



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetables

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

Lima Beans.

Continue to scout fields for lygus bugs, stinkbugs and green cloverworm. Treatment for lygus bugs and/or stinkbugs should be considered if you find 15 adults and/or nymphs per 50 sweeps. A treatment for cloverworms will be needed if defoliation exceeds 20% prebloom or 10% during podding. Lannate or Capture will provide control of all 3 insects. The 4-oz per acre rate should be used if stinkbugs are present.

Potatoes.

Second generation Colorado potato beetle adults have started to emerge and larvae are still present in fields. Spintor, Leverage, Provado, and Actara will provide control. We continue to see an increase in green peach aphid populations. The treatment threshold is 2 per leaf in later planted fields and 4 per leaf in the earliest planted fields. Provado, Leverage or Fulfill will provide control.

Snap Beans.

Continue to sample seedling beans for thrips, leafhoppers and green clover worm activity. Corn borer activity remains low.

Sweet Corn.

Fresh market silking sweet corn should be sprayed on a 6-day schedule in most areas of the state except in the Dover, Laurel and Seaford areas where a 3-4 day schedule is needed. Be sure to watch the latest planted fields for fall armyworm larvae present in the whorls. A treatment will be needed if you find 15% of the whorls infested. In general, 2 applications are needed to achieve control. Lannate, Spintor or Warrior have provided the best fall armyworm control in whorl stage sweet corn. Avaunt should also provide good control.



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

Phytophthora fruit rot control. Phytophthora fruit rot continues to be a problem for pickle and slicing cucumber growers. Since Ridomil Gold is only labeled for at planting applications and has not provided Phytophthora fruit rot control when we have heavy rain events, Acrobat 50WP was approved for use under the EPA Emergency Exemption program last April. Acrobat 50WP is manufactured by BASF. This fungicide will help manage Phytophthora blight caused by *Phytophthora capsici*. Recent research work done in various areas of the country has shown that it can be effective in reducing Phytophthora blight on cucurbits including cantaloupes, cucumbers,

squash (summer, winter and pumpkins, and watermelons) Acrobat will provide control of Phytophthora only and needs to be tank mixed with another protectant fungicide such as chlorothalonil (Bravo) or mancozeb (Dithane). Because it has a unique mode of action, it must be mixed with a tank-mix partner.

Acrobat can provide some protection of the fruit rot stage of Phytophthora blight on cucumbers. The crown rot phase of the disease does not appear to affect cucumbers so we get no early warning that the fungus is present. On summer squash, the disease produces a crown rot as well as a fruit rot. Phytophthora has been present in New Jersey on summer squash and peppers for several weeks following the heavy rains. In cucumbers it is suggested that if Phytophthora fruit rot needs to be prevented and the disease is present in your area, the best time to apply Acrobat would be when the fruit are present and repeat 7 days later. This is not a systemic fungicide so applications should be made to maximize coverage by increasing the volume of water.

For other longer season crops such as pumpkins or winter squash wait until fruit are present before beginning a program. A maximum of five applications are allowed so watch your timing to prevent infection during this hot, humid weather.

Acrobat is not a magic bullet for control of Phytophthora blight, it is meant to be part of an integrated control program. The following bears to be repeated. The best control is to grow the plants on beds, if practical, to get them out of the water and to rotate for long periods of time (3 years or more) away from susceptible crops. For vegetable growers this is difficult because many crops are susceptible, and irrigation availability limits rotation intervals. A combination of rotation and other horticultural practices combined with fungicides may provide some relief. Fungicides alone have not provided a solution as results from New Jersey on Phytophthora blight on peppers has shown. What drives this disease is water. Choosing well-drained fields, avoiding planting

wet areas, and planting on high beds combined with fungicides that are labeled for the crop have provided a measure of control.

Potatoes.

Late Blight Update

Disease Severity Value (DSV) Accumulations as of July 4, 2001, are as follows:

*Location: Joe Jackewicz Farm, Magnolia, DE
Remember that 18 DSV's is the threshold to begin a spray program*

Date	Total DSV	Spray Recommendation
5/16	0	
5/17	11	
5/20	29	
5/30	51	5-day, low rate
6/3	57	5-day, low rate
6/5	57	5-day, low rate
6/7	57	7-day, low rate
6/11	59	10-day, mid rate
6/13	60	10-day, mid rate
6/17	76	7-day mid rate
6/20	76	7-day high rate
6/24	88	7-day high rate
6/27	88	7-day high rate
7/1	89	10-day, high rate
7/4	90	10-day, high rate

Growers should be applying a fungicide for foliar diseases. There have been no reports of late blight on potatoes from our region.

Pythium vine rot was seen on vines in wet, low areas. Infection by Pythium is very dark almost black and white fuzzy growth can usually be seen on the infected areas of the vine. **Soft rot bacteria** have also been seen on vines where corn borer has wounded the vines. The bacteria splash from the soil onto the damaged vines, causes a black slimy decay, and the vine yellows and dies.



Vegetable Diseases - *Kate Everts, Extension Vegetable Pathologist, University of Delaware and University of Maryland; everts@udel.edu*

MELCAST for Watermelons

EFI Values (Environmental Favorability Index)

Do not use MELCAST if there is a disease outbreak in your field, it is a **preventative program**. Any questions, please call David Armentrout at (410) 742-8788 or e-mail: da88@umail.umd.edu

Location	6/25	6/26	6/27	6/28	6/29	6/30	7/1	7/2
Bridgeville, DE	2	2	2	1	2	1	0	3
Laurel, DE (Collins Farms)	2	3	3	3	3	1	1	3
Galestown, MD	2	2	3	3	3	3	1	3
Georgetown, DE	1	2	3	4	3	5	1	2
Hebron, MD	2	3	2	4	4	4	1	3
Salisbury, MD	0	0	0	0	0	2	0	3
Laurel, DE (Vincent Farms)	1	2	2	1	3	1	0	3

Watermelon Fields should be sprayed with a fungicide when 30 EFI values have been 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 zero. The first and last day above can be partial days so use the larger EFI value of this report and other reports for any specific day

More detailed information concerning MELCAST and sample data sheets are available on the web at <http://www.agnr.umd.edu/users/veg/disease/veg/disease.htm>. . ❖



Field Crops

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

Alfalfa.

Continue to scout for leafhoppers - economic levels are still present in many fields. If economic levels were present before cutting, be sure to sample re-growth within 7 days of cutting. Although cutting can help to reduce populations, economic levels may still be present after harvest. The threshold is only 20 leafhoppers per 100 sweeps on alfalfa 3 inches or less in height.

Field Corn.

Continue to watch for grasshoppers, especially along field edges. We are also seeing economic levels of corn borers in non-Bt corn. The treatment threshold is 75-80% infested plants in

dry land corn and 50% infested plants in irrigated corn. You should also look for larvae boring into the mid-ribs of the leaves. If more than 1/3 of the larvae have bored into the leaves, a treatment is generally too late. The best time to apply a treatment will be just as the tassels are emerging from the whorls. A pyrethroid or PennCap timed correctly can provide 90% control. The addition of a wetting agent to move the insecticide into the tassel area has also improved control. We can also find southern corn stalk borers in the whorls and tassels. Since we rarely treat for the southern corn stalk borer, be sure to pull out the whorls of 10-20 plants per field to determine which insect is causing the damage. Southern corn stalk borer larvae will appear spotted compared to the cream colored body of the corn borer.

Soybeans.

In addition to grasshoppers and spider mites, green cloverworm, silver spotted skippers and

painted lady larvae - also know as thistle caterpillars - can be found in fields. Although we have seen reports from other areas documenting occasional economic levels of painted lady caterpillars in soybeans, we have never seen painted ladies causing economic losses in our area. This butterfly species overwinters in Mexico and migrates north each spring. Population explosions seem to be linked to heavy rains in the deserts of Mexico as a result of a strong El Nino. The heavy rainfall results in an abundance of plant growth in the desert and the Painted Lady is not picky about host plants. Although thistle is preferred, the Painted Lady will lay eggs on a variety of host plant species, including soybeans. So in an El Nino year, Painted Ladies in the Mexican desert are able to utilize many of the plants that suddenly proliferate. More caterpillars survive, and many adults emerge within a short period of time and many of them migrate immediately northward. Adults migrating from overwintering sites in Mexico, arrive in our area in early June. Painted lady larvae are mottled yellowish green and black with a lateral yellow stripe and are covered with yellowish spines. They live in a nest of leaves woven together by silken threads. This year we have had reports of two fields in Sussex County with economic levels of defoliation from painted ladies or a combination of defoliators. A control should be applied prebloom if one or a combination of these caterpillars and/or grasshoppers is causing 30% or more defoliation. A pyrethroid will provide effective control of all three worm species.



**Painted Lady
Larvae**



**Painted Lady
Adult**



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

Soybeans.

Soybean cyst nematode can be seen on plants that are 32-35 days from planting. Look for areas in the field which are yellow and/or stunted. The small yellow or white cysts can be seen easily at this time if you have a 10X hand lens and carefully dig up the plants and not pull them from the soil. Soil sampling is also encouraged if you do not find the cysts or to confirm their presence if you are not sure. Soil sample bags are available from the county Extension offices.

Corn.

Anthracnose is still being seen on lower leaves in field and sweet corn plantings around the state. Hopefully corn will outgrow the disease with the return of some rain and good growing conditions.



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

Weather Developments to Dominate Commodity Markets in Near Term

Commodity traders are beginning the remainder of this week formulating their ideas about next Wednesday's USDA supply/demand reports. Weekly export levels will not be known this week until Friday due to the delay incurred in celebrating the Independence Day holiday. The nation's corn crop, although reported in last Monday's crop conditions report to be 69% in the good to excellent category, is uneven overall and likely to take much longer than usual to pollinate and enter the reproductive stage. This factor alone can make weather developments have a greater impact on commodity prices over a more extended time period than usual. Although weekly crop condition ratings for the U.S. corn and soybean crop did not change on average from the previous week, a look at Illinois showed a reduction in the good/excellent category of 3 percent (78% down

to 75%). Interestingly, since that report was issued a large portion of the Illinois corn crop has received more rain.

General Comments

This market still has a chance of breaking either way. New crop corn futures are currently priced just above the local loan rate of \$2.10 per bushel. Any opportunity to lock a decent basis level on new crop corn bids (10 to 20 over) should be used to get to at least the 50 % priced level. Although soybeans have recently incurred a 30 cent per bushel rally it remains too risky to price new crop soybeans at this time. On July 3rd Dec CBT corn closed at \$2.13, Nov. soybeans at \$4.76, and July wheat at \$2.53 per bushel.



UPCOMING MEETINGS:

AGRONOMIC CROPS FIELD DAY JULY 17 AT UD DEMO PLOTS

New Castle County Cooperative Extension and the Delaware Soybean Board invite you to join your fellow farmers and other members of the agricultural community on Tuesday, July 17, 2001, 10:00 am - 1:30 pm, as our Extension Specialists lead discussions of this year's field trials and other in-season issues related to corn, soybeans, and small grains. Other topics will include grain marketing and nutrient management. We expect to have the 2000-2001 wheat and barley variety trial results for distribution and discussion. There will be time to discuss your current cropping issues. Credit toward Delaware pesticide license recertification (Ag Plant category) and CCA (Certified Crop Advisor) CEUs will be awarded.

The Demo Plots are on Marl Pit Road (Rd. 429, approximately 1/2 mile east of the intersection with Del. Rt. 71/U.S. Rt. 301 (Armstrong's Corner). Look for the University of Delaware signs on the left. The traditional Extension Staff lunch will be provided.

The meeting is free and everyone interested in attending is welcome. For more information or for special consideration in accessing this meeting, please contact Carl Davis, NCC Agriculture Agent at 302-831-2506 or email: cpdavis@udel.edu.



Weather Summary	
Week of June 28 to July 4, 2001	
Rainfall:	June 29: 0.28 inches July 1: 0.33 inches July 2: 0.01 inches
Readings taken for the previous 24 hours at 8 a.m.	
Air Temperature:	Highs Ranged from 93°F on June 30 to 72°F on July 2.
	Lows Ranged from 74°F on June 30 to 50°F on July 3.
Soil Temperature:	80°F average for the week.
(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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