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

Lima Beans.
Heavy leafhopper populations can still be found on seedling stage lima beans. If nymphs are easily detected and you can find plant damage a treatment may be needed. As soon as pin pods are present, scout fields for lygus bugs and stinkbugs. Treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. Lannate, Capture or Warrior can be used if both species are present. A higher rate of Capture (4 oz/A), Mustang (4.3 oz/A) or Warrior (3.84 oz) will be needed if stinkbugs are the predominant insect present. At the end of last week, corn earworm moths catches significantly increased in a number of pheromone trap locations and the first corn earworm larvae have been found in lima beans. A treatment is recommended if you find one worm per 6 foot of row. Materials labeled for earworm control include Capture, Mustang MAX, Lannate and Warrior.

Melons.
Continue to scout all melons for aphids, cucumber beetles, and spider mites. Although we can still find fields with economic levels, spider mite population levels are low-moderate and the number of fields needing a treatment are lower compared to 2002. A treatment will be needed for spider mites if you find 20-30% of the plants infested with 1-2 mites per leaf. Melon aphid populations continue to increase. The treatment threshold for aphids is 20% of the plants infested with at least 5 aphids per leaf. Fulfill, Lannate and Thiodan are labeled on melons and will provide melon aphid control. A penetrating surfactant (e.g. LI-700 or AD-100) should be used with Fulfill. Be sure to watch for bees foraging in the area and avoid insecticide applications on blooming crops. Be sure to follow all label restrictions regarding insecticide applications during bloom. Cucumber beetle populations have also started to increase and rindworms (larvae of the cucumber beetle) can be found in fields. A cucumber beetle spray should be applied if you find more than 2 beetles per plant or you can find damage to the rind. Dimethoate or a pyrethroid will provide control.

Peppers.
At the present time, all peppers that have fruit ½ inch in size or larger should be sprayed on a 7-day schedule for corn borer, corn earworm and pepper maggot control. In the Bridgeville, Dover, Harrington, Greenwood and Milford areas sprays are needed on a 5-day schedule. We can also find the first corn earworm larvae feeding in fruit. Remember Orthene or Address will not provide satisfactory earworm control. A pyrethroid or Lannate will be needed for earworm control. After 2 applications of Orthene are used, Spintor or Intrepid combined with a pyrethroid or Lannate should be used on a 5-7 day schedule. A continuous pyrethroid program should not be used to avoid aphid explosions. Dimethoate will
still be needed through mid-August for pepper maggot control.

**Snap Beans.**
Seedling beans should still be watched carefully for leafhopper activity. The leafhopper threshold is 5 per sweep. Since corn borer catches have increased significantly, corn borer sprays should be applied at the bud and pin stages on processing snap beans. With the increase in corn earworm activity, a pyrethroid should also be added to the pin spray. After the pin spray, sprays will be needed on a 5-day schedule until harvest except in the Bridgeville area where sprays are needed on a 4-day schedule. Since this can change quickly, be sure to check our website for the most recent trap catches and information on how to use this information to make a treatment decision in processing snap beans (http://www.udel.edu/IPM/traps/latestblt.html and our link to [http://www.udel.edu/IPM/thresh/snapbeanecbthresh.html](http://www.udel.edu/IPM/thresh/snapbeanecbthresh.html)). As soon as pin pods are present, fresh market beans should be sprayed on a 5 to 7-day schedule. Lannate, Capture, Mustang or Warrior should be used.

**Sweet Corn.**
Fresh market silking sweet corn should be sprayed on a 3-day schedule throughout the state. Be sure to check the IPM website for the most recent BLT catches in your area (http://www.udel.edu/IPM/traps/latestblt.html). We are seeing a significant increase in fall armyworm and corn earworm larvae feeding in the whorls of the latest planted corn. Controls will be needed if 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. Avaunt, Baythroid, Lannate, Larvin, Spintor or Warrior will provide fall armyworm control in whorl stage corn. If high whorl infestation levels are present (30% or more), silk stage sweet corn will also be susceptible to attack from fall armyworm. In order to get good control of all three insects attacking silking corn (corn earworm, fall armyworm and corn borer), **a combination of** Lannate or Larvin plus a pyrethroid may be needed at the tassel, ear-shank and first full silk spray. You **should not alternate between a pyrethroid and Lannate or Larvin.** Remember that Larvin treated corn silage or fodder **can not** be feed to livestock. Livestock can not graze Larvin treated fields.

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**Field Crops**

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

**Field Corn.**
As expected, we are starting to find high levels of corn earworns and fall armyworms in late-planted non-Bt grain and silage corn. In some cases, armyworms are large and are almost done feeding. In other fields, mixed sizes of larvae can be found. The treatment threshold for these two insects in whorl stage field corn for grain is 75% plants infested with 1 worm or 50% plants with 2 or more worms per plant. Although we rarely recommend treatment on silage corn, these thresholds may apply in areas where feed is limited and you want to maximize silage yields. Since larvae feed deep in the whorls, insecticides should be washed into the whorls with 20-30 gallons of water per acre (the higher the better). In many cases, one application will only give about 60-75% control and large larvae are extremely difficult to control, regardless of the material used. Materials labeled for earworm and fall armyworm control in field corn include Baythroid (fall armyworm- first and second instar), Lannate, Lorsban, Mustang MAX, and Warrior (although we have gotten control of medium size fall armyworm larvae label states first and second instar).

**Soybeans.**
Heavy potato leafhopper populations and "hopper burn" continue to be found in seedling stage soybeans throughout the state. As a general
guideline, a spray may be needed if you find 4 per sweep in stressed beans and 8 per sweep in non-stressed fields. There are no thresholds for numbers per leaf however, if leafhoppers are easily detected and you can see symptoms of plant damage, a treatment may be needed. A pyrethroid or dimethoate will provide control.

Continue to scout for grasshoppers and spider mites in seedling stage beans. Grasshopper populations remain high, especially in soybeans planted after barley and wheat. Grasshoppers can be controlled with Asana, Baythroid, Dimethoate, Furadan, Lorsban or Warrior. We continue to find low levels of spider mites in an occasional field. Dimethoate, Lorsban or Parathion are still the only available products.

You should also scout the earliest planted field as soon as pods are present for corn earworm. With the recent increase in moth catches in pheromone traps, moths will be attracted to late-planted, open canopy, blooming fields.

Late-Summer Forage Seedings - Richard W. Taylor, Extension Agronomist, rtaylor@udel.edu

With the continuation of rainfall across Delaware, conditions this year are favorable for earlier than normal late-summer/fall forage establishment. For many years, we have had to wait until late-September or October for enough rain to chance seeding forages. Late planting leads to smaller than desired seedlings as they enter the winter season and puts establishment success at risk.

What should you be doing to make use of this year’s opportunity for early or at least on-time planting? First and foremost, if you have not already taken a soil sample for fertility analysis, take the sample and rush it to a soil testing facility for analysis. As soon as the analysis is available, prepare a fertility program or consult your crop adviser/consultant, Extension professional, or nutrient plan writer for a recommendation.

In legume seedings, lime application to correct soil acidity (pH) problems will be critical. For both legume and grass species, the additions of needed phosphorus (P) will ensure excellent root growth while potassium (K) will help prepare the plants for winter temperatures. With all the rain we’ve received since last fall, don’t overlook the need for sulfur, boron, and magnesium, especially on light sandy soils. This past spring we saw numerous fields with sulfur and magnesium deficiency.

Since forage plantings are made with the expectation of many years of production, be sure to take care of compaction problems prior to seeding. If you plan to establish forages using no-till, it is essential that the field chosen has no compaction or drainage issues, currently is fertile (has medium to high levels of both P and K), and has an adequate pH and calcium and magnesium levels. If the field has one or more of these problems, it should be worked and fertilized to correct the problems. A fine, firm, weed-free seedbed should be prepared for seeding. Forage seeds do best when placed at the proper depth for that species. Also, if legumes are seeded, use either preinoculated seed that has been properly stored or inoculate the seed yourself with fresh Rhizobia inoculum that is designed for the particular legume species.

What else should you do to prepare for late-summer seedings this year? Select a reliable seed source and obtain fresh seed with good to excellent germination. Select a variety or cultivar with the disease and/or insect resistance levels that will be best suited for your field’s pest history. Either before or after seeding, apply 20 to 30 pounds of nitrogen per acre to jump start early growth.
Grain Marketing Highlights - Carl German, Extension Crops Marketing Specialist; cgerman@udel.edu

U.S. Corn.
The 2003 growing season for corn and soybeans is running somewhat later than normal. Even so USDA projects a record 10.27 billion bushel corn crop responding to better than average crop conditions. Projected ending stocks for US corn are expected to increase by only 10 million bushels due to increases in demand. Weather developments continue to drive short term corn price direction. Although crop conditions are indicative of a large crop it is noted that severe storms, particularly hail, have been prevalent throughout the corn belt these past few weeks. For the time being, CBOT corn price bidding is indicating an expected large crop. Funds are currently net short 50-60 thousand contracts.

Soybeans.
The bottom line for the soybean market is tight old crop supplies and big new crop potential. The effect of the change from tight supplies to large production and increasing supplies has impacted soybean prices very quickly, almost overnight. August crop conditions generally make or break the size of the US crop.

Ending stock projections for both the 2002/03 and the 2003/04 marketing years were increased in the July crop report. Market traders will be watching weather developments in the corn belt in the next 30 days to determine price movements.

Wheat.
Projected wheat carryover stocks were increased 738 million bushels for the 2003/04 marketing year, a 22% increase over the June estimate of 604 million bushels. The USDA all-wheat crop estimate at 2.311 billion bushels was above the high end of the range in trade expectations.

Market Strategy.
New crop corn and soybean prices at current levels dictate that further sales of 03 crop production now hinge around the loan rates. This means that any consideration of advancing further sales needs to take into account the relationship of the net sale price to the loan rate that is attainable in a given location. Wheat that can not be held through next March 04 should be sold at current price levels.

Reminders about Glyphosate Application With Roundup Ready Soybean Weed Control - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Typically we recommend postemergence spray during the period 3 to 4 weeks after planting with conventional tillage soybeans or 3 to 5 weeks after planting with no-till soybeans. The moisture conservation with no-till allows for the wider window of application. This is the timeframe we recommend for singly-cropped soybeans and it is early enough to eliminate weeds reducing yield, but late enough to prevent a second glyphosate application. In the case of double-cropped soybeans, the window is wider. For double-cropped soybeans the window is 2 to 5 weeks after planting. Many fields are being sprayed too late, after weed competition has reduced yield. Also, by waiting beyond 4 weeks after planting, the effectiveness of glyphosate on species such as morningglory can be reduced.

Postemergence Control of Glyphosate-Resistant Horseweed - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

A number of fields have horseweed plants that were not controlled prior to planting. Under these conditions the horseweed plants will not be killed, rather the best you can expect is some suppression. Suppression is dependent on size, with large weeds being affected less. Under most situations, it will be hard to justify the expense of a spray only to control horseweed, but often there are other weeds that will need to be controlled as
well. One option is not using an herbicide other than glyphosate, because glyphosate will control the other weed species and provide some suppression of the horseweed (10 to 20% additional suppression). Other options for these horseweeds is either FirstRate or Classic, since additional glyphosate applications will not control the resistant horseweed. FirstRate has consistently performed better than Classic. FirstRate should be applied at 0.3 oz/A.

Sandea Can Carryover to Some Vegetables - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Sandea is labeled for use in a number of vegetable and melon crops. However, it is not safe for all vegetables and this includes vegetables planted in rotation with crops treated with Sandea (halosulfuron). Last year a few fields were planted with pickles, treated with Sandea, and rotated to spinach. The spinach crop was injured due to halosulfuron carryover. So check your herbicide labels to be sure there are no problems with herbicide carryover.

Manganese Applications with Postemergence Glyphosate - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Roundup Ready soybeans may require a postemergence application of glyphosate (Roundup Touchdown or GlyphoMax) and a manganese application about the same time. These glyphosate products can be tankmixed with manganese with some precautions. The manganese products can bind with glyphosate in the spray tank and reduce glyphosate’s effectiveness. The form of manganese has an impact. Manganese chelated with EDTA did not affect the performance of glyphosate, but other forms of manganese did. The addition of ammonium sulfate overcame the problem. Thus, when tankmixing glyphosate with manganese, use an EDTA form of manganese or add ammonium sulfate to overcome the reduced weed control. When using ammonium sulfate be sure to add the ammonium sulfate to the tank first and add the glyphosate last.

UPCOMING EVENTS:

Farm and Home Field Day

Wednesday, August 13, 2003

8:30 a.m. - 1:30 p.m.

UD Research & Education Center
16684 County Seat Highway (Rt. 9), Georgetown, Delaware

- Safe Kids Day
- Agronomic and Vegetable Field Tours
- Master Gardener Demonstration Garden
- Interactive Exhibits
- 4-H Petting Zoo
- Carriage and Pony Rides
- Lunch - 12 noon
- Poultry Research House Dedication - 1:30 p.m.

Take a day to enjoy summertime in the country at the University of Delaware’s Farm and Home Field Day, Wednesday, August 13. Held from 8:30 a.m. until 1:30 p.m. on the grounds of the Research and Education Center, on 16684 County Seat Highway (U.S. Rt. 9) west of Georgetown,
this annual event offers many fun-filled, educational activities, tours, interactive exhibits and demonstrations for homeowners and farmers alike.

Field tours by wagon will highlight agronomic and vegetable crops. Farmers can consult with Extension specialists about the latest research and pest control strategies. Visitors to Field Day can drop by the Master Gardener demonstration garden to view the wide array of plantings.

Children, parents, and caregivers will learn about keeping their young children safe during the summer months.

This portion of the program will include many interactive exhibits and demonstrations plus costumed characters, children’s aerobics, face painting, finger printing, a petting zoo, and car seat check. Local 4-H clubs will set up a petting zoo and food booths.

Consumer, environmental and commodity groups will staff informational booths in the Grove. Carriage and pony rides will round out the morning’s activities.

Farm and Home Field Day is free and open to the public, and plenty of free parking is available. Tickets for a traditional barbecued chicken luncheon at 12 noon can be purchased at the registration table for $6.00.

For more information, call Mark Isaacs at 302-856-1997 or Jay Windsor at 302-856-7303.

Weather Summary

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

Weeks of July 25 to July 30, 2003

Rainfall:
0.04 inches: July 27
1.05 inches: July 28
0.02 inches: July 29
0.50 inches: July 30

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

Air Temperature:
Highs Ranged from 91°F on July 27 to 72°F on July 30.
Lows Ranged from 76°F on July 27 to 63°F on July 25.

Soil Temperature:
76°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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Sussex County Extension Educator - Horticulture

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