



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 20, Issue 25

September 7, 2012

Vegetable Crops

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

Cabbage

Continue to scout all fields for beet armyworm, fall armyworm, diamondback and cabbage looper larvae.

Lima Beans

Continue to scout all fields for lygus bugs, stinkbugs, corn earworm, soybean loopers and beet armyworm. Multiple sprays will be needed for worm control.

Peppers

Be sure to maintain a 5 to 7-day spray schedule for corn borer, corn earworm, beet armyworm and fall armyworm control. You should also watch for economic levels of aphids.

Snap Beans

All fresh market and processing snap beans will need to be sprayed from the bud stage through harvest for corn borer and corn earworm control. You should also watch for beet armyworm and soybean loopers. In addition, the highest labeled rates may be needed if population pressure is heavy in your area.

Spinach

Garden webworm, Hawaiian beet webworms and beet armyworms are active at this time and controls need to be applied when worms are small and before they have moved deep into the

hearts of the plants. Controls need to be applied early when worms are small and before significant webbing occurs.

Stip Disorder in Peppers - Gordon Johnson,
Extension Vegetable & Fruit Specialist;
gcjohn@udel.edu

As fall approaches and late pepper crops mature, pepper stip disorder can be a problem in bell, pimento, and elongated peppers (chilies, bananas, sweet frying types) causing them to be unmarketable. It is particularly a problem on peppers taken to ripe stage such as red bells, but can also be an issue on green immature fruit. Pepper stip, also called color spotting or black spotting, is a physiological disorder of pepper fruit. It causes gray, brown, black, or green spots that are slightly sunken and are ¼ inch or smaller in diameter. Spots may be single or in groups and can resemble damage from stink bugs. Microscopic examination of affected areas shows dead collapsed cells with no evidence of cell puncture or insect damage. It is primarily a fall disorder and occurs most often when temperatures drop into the 40s and 30s. It can also occur after peppers are moved into cold storage. This is similar to what is seen with blossom end rot, only the affected areas are isolated and can occur throughout the fruit, not just on the ends.

The exact cause of stip is not known; however, it is thought to be a nutrient imbalance involving lower calcium (Ca) in fruit and high levels of

nitrogen (N) and potassium (K). Research has shown that stip was most common in fields with low soil calcium or low pH and in fields with very high N and K fertilization.

Pepper varieties vary considerably in their susceptibility to stip. Research has shown that resistant cultivars consistently had lower N and K, and higher Ca concentrations than susceptible cultivars in leaf or fruit tissue samples. In 2011 red bell pepper variety trials conducted in New Jersey by Rutgers University, it was found that Camelot, Paladin, Classic, Patriot and Vanguard all were susceptible to stip. Additional trials are underway this fall.

In late summer and fall, there is reduced transpiration, and Ca movement in the fruit can be reduced. Excess N can cause rapid growth and extra foliage further limiting fruit transpiration and excess K can compete with Ca for plant uptake and cation exchange in the fruit.

Managing stip starts with using resistant varieties for fall production. Maintain high soil calcium levels and reduce nitrogen and potassium in fall production. Additional calcium through the drip system may help reduce stip. Foliar calcium applications have shown little or no effect on reducing stip.



Stip in pepper

Boron Deficiencies in Cole Crops - Gordon Johnson, *Extension Vegetable & Fruit Specialist*; gcjohn@udel.edu

Long time growers of cole crops know that the micronutrient boron is critical for production. However, newer growers may be unaware of these requirements. Boron is also subject to leaching with rainfall, particularly in our sandy soils, so available soil boron declines over time.

Cole crops have a moderate to high boron requirement. Symptoms of boron deficiency vary with crop type. Most boron deficient cole crops develop cracked and corky stems, petioles and midribs. The stems of broccoli, cabbage and cauliflower can be hollow and are sometimes discolored. Cauliflower curds become brown and leaves may roll and curl, while cabbage heads may be small and yellow. Of all the cole crops, cauliflower is the most sensitive to boron deficiencies.

It is recommended in broccoli and kale to apply 1.5-3 pounds of boron (B) per acre in mixed fertilizer prior to planting. In Brussels sprouts, cabbage, collards and cauliflower, boron and molybdenum are recommended. Apply 1.5-3 pounds of boron (B) per acre and 0.2 pound molybdenum (Mo) applied as 0.5 pound sodium molybdate per acre with broadcast fertilizer.

Boron may also be applied as a foliar treatment to cole crops if soil applications were not made. The recommended rate is 0.2-0.3 lb/acre of actual boron (1.0 to 1.5 lbs of Solubor 20.5%) in sufficient water (30 or more gallons) for coverage. Apply foliar boron prior to heading of cole crops.

Other fall crops such as beets, radishes, and turnips are also susceptible to boron deficiencies in sandy soils with limited boron fertilizer additions.

Agronomic Crops

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

Soybeans

We continue to find corn earworms in soybeans. If you have not checked your fields, be sure to sample fields so you do not miss a late hatch of larvae. Although trap catches appeared to be declining on September 3, we will need to watch trap catches at the end of this week to see if this trend continues. In addition, we need to watch what happens in states to our south.

A number of defoliators are still present in double crop beans. The threshold for defoliation will need to be reduced if a mixed population is present. Although soybean looper populations remain low, there are reports from the southern states of building populations.

In New Castle and Kent Counties, we are finding a few more fields with high levels of Brown Marmorated Stink Bugs on field edges of full season soybeans. Although we do not have a threshold for BMSB, we are also finding levels that we use as a threshold for native stinkbugs (2.5 per 15 sweeps) along the edges of double crop fields in New Castle County. Native stink bug populations continue to be at threshold levels in fields throughout the state.

Small Grains

As you make plans to plant small grains, you need to remember that Hessian fly can still be a problem. Since the fly survives as puparia ("flax seeds") in wheat stubble through the summer, you should still consider this pest as you make plans to plant small grains. In our area, damage has generally been the result of spring infestations. Plants attacked in the spring have shortened and weakened stems that may eventually break just above the first or second node, causing plants to lodge near harvest. Warm fall weather conditions can extend fly emergence and egg-laying beyond the fly-free dates, but these dates should still be used as a guideline for planting. Plants attacked in the fall at the one-leaf stage may be killed outright. Wheat attacked later in the fall will be severely

stunted, with the first tillers killed and plant growth delayed. Plants infested in the fall can easily be recognized by their darker than normal bluish coloration and leaves with unusually broad blades. Combinations of strategies are needed to reduce problems from Hessian fly:

- Be sure to completely plow under infested wheat stubble to prevent flies from emerging.
- Avoid planting wheat into last season's wheat stubble, especially if it was infested with Hessian fly.
- Avoid planting wheat next to last season's wheat fields - the most serious infestations can occur when wheat is early planted into wheat stubble or into fields next to wheat stubble.
- Eliminate volunteer wheat before planting to prevent early egg-laying.
- Do not use wheat as a fall cover crop near fields with infestations.
- Plant after the fly-free date. (Oct 3 - New Castle County; Oct 8 - Kent County; Oct 10 - Sussex County).
- Plant resistant varieties. You should look for varieties that have resistance to Biotype L. You will need to check with your seed dealers to identify varieties that our adapted our area.

The following link from Alabama provides additional information on Hessian Fly Management

(<http://www.aces.edu/dept/grain/HessianFly.php>).

Considerations for Small Grains Weed Control - *Mark VanGessel, Extension Weed Specialist; mjv@udel.edu*

For no-till fields, a non-selective herbicide needs to be used prior to planting. If grasses are present glyphosate is a better choice than paraquat. Fields worked with a vertical tillage implement for residue management still need a non-selective herbicide. These implements are not weed control tools.

There are few effective herbicides labeled for preemergence applications. Sharpen is labeled

but we have limited data in the region to recommend it for either residual weed control or crop safety. Valor can be used at 1 to 2 oz with the burndown application, but there must be a 30 day period between application and planting wheat due to concerns with crop safety.

A few products can be used shortly after the crop has emerged. Axiom and Prowl H2O can be used at crop emergence (Axiom at the spike stage and Prowl H2O at 1 leaf stage); however they need to be tankmixed with other herbicides or followed by postemergence herbicides to provide a broad spectrum of control.

Products that provide postemergence control include: Harmony, Harmony Extra, Starane Ultra, Osprey, PowerFlex, Axial XL, 2,4-D, or dicamba. Others labeled with a limited fit include metribuzin, Finesse, and Maverick.

Mid-Atlantic Crop Management School Registration Opens Soon - *Richard Taylor, Extension Agronomist; rtaylor@udel.edu*

For those who like to come to the Mid-Atlantic Crop Management School that's held each year in Ocean City, Maryland, this year's school will take place from November 13 (Tuesday) to November 15 (Thursday) again hosted at the Princess Royale Oceanfront Hotel and Conference Center. The program for this year's school is now finished and can be found online at:
<http://www.grains.cses.vt.edu/articles/Crop%20School%20Brochure%202012%20Final.pdf>.

The website for registration is under constructed and we will announce when it is available, although until then you can still register by faxing in the registration form in the brochure to Gail Knapp at 302-831-2998 or by mailing in the form and payment to Conference Services Attn: Gail Knapp, 104 John M. Clayton Hall, Newark, DE 19716.

I hope to see you at this year's Mid-Atlantic Crop Management School. At least from what I've seen of the program so far, it should be a very good school with a lot of outside speakers.

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

Short Term Downtrend in Commodity Prices Expected

Even though the long term outlook for corn, soybeans, and wheat remains bullish a short term price break appears to be developing. There are several reasons to believe this scenario. First, the early 2012 harvest has begun in the U.S. Short crop or not the harvest period has a tendency to pull commodity prices down in the near term. Second, corn and soybean futures contracts (nearby contract months compared to the distant months) remain inverted albeit at a reduced difference compared to a couple of weeks ago. Second, the highs appear to be getting lower. Dec '12 corn futures topped at \$8.49 per bushel on August 10, hit a high of \$8.06 per bushel in Wednesday's trade and are currently posted at \$7.94 per bushel. Nov '12 soybean futures topped at \$17.89 on September 4, hit a high of \$17.69 on Wednesday and are currently posted at \$17.42 per bushel. The weakening of the inverted spreads may well be a signal that the markets are due for a correction. Third, a record large long-futures position held by noncommercial traders in soybean futures is expected to result in profit taking, while stepping to the sidelines with the intention of coming back at a lower price. In other words, Dec '12 corn futures could be working toward a test of support in the vicinity of \$7.86 per bushel. Nov '12 soybean futures could be looking to test support in the \$15.70 to \$15.65 area. (Source: DTN)

Fundamentally, these markets remain long term bullish. The futures market is expected to remain in a sideways to down trend for the remainder of this week going into the September 12th USDA Supply and Demand report. The impact of the September report may turn out to be significant in so far as we have seen a reduction in U.S. corn exports falling about 54 million bushels shy of reaching USDA's 1.55 billion bushel projection. However, yield reports on the first 10% of the U.S. corn harvest have been disappointing with the idea forming that 2012 U.S. corn production may be hard pressed

to achieve USDA's August forecast of 123.4 bushels per acre.

U.S. soybeans managed to top USDA's '11/'12 marketing year export market projection of 1.35 billion bushels by 15.5 million bushels. Rumors are circulating that dry weather in the Southern Hemisphere may hamper South America's crop development beginning with delayed plantings.

U.S. wheat exports are on pace with USDA's projection of 1.2 billion bushels, although inspections for shipment are running roughly 15% behind schedule. On August 10 July '13 SRW wheat futures hit a high of \$8.68 per bushel and are currently posted at \$8.60 per bushel. Continued dry weather in the Southern Plains with the date for fall wheat plantings rapidly approaching is having an impact on 2013 wheat futures prices. Hopefully, we will be able to get a better handle on world wheat production projections in USDA's September report.

Market Strategy

Fundamentally the markets remain long term bullish. However, we can expect a short term downtrend in Dec '12 corn and Nov '12 soybean futures due to the need for the bull to be fed with new news. U.S. and world supplies for corn and soybeans will be tight going into the 2013 cropping season. Making sales for next year's intended production of corn and soybeans should be considered on a very limited basis. Taking an initial forward cash sale for 2013 SRW wheat based upon the July '13 futures contract recently making a new life-of- contract high should be considered. It might not be a bad idea to cover the downside price risk of any new crop (2012) corn or soybeans held in storage for sale at a later date.

For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

Announcements

UD Extension Tour and Discussion Improving Soil Health / Cover Crops for Agronomic and Commercial Vegetables

Thursday, September 13, 2012 4:00 - 8:00 p.m.

Carvel Research and Education Center

16483 County Seat Hwy

Georgetown, DE 19947

Come see and hear about many of the UD Extension's field research projects for Agronomic and Commercial vegetables which involve soil health or cover crop components.

A variety of projects will be presented including:

- Reduced tillage/no-till for limas
- Evaluation of biofumigant and winter kill cover crops
- Pumpkins produced with rye cover crop - influence of rye on weed control and fruit quality
- Use of cover crop and reduced tillage in a rotational system for commercial vegetable production - strategies for fitting cover crops into different systems
- Soybean production with rye cover crops - advantages and challenges
- Also discussion of on-going projects with bee pollination and irrigation

Dinner will be served. There is no charge for this field day.

After dinner we will have a conversation on our current and future research efforts and would like feedback on future educational programs

Please **pre-register** by contacting Karen Adams at 302-856-2585 ext. 540 or adams@udel.edu. Register by September 11.

Credits:

CCA: S/W 1; NM 0.5; CM 0.5; IPM 0.5

DE Nutrient Management: 1.0

DE Pesticide Credits: 1 PA; 1 Agric. Plant; 1

Demo/Research

Upcoming Workshops Aim to Benefit Farmers with Drought-Plagued Fields

Monday, September 17, 2012 8:00 a.m.
Paradee Center
69 Transportation Circle
Dover, DE

Monday, September 17, 2012 7:00 p.m.
Carvel Research and Education Center
16483 County Seat Highway
Georgetown, DE

Nearly 50% of the nation's farmers' crops have suffered losses from extremely dry conditions during the current growing season. Sharply rising prices and crop devastation will affect not just producers themselves, but all channels of the U.S. and global economies. Therefore, it is important Delaware farmers stay informed about risk management and farm safety-net options available to them, in order to keep funds available and cash flow steady.

Two workshops are to be held on September 17, 2012 featuring discussion and instruction on crop insurance, grain marketing, pending ag legislation, and general risk management. Admission is free and each meeting includes complementary risk management related materials and refreshments.

To register for either event **please call 302-424-8340 or 877-673-2767** (registration is not required, but ensures availability of materials for all attendants). Setting aside the time to attend may save you time and money in the future.

University of Delaware Irrigation Field Day

Wednesday, September 19, 2012 9:00 a.m.
UD Warrington Irrigation Research Farm
Corners of Rt. 5 and DE 290 Cool Spring Rd./ Hurdle
Ditch Rd.
4 miles south of Harbeson, DE
(Signs will be posted.)

The University of Delaware Irrigation Program invites farmers, industry and the general public to tour UD's Warrington Irrigation Research Farm on Wednesday, September 19 at 9:00 a.m. UD Irrigation Engineer James Adkins along with Sussex County Agent Cory Whaley and Kent County Agent Phillip Sylvester will present the following:

First Year Experiences with Subsurface Drip Irrigation (SDI)

Tour our newly installed 42 zone SDI research facility and discuss the potential of SDI to irrigate previously uneconomical fields. Join in a candid discussion of the benefits and challenges of SDI in sandy soils and the nuances every farmer should consider before installation.

The Potential for Variable Rate Center Pivot Irrigation (VRI)

Discuss the feasibility, practicality and affordability of VRI as a tool to improve irrigation management in highly variable fields. View a demonstration of the UD 4 tower VRI system and the potential applications of VRI technology outside of irrigation research.

Soil Moisture Monitoring as a Tool to Refine Irrigation Management

View many of the various options to monitor soil moisture levels with a discussion of the pros and cons of each option.

Irrigated Corn, Full Season and Double Soybean Irrigation Research Plots

Discuss the preliminary results of multiyear irrigation research to improve the yields of irrigated agronomic crops.

For more information contact: Karen Adams at 302-856-2585 ext. 540

2012 Delmarva Poultry Conference

Wednesday, September 26, 2012
Ronald E. Powell Convention Center
Ocean City, MD

7:00 - 8:00 am REGISTRATION/CHECK-IN

8:00 am Switchgrass as a Litter Alternative

Bill Brown, University of Delaware
Jennifer Timmons, University of Maryland

8:25 am Managing Water for Performance

Susan Watkins, University of Arkansas

8:55 am Ten Steps to Drier Houses and Better Paw Quality

Jesse Campbell, Auburn University

9:25 am Vegetative Environmental Buffer Update

Jim Passwaters, Delmarva Poultry Industry, Inc.

9:45 am Break/Refreshments/Exhibits

10:15 am Considerations for Attic Vent Installation

Jody Purswell, USDA-ARS

10:50 am Infectious Laryngotracheitis Disease Prevalence Patterns

Dan Bautista, University of Delaware

11:15 am Infectious Laryngotracheitis Control Strategies

David Shapiro, Perdue Farms, Inc.

11:40 am Using Technology to Enhance Management Decisions

Dan Goss, Verible

12:05 pm Flock Supervisors' Award

12:15 pm Lunch and Exhibits

1:30 pm Solar Energy for Poultry Farms

Jim Glancey, University of Delaware

2:00 pm Poultry Grower Experiences with Solar Energy

Dan Heller, Flintrock Farm

Robbie Issacs, Issacs Farm

Terri Wolf King (unconfirmed), Cornerstone Farm

2:45 pm LED Lights - New Technology in Lighting

Susan Watkins, University of Arkansas

3:15 pm Poultry House Water Supply

Jesse Campbell, Auburn University

A block of rooms has been reserved at the *Princess Bayside Beach Hotel* (Standard: \$55 + tax, Bayfront efficiency: \$69 + tax)

800-854-9785 www.princessbayside.com

Rooms are reserved under:

Delmarva Poultry Conference

Reservations must be made BEFORE August 27, 2012

Registration form and additional information is online at: <http://agdev.anr.udel.edu/weeklycropupdate/wp-content/uploads/2012/08/2012DelmarvaPoultryConference.pdf>

or contact:

Lisa Collins: (302) 856-2585 x702 or lcollins@udel.edu

**Delaware Ag Week
January 14 – 18, 2013**

The University of Delaware Cooperative Extension, Delaware State University Cooperative Extension and the Delaware Department of Agriculture are cooperating to organize this annual week of agriculture-related events.

A schedule of sessions offered during Ag Week will be published in the final issue of WCU for the season.

Weather Summary	
Carvel Research and Education Center Georgetown, DE	
Week of August 30 to September 5, 2012	
Readings Taken from Midnight to Midnight	
Rainfall:	2.36 inches: September 2 0.26 inch: September 3
Air Temperature:	Highs ranged from 89°F on August 31 to 83°F on September 2. Lows ranged from 75°F on September 4 to 61°F on August 30.
Soil Temperature:	79.0° F average
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

Cooperative Extension Education in Agriculture and Home Economics, University of Delaware, Delaware State University and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Delaware Cooperative Extension, University of Delaware. It is the policy of the Delaware Cooperative Extension System that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age or national origin.

Reference to commercial products or trade names does not imply endorsement by University of Delaware Cooperative Extension or bias against those not mentioned.