



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetables

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

Aphids in Field and Vegetable Crops.

Although aphid populations are not high in all crops, populations are heavy in spots throughout the state. The recent cool weather and current predictions for cool weather will be favorable for increases in populations. Under these conditions, beneficials may not be able to keep up with population explosions.

Asparagus.

We continue to find asparagus beetle egg laying activity on spears. A treatment is recommended if 2% of the spears are infested with eggs. Since adults will also feed on the spears, a treatment is recommended if 5% of the plants are infested with adults. Sevin, Lannate, Ambush, or Pounce will provide control.

Cabbage.

Imported cabbageworm and diamondback larvae can be found feeding on cabbage. Treatments should be applied when 5% of the plants are infested with larvae and before larvae move to the heart of the plants. Avaunt, Bt insecticides, Proclaim, or Spintor will provide effective control of both species. Be sure to rotate between these classes of insecticides to avoid the development of resistance.

Melons.

Continue to scout all early-planted melons for aphids, cucumber beetles, and spider mites. The threshold for mites is a 20-30% infested crown with 1-2 mites per leaf. Capture, Danitol, Agri-Mek or Kelthane will provide control, but should be rotated 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 the labeled on melons and will provide melon aphid control. **Dimethoate will not control melon aphids.**

Peas.

Continue to sample for aphids. Populations continue to increase and treatments will be needed if you find 5-10 aphids per plant or 50 or more aphids per sweep. Dimethoate or Lannate will provide aphid control. Be sure to check the labels for application restrictions during bloom.

Potatoes.

Colorado potato beetle adults, egg masses and the first small larvae can be found in earliest emerged fields. A treatment should not be needed for adults until 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. Actara, cryolite, Spintor or Provado will provide control. We have also found our first ECB egg mass in the earliest planted potatoes. 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. Ambush, Baythroid, Furadan, Penncap, Pounce or Spintor will provide control. 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. Potato leafhoppers have also been detected in the earliest planted fields. As a general guideline, controls should be applied if you find ½ to one adult per sweep and/or one nymph per every 10 leaves. A pyrethroid, Actara or Provado will provide control.

Sweet Corn.

Flea beetles and cutworms are still active in seedling stage sweet corn. The treatment threshold for flea beetles is 5% infested plants. The cutworm threshold is 3% cut plants or 10% leaf feeding. Continue to sample any corn in the whorl stage for European corn borer larvae. A treatment should be applied if 15% of the plants are infested. The best timing for a treatment is just as the tassels are emerging from the whorls. In recent years, Baythroid, Mustang, Penncap or Warrior have provided effective control.



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

Peas.

Downy mildew has been identified in peas this week. This is a disease that can be easily overlooked and takes a sharp eye to detect it. In this field the lower leaves are infected in a low spot with poor air movement. Cool, moist growing conditions favor the disease caused by the fungus *Peronospora viciae*. As can be seen in the pictures, the upper leaf surface is greenish yellow and the corresponding lower leaf surface is covered with the fluffy gray, dirty looking fungus growth. Early systemic infection can produce stunted and distorted plants. Plants infected later are not as severely affected. It takes long periods of humidity above 95% for sporangia (spores) to be produced and recent low humidity in the 60's should limit spread. It has not been shown to be seed transmitted like downy mildew on soybean. There are no chemical controls. If this disease should appear a five year rotation is suggested. Downy mildew is more common in England and continental Europe so varieties developed there tend to have more resistance.



Upper leaf surface
(Downy Mildew on Peas)



Lower leaf surface
(Downy Mildew on Peas)



Watermelon Transplanting Reminders – Derby Walker, Sussex County Agricultural Agent, derby@udel.edu

We had several calls this week concerning stressed, wilting transplants. When transplanting, be sure to put the transplant deep enough in the ground to cover properly with soil. Any exposed potting soil from the root ball will act as a wick and remove the moisture from the roots of the transplant. Use enough water at transplanting to be sure the soil is wet enough to cover the transplant roots, “sealing” the transplant in the hole.

Another incident involved rough handling of transplants. The plants were being pulled from the trays breaking the root mass. The plants that were handled rough did not have enough root mass to withstand transplanting stress and the adverse weather.

Seed corn maggots are present. Be sure to consider seed corn maggot control, especially where a green cover crop is plowed under close to planting, manure is used and/or a field is minimum tilled.



Field Crops

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

Aphids in Field and Vegetable Crops.

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Alfalfa.

Potato leafhopper adults have been detected this week. It is important to sample all spring seedings and established stands within one week of cutting. 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. Baythroid, dimethoate, Mustang or Warrior will provide effective control.

Field Corn.

In general, black cutworm trap catches remain high compared to past seasons. Continue to sample for cutworms feeding above and below ground. A treatment in 1-2 leaf stage should be applied if you find 3% cut plants or 10% leaf feeding. A pyrethroid or Lorsban will provide the best control. Fields should be scouted through the 5th leaf stage for cutworm damage.

Small Grains.

Cereal leaf beetle populations have increased throughout the state and a number of fields have reached threshold level. Since damage can occur quickly, a treatment should be applied as soon as you find threshold levels (0.5 larvae per stem.) Although not every field is infested, we are also seeing an increase in aphid activity. Beneficial activity is low due to the recent cooler weather. Since aphids can explode quickly and beneficials may not be able to keep up with aphid populations, all barley and wheat should be sampled for aphids feeding in the head. The treatment threshold is 20-25 per head with low beneficial activity (less than 1 per 50 aphids). If a pyrethroid is used on wheat for aphid control (*Mustang and Warrior are not labeled on barley*), remember that these products work mainly by ingestion so you should not evaluate control for 2-3 days after an application. Small sawfly and armyworm larvae have been found in wheat in Sussex county. Since sawflies can quickly clip heads in both crops, early detection is critical. Be sure to shake plants to dislodge sawfly larvae feeding on the plants during the day. In both crops, the treatment threshold for sawflies is 2 per 5 foot of row innerspace or 0.4 per foot of row. The armyworm threshold is one per foot of row in barley and two per foot of row in wheat. In barley, your control options include Lannate or Parathion. In wheat, your options include Lannate, Mustang, Parathion or Warrior. Remember Parathion can only be applied by air and has numerous set back restrictions.



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

U.S. and World Supply/ Demand Highlights

The May 12th crop report marks the near completion of the '02/'03 and a first look at projections for '03/'04 marketing years. USDA's first projection for 2003 U.S. corn crop production is placed at 10.060 billion bushels. Total use for the '03 corn crop is projected at 9.825 billion bushels, 5 million more than the '01/'02 marketing year. Ending stocks are forecast at 1.304 billion bushels, as compared to 1.059 billion for the '02/'03 marketing year. World grain production is projected to increase slightly over the '02/'03 marketing year, however, with use outpacing total supply ending stocks for the world grain supply are projected to decrease by 45 million metric tons in the '03/'04 marketing year. Further, ending world grain stocks for the '03/'04 marketing year are projected to be 145 million metric tons less than they were in the '01/'02 marketing year.

Total U.S. wheat production is projected at 2.113 billion bushels for the '03 wheat crop, substantially above last year's 1.616 billion bushel crop and 156 million bushels more than the '01 wheat crop. Total use for all U.S. wheat is projected to increase from last year's level, now projected at 2.140 billion bushels. This is a 24

million bushel decrease for domestic usage from the '01/'02 marketing year. World wheat output is projected to increase by about 5 million metric tons from last year and slightly over 10 million metric tons above '01/'02 production. World wheat supply is projected to decrease by the end of the '03/'04 marketing year, at 134.46 million metric tons declining 21.9 million metric tons from the '02/'03 marketing year and slightly over 21 million metric tons from '01/'02.

Total U.S. soybean production is projected at 2.855 billion bushels, 125 million bushels more than last year and 36 million bushels greater than the '01 crop. Total use for U.S. soybeans, projected at 2.749 billion bushels for the '03/'04 marketing year is 58 million bushels less than the year just ending and 84 million bushels less than the '01/'02 marketing year. Ending stocks for U.S. soybeans now projected at 245 million bushels for the '03/'04 marketing year, 120 million bushels larger than the stocks estimate for the current marketing year and 37 million bushels more than '01/'02 ending stocks. Global oilseed production for 2003/04 is projected to rebound sharply to 344 million tons, up about 5 percent from '02/'03. Foreign oilseed production accounts for most of the increase, reflecting recovery from low yields in several countries last year and continued expansion in Southern Hemisphere production.

Marketing Strategy

The 2003 cropping season has just gotten underway. Initial sales of new crop corn and soybeans are completed. The dollar has gotten substantially weaker over the past month or so, which is adding to the demand for exports, without anything else having to occur. Both old crop and new crop corn and soybeans are poised for a move higher. It is time to sit and wait for better sales opportunities.



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

Wheat.

There has been some confusion about the use of Tilt on wheat and the stage of growth. Tilt can be applied up to and including growth stage 10.5 which is termed full head emergence or all spikes out of sheath. This is translated to mean that all the heads are fully out of the leaf sheath and extended above the flag leaf and up to flowering which begins when you can see the anthers extending from the head. This is a section 24c label for Delaware for Tilt to be applied up to this growth stage.

Powdery mildew is increasing and growers should be checking especially once heads have emerged. Protecting the topmost leaf (flag leaf) and the leaf below is important to preserve yield potential in the crop.

I still do not have an identification for the unusual leaf spot many are seeing in wheat. The picture shows how much it looks like a fungus leafspot, but no fungus is growing from these spots and no spores are present. This sample was provided by a consultant in Sussex County and is the same as I have seen in the Georgetown vicinity and in New Castle county as well. Some have been calling this spot tan spot which I believe is incorrect. Tan spot needs warmer weather than we have experienced so far and the symptoms are different. I have included a picture of tan spot from an outbreak in Delaware in 1998.



Unknown Leaf Spot on Wheat



Tan Spot on Wheat



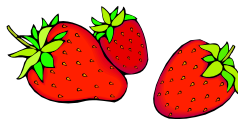
Salt Damage on White Pines – Derby Walker, Sussex County Agricultural Agent, derby@udel.edu

White pines are very sensitive to salt spray and air pollution. Salt damage is a common problem this spring. Salt spray from the Delaware Bay, carried by strong Northeast winds, has affected trees as far inland as 30 miles. The eastern side of the trees will look “burnt”. Other trees and grass will not be affected. Unfortunately, many of the trees will lose most of the browning needles. The candles or new needles (new growth) are just coming out. Normally pines keep last year’s needles, plus this years and will shed the three year old needles in late fall. White pines will look bare from the extra needle loss, but should live. This is the fourth time in the last 30 years that we have had salt damage come this far inland. This occurrence is seen more frequently in the coastal areas near the ocean and bay.



UPCOMING EVENTS:

Annual Strawberry Twilight Meeting



Location: University of Maryland Wye Research and Education Center, Queenstown MD

When: Thursday May 22, 2003

Program begins at 6:00PM
Directional signs will be posted to program area

What will be seen: All Strawberry research conducted as plasticulture production

- Herbicide trial
- Plug pre-plant conditioning trial
- Fall vs Spring planted systems
- Evaluation of Web-based weather forecasting service
- Advanced breeding selections from Maryland and Canadian programs

Experts from Maryland and USDA will be in attendance. For more information and/or directions contact:

Debby Dant 410-827-0831 or
Mike Newell 410-827-7388

Spring Crops Twilight Tour

Location: University of Maryland's Wye Research Center, Queenstown, MD

When: Thursday, May 22nd, at 6:30 PM.

This will be an opportunity to observe and discuss some of the research projects involving spring planted crops and small grains at the Center.

Some of the current research projects to see and talk about are:

- Corn stalk management with no-till wheat
- Hard wheat nitrogen rate management
- Barley and wheat variety testing
- Disease resistance screening
- Foliar fungicides

As always, we hope to be able to address any pest or management topics that are of current concern. The format is for a casual, informal discussion on any relative topic.

For topic suggestions or questions, contact Mark Sultenfuss at 410-827-7388 or msulten@umd.edu

Refreshments provided by the Maryland Crop Improvement Association.

***Note** this is also the same date and time as the Strawberry Twilight Tour.

Come Join Us For A... **Pasture Walk**

When: Wednesday, May 21, 2003

Where: University of Delaware Webb Livestock Unit (blue building), Newark, DE (enter on east side of Rt. 72, approx. ½ mile north of intersection with Rt. 4)

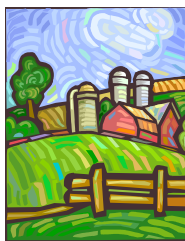
Time: 6:15 p.m.

UD Farm, Cooperative Extension, and local NRCS and Conservation District Staff will be available to discuss production objectives and challenges, and pasture management to include such topics as variety selection, fertility, weed management, livestock/horse considerations, and conservation practices. Most importantly, you will be encouraged to participate with questions and comments. Come dressed for walking in pastures.

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



| 2003 Black Cutworm Pheromone Trap Counts | | | |
|---|------------|-------------------|-----------|
| Trapping Date: May 12, 2003 | | | |
| Bridgeville | 62 | Magnolia | 5 |
| Delmar | 40 | Middletown | 15 |
| Ellendale | 17 | Milford | 24 |
| Felton | 40 | Millsboro | 4 |
| Frederica | 121 | Milton | 66 |

| | | | |
|--------------------------------|-----------|-------------------|------------|
| Georgetown (UD REC) | 65 | Sandtown | 17 |
| Greenwood | 79 | Seaford | 43 |
| Harrington | 42 | Selbyville | 175 |
| Kenton | 15 | Smyrna | 53 |
| Laurel | 89 | Townsend | 3 |
| Leipsic | 81 | Wyoming | 39 |
| Lewes | 49 | | |
| Lincoln | 51 | | |
| Little Creek | 70 | | |

NOTE:

- (1) Moth catches of 9 to 15 moths per 7-day period =mod. to high potential for outbreaks.
- (2) You can expect to see cutting activity around 300 degree-days, base of 50 degree F from peak moth activity



Weather Summary

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

Weeks of May 8 to May 15, 2003

Rainfall:

0.01 inches: May 8
0.06 inches: May 9
0.10 inches: May 10
0.02 inches: May 11

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

Air Temperature:

Highs Ranged from 83°F on May 11 to 64°F on May 9.
Lows Ranged from 63°F on May 11 to 46°F on May 14.

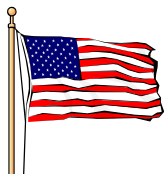
Soil Temperature:

65°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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