



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetable Crops

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

Lima Beans

As soon as pin pods are present be sure to watch carefully for plant bug and stinkbug adults and nymphs. As a general guideline, treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. Bifenthrin (Brigade and a number of generics), Mustang MAX, Proaxis and lambda-cyhalothrin (Warrior and a number of generics) are labeled for both insects. The higher labeled rates will be needed if stinkbugs are the predominant insect present.

Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. We have heard a few reports of beet armyworms feeding on the rinds of watermelons. Since this insect is difficult to control, be sure to select a material that is labeled for beet armyworm (BAW) on melons such as Coragen, Intrepid, Radiant, Spintor, or Synapse. The pyrethroids will not provide effective BAW control.

Peppers

As soon as the first flowers can be found, be sure to consider a corn borer treatment. Depending on local corn borer trap catches, sprays should be applied on a 7 to 10-day schedule once pepper fruit is ¼ - ½ inch in diameter. Be sure to check local moth catches in your area by calling the Crop Pest Hotline (in state: 1-800-

345-7544; out of state: 302-831-8851) or visiting our website at

(<http://ag.udel.edu/extension/IPM/traps/latestblt.html>). You will also need to consider a treatment for pepper maggot. Be sure to watch carefully for beet armyworm larvae since they can quickly defoliate plants. In addition, be sure to use a material that provides beet armyworm control - the pyrethroids will not control this insect.

Potatoes

Continue to scout fields for Colorado potato beetle (CPB), aphids and leafhoppers. Controls will be needed for green peach aphids if you find 2 aphids per leaf during bloom and 4 aphids per leaf post bloom. This threshold increases to 10 per leaf at 2 weeks from vine death/kill. If melon aphids are found, the threshold should be reduced by one half.

Snap Beans

Continue to scout for leafhopper and thrips activity in seedling stage beans. As a general guideline, 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. Additional sprays may be needed after the pin spray on processing beans. Since trap catches can change quickly, be sure to check our website for the most recent trap catches and information on how to use this information to make a treatment decision in processing snap beans after bloom (<http://ag.udel.edu/extension/IPM/traps/latestblt.html>) and

<http://ag.udel.edu/extension/IPM/thresh/snapbeanecbthresh.html>). Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7 to 10-day schedule should be maintained for corn borer control.

Sweet Corn

Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample all fields from the whorl through pre-tassel stage for corn borers, corn earworms and fall armyworm. We have started to find the first fall armyworm larvae in whorl stage corn. A treatment should be considered when 12-15% of the plants are infested. Since fall armyworm feeds deep in the whorls, sprays should be directed into the whorls and multiple applications are often needed to achieve control. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check both blacklight and pheromone trap catches for silk spray schedules since the spray schedules can quickly change. Trap catches are generally updated on Tuesday and Friday mornings (<http://ag.udel.edu/extension/IPM/traps/latestblt.html> and <http://ag.udel.edu/extension/IPM/thresh/silksp raythresh.html>). You can also call the Crop Pest Hotline (in state: 1-800-345-7544; out of state: 302-831-8851).

Cucurbit Downy Mildew Found on the Eastern Shore of Maryland - *Kate Everts, Vegetable Pathologist, University of Delaware and University of Maryland; keverts@umd.edu*

Downy mildew on cucumber was confirmed on the Eastern Shore of Maryland on July 7, 2009. The processing cucumber scout that found the original infection reports that symptoms, but not sporulation, were present since June 30. The original field had been sprayed, which may have suppressed initial sporulation. There are many cucumber fields affected, which comprise approximately 300 acres. Therefore, all commercial cucumber growers should apply targeted fungicides for control of downy mildew.

The following are the most effective materials (always tank-mix these products with a protectant such as chlorothalonil at 1.5-3 pt 6F/A or OLF, or mancozeb at 3.0 lb 75DF/A):

- Ranman at 2.1-2.75 fl oz 400SC/A *plus* an adjuvant
- Presidio at 3.0-4.0 fl oz 4SC/A
- Previcur Flex at 1.2 pt 6F/A
- Tanos at 8.0 oz 50WDG/A
- Curzate at 3.2 oz 60DF/A

The NCSU forecasting website ranks these fungicides as follows:

Ranking of Efficacy for Fungicides to Control Downy Mildew

Fungicide	Activity Rating ¹
Presidio ²	4.5
Ranman	4.5
Previcur Flex	3.5
Curzate	3
Gavel & mancozeb	2.5
Bravo	2

¹5 = excellent, 1 = low activity

²Presidio has plant back restrictions, so read the label carefully before selecting that product.

Growers of other cucurbit crops (pumpkin, muskmelon, squash, and watermelon) should aggressively scout their fields. In addition, they should be on a good standard maintenance program that includes chlorothalonil or mancozeb.

Fortunately the weather in the last several days has not been that favorable for long distance spread and survival of the spores. The forecast site states that the risk of downy is low through Thursday, July 9. Check the website often for the latest forecast at <http://cdm.ipmpipe.org>.

Nitrogen Deficiencies in Lima Beans - *Gordon Johnson, Extension Ag Agent, Kent Co.; gcjohn@udel.edu*

Both early planted processing baby lima beans and market garden pole lima beans are showing signs of nitrogen deficiency now across the state, even with adequate N being applied. This is likely a result of excessive N leaching during the wet spring periods in May and early June in

many fields, especially on very sandy soils. Pole lima beans commonly show N deficiencies later in mid-summer as pod set and development progresses; however this year, yellow plants are being seen much earlier.

Severe N deficiency in lima beans will be seen as an overall yellowing of plants with lower leaves often dropping off as N is mobilized from the oldest leaves to support the new growth at growing tips. Less severe N deficiency will be seen as a lighter green color than normal with lowest leaves most affected. Tissue tests can be used to confirm N deficiencies. Take the uppermost fully expanded leaves to send off for analysis. There are other potential causes for yellowing in lima beans including low pH leading to magnesium deficiencies and excessively high pH leading to micronutrient deficiencies, most commonly manganese.

It is important to apply additional N as soon as possible in N deficient lima beans. General recommendations are to sidedress 30-40 lbs of N, 3-5 weeks after emergence in baby lima beans and at early pod set in pole lima beans. In fields that have suffered heavy leaching losses, this may need to be increased slightly. However, remember that too much N can lead to excessive vine growth and delay flowering and pod set. Deficient pole lima beans will need an early sidedress application now and will likely need an additional sidedressing of N in August during pod development.

Controlling Cucurbit Powdery Mildew - *Andy Wyenandt, Assistant Extension Specialist in Vegetable Pathology, Rutgers University;*
wyenandt@aesop.rutgers.edu

Cucurbit powdery mildew (PM) season is just around the corner! Symptoms typically begin on older, lower leaves and can spread rapidly under dry, humid conditions.

Control of powdery mildew begins with regular scouting for symptoms and weekly fungicide applications. Begin a fungicide program when PM has been found in the region and/or when 1 lesion is found on the underside of 45 leaves. Fungicide resistance management of the fungus

which causes powdery mildew is critical in the mid-Atlantic region! Fungicides with a high risk for resistance development, such as the strobilurin (Pristine, FRAC code 11) and Rally or Procure (FRAC code 3), should be tank mixed with a protectant fungicide such as chlorothalonil (M5) and rotated with fungicides of a different chemistry.

The following are some fungicide recommendations for control of powdery mildew in a variety of crops:

To control powdery mildew in pumpkin and winter squash:

Alternate:

Nova or Rally (myclobutanil, 3) at 5.0 oz 40WP/A *plus* chlorothalonil at 2.0-3.0 pt 6F/A

or

Procure (triflumizole, 3) at 4.0-8.0 oz 50WS/A *plus* chlorothalonil at 2.0-3.0 pt 6F/A

With:

Micronized Wettable Sulfur (M2) at 4.0 lb 80W/A; Sulfur may injure plants especially at high temperatures. Certain varieties can be more sensitive. Consult label for precautions.

or

chlorothalonil *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 12.5-18.5 oz 38WG/A

If powdery mildew has become well established in the mid to late part of the season, only apply protectant fungicides such as chlorothalonil or sulfur.

To control powdery mildew in summer squash and cucumbers:

Alternate:

Nova or Rally (myclobutanil, 3) at 5.0 oz 40WP/A *plus* chlorothalonil at 2.0-3.0 pt 6F/A,

or

Procure (triflumizole, 3) at 4.0-8.0 oz 50WS/A *plus* chlorothalonil at 2.0-3.0 pt 6F/A

With:

chlorothalonil *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 12.5-18.5 oz 38WG/A

To control powdery mildew in muskmelon and watermelon:

Alternate:

Nova or Rally (myclobutanil, 3) at 5.0 oz 40WP/A

plus chlorothalonil at 2.0-3.0 pt 6F/A
 or
 Procure (triflumizole, 3) at 4.0-8.0 oz 50WS/A
plus chlorothalonil at 2.0-3.0 pt 6F/A

With:
 Quintec (quinoxifen, 13) at 6.0 oz 2.08F/A *plus*
 chlorothalonil at 2.0-3.0 pt 6F/A
 or

Pristine (pyraclostrobin + boscalid, 11 + 7) at
 12.5-18.5 oz 38WG/A *plus* chlorothalonil at 2.0-
 3.0 pt 6F/A

For more information on control of powdery
 mildew of cucurbits please see the [Delaware
 Commercial Vegetable Production
 Recommendations](#).

Potato Disease Advisory #17 - July 9, 2009 - *Bob Mulrooney, Extension Plant Pathologist;*
bobmul@udel.edu

Disease Severity Value (DSV) Accumulation as of July 8, 2009 is as follows:

Location: Shadybrook Farms, Little Creek, DE in Kent County.
 Greenrow: May 1

Date	LATE BLIGHT			EARLY BLIGHT
	Daily DSV	Total DSV	Spray Recs	Accumulated P-days*
6/20-6/21	1	111	5-day interval	434
6/22-6/23	0	111	7-day interval	462
6/24	1	112	7-day interval	470
6/25-6/28	0	112	10-day interval	495
6/29	0	112	10-day interval	503
6/30	0	112	10-day interval	511
7/1	2	114	10-day interval	519
7/2	1	115	10-day interval	528
7/3-7/5	0	115	10-day interval	555
7/6-7/8	0	115	10-day interval	581

There have been no new late blight reports on potato or tomato from DE since Monday, when a small area under power lines that had not been covered well was discovered with late blight east of Dover. The recent clear days and low humidity are not favorable for new infections. There is no reason for concern if your fields were sprayed several times with a late blight fungicide during the last several weeks. Be sure to keep scouting, especially in those areas where fungicide coverage might not be the best or next to woods lines, places where the dew lingers in the morning, low areas, etc. The weather now is not very favorable for late blight but continue with preventative fungicides if crop development requires more growing time. It looks like we are going to get a break in the weather in that it will not be favorable for late blight again for the next few days but will continue to be favorable for early blight.

Ground application of fungicides would be recommended for areas or fields that have obstructions (under power lines, next to buildings, fence rows, etc.) that prevent effective aerial applications of fungicides since there is still late blight in the area.

Agronomic Crops

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

Alfalfa

If you have not been scouting fields, be sure to keep a close watch for leafhoppers. Remember, the nymphs can quickly cause damage and once yellowing is present significant damage has already occurred both in season as well as to the long term health of the stand. Since the weather has turned warmer and dry, you may need to reduce treatment thresholds by one-third to one half.

Field Corn

We are starting to see an increase in Japanese beetles and corn rootworm beetles feeding on corn silks. Both of these insects can potentially interfere with pollination. However, silk feeding by these beetles will not reduce pollination if they cut the corn silks after pollination has already taken place. As a general guideline, an insecticide treatment may be needed if two or more Japanese beetles or corn rootworm beetles are present per ear and silks are clipped to less than ½ inch prior to pollen shed. As far as stinkbugs, we have no thresholds for our area; however, the following is information from Georgia:

“Corn is most sensitive to stinkbug injury during ear elongation before pollen shed. The treatment threshold at this stage is 1 bug per 4 plants (25% infested plants). Once pollination occurs, feeding though the husk causes damage to individual kernels. Kernels are susceptible to damage up until the milk stage (R3) and possibly early dough stage (R4). The threshold at this time is 1 bug per 2 plants (50% infested plants).”

Soybeans

We continue to see a wide variety of defoliators present in fields including Japanese beetles, green cloverworm, grasshoppers, painted lady caterpillars, blister beetles and silver spotted skipper. The best way to make a treatment decision in full season soybeans is to estimate defoliation. Before bloom, the defoliation threshold is 30%. As full season beans enter the

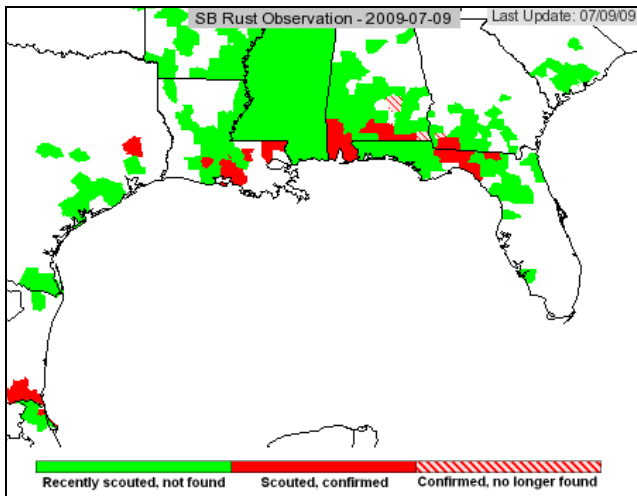
reproductive stages, the threshold drops to 15% defoliation. Remember that double crop soybeans cannot tolerate as much defoliation as full season beans so, be sure to watch newly emerged fields carefully.

We are starting to find spider mites in full season soybeans and economic levels are being found in an occasional field. Early detection and control is needed to achieve spider mite suppression. With the current warmer, dry weather, we could see an increase in populations. In addition to dimethoate and Lorsban, we now have Hero (zeta-cypermethrin + bifenthrin) as well as a number of stand alone bifenthrin products (*not all are labeled so be sure to check the label*) available for spider mite control in soybeans. All of these products need to be applied before mites explode. Be sure to read the labels for use rates and restrictions - there is a limit on the number of applications as well as the time between applications on all of the materials labeled for spider mite control. As a reminder, dimethoate is very susceptible to alkaline hydrolysis (chemical breakdown from high pH water) so pH of water is an important factor to consider with dimethoate applications.

We have also found our first soybean aphids in a full season soybean field in New Castle County. Remember that this aphid is favored by cooler temperatures so we could see population increases, especially if we continue to experience moderate temperatures. Be sure to be sampling for this pest on a weekly basis. The treatment threshold established in the Midwest is 250 aphids per plant from R1 through R5 stage of growth. The following links from the University of Wisconsin provides good information in sampling, stages of soybean growth and development, thresholds and treatment guidelines
<http://www.plantpath.wisc.edu/soyhealth/aglycine.htm> and
http://www.plantpath.wisc.edu/soyhealth/pdf/aphid_thresholds.pdf.

Soybean Rust Update - Bob Mulrooney,
Extension Plant Pathologist; bobmul@udel.edu

Soybean rust was found on soybean for the first time in a Florida sentinel plot in Gadsden County in the panhandle. Rust is developing in kudzu sites in the other positive counties in Florida. Some areas have been very hot and wet others have been hot with no rain. Rust is developing slowly so far.



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

Count Down to the July Supply/Demand Report
USDA is scheduled to release the July Supply and Demand report tomorrow morning, July 10. The question to ask ourselves isn't whether any surprises are forthcoming, rather what are the surprises likely to be? Several areas of concern will likely impact commodity prices as the market moves to trade the new USDA numbers. They are: what will the yield forecast for '09 U.S. corn production be? Will the estimate for the demand for feed go down? Will the estimate for the demand for ethanol be changed? If so, what will become of the estimate for carry-over stocks? In short, for corn, the market is anticipating a resulting increase in the number for ending stocks. The proof is in the pudding. Since the release of the June 30 Acreage Report, where U.S. planted corn acres increased on the order of 2.4 million acres Dec '09 corn futures

have fallen another 60+ cents per bushel. Favorable weather for U.S. corn production could result in USDA raising the national yield estimate. In June, USDA estimated the corn yield at 153.4 bushels per acre.

The soybean carry-over number will be quickly noted by commodity traders. If the '08/'09 marketing year ending stocks number is less than 110 million bushels, that would be considered price positive for old crop beans. If the number is greater than 110 then that would be viewed as bearish, depending upon the resulting impact upon the ending stocks estimate for the '09/'10 marketing year, projected at 210 million bushels in USDA's May report. The soybean market is in the process of transitioning from tight old crop to more adequate new crop supply. Ending stocks for new crop soybeans are likely to increase due to the acreage increase projected in the June 30 actual plantings report. Just from the acreage increase, U.S. soybean production will increase by an additional estimated 63.9 million bushels from the June 10 production estimate. The market is anticipating a larger U.S. soybean crop resulting in a larger ending stocks estimate for the new crop '09/'10 marketing year.

USDA Export Sales Report (week ending July 2)

The most notable item in this week's export sales report for corn is the shipments number, reported at 38.1 million bushels. This was below that needed this week to stay on pace with USDA projections. The anticipation is, with exports currently running about 5% behind the USDA estimate, that USDA will lower the '08/'09 marketing year export estimate of 1.75 billion bushels which would increase ending stocks for the '08/'09 and '09/'10 marketing years.

Total U.S. soybean exports exceeded USDA's projection for the '08/'09 marketing year in this week's report. That noted, then we could get a reduction in the ending stocks number for old crop soybeans.

U.S. wheat exports were reported as neutral to bullish. U.S. wheat exports were projected at 900 million bushels for the '08/'09 marketing year in both the May and June USDA reports.

Market Strategy

Commodity prices have been recently stymied by favorable growing conditions for a crop that was planted late in the Eastern and early in the Western Corn Belt. Couple that with slackening oil prices and a weakening economy and we have had nothing but trouble developing for new crop corn and soybean prices. Non-commercial traders have continued to liquidate long positions. Meanwhile, the technicians were calling for a possible extended seasonal rally, one that would last longer than usual for corn and soybean prices. Obviously, that did not happen. Fundamentalists were anticipating fewer corn acres to be reported on June 30. That also did not materialize.

The reality is that new crop corn and soybean prices have dropped nearly \$1.30 and \$2.00 per bushel, respectively, since the beginning of the second week of June. Tomorrow's report is important in that we need to see if USDA's July projections offer commodity prices any help in the foreseeable future. Corn, soybean, and wheat futures are currently oversold. Dec '09 corn futures are currently trading at \$3.37; Nov '09 soybeans at \$9.07; and Dec '09 SRW wheat at \$5.50 per bushel. For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

Announcements

Hay You Farmers!! Breakfast Social and Informational Meeting

Wednesday, August 5, 2009 7:00 a.m.
Ches Del Diner
2120 DuPont Parkway, Middletown, DE

We know it's been a wet year... we can't do much about the weather — but we can help you understand how to manage your hay fields and how to keep a bad situation from getting worse.

Join your fellow producers and the UD Extension team to hear about this year's small grain variety trial results and an information segment on making hay. There will be time for questions and answers. Get your questions answered by asking the experts!

We will apply for DE Pesticide and Nutrient Management and CCA credits.

Please pre-register by July 28th.

This meeting is free and everyone interested in attending is welcome. To register, request more information or if you require special needs assistance for this meeting, please call our office in advance at (302) 831-2506.

See you there!

Anna Stoops, New Castle County Agricultural Extension Agent

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of July 2 to July 8, 2009

Readings Taken from Midnight to Midnight

Rainfall:

0.04 inch: July 2

0.12 inch: July 3

Air Temperature:

Highs ranged from 85°F on July 7 to 76°F on July 5.

Lows ranged from 67°F on July 2 to 61°F on July 8.

Additional Delaware weather data is available at http://www.deos.udel.edu/agirrigation_retrieval.html and <http://www.rec.udel.edu/TopLevel/Weather.htm>

Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Associate - Vegetable Crops. For subscription information, contact her at emmalea@udel.edu or (302) 856-2585 x 587.

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