



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Soybean Rust Update

There are no new confirmed soybean rust detections this week.

There are new pictures of soybean rust now available on the web at <http://www.usda.gov/soybeanrust/identification.shtml>. These are excellent pictures of soybean rust on soybean as well as other legumes including lima bean, cowpea, kudzu, and snap bean. Remember that these are greenhouse inoculated plants, but they do show good symptoms for identification purposes. These were pictures posted by Morris Bonde of the Agricultural Research Service at Ft. Detrick, MD.

The last of the Soybean Rust Sprayer Clinics will be held in New Castle County on Wednesday June 8 at 5 PM. The Clinic should last about 1.5 hours followed by the NCC Crop Update. It will be held at the UD Cooperative Extension Research and Demonstration Area (3/4-mile East of Armstrong Corner, on Marl Pit Rd. - Rd 429, Middletown). From Route 1 going north exit at Rt 299 take a left toward Middletown and at the light at Brick Mill Rd turn right. Proceed until you reach the intersection with Marl Pit Rd and turn left, proceed approx 0.5 mile the farm is on the right. Ray Kaczmarczyk, Application Technology Engineer - Dupont Crop Protection Chemicals, will present an interactive session on setting up ground sprayers for optimum soybean canopy penetration and disease control. There

will be time for questions and answers. Ray has lots of information to share from his many years of experience with Dupont working on improving crop protection chemical applications to many different crops. The first two clinics have been excellent so if you are wondering how to set up your sprayer come out on Wed. June 8th. Pesticide recertification credits will be given.

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. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. You should also watch for beneficial insects. Fulfill, Lannate and Thionex are labeled on melons for melon aphid control. Mite populations are still low; however, we are starting to see an increase in the number of fields with mite detections. The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Acramite, Agri-Mek, Capture (bifenthrin), Danitol, Oberon and Kelthane are labeled on melons for mite control. The manufacturer of Acramite (Crompton) recommends against mixing Acramite with any sticker or products containing stickers. LI700 has been used with Acramite on apples and they

have not experienced any problems. They have also had good success using silicone based wetting agents, such as Silwet and Kinetic, with Acramite. It is also important to maintain a tank-mix at or below pH 7.0. In actual field use, they have seen that a pH of 6.5 or lower is better. Continue to watch fields carefully for cucumber beetles - with the warmer days we are seeing an increase in activity. Be sure to look under the plastic where beetles can often hide until disturbed.

Peppers

Continue to sample fields for thrips and corn borers. 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. Young larvae can infest stems and petioles under these conditions. The first corn borer egg masses have been found on pepper leaves. You should also check local moth catches in your area at <http://www.udel.edu/IPM/traps/latestblt.html>.

As a general guideline, a treatment with a pyrethroid 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 watch for egg masses. In general, 2 applications may be needed to achieve effective control.

Potatoes

Where at-planting insecticides were not used, we continue to see Colorado potato beetle adult activity and egg laying. In addition, the first small larvae have been found. 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, and 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. We are starting to see an increase in corn borer moth activity and the first egg masses have been found in the earliest planted fields. 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 have provided 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. Furadan or Monitor have provided the best control if you are waiting until you see infested terminals. The first potato leafhoppers have also been detected in potatoes.

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, bifenthrin, and Warrior are labeled for both 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. The first corn earworm moths have also been detected. Be sure to check our websites for the most recent trap catches at <http://www.udel.edu/IPM/traps/latestblt.html>



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

Growers are shipping pickles at full swing from the central Florida region, and harvest began last week in Georgia. Cool weather has delayed the season in Georgia, but harvest will hit full stride this week. Harvest has just begun at a few locations in North Carolina.

Downy mildew has not been seen in these regions to date, which is encouraging.

We will maintain contact with the folks down South to keep us up to date of the crop's progress.



Pursuit Rates - Ed Kee, *Extension Vegetable Specialist*; kee@udel.edu

The formulation of Pursuit 70DG is fast becoming unavailable and is being replaced with the liquid formulation, Pursuit 2SC. For a quick reference, the 0.5 ounce rate of 70DG is equivalent to 1.5 ounces of the Pursuit 2SC; 0.72 ounce rate of 70DG is essentially 2 ounces of the Pursuit 2SC; and the 1.1 ounce rate of 70DG is equivalent to 3 ounces of Pursuit 2SC.

The liquid formulation, Pursuit 2SC, is an old standard and has been used successfully since 1988 for pre-emergence treatments of lima beans. On lima beans, a rate of 2 to 3 ounces has been very effective on many broadleaf weeds, and provides some suppression of grasses. It should be mixed with a grass herbicide, and be aware of the potential of carry-over damage on rotational crops. Always read the label carefully.

Agronomic Crops

Agronomic Crop Insects - Joanne Whalen, *Extension IPM Specialist*; 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. 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

We are starting 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. A pyrethroid, labeled on soybeans, dimethoate, Lorsban or Sevin will provide control. We are also finding small grasshopper nymphs, especially in full season no-till fields. The treatment threshold for grasshoppers is 1 per sweep and 30% defoliation. Multiple applications may be needed for grasshopper control. Asana, dimethoate, Furadan, Lorsban, Sevin or Warrior will provide control.



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

Stripe rust continues to appear or increase in some fields. Most wheat is past flowering and no longer can be treated with fungicides. After checking the variety trial plots at the Research and Education Center near Georgetown a handful of varieties have the most infection. They included Coker 9184, SS-520, SS-550, V9510, FS-621, and Sisson. Even within these small plots you could see the spotty nature of the infections. These varieties had flag infections and infected leaf throughout the canopy. Fortunately there is varietal resistance to this new rust disease. Other diseases were also present including powdery mildew on susceptible varieties such as Roane, USG exp.820, and Pat. Some **Septoria leafspot** could be found on the lower leaves as well. No scab is present currently. All the varieties were just past flowering or beyond.



PSNT for Corn - Gordon Johnson, *Extension Ag. Agent, Kent Co.*; gcjohn@udel.edu

Now is the time to plan for taking pre-sidedress soil nitrate tests (PSNT) in corn. Fields that are candidates for the test are those that have received recent applications of manures, organic

wastes, or have had leguminous cover crops and that have received less than 50 lbs. of starter fertilizer nitrogen. The PSNT is not appropriate for fields receiving more than 50 lbs/A of fertilizer N, or where no organic sources of nitrogen (manure, sludge, compost, legume crops) have been used.

The PSNT measures the amount of nitrate nitrogen in the soil just prior to sidedressing. As organic sources of nitrogen mineralize, nitrate nitrogen will be available for plant uptake. Field trials in many states have taken these PSNT results and correlated them to corn response to different levels of sidedress nitrogen addition. By doing this a recommendation can be given for any additional nitrogen needed at sidedressing.

Take soil samples for the PSNT from the row middles at a depth of 12" in corn that is 10-12" tall. Multiple cores should be taken for each field and then mixed and quickly air dried by spreading them on paper in a warm area. Once dry they should be immediately tested. If they must be stored place them in refrigerated conditions. Samples should be representative of each field and if different manure rates have been used in a field, they should be sampled separately. Also, avoid taking samples immediately after a heavy rain or irrigation, wait a day or two instead.

The PSNT helps the grower by taking the guesswork out of the decision for sidedress nitrogen in corn fields receiving significant manure additions or where other organic nitrogen sources have been used.

The Conservation Districts in Kent and Sussex Counties, the University of Delaware Soil Testing Lab, and private soils testing laboratories can all run the nitrate tests for the PSNT.



Weeds That are Building Up in Small Grains

- Gordon Johnson, Extension Ag. Agent, Kent Co.; gcjohn@udel.edu

If you go past wheat and barley fields right now in Kent County, you will see many blue flower heads sticking up above the grain. The vast

majority of these are cornflowers, *Centaurea cyanus*. Cornflower is related to the Bachelor's Buttons that are commonly used as ornamental cut flowers. There are annual and perennial *Centaurea* species. The cornflower seen in small grain is a winter annual that germinates in the fall and seeds in late spring. Infested fields will have considerable reserve seed banks.

Cornflower is not controlled with Harmony Extra. The most effective material is Buctril which has shown excellent results in tests on cornflower in Kentucky with near complete control. 2,4-D is rated as good on cornflower, Banvel/Clarity are rated fair to good, and the combination of 2,4-D with Banvel/Clarity is rated as good also. However, we have had several instances where these materials did not provide adequate control this year. Another blue-flowered weed is chicory. Chicory is a perennial that does not tolerate cultivation and is commonly found along field edges.

We are also seeing a buildup of bluegrass species in small grains with heavy infestations in the Felton and Harrington areas. We see both the low growing and tall types of bluegrasses: annual bluegrass, *Poa annua*, grows and seeds low to the ground, roughstalk bluegrass, *Poa trivialis*, is a taller growing perennial species that can seed above or at the height of the grain. Other bluegrass species may also be present. These bluegrasses have the same growth period as small grain and go to seed in the spring. If these species have gone to seed in a field, plan ahead for control programs in future small grain plantings. Hoelon herbicide that we use for annual ryegrass is not effective on bluegrasses. In wheat, Maverick herbicide is labeled for bluegrass control fall or spring; however, it has significant rotational restrictions for soybeans and other crops. Osprey herbicide is also labeled for bluegrasses in late fall, winter or spring applications in wheat. It has a 3 month rotational interval to soybeans and 10 months to other crops such as vegetables. Both herbicides work on small bluegrass plants and not those that have many tillers.



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

Weather Concerns, Fund Activity and a Hint of Rust

Commodity prices for new crop corn, soybeans, and wheat have continued on their volatile path this past week, primarily due to weather concerns and the impact on potential yields for the '05 cropping season. This week commodity markets have been trading on weather developments and a hint of rust. These concerns have turned the technical indicators into buying opportunities in these markets, which in turn fuels fund activity. Many different theories are being offered for the unexpected surge in price bidding in the commodity pits, most are centered on the weather and the ever present fear of the spread of Asian Rust in the U.S. this summer. A report issued this week suggested that Asian Rust is 'likely' to have spread further into the state of Georgia? Perhaps we will learn more about the meaning of that statement over the next week or so. Interestingly enough it is way too early to give the '05 production possibilities up for any kind of huge loss. However, it might not come as a surprise to the futures market if USDA were to adjust '05 U.S. corn (placed at 148 bushels per acre in the May supply and demand estimate) and soybean yield predictions (placed at 39.9 bushels per acre) downward in the June supply and demand report. Whether said adjustments occur at this stage in the game depends largely upon whether the Eastern Corn Belt receives a good soaking rain. Prices are likely to remain volatile in the near term.

Market Strategy

An old adage in the commodity market is "When in doubt, stay out!" This is the advice being given by a highly reputable private grain analyst this week in regard to corn and soybean marketing decisions. The idea being to go with the technicals for the time being. Admittedly, this is dangerous in that the market can turn as quick as crop development turns. There are 'perceived' uncertainties in potential U.S. '05 corn and soybean production at the moment. Those perceptions could change very quickly. If one knew for sure that we would be getting a general soaking rain in the Midwest this week

then they'd boost '05 corn and soybean sales, at least to the 50% level. If those rains turn out to be short of what is needed to accelerate a slow developing U.S. corn and soybean crop then we are likely to see higher prices yet to come. Perhaps it is time to make sales advances with the purchase of put options, or then again it may be wise to sit it out and take a wait 'n see attitude. Growing conditions for crop development would probably have to turn to 'ideal' before we see the volatility in these markets dissipate. There should be plenty of time to make timely grain and soybean sales over the course of the summer.

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

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.

Weather Summary

Agronomic Crops Twilight Session and Asian Soybean Rust Sprayer Clinic

Wednesday, June 8, 2005 5:00 – 8:00 p.m.

UD Cooperative Extension Research and
Demonstration Area (3/4-mile East of Armstrong
Corner, on Marl Pit Rd. (Rd 429), Middletown)

5:00 PM - Sprayer Clinic **Note Time Change**

Ray Kaczmarczyk, Application Technology Engineer
– Dupont Crop Protection Chemicals, will present an
interactive session on setting up ground sprayers for
optimum soybean canopy penetration and disease
control. There will be time for questions and answers.
Ray has lots of information to share from his many
years of experience with Dupont working on
improving crop protection chemical applications to
many different crops.

6:30 PM - Join your fellow producers and the UD
Extension team for our annual interactive and hands-on
discussion of **demonstration trials** and **in-season
production issues** in small grains, corn, and soybeans.

We will focus on:

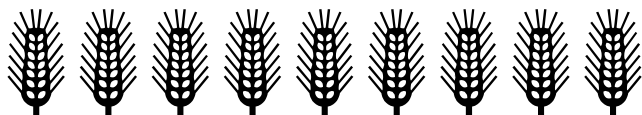
- **Small grain variety comparisons**
- **Insect, weed, disease and nutrient management**
- **A Grain Marketing Update.**

We will wrap up with the traditional ice cream
discussion session!

We will apply for **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



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

Week of May 26 to June 1, 2005

Readings Taken from Midnight to Midnight

Rainfall:

0.01 inches: May 26

0.09 inches: May 31

Air Temperature:

Highs Ranged from 82°F on May 27 to 69°F on
May 26.

Lows Ranged from 58°F on May 31 to 48°F on
May 27.

Soil Temperature:

71°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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Potato Disease Advisory #5 - June 2, 2005, Bob Mulrooney, Extension Plant Pathologist

Late Blight Advisory

Disease Severity Value (DSV) Accumulation as of June 1, 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- 5/26	7	16	none
5/27 - 6/1	0	16	none

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 196. 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.

MELCAST for Watermelon
From the University of Maryland and University of Delaware

Latest EFI (Environmental Favorability Index) values from local weather stations

Location	06/01/05	05/31/05	05/30/05	05/29/05	05/28/05	05/27/05	05/26/05
Coverdale Crsrd., DE	0	1	0	0	2	1	0
Galestown, MD	0	1	0	1	3	0	0
Hebron, MD	0	1	0	0	3	0	0
Laurel, DE (SE)	0	1	0	0	3	0	0
Laurel, DE (WSW)	0	1	0	0	3	0	0

How to Use MELCAST

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

If, for some reason, a serious disease outbreak occurs in your field, return to a weekly spray schedule.
Any questions please call (410) 742-8788