labeled for armyworm control in barley. Be sure to read the

label for use rates and application/grazing/feeding restrictions.



**Stripe Rust on Wheat** – Bob Mulrooney,  
Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)

We are still receiving reports of stripe rust in DE (including New Castle Co.) and MD. As mentioned in last week’s WCU the disease is spotty in fields. There are areas with high incidence and severity in spots with apparently unaffected areas surrounding the infected ones. Not all fields are infected and there appears to be resistance to the disease in some varieties. So it is very important to scout wheat fields to determine how much is present. Keep in mind that the threshold on the flag leaves is 1-3% infection and weather favorable for infection to occur; such as intermittent showers or dew and cool temperatures, which are forecast through next week. Quadris, Headline, Stratego, and Tilt are effective if used preventatively. If rust is easily seen and the wheat has not flowered Tilt or Propimax (propiconazole) or Stratego are recommended. As for powdery mildew or other foliar diseases of wheat, like rust, it is important to protect the flag leaf and the leaf below through heading and grain development. Just a reminder, Quilt is not labeled for use on wheat in DE or MD. If no infection is present or the infection levels are very low and product can be applied soon then Quadris and Headline could be used also. Quadris and Headline can be applied up to the beginning of flowering (Feekes 10.5). Quadris and Headline are also very effective on Septoria and tan spot if wet weather continues. For many areas wheat has developed past the stage for fungicide applications. **Be sure to read the label for specific information.**

Figure 1. Note linear orange leaf lesions of early stripe rust infection.



M. Spellman

Figure 2. Close-up of stripe rust lesion and rust pustules in lesion.



M. Spellman



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

Each year we see wheat fields that have sulfur deficiencies. This year, I was in a field that had nitrogen applied to it, and started to go “backward” - it turned yellow and did not grow well. The pH was on the low side and soil and tissue tests confirmed sulfur deficiency. What was puzzling was that ammonium sulfate had been applied in the fall. So why the deficiency? There were several factors. First, the soil is very sandy, especially where the deficiencies were most severe. Sulfur is readily leached out of the topsoil and even with the fall application of sulfur, the wet winter caused sufficient leaching to reduce sulfur in the topsoil to low levels. Second, there was a hardpan at about 6 inches - even though sulfur does leach, it accumulates in the subsoil where there is more clay and as roots grow deeper, they should pick it up more sulfur. However, in this case, the

Post harvest interval (PHI) for wheat fungicides	
Tilt	40 days
Stratego	40 days
Headline	No later than beginning of flowering Feekes 10.5, Zadok’s 59; 14 days for wheat hay
Quadris	45 days for grain and straw, 14 days for hay

hardpan restricted root growth into the subsoil so the wheat did not pick up adequate sulfur.



**Be Sure to Scout Early-Planted Corn** - Mark VanGessel, *Extension Weed Specialist*; [mjv@udel.edu](mailto:mjv@udel.edu)

It is important to start to get over the early planted corn ground to check if there are weed breaks. Crabgrass is one that worries me since it is very difficult to control with a postemergence spray. Most of the postemergence grass herbicides (Basis Gold, Steadfast, or Option) will not control crabgrass over 1 to 2 inches tall. Herbicide-resistant corn (Liberty Link or Roundup Ready) gives you a wider window for crabgrass control. Be sure to check your fields early.



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

#### **Weather Concerns and Fund Activity Add Volatility to the Market**

We have all heard of the old adage "Never say never". What this means is that about the time one thinks that they have something figured out, something else comes along and things change. So how does this adage apply to the commodities markets this year? The answer to that question is easy to ascertain. Fundamentally speaking, based upon USDA's May supply and demand report, current price levels can not be justified nor sustained. Therefore, a fundamental trader is likely to say that we will never see \$7.00 (+) new crop soybeans or \$2.50 (+) new crop corn at the Chicago Board of Trade this summer. In fact, fundamental grain analysts were likely saying that these price levels would 'never' be hit, not in the '05/'06 marketing year.

And then a couple of things happened that are not reflected in the initial production estimates for the '05 cropping season. First, the general consensus is that thus far the weather and crop development is not keeping pace with the kind of conditions necessary to achieve a 148 bushel

per acre national average yield for the corn crop or a 39.9 per acre national average yield for the soybean crop. Yet, we all know that crop yields at any level are a long way from being made. We won't begin to have a handle on the level of U.S. corn yield to expect until the later part of June, first of July. For soybeans, we probably won't begin to get a good handle on this year's yield level until August. Indications are that crop development for new crop corn and soybeans is delayed. However, at this point in time it isn't safe to assume that we won't achieve the initial yield projections that will be revisited each month until the crops are in the bin. Second, fund activity in the commodity markets has been active this spring. On a given day the funds do not pay much attention to the fundamentals in the commodity being traded. When the funds buy and sell these markets, huge price swings occur.

#### **Market Strategy**

The only thing for sure in making grain marketing decisions at the current time is that the two phenomena discussed above have brought '05 corn and bean price levels back to within striking distance of their March highs (for corn) and above the March high for soybeans. New crop corn traded at \$2.48 per bushel in March and new crop soybeans traded at \$6.50 per bushel. Currently, new crop corn is trading at \$2.39 with new crop soybeans at \$6.65 per bushel. So where do we go from here? In managing price risk, it appears to be prudent to get the first half of intended new crop production forward cash priced.

Can prices go higher? Certainly. They can also go much lower, much faster than prices generally go up in the event that a major soaking rain occurs in the Corn Belt. Other pressing grain marketing questions to deal with in the coming days and weeks ahead will be, should hedges be placed or puts purchased on the remaining portion of intended new crop production? At what price level should we think about taking the additional price protection? These are currently and will continue to be tough questions to answer. The weather in the Corn Belt still appears to be a mixed bag. It is probably too soon to begin placing hedges and buying puts for that reason. If prevailing rains hold off for awhile then we might see the price

levels occur that 'never' should occur in the first place. An Illinois farmer told me this morning that his corn should be knee high but it isn't and that it needs a good soaking rain. Nevertheless, grain marketing just got more difficult.

Remember last year. Fundamentally speaking we'd never see soybeans above \$7.00 per bushel, we'd never see ideal garden growing conditions develop over the corn belt, etc. And then something else happened. The South American soybean crop was much lower than originally projected due primarily to dry weather and the funds rediscovered commodity speculation, etc.

Price volatility paves the way for profits to be made in grain markets. Volatility also makes certain decisions much more difficult to make, especially when markets are reacting more to 'external' forces than they are to fundamentals. Weather, crop pests, and perhaps disease developments will eventually dictate the size of this year's U.S. corn and soybean crops. Remember, one needs to market grain with price objectives in mind, allowing for managing price risk, and locking-in acceptable prices.

## General Info

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

Boron is a necessary element for all crops with some such as alfalfa and Brassica species (cabbage, broccoli, cauliflower) having a higher requirement than others. However, only between ½ lb to 3 lbs of B per acre are needed for any crop. Many farmers will add boron to their fertilizer programs in starter fertilizers or as foliar applications rather than as a broadcast application. A good example is in the southeast, where research has shown that foliar Boron applications to soybeans at the R3 stage will gain several bushels of yield (results have not been as consistent in more northern states with foliar B in soybeans).

No matter what crop you are applying boron to, it should be done with caution. Boron has a narrow range of safety: a little bit too much and

crops will be injured. Certain crops such as snap beans are very sensitive to boron injury and applications should not be made to them. Every so often, we see Boron damage to other crops. Foliar, starter, and popup applications of boron have the greatest risks. Injury most often occurs where boron is not adequately mixed in fertilizers or spray solutions. This causes "hot spots" of elevated boron that will injure plants that the fertilizers are applied to. Boron is one of those elements where "a little bit more" is not better. Play it safe, apply at recommended rates to those crops that need it the most; use soil applications for most crops; and where foliar or starter boron is applied, make sure that it is evenly blended or mixed and that you do not exceed safe application rates.



**Excess Rainfall Can Cause Loss of Soil-Applied Herbicides** - *Mark VanGessel, Extension Weed Specialist*; [mjv@udel.edu](mailto:mjv@udel.edu)

The excess rainfall we have been getting can cause some of the herbicides to dissipate and lose their effectiveness sooner than we see in drier years. It's a double-edged sword; you need rainfall (or irrigation) to activate the soil-applied herbicides, but then too much will cause them to not work as long as needed. How much rain is too much? It will depend on the herbicides you used. Those herbicides that are highly water soluble are more likely to be lost than those with less solubility. The other way to think about it is, those herbicides that need more rain to activate them are more likely to last longer in a wet year. The accompanying table gives the solubility of various herbicides and their likelihood of losing activity under wet conditions.

Because of the recent wet weather, fields will need to be scouted more intensively to be sure that weeds emerging prior to layby are treated. If the field is clean, (no emerged weeds) at layby it should be fine. But if weeds start to emerge prior to layby they may need to be treated. Often times you can not tell if weeds have started to emerge unless you walk the field.

## Solubility and Likelihood of Losing Activity Under Wet Conditions for Various Herbicides

Herbicide	Solubility (ppm)	Likelihood of Losing Activity
Atrazine	33	+
Callisto	1500	++++
Define	56	+
Dual II Magnum	530	++++
Frontier	1,174	++++
Harness / Degree	223	++
Lasso (Micro-Tech, Partner)	242	++
Outlook	1,174	++++
Princep	5	+
Prowl	1	+
Topnotch	223	++
Premixes		
Bicep II Magnum	Dual II Magnum, Atrazine	
Bicep Lite II Magnum	Dual II Magnum, Atrazine	
Field Master	Harness, Atrazine, Roundup	
Fultime / Keystone	Topnotch, Atrazine	
Guardman Max	Outlook, Atrazine	
Harness Xtra / Degree Xtra	Harness (or Degree), Atrazine	
Lumax	Dual II Magnum, Callisto, Atrazine	

NOTE: "++++" does lose activity 4 times faster than "+"; it is used to demonstrate herbicides with more "+"s are more likely to lose activity with excess rainfall.

### Potato Disease Advisory #3 - May 23, 2005, Bob Mulrooney, Extension Plant Pathologist

#### Late Blight Advisory

Disease Severity Value (DSV) Accumulation as of May 24, 2005 is as follows:

Location: Joe Jackewicz Farm, Magnolia, DE. Greenrow: May 4, 2005

*Remember that 18 DSV's is the threshold to begin a spray program.*

Date	Daily DSV	Total DSV	Spray Recommendation
5/4- 5/14	0	0	none
5/15	1	1	none
5/16- 5/18	0	1	none
5/20-5/21	6	7	none
5/22	2	9	none
5/24- 5/25	4	13	none

The weather has been more favorable for DSV accumulation. We still have not reached the 18 DSV threshold, but are getting close. 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 4th.

Growers who do not want to rely only on the DSV calculations for scheduling fungicide applications should apply at least 1-2 sprays of mancozeb (Dithane, Pencozeb, Manex II) or Bravo (chlorothalonil) before plants canopy down the row.

P-day values, which are used to predict early blight and the need for protective fungicides, are now 132. Our threshold for p-day values is 500, so we have a way to go yet. These are accumulating slowly due to the cool weather.

## Announcements

### 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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### Hay and Pasture Field Session

Thursday, June 2, 2005 6:00 p.m.  
University of Delaware, Newark Farm  
(enter on west side of Rt. 72, approx. 1/2 mile north of intersection with Rt. 4. Look for the sign!)

Cooperative Extension, local NRCS and Conservation District staff, and **you** will discuss and evaluate last fall's strip establishment plantings of hay and pasture species – mostly grasses. We will cover some of the pitfalls, costs, and management challenges associated with delayed planting as well as general topics such as soil sampling, variety identification and selection, fertility and nutrient management, weed management, horses and other livestock considerations, and conservation practices. Dress comfortably for a pasture setting. Feel free to bring a lawn chair!

We will apply for both DE Pesticide and Nutrient Management re-certification credit.

This meeting is free and everyone interested in attending is welcome.

**To register, for more information or special consideration in accessing this meeting, please call our office in advance, at (302) 831-2667.**

See you there!

Carl P. Davis, Extension Agent, Agriculture

## Weather Summary

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

Week of May 19 to May 25, 2005

### Rainfall:

3.71 inches: May 20

0.05 inches: May 24

0.20 inches: May 25

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

### Air Temperature:

Highs Ranged from 71°F on May 21 to 53°F on May 25.

Lows Ranged from 54°F on May 23 to 46°F on May 21.

### Soil Temperature:

61°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>

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