WEEKLY CROP UPDATE
UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 19, Issue 19 **July 29, 2011**

Vegetable Crops

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

Lima Beans
Continue to scout for spider mites, stink bugs, lygus bugs and corn earworm. As soon as pin pods are present, be sure to watch carefully for plant bug and stink bug adults and nymphs as well as corn earworm larvae. As a general guideline, treatment should be considered for plant bugs and stink bugs if you find 15 adults and/or nymphs per 50 sweeps. A treatment will be needed for corn earworm 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 find fields with a number of different worm species (beet armyworm, yellow striped armyworm, and cabbage looper) as well as cucumber beetle adults feeding on the rinds of watermelons.

Peppers
Depending on local corn borer trap catches, sprays should be applied on a 7-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 (instate : 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 to beet armyworm feeding on leaves you should also watch for an increase in aphid populations. We are starting to find aphid populations increasing and they 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
As corn borer and corn earworm populations start to increase, you will need to consider treatments for both insect pests. Sprays are needed at the bud and pin stages on processing beans for corn borer control. As earworm trap catches increase, an earworm spray will also be needed at the pin stage. 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).

Sweet Corn
Continue to sample all fields from the whorl through pre-tassel stage for corn borers, corn earworms and fall armyworm. We continue to see an increase in whorl infestations of fall armyworm. A treatment should be considered 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. 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/silkspraythresh.html). You can also call the Crop Pest Hotline (in state: 1-800-345-7544; out of state: 302-831-8851).

Summer Vegetable Plantings for Fall Harvest

– *Gordon Johnson, Extension Vegetable & Fruit Specialist;* gcjohn@udel.edu

Plantings for fall harvested vegetables are underway. Timing these plantings can be a challenge, especially where multiple harvests are needed. Plantings from mid-July through the end of August may be made, with cutoff dates depending on the crop, variety, and season extension methods such as row covers, low tunnels, and high tunnels.

These plantings can be divided into 2 groups: 1) warm season vegetables for harvest up to a killing frost and 2) cool season vegetables for extended harvest in the fall.

The three main factors influencing crop growth and performance in the fall are daylength, heat units, and frost or freeze events. A few days difference in planting date this time of year can make a big difference in days to maturity in the fall.

Warm season vegetables for fall harvest include snap beans, squash, and cucumbers. July plantings of sweet corn can also be successful to extend seasons for farm stands. Mid-July plantings of tomatoes and peppers also are made for late harvests, particularly in high tunnels.

Cool season vegetables for fall harvest include cabbage, broccoli, and cauliflower; the cole crop greens, kale and collards; mustard and turnip greens; turnips for roots; spinach; beets; lettuce; leeks; green onions; and radishes.

To extend harvest in the fall, successive plantings are an option. However, days between plantings will need to be compressed. One day difference in early August planting for a crop like beans can mean a difference of several days in harvest date.

Another option to extend harvest in the fall is with planting different maturing varieties at the same time. This is particularly successful with crops such as broccoli and cabbage where maturity differences of more than 30 days can be found between varieties.

Another way to get later harvests is by use of row covers or protecting structures. This can allow for more heat accumulation and will aid with protection against frost and freezes. Decisions on what type or combination of covers/protection to use and when to apply the protection will influence fall vegetable maturation and duration of harvest.

A final factor for summer planting for fall production is on planting cutoff dates. For example, a crop such as cucumber may produce well with an August 2 planting but poorly with an August 8 planting; broccoli has a wider planting window than cauliflower; turnip greens have a wider planting window than kale.

Brown Marmorated Stink Bug Populations This Season

– *Jerry Brust, IPM Vegetable Specialist, University of Maryland*; jbrust@umd.edu

Brown marmorated stink bug populations were a big concern early this spring (and also all of last year) as their numbers were found to be pretty high in and around fruit orchards and a few vegetable fields. These were the BMSB that had overwintered that were coming out of their hibernation mode and moving out for something to eat. Their populations grew a bit more in May, but then seemed to hold steady, except for some scattered hot spots throughout the Mid-Atlantic where their numbers and damage were much greater. For the most part, growers were ready

for the onslaught and did a good job of limiting the bug's damage, but at the cost of a heavy spray schedule and the loss of many of their IPM programs. The adult BMSB population has declined over the last few weeks in many areas of the Mid-Atlantic. I am guessing that some of the overwintering adults are dying off and that soon the nymphs will start to be seen in greater numbers than before. This is just what I see happening in some pepper fields. Where before we were finding few adults or egg masses, we now are finding 4-6 nymphs/plant (Photo 1). The nymphs are feeding on both large and very small fruit causing damage that looks much like what the adults would do to peppers (Photo 2). BMSB eggs were looked for earlier in the season and not found to any great extent, but the eggs of any stink bug are very difficult to find. That is why there still are no good thresholds for green and brown stink bugs in many vegetable crops—they are just too difficult to monitor accurately. These medium-size nymphs we are now seeing are easy to spot as they tend to be on the top or edge of the pepper plants in the morning and even during early afternoons. Growers should be looking for the nymphs now in all their vegetables, but especially in peppers and sweet corn even if they have not seen many BMSB adults before this time. These medium to small nymphs while not particularly easy to kill are much easier to control than large nymphs or the adults and this would be the time to control them.

Photo 1. Brown marmorated stink bug nymph

Photo 2. BMSB feeding damage on small and medium size pepper fruit

Fruit Crops

Imidan 70 Now Labeled for Spotted Wing Drosophila on Some Crops – *Joanne Whalen, Extension IPM Specialist*; jwhalen@udel.edu

It should be noted that Spotted Wing Drosophila has been added to the Imidan 70 label for key crops. (http://www.cdms.net/LDat/ld7DS043.pdf).

Agronomic Crops

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

Field Corn

This week we found a couple of additional fields in New Castle County with high levels of brown marmorated stink bugs (3-4 per plant) on field edges near woods. Adults, nymphs and egg masses could all be found. Populations in field interiors were still generally low (3-5 per 100 plants). Although we can see the beginning of kernel damage, we have also started to find adults moving out of corn into nearby soybeans fields. Once nymphs develop, they too will start moving into nearby soybeans. An edge treatment, if practical, might be considered, if numbers remain high and you can find ear damage. As indicated in last week's newsletter, demonstrations are being conducted in Maryland to look at the effectiveness of edge treatments so we will have more information after this season.

Soybeans

Continue to watch for defoliators as well as spider mites in both full season and double crop soybean fields. In full season soybeans in the pod fill stage, the defoliation threshold drops to 10-15% defoliation. Remember, double crop soybeans cannot tolerate as much defoliation since they often do not reach the leaf area index needed for maximum yields.

You should also scout for stink bugs and pods worms as we enter the pod set and pod fill stages.

Corn earworm - Open canopy blooming soybeans will be attractive to egg laying corn earworm moths, especially in drought stressed areas where corn is drying down early. Corn earworm trap catches continue to increase in our area as well as areas to our south. The following link provides information on the annual corn earworm survey conducted in Virginia (http://www.sripmc.org/Virginia/downloads/cewsurvey2011.pdf). Since corn is considered a nursery crop for earworm, their data (over 30 years) has shown that there is nearly a 1:1 relationship between the infestation level in corn and the amount of soybean acreage that gets treated with insecticide for corn earworm in Virginia. However, only time will tell if we will have a podworm outbreak in soybeans in our area. Although we are finding a few corn earworms in full season soybeans, this is not unusual for this time of year and only scouting on a routine basis will tell you if you have an economic problem. In the past, we have used the treatment threshold of 3 corn earworms per 25 sweeps in narrow fields and 5 corn earworms per 25 sweeps in wide row fields (20 inches or greater). These are static thresholds that were calculated for a 10-year average soybean bushel value of $6.28. A better approach to determining a threshold is to access the Corn Earworm Calculator (http://www.ipm.vt.edu/cew/) which estimates a threshold based on the actual treatment cost and bushel value you enter.

Stink bugs - We have started to see an increase in native green and brown stink bug levels in fields throughout the state. Economic damage from stink bugs is most likely to occur during the pod development and pod fill stages. Available thresholds are based on beans that are in the pod development and fill stages. As a general guideline, current thresholds for native stink bugs 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. We do not have a threshold for brown marmorated stink bugs (BMSB). In New Castle County and northern Kent County, we can find a mix of native green and brown stink bugs as well as BMSBs. In situations where BMSBs are being found mainly on field edges, an edge treatment may be considered.

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

Executive Summary – 'Price Direction Hinges Upon the Weather'

With the state of the economy currently up in the air, ethanol margins are reported to be the best spot margins in a few years. This along with a mixed bag concerning weather conditions in the Corn Belt (heat is still in the forecast) is limiting downside movement in corn prices. The weekly crop progress report, issued Monday afternoon for the week ending July 24, lowered the conditions report for U.S. corn and soybeans the second week in a row. A survey conducted by private forecasters and reported on Tuesday afternoon resulted in a corn yield average estimate of 155.6 bushels per acre, down 3.1 bushels from USDA's June 30 forecast based upon June 1 conditions. The trade will be watching the south-central belt which is dry and expected to stay hot with limited moisture over the next 10 days. Hot and dry conditions are prevailing from Kansas-Northern Texas across to central Illinois, Indiana and most of Ohio through Kentucky, down to the Northern Delta. Nebraska, Iowa and Northern Illinois, and areas North should continue to see meaningful moisture.

USDA Export Sales Report (week ending 7/21/11)

Pre-report estimates had weekly corn export sales at 21.7 to 37.4 million bushels. The weekly report showed total export sales of 19.1 million bushels, with 13 million bushels of old crop, well above the 5 million bushels needed this week to stay on pace with USDA's demand projection of 1.875 billion bushels. Weekly shipments of 39.6 million bushels were below the 46.6 million bushels needed to stay on pace with USDA's demand projection. This report should be viewed as neutral to bearish.

Pre-report estimates for weekly export sales of soybeans ranged from 20.2 to 31.2 million bushels. The weekly report showed total export sales of 13.7 million bushels with old-crop sales accounting for .04 million bushels. Shipments of 7.2 million bushels were below the 15.1 million bushels needed this week to stay on pace with USDA's demand projection of 1.52 billion bushels. This report should be viewed as bearish.

Pre-report estimates for wheat ranged from 11.0 to 18.4 million bushels. The weekly report showed export sales at 17.4 million bushels, near par with the 17.3 million bushels needed this week to stay on pace with USDA's demand projection of 1.15 billion bushels. Weekly shipments of 20.7 million bushels were slightly below the 22 million bushels needed this week. This report should be viewed as neutral to slightly bearish.

Market Strategy

Bottom line, rains were very good to excellent in the Northern tier of the Corn Belt., not so good in the South-South Central area. There is an implied logic that suggests advancing corn and soybean sales is warranted, due to the mixed bag concerning the current weather situation. In this morning's trade, Dec '11 corn futures are trading at $6.87; Nov '11 soybeans at $13.79; Dec '11 SRW wheat at $7.52; with July '12 SRW wheat at $8.03 per bushel.

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

Announcements

University of Delaware Watermelon Twilight Meeting

Wednesday, August 3, 2011 5:00-7:00 p.m.
UD Carvel Research and Education Center
16483 County Seat Highway
Georgetown, DE

The University of Delaware will be hosting a watermelon twilight meeting and tour on Wednesday, August 3. Featured will be research on pollenizers for seedless production, hollow heart causes and hollow heart reduction, enhanced fruit set, growth regulators for watermelons, bacterial inoculants, bumblebees for watermelon pollination, disease management, insect control, and herbicides for under plastic and row middles. Researchers will be on hand to discuss their work and present current results. There will be a short walking tour.

Light refreshments will be provided

NE SARE Farmer Grant Workshop: Learn how to get problem-solving grants that will benefit the community as a whole

● Have you ever been frustrated by the lack of a solution to a particular problem in farming?

● Have you ever wondered about writing a grant to see if your problem-solving idea really works?

● Does the whole process of writing a grant just seem overly complicated?

● Would you like some guidance through the grant writing process?

● Do you raise animals, crops, grains, cut flowers or perhaps even bees?

This workshop is designed to guide farmers through the individual steps of writing a grant for Northeast SARE (Sustainable Agriculture, Research, and Education). The business of getting grants is competitive and learning the tools that will get you closer to receiving a grant is valuable. By attending this workshop you will learn how to answer the 7 questions required for a SARE Farmer grant.

This series of 7 workshops begins on Saturday, August 13.

All meetings will be held at the UD Paradee Center, 69 Transportation Circle, Dover, DE 19901

Registration deadline is August 5. For more information contact Dr. Brigid McCrea at (302) 857-6424 or bmccrea@desu.edu or go to http://agdev.anr.udel.edu/weeklycropupdate/wp-content/uploads/2011/07/SAREws.pdf

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of July 21 to July 27, 2011

Readings Taken from Midnight to Midnight

Rainfall:

0.57 inch: July 24
0.40 inch: July 25

Air Temperature:

Highs ranged from 101°F on July 22 to 87°F on July 25.

Lows ranged from 82°F on July 23 to 70°F on July 27.

Soil Temperature:

88.0°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