



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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May 20, 2005

Soybean Rust Update

There have been no new reports this week of Asian Soybean Rust in the US. Scouting of sentinel plots that have emerged across the South has begun. These plots are like an early warning system that will help us to determine when rust could appear locally.

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

Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Acramite, Capture (bifenthrin), Danitol, Agri-Mek and Kelthane are all labeled on melons for spider mite control. It will be important to rotate chemistry to avoid the development of resistance. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. Fulfill, Lannate and Thiodan are labeled on melons for melon aphid control. Since cucumber beetle populations can

seem to appear overnight be sure to watch carefully for adult beetles. We are starting to find the first adult beetles near overwintering sites.

Peas

Continue to scout for aphids on peas. On small plants, you should sample for aphids by counting the number of aphids on 10 plants in 10 locations throughout a field. On larger plants, take 10 sweeps in 10 locations. A treatment is recommended if you find 5-10 aphids per plant or 50 or more aphids per sweep. Be sure to check labels for application restrictions during bloom.

Potatoes

In fields where an insecticide labeled for Colorado potato beetle control was not used at planting, we are seeing an increase in Colorado potato beetle adult activity. We are also starting to find egg masses. 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. Since Rimon received a label late in 2004, be sure to remember that it is only effective on larvae. The label states that applications should be made when the majority of the population is in the egg hatch to second instar stage. Please see the label for additional use directions (<http://www.cdms.net/ldat/ld6LD008.pdf>). Also, the Actara label has changed to include aphid as well as Colorado potato beetle and leafhopper control. Please see the label for new use rates (<http://www.cdms.net/ldat/ld55M016.pdf>). In general, corn borer catches remain low. 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 <http://www.udel.edu/IPM/traps/latestblt.html> for the most recent moth catches in your area. If you are scouting for infested terminals, the first treatment should be applied when 20-25% of the terminals are infested. Furadan or Monitor will provide the best control if you are waiting until you see infested terminals.

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 midday when beetles are active. A treatment will be needed if 5% of the plants are infested with beetles. On the earliest planted corn, especially fields that were planted under plastic, be sure to sample for European corn borer larvae. A treatment should be applied if 15% of the plants are infested.



Control Strategy for Downy Mildew on Pickling Cucumbers - Ed Kee, Extension Vegetable Specialist; kee@udel.edu

Planting of pickling cucumbers has begun, and many growers have 2 to 4 plantings in. Downy mildew remains in south Florida as of Thursday, May 19 (See related map and chart). While this is good news, and we all hope it continues for a long time, and we are not recommending any applications at this point in time, it is appropriate to discuss control strategies if we are confronted with downy mildew.

1. Continue to consult the N.C. 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 avoid wasting sprays if not needed, and to achieve timely control prior to infection if the organism moves north towards Delaware and the Eastern Shore of Maryland.**
2. 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.
3. A fungicide program, according to the N.C. State work last fall, should be based on

Previcur Flex (1.2 pts/A), alternated with Tanos (8 oz/A). Each of those materials should be mixed with either chlorothalonil (Bravo, Echo, Equus) or mancozeb.

4. 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.
5. Mechanically harvested cucumbers typically take 45 days to harvest. If the chance for infection seems probable, growers may have to spray every 7 to 10 days, especially if cool, wet conditions are prevalent. Dry conditions may significantly reduce the need for application.
6. A network of contacts through the south will be providing input and identification of downy mildew if it moves northward. Updates will occur weekly in this newsletter, along with information from the N.C. State website.

Vegetable Crop Diseases – Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

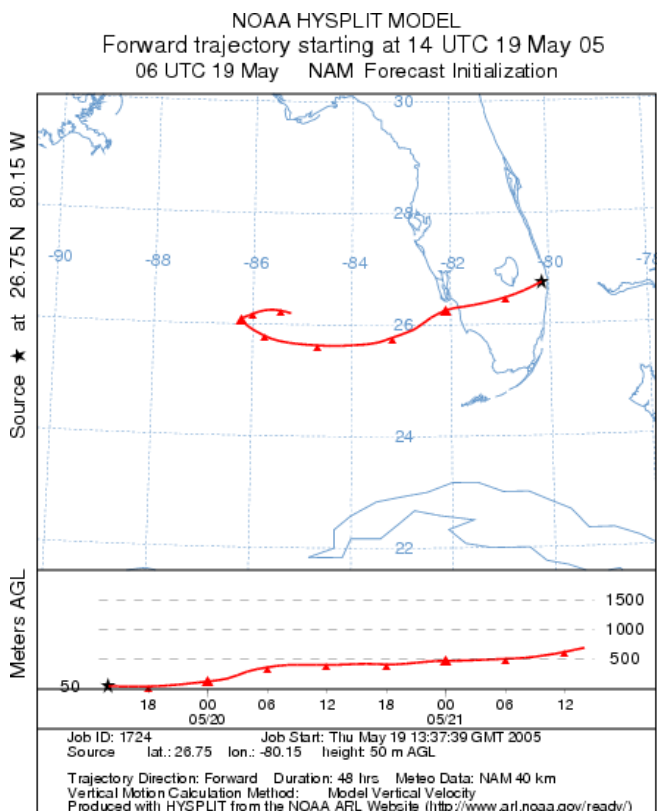
Potatoes

Conditions have been very unfavorable for late blight or early blight at this time. Only one DSV (disease severity value) has accumulated thus far for late blight prediction. 18 DSVs is the threshold for beginning a fungicide program for late blight control. If fields are approaching row closure down the row or have closed and you do not want to follow the forecast a fungicide is recommended at this time. See Issue 6, April 29 for more info on the Potato Disease Advisory. <http://www.rec.udel.edu/update05/Voume13,Issue6.htm>

Agronomic Crops

Wheat Leaf and Stripe Rust Outbreak in the Mid-Atlantic

Growers and Consultants Advised to Scout for Wheat Leaf Rust and Stripe Rust



Stripe Rust



Leaf Rust

The following information is from Arv Grybauskas, the Extension Plant Pathologist for the University of Maryland.

I have received numerous calls, from the eastern shore including Delaware and Northeastern Virginia, describing the sudden outbreak of both leaf rust and stripe rust of wheat. My counterpart, Dr. Erik Stromberg in Virginia, has indicated that the leaf rust strain may be a new race as it is attacking previously resistant varieties like 'McCormick' and 'Tribute'. Stripe rust has been an oddity in Maryland as it has appeared only a few times the last three seasons but never to a level requiring attention. The problem with stripe rust is that we expect that none of our varieties will have resistance. Stripe rust has been predominantly a problem in the Pacific Northwest and Mexico until about 5-7 yrs ago when it started showing up in Arkansas and other southern states growing soft red wheat. Stripe rust has been pretty significant in Arkansas this season. Dr. Don Hershman had reported a couple of weeks ago that southwest Kentucky had a significant stripe rust outbreak developing, and Georgia has also had significant wheat leaf and stripe rust this season. Both leaf rust and stripe rust are diseases with wind-blown spores. Most of the observations to date have noted that the infections are predominantly in the upper canopy, indicating that a recent spore shower brought the spores in. We suspect that

spore showers must have occurred a week or so ago with inoculum originating from affected areas in Georgia, Arkansas or Kentucky.

Both rusts can develop very fast and can cause significant losses if the upper canopy leaves are damaged during grainfill. The temperatures are conducive and the pathogen is now present and able to move from plant-to-plant and field-to-field. All that is required is moisture to produce periods of leaf wetness for the spores to germinate and infect plants. This can be provided by rainfall or dew. The cool night time temperatures that we are still experiencing may be providing the necessary dew. Most wheat in Maryland is anywhere from late boot stage to heading. Fortunately, fungicides are very effective in managing both diseases. However, just like the soybean rust disease, if infection has occurred and in this case relatively widespread then materials that act best as preventatives (like Quadris and Headline) may not be the best choice. Growers and consultants should check for the disease and extent of infection. If there is a high incidence of disease then triazoles or products containing triazoles, namely Tilt, Stratego and Quilt, are the products of choice. **Where you are makes a huge difference as to what fungicides can legally be applied, see below.** If the infection is low and product can be applied soon then Quadris and Headline are very effective. The damage threshold for wheat rusts is about 1-3% of the flag leaf area and forecasts of continued favorable weather.

I have not seen these diseases on the western shore of Maryland, so **this is not a blanket recommendation to spray!** People must scout and determine their risk before spending the money. Most "outbreaks" are focal or in small pockets. In an infection focus there can be 95% of the plants infected, and the severity is approaching 5% of the flag leaf area. But the rest of the field (80-90%) is clean. So, the important thing is for people to scout their fields and determine the overall extent of the disease.

Fungicide Registration Details

Quadris and Headline are fully registered in all states through heading.

Tilt is registered under 24c for Maryland, Delaware and Virginia through heading.

Stratego is registered under a 24c in Delaware and Virginia through heading. Quilt is only registered under 24c in Virginia.



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

Alfalfa

In many cases, fields have been cut so be sure to scout regrowth within one week of cutting for alfalfa weevil. Before cutting, we could find late instar larvae as well as pupae in many fields. If economic levels of weevils were present before cutting and you did not treat, be sure to check the regrowth for larvae as well as adults. If baling is delayed, adults and larvae feeding in the crowns can delay normal green-up. A treatment should be considered if you find 2 or more adults and/or larvae per crown. If adults are present, be sure to select an insecticide labeled for both alfalfa weevil adults and larvae. You should also check all fields for leafhoppers within one week of cutting. Be sure to sample all spring planted fields since they are very 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.

Small Grains

We are starting to see an increase in the numbers of fields with insect activity. Cereal leaf beetle can now be found feeding on the flag leaves. If economic levels of CLB are present, sprays will be needed until the grain reaches the hard dough stage. We have also had reports of head clipping from grass sawfly. With the continued cool weather, be sure to watch for movement of aphids into the grain heads. During cool, dry conditions aphid populations continue to increase and predator populations can lag behind. The treatment threshold is 20-25 aphids per head with low beneficial activity (less than 1 beneficial per 50 aphids). If multiple pests are present in barley, your only control option is Lannate. In wheat, your options include Lannate, Mustang, Proaxis or Warrior. If sawfly

are present, be sure to use the higher labeled rates.



Understanding Bird Damage in Newly Planted Corn Fields - Gordon Johnson, Extension Ag. Agent, Kent Co.; gcjohn@udel.edu

There have been many reports of bird damage to corn this spring. In some cases significant acreage will be replanted. The most common group of birds that cause damage to newly planted corn fields is "blackbirds" a term that includes several species. The blackbirds that cause the most damage are the red-winged blackbird (*Agelaius phoeniceus*) and the common grackle (*Quiscalus quiscula*).

Corn planting coincides with nesting season for these birds when they need more food - increased sources of energy and protein. Females tend to feed more on insects during this period whereas males will readily eat seeds. Blackbirds will pull up corn seedlings to get to the seed and often you can see them working down the row pulling up plant after plant.

What conditions favor bird damage? First, fields next to nesting areas are most vulnerable. Grackles nest mostly in trees and red-winged blackbirds nest near the ground in small grains, hayfields, marshes, reed beds, and ditches. Cornfields nearby are at risk of damage. Other factors favoring bird damage include:

Tillage - tillage reduces insect numbers thus shifting feeding to seeds

Planting depth - shallow planting increases the potential for bird damage

Delayed emergence - cool weather after planting will delay emergence and increase the time that seeds are available to birds

Emergence timing - First emerging fields nearest to nesting sites are most at risk

Interrupted planting - when planting is interrupted, early planted fields will be more exposed to birds and damage whereas when most corn is planted at the same time, birds will

have more acreage to select from and damage will be more spread out

Slow plant growth - Birds can pull up seedling plants to get to the seed. The longer the plant takes to reach 4" or more in height, the more potential there is for bird damage.

Low insect activity - When insects are less available, birds switch to seeds. In particular, if moth flights are delayed or reduced, birds will seek other food sources.

Loss of seed treatment effectiveness - Lindane seed treatment found in some planter box formulations will deter bird feeding. However, the longer seed is in the ground and is exposed to repeated rainfall or irrigation, the less effective it will be. This is true for any bird repellent.

How can bird damage be reduced? Plant large blocks of corn at the same time. Avoid isolated early plantings near nesting areas. Plant at deeper depths. Plant when soil temperatures are high enough that seed will germinate and plants will emerge rapidly. Plant fields that are near nesting areas last when they will emerge more rapidly. Use bird repelling treatments such as lindane containing hopper box formulations. Reduce tillage to increase insect availability to birds, thus reducing seed feeding. Switch to soybeans in fields that are subject to repeated bird damage.

Information extracted from the May 13, 2005 issue of the University of Illinois Extension IPM newsletter "The Bulletin" - Article by Ron Hines on "Why So Much Bird Damage to Early Planted Corn"



Commodity Markets React to Dry Weather Concerns - Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu

It is now exactly one week since the release of USDA's May 12th Supply and Demand Report, a day which appeared to be 'the day that commodity prices died'. The primary reason being the large production estimate for the '05/'06 corn marketing year at 10.985 billion

bushels with ending stocks building to an estimated 2.540 billion bushels, the largest since the '87/'88 marketing year. The scenario for U.S. soybeans was projected to be somewhat better with a crop size projected at 2.895 billion bushels and ending stocks at 290 million bushels. The stickler for the soybean market forecast was the level of carry into the '05/'06 marketing year; at 355 million bushels that number is 243 million bushels larger than the carry into the '04/'05 marketing year. The soybean market reacted negatively to a somewhat positive May supply and demand report, not a good sign for long term price direction. '05 U.S. wheat production, estimated at 2.185 billion bushels for all wheat, was up 1 percent from the previous marketing year, with ending stocks for the '05/'06 marketing year at 678 million bushels, an increase of 137 million bushels from last year. Once these numbers were released, the corn, soybean, and wheat futures markets went into a nose dive.

So what happened this week to breathe new life into commodity prices, at least temporarily? One would have to say that would be the weather, which was believed to be drier in parts of the Corn Belt than good crop development desires. Will this rally last? -- probably not, not in the near term anyway. The reason - LaSalle Street (where the CBOT is located in Chicago, Illinois) received a 1.4" rain last night (05/19/05). Simultaneously, parts of the Corn Belt received showers with forecasts for more on the way. Depending on how much rain was received, how widespread it was perceived to be, and how much more is needed to keep the '05 crop on track to produce the yields that USDA projected on May 12th will determine whether buying interest comes back any time soon. Meanwhile, expect commodity prices to turn lower for the time being. The reason, "rain on LaSalle Street," of course! Mother Nature is now in the driver's seat concerning commodity prices. Fasten your seat belt.



Announcements

Spring Crops Twilight Tour

May 25, 2005 6:30 p.m.

Wye Research and Education Center

-Visit the wheat and barley plots to compare plant growth type, maturity and disease resistance.

-Update on current insect, weed and disease pressure, predictions for the near future, and management techniques for integrated pest management.

-Discussion of any current crop management issues

-CCA credits

Refreshments/dessert will be available.

Registration is not required.

Contact: Mark Sultenfuss (410) 827-7388 or
Debby Dant (410) 827-8056

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.

2005 Wye Strawberry Twilight Meeting

May 25, 2005 6:00 - 8:00 p.m.

-2004-05 research plots

-Effect of Strawberry tip plugging date on Spring yields with and without Fall applied row covers in the field and in a high tunnel.

-Variety trial with Bish, Treasure, Festival and Gem.

USDA cooperative research on "conditioned" strawberry plugs for Fall and Spring harvest.

-Greenhouse-gutter production system.

-USDA Fruit Pathologist Bill Turechek will discuss strawberry diseases and current control measures. USDA and University small fruit specialists will also be on hand.

Refreshments/dessert will be available.

Registration is not required.

Contact: Mike Newell (410) 827-7388 or
Debby Dant (410) 827-8056

Virginia Small Grains Association Field Day

May 24, 2005 9:30 a.m.

Farm of Lanier Easley, Pittsylvania County, VA

Field plots will feature ryegrass/weed control strategies, insecticide seed treatments, evaluations of hulless barley and bread wheat seeding rates and management, and variety demos from Southern States, Pioneer, Hubner, Vigoro/Royster Clark, VCIA, U of Maryland, Coker, and USG.

Spring fungicide demonstrations and strips with nitrogen and nitrogen+sulfur as a topdress are planned. Results will be shown as part of the tours. There will also be display/demonstration of the new Greenseeker technology. The Greenseeker applies a variable rate nitrogen application based on the needs of each plant.

The tentative program includes speakers from the Altria/Shared Solutions Program and Don Mennel with Mennel Milling.

For further information, please contact:

Ellen Davis, Executive Director of Virginia Small
Grains Association, (804) 843-4455

Dr. Wade Thomason, Extension Grain Specialist, (540)
231-2988.

Directions:

*From Rt. 57 about 8.5 miles west of Chatham, VA
(Town of Rondo)*

*Turn South on Rt. 750, Strawberry Rd. Go
approximately 1.25 miles*

*Turn Left onto Rt. 833, parking and field plots are on
the right, approximately 0.8 miles from the turn.*

Weather Summary

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

Week of May 12 to May 18, 2005

Rainfall:

0.39 inches: May 15

0.06 inches: May 16

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

Air Temperature:

Highs Ranged from 79°F on May 14 to 60°F on May 13.

Lows Ranged from 59°F on May 15 to 46°F on May 18.

Soil Temperature:

70°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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