



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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August 8, 2008

Vegetables

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

Cabbage

We are seeing a significant increase in diamondback larval populations. As soon as plants are set in the field, be sure to sample for cabbage looper and diamondback larvae. Treatment will be needed before larvae move into the hearts of the plants. If both species are present, Avaunt, a Bt, Proclaim, Rimon, Radiant or Spintor have provided control in the past. If cabbage looper is the predominant species, a pyrethroid, Intrepid, or Confirm will also provide control. We are also starting to see an increase in Harlequin bug activity. In general, most of the "worm" materials are not effective on Harlequin bugs. The pyrethroids have provided control in years past.

Cucumbers

Be sure to watch for an increase in cucumber beetle and aphid populations. Fresh market cucumbers are susceptible to bacterial wilt, so treatments should be applied before beetles feed extensively on cotyledons and first true leaves. Although pickling cucumbers have a tolerance to wilt, a treatment may still be needed for machine-harvested pickling cucumbers when 5% of plants are infested with beetles and/or plants are showing fresh feeding injury. A treatment should be applied for aphids

if 10 to 20 percent of the plants are infested with aphids with 5 or more aphids per leaf.

Lima Beans

Continue to scout for spider mites, stink bugs and lygus bugs. Be sure to sample for corn earworm larvae as soon as pin pods are present. A treatment will be needed if you find one corn earworm larvae per 6 ft-of-row.

Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. We continue to see an increase in aphid populations. Treatments should be applied before populations explode and leaf curling occurs.

Peppers

In areas where corn borers are being caught in local traps, fields should be sprayed on a 7-day schedule for corn borer control. As soon as corn borer trap catches increase to above 10 per night, a 5 to 7-day schedule may be needed. Since trap catches can increase quickly at this time of year, 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>). We continue to find beet armyworms (BAW) so be sure to watch for feeding signs and apply treatments before significant webbing occurs. You will also need to consider a treatment for pepper maggot. We continue to find aphids in fields and populations can explode quickly, especially where beneficial insect activity is low. As a general guideline, treatment

may be needed if you find one or more aphids per leaf and beneficial activity is low.

Snap Beans

At this time of year, you will need to consider a treatment for both corn borer and corn earworms. Sprays are needed at the bud and pin stages on processing beans for corn borer control. An earworm spray may also be needed at the pin stage. Just as a reminder, Orthene (acephate) will not provide effective corn earworm control in processing snap beans. If Orthene is used for corn borer control you will need to combine it with a corn earworm material (e.g. a pyrethroid). You will need to check our website for the most recent trap catches to help decide on the spray interval between the pin stage and harvest for processing snap beans

(<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, a 7 to 10-day schedule should be maintained for corn borer and corn earworm control.

Spinach

As the earliest planted spinach emerges from the ground, be sure to watch for webworms and beet armyworms. Controls should be applied when worms are small and before they have moved deep into the hearts of the plants. Also, remember that both insects can produce webbing on the plants.

Sweet Corn

The first silk sprays will be needed 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). A whorl stage treatment should be considered for fall armyworm when 12-15% of the plants are infested. Since fall armyworm feed deep in the whorls, sprays should be

directed into the whorls and multiple applications are often needed to achieve control. At this time of year you will need to combine a fall armyworm material with a pyrethroid for the first 2-3 silk sprays for fall armyworm control. Be sure to check all labels for days to harvest and maximum amount allowed per acre.

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

Conditions for downy mildew continue to be favorable, so preventative control for cucumber is important at this time. To date we have only observed downy mildew on cucumbers.

Powdery mildew is increasing on squash, cantaloupe and pumpkin, and has been seen on watermelon as well. It is often hard to see the infection on watermelon because the fungus sporulates sparsely on watermelon and the leaf color masks the fungus. Look for chlorotic spots on the upper surface of young, fully expanded leaves, and then inspect the corresponding lower leaf surface with a hand lens to confirm the presence of the fungus. On watermelon, if control is needed, alternate Nova /Bravo or Procure/Bravo with Quintec/Bravo or Pristine/Bravo. Any generic chlorothalonil can be substituted for Bravo.

Cucumber Beetles and Watermelons - *Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu*

While out in some watermelon fields recently I happened to turn over some fruit and was surprised to find large numbers of striped cucumber beetles feeding on the undersides of the watermelon on the outer rind. There was almost no feeding on the upper surface of any watermelon and the damage could not be seen until the fruit was rolled over. Normally you would expect to see a few beetles feeding on a few melons, but close to 70% of the watermelons in some fields had feeding damage. The damage was superficial, but few people are going to buy a watermelon with that type of scarring. A

pyrethroid spray in a high volume of water (100gal/acre) is needed to control the beetles. Why the population of striped cucumber beetles is so high in some areas of Delmarva I am not sure. It may be due to the perfect weather conditions for them this summer as it has not been extremely hot and we have not had drought conditions.



Many scarred watermelons due to striped cucumber beetle feeding only on the undersides of the fruit

Cover Crops for Vegetable Rotations - *Gordon Johnson, Extension Ag Agent, Kent Co.;* gcjohn@udel.edu

August is here and it is time to consider late summer and fall cover crop options for vegetable rotations. Reasons to use cover crops:

- Return organic matter to the soil. Vegetable rotations are tillage intensive and organic matter is oxidized at a high rate. Cover crops help to maintain organic matter levels in the soil, a critical component of soil productivity.
- Provide winter cover. By having a crop (including roots) growing on a field in the winter you recycle plant nutrients (especially nitrogen), reduce leaching losses of nitrogen, reduce erosion by wind and water, and reduce surface compaction and the effects of heavy rainfall on bare soils. Cover crops also compete with winter annual weeds and can help reduce weed pressure in the spring.

- Reduce certain diseases and other pests. Cover crops help to maintain soil organic matter. Residue from cover crops can help increase the diversity of soil organisms and reduce soil borne disease pressure. Some cover crops may also help to suppress certain soil borne pests, such as nematodes, by releasing compounds that affect these pests upon decomposition.

- Provide nitrogen for the following crop. Leguminous cover crops, such as hairy vetch or crimson clover, can provide significant amounts of nitrogen, especially for late spring planted vegetables.

- Improve soil physical properties. Cover crops help to maintain or improve soil physical properties and reduce compaction. Roots of cover crops and incorporated cover crop residue will help improve drainage, water holding capacity, aeration, and tilth.

There are many cover crop options for late summer or fall planting including:

Small Grains

Rye is often used as a winter cover as it is very cold hardy and deep rooted. It has the added advantage of being tall and strips can be left the following spring to provide windbreaks in crops such as watermelons. Rye makes a very good surface mulch for roll-kill or plant through no-till systems for crops such as pumpkins. It also can be planted later (up to early November) and still provide adequate winter cover. Wheat, barley, and triticale are also planted as winter cover crops by vegetable producers. Spring oats may also be used as a cover crop and can produce significant growth if planted in late August or early September. It has the advantage of winter killing in most years, thus making it easier to manage for early spring crops such as peas or cabbage. All the small grain cover crops will make more cover with some nitrogen application or the use of manure.

Ryegrasses

Both perennial and annual ryegrasses also make good winter cover crops. They are quick growing in the fall and can be planted from late August through October. If allowed to grow in the spring, ryegrasses can add significant organic

matter to the soil when turned under, but avoid letting them go to seed.

Winter Annual Legumes

Hairy vetch, crimson clover, field peas, subterranean clover, and other clovers are excellent cover crops and can provide significant nitrogen for vegetable crops that follow. Hairy vetch works very well in no-till vegetable systems where it is allowed to go up to flowering and then is killed by herbicides or with a roller-crimper. It is a common system for planting pumpkins in the region but also works well for late plantings of other vine crops, tomatoes and peppers. Hairy vetch, crimson clover and subterranean clover can provide from 80 to well over 100 pounds of nitrogen equivalent. Remember to inoculate the seeds of these crops with the proper Rhizobial inoculants for that particular legume. All of these legume species should be planted as early as possible - from the last week in August through the end of September to get adequate fall growth.

Brassica Species

There has been an increase in interest in the use of certain Brassica species as cover crops for vegetable rotations. Rapeseed has been used as a winter cover and has shown some promise in reducing certain nematode levels in the soil. To take advantage of the biofumigation properties of rapeseed you plant the crop in late summer, allow the plant to develop until early next spring and then till it under before it goes to seed. It is the leaves that break down to release the fumigant-like chemical. Mow rapeseed using a flail mower and plow down the residue immediately. Never mow down more area than can be plowed under within two hours. Note: Mowing injures the plants and initiates a process releasing nematicidal chemicals into the soil. Failure to incorporate mowed plant material into the soil quickly, allows much of these available toxicants to escape by volatilization. More recent research in the region has been with forage radish. It produces a giant tap root that acts like a bio-drill, opening up channels in the soil and reducing compaction. When planted in late summer, it will produce a large amount of growth and will smother any winter annual weeds. It will then winter kill leaving a very mellow, weed-free seedbed. It is an ideal cover

crop for systems with early spring planted vegetables such as peas. Brassicas must be planted early – mid-August through mid-September.

Mixtures

Mixtures of rye with winter legume cover crops (such as hairy vetch) have been successful and offer the advantage, in no-till systems, of having a more rapidly decomposing material with the longer residual rye as a mulch.

There are many other lesser known cover crops that can also be used. For more information on cover crops go to:

<http://www.sare.org/publications/covercrops/covercrops.pdf>

or

<http://attra.ncat.org/attra-pub/covercrop.html>

Agronomic Crops

[Agronomic Crop Insects](#) - *Joanne Whalen, Extension IPM Specialist*; jwhalen@udel.edu

Soybeans

As the potential for late season insect control increases, be sure to check all labels for the days from last application to harvest as well as other restrictions.

In areas of the state with high bean leaf beetle counts, be sure to watch for both defoliation and pod feeding. Be sure to check the following link for the most recent decision making information for this insect pest from the Midwest

(<http://www.extension.iastate.edu/CropNews/2008/Issues/20080728.htm>).

We have received reports of adult and immature spider mite populations declining in some areas of the state; however, eggs are still present in fields. The recent cooler mornings and humid days have been favorable for the development of diseases that can crash populations. However, be sure to check fields within 3 days if high levels of eggs are present in fields. As temperatures increase again, we could see a rebound in populations. In addition to dimethoate, Lorsban and Hero, it should also be noted that

the high rate of Brigade is labeled for mites on soybeans.

You should also scout for soybean aphids. We have just found the first soybean aphids in Kent and Sussex Counties. We are finding very low levels; however, they are building in the western states and we often see more moving to our area after this occurs. Also, as a reminder, this is more of a cool season aphid. As a general guideline, treatment is needed through the R-5 stage (seed is $\frac{1}{8}$ inch long in the pod of one of the four uppermost nodes on the main stem) of soybean development if economic levels are present. It may also be beneficial to spray through R-6 stage (pods containing a green seed that fills the pod cavity at one of the four uppermost nodes on the main stem) – reports vary as to the benefit of spraying once plants reach the R-6 stage but in some years and some situations there has been an economic return. Spraying after R-6 stage has not been documented to increase yield in the Midwest. The suggested treatment threshold from the Midwest is still 250 aphids per plant with 80% of the plants infested with aphids. You can also consider using speed scouting to make a treatment decision. Information on how to use speed scouting can be found at:

http://www.nwroc.umn.edu/Cropping_issues/2007/Issue9/07_17_07_no4.htm

or

<http://breeze.ag.vt.edu/speedscouting>

Continue to scout for stinkbugs in fields that are in the pod development and pod fill stages. Economic damage is most likely to occur during these stages. You will need to sample for both adults and nymphs when making a treatment decision. Available thresholds are based on beans that are in the pod development and fill stages. We are currently following the same guidelines that are being used in Virginia. Thresholds are also based on numbers of large nymphs and adults, as those are the stages most capable of damaging pods. As a general guideline, current thresholds are set at 1 large nymph/adult (either brown or green stink bug) per row foot if using a beat sheet, or 2.5 per 15 sweeps in narrow-row beans, or 3.5 per 15 sweeps in wide-row beans.

You should also scout for podworms as we enter the pod set and pod fill stages. We continue to find low levels of corn earworm in full season and now double crop soybeans, so be sure to scout fields on a routine basis. As trap catches increase, open canopy blooming fields will be the most attractive to egg laying moths. However, all fields should be scouted because as corn dries down, all fields could be attractive to egg laying moths. A treatment should be considered if you find 3 podworms per 25 sweeps in narrow-row fields and 5 podworms per 25 sweeps in wide-row fields (20 inches or greater).

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

Not much has happened since last week. Tropical Storm Eduard may increase chances of rust appearing in part of east Texas, but nothing is happening yet. The South continues to be pretty dry and the rust that is present in kudzu is moving very slowly. Soybeans around the state appear to be free of any serious disease problems at the present time. Downy mildew and Septoria brown spot can be found in some fields but at levels that should not affect yields at this time.

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

Commodity Markets Poised for Price Recovery
December new crop corn futures are now bidding at levels not seen since March 2008. On March 20th Dec corn futures closed at \$5.21 per bushel and didn't look back until achieving a close of \$7.88 per bushel on June 26th. November soybeans are trading at levels last seen in early May, when we saw a \$4.31 per bushel run in soybean prices that peaked in early July (prices ran from \$12.00 to \$16.31 per bushel). Many market observers have correctly indicated that the sell off in the commodities markets can be attributed to fund liquidation, the price of oil dropping, and great weather conditions for crop development. What was not readily known until yesterday was that some of the fund liquidation

was forced by the CFTC, likely due to the inability of an undisclosed firm to meet margin calls. That said, it now looks like we are likely to enter into a counter seasonal rally, if not before harvest then at the completion of harvest. Why? The U.S. corn crop, which is doing phenomenally well considering the events that have occurred this summer, can still be stunted by an early frost. An early frost would reduce the projected U.S. corn carryover to less than 1 billion bushels and would mean that U.S. corn acres would need to increase in the '09 crop year. With U.S. soybeans looking at a 125 million bushel carryover projection, soybean prices will also need to bid for '09 acres. Therein lies the stage being set for a counter seasonal rally. Go to: <http://www.allendale-inc.com/> and click on "Can This Late Crop Beat a Freeze?"

Marketing Strategy

Price charts for new crop corn and soybeans currently indicate that it is time to offset puts, buy calls, and to generally plan to store unpriced '08 corn and soybeans. On Tuesday, August 12th USDA will release the August Supply and Demand report. On Thursday, August 14th a one-hour webinar will be held to discuss the implications of the report, and to explore options and other marketing strategies. To register for the Options and Other Strategies for '08/'09 webinar see the information in the announcements section.

Announcements

Niche Market Opportunities

Thursday, August 14, 2008 6:00 p.m.
DSU Smyrna Outreach and Research Center
884 Smyrna-Leipsic Rd., Smyrna, DE

Learn about specialty crops to meet the needs of diverse populations in the Mid-Atlantic region.

Light refreshments served.

Please call (302) 857-6462 to register.

This workshop is part of the 2008 Small/ Beginning Farm Workshop Series held by Delaware State University. For complete information on the workshops planned, see the brochure at

<http://www.rec.udel.edu/update08/announcements/sma11farmbrochure2008.pdf>

For Current Agricultural Information from the UD Kent Co. Extension Office Visit
www.kentagextension.blogspot.com

Recent Topics:

- Biotech Traits - The Stacks Will Be Getting Higher
- Are Soybean Cyst Nematodes Robbing Your Yields?
- Salt Tolerant Soybean to be Tested
- Last Day for Cover Crop Cost Share Sign Up
- Stinkbug Damage on Tomato
- Some Vegetable Disease Pictures
- August Crop Report Coming Up Next Week
- Grain Markets Drop
- Picture of Soybean Variety Trials in Kent County
- Some Diseases of Cucurbits Showing Up
- August and Early September - The Time for Field Days
- Rainfall over the Weekend
- Hay Baling and Handling Meeting
- Herbicides - Are Your Expectations Too High?
- Poultry - House Tightness is Important in Tunnel Ventilated Houses
- Remediating Poultry House Pad Soils - Tests With Summer Annual Grasses
- Dairy - Forage Particle Size and Dairy Cow Health
- More on Mites in Soybeans
- Promising Grass for Remediation of Recently Exposed Poultry Pad Soils
- Current Grain Market Information
- Good Peach Season

Dairy Webinar:

Surviving High Feed Costs

Monday, August 18, 2008 8:00 p.m. EDT

Do high feed costs have you worried?

DAIREXNET can provide you with the information needed for making wise business decisions.

Topics:

- Strategies to Lock in Milk and Feed Prices
- Feeding Strategies with \$7, \$8, or \$9 Corn
- Alternative Feedstuffs for Corn and Soybean Meal

Each topic will be presented by a keynote speaker for ten minutes each with 30 minute Q&A at the end of the presentations.

For directions on how to log on visit:
www.extension.org/dairy+cattle

UD Watermelon Twilight Meeting

Wednesday, August 13, 2008 6:30 p.m.

Carvel Research and Education Center
16483 County Seat Hwy, Georgetown, DE

Watermelon Disease Control

Kate Everts – See Fusarium wilt control trials and learn about results from recent fungicide trials for gummy stem blight. Discuss Pristine resistance as it relates to the Delmarva.

Watermelon Weed Control

Mark VanGessel – See experiments on general weed control, experimental fumigant for under plastic mulch and recovery and response of watermelons to herbicide drift.

Watermelon Insect Update

Joanne Whalen

2008 Watermelon Variety Trial

Emmalea Ernest - See and sample varieties from the trial.

Meet at the picnic grove near the farm shop to board the wagon and begin the tour at 6:30 p.m. Stay to enjoy dessert and taste some of the varieties from the variety trial afterwards.

Please pre-register on or before August 11, 2008 by contacting Karen Adams at adams@udel.edu or (302) 856-2585 x 540.

Small Flock Poultry Seminar

Saturday, August 16, 2008 9:00 a.m. - noon

University of Delaware Webb Livestock Farm
South Chapel Street, Newark, DE

Want to learn more about starting up a small poultry flock or get information on health and maintenance of your current small flock? Then come to our Small Flock Poultry Seminar. We'll have experts from the University of Delaware, Delaware State University and University of Maryland Cooperative Extension on hand to provide information and answers to your questions, plus local feed and supply stores to provide information on product availability.

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.

Please register by August 12, by calling (302) 831-2506.

Grain Marketing Webinar: Options and Other Strategies for 2008/09

Thursday, August 14, 2008 12:00 – 1:00 CDT

Doing nothing may be the right strategy if prices don't fall, but with input costs at record levels, can you afford the risk of lower prices? This one-hour webinar with Carl German, grain marketing specialist at the University of Delaware, will explain how options control risk with a known cost and explore other alternatives. Q&A session follows the presentation.

The Webinar is free; you may have long-distance phone charges depending on your telephone service plan.

Space is limited. Reserve your Webinar seat now at: <https://www1.gotomeeting.com/register/776123601>

System Requirements

PC-based attendees

Required: Windows® 2000, XP Home, XP Pro, 2003 Server, Vista

Macintosh®-based attendees

Required: Mac OS® X 10.3.9 (Panther®) or newer

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of July 31 to August 6, 2008

Readings Taken from Midnight to Midnight

Rainfall:

0.36 inch: August 2

Air Temperature:

Highs ranged from 90°F on August 1 and August 6 to 84°F on August 3.

Lows ranged from 73°F on July 31 to 63°F on August 4.

Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_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

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