Late blight was confirmed in processing tomato near Elmer, NJ this past weekend. Incidence was low (1-2% infection), but appeared to be a result from an outside infection source (i.e., blown into the field). All tomato and potato growers should include a Late blight specific fungicide(s) into their weekly program. Late blight samples have been sent to Cornell University for testing. If you suspect late blight on your farm, please contact your county agent. To track the progress of Late blight in the US please visit: http://usablight.org.

Reports of Bacterial leaf spot in tomatoes, particularly in heirloom varieties, continues to cause some problems. Heirloom tomatoes are notorious for harboring the pathogen in infested seed. As a rule, all heirloom seed should be hot water treated before use.

Cucurbit downy mildew has already been reported on cucumber in New Jersey. Reports in cucumber have picked up this past week from around the state. All cucurbit growers should include a downy mildew specific fungicide in their weekly fungicide program. Please see the 2012 Commercial Vegetable Recommendations Guide for specific fungicide recommendations. To track the progress of cucurbit downy mildew please visit North Carolina State University's Cucurbit Downy Mildew Forecasting Center at: http://www.ces.ncsu.edu/depts/pp/cucurbit.

Cucurbit powdery mildew has been found in New Jersey. Cucurbit growers should adjust fungicide programs accordingly.

Blossom end rot, symptoms of heat-related stress, and damage as a result of the isolated severe storms are starting to show up across a number of crops due to the weather from late last week. Unfortunately, the hot temperatures will be heading our way again on Friday and over the weekend.

For the most up-to-date information fast, please sign up for the Jersey Vegetable Crop Ag Updates at: http://jerseyvegcropsagupdates.blogspot.com.
Vegetable Disease Update

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

✔ Pepper – Anthracnose - Symptoms of fruit infection include sunken, circular spots which develop blackish-tan to orange concentric rings as lesions develop. Lesions on stems and leaves appear as grayish-brown spots with dark margins and can easily be overlooked. Control of Anthracnose begins scouting on a regular basis and applying preventative fungicide applications before symptoms appear, especially in fields or areas of farm where you have had anthracnose problems in the past. Beginning at flowering and as small fruit begin to set, alternate chlorothalonil (M5) at 1.5 pt 6F/A or Manzate Pro-Stick at 1.6 to 3.2 lb 75DF/A with one of the following FRAC code 11 fungicides: azoxystrobin (Quadris at 6.0 to 15.5 fl oz 2.08F/A) or Cabrio (pyraclostrobin) 20EG. After harvesting, pepper fields should be disced and plowed under thoroughly to bury crop debris.

✔ Potato – Black Leg – Black leg is caused by Erwinia spp. which also cause ‘soft rots’. The bacteria which lead to the aerial phase of Black leg are soil-borne (originate from old crop debris) and spread by rainfall, overhead irrigation and wind. The aerial phase of Black leg does not originate from decaying seed pieces. The bacterium can enter the plant through wounds created by cultivation or through stems damaged by blowing wind, sand or hail. Dense canopies, warm weather and prolonged periods of leaf wetness favor the spread of aerial Blackleg. Fortunately, the disease rarely extends below ground and only causes dieback of stems over time. Symptoms of the aerial phase of Blackleg first appear as an irregular, water-soaked ‘green’ decay on stems that turns light-brown to black over time. Hot, dry weather will cause infected areas to dry out and become brittle. Do any cultivating when plants are dry, cultivating in the presence of dew or wet plants may help to spread the bacterium around.

✔ Tomato – Bacterial spot, speck and canker – After transplanting, apply Actigard at 0.33 oz 50WG/A (see label for use), or fixed copper (M1) at 1 lb a.i./A plus a mancozeb (Dithane, Manzate, Penncozeb, M3) at 1.5 lb 75DF or OLF, or ManKocide (M1 + M3) at 2.5 to 5.0 lb 61WP/A on a 7 day schedule. ☐

IPM Update

Joe Ingerson-Mahar, Vegetable IPM Coordinator

European corn borer

Very low numbers of ECB have been caught across the entire state – less than 1 per night. Active caterpillars are still being found in whorl and tassel stage sweet corn with some fields reaching 20% infestation in the whorl stage. Sap beetles are coming to corn borer damaged plants. Princeton, Pennington and Farmingdale have the highest nightly catches for the week.

Peppers with fruit will become more attractive to ECB. Look for fine sawdust material around the cap of the fruit which indicates ECB larvae boring into fruit.

Based on the Vegetable IPM Program historical data, the second generation moth flight begins around 1200 degree days (base 50) which has been reached for at least the southern half of the state. The moths now being caught there are the early adults of the second generation. These numbers will increase as we move into July.

Corn earworm

Very low blacklight numbers across the central and northern part of the state with numbers increasing in the southern tier of the state, except for Cape May County. Earworm caterpillars are still occurring in whorl sweet corn, at least in the south.

Highest blacklight counts per night – Woodstown - 2, Centerton – 2, Jones Island – 2, Allentown – 1, Princeton - 1

Spray schedules for silking sweet corn:

North – 4 to 5 day
Central – 3 to 4 day
South – Burlington/Camden/Gloucester – 4 to 5 day
Salem/Cumberland/Atlantic – 3 day
Cape May – 4 to 5 day

Pheromone trap catches of corn earworm are the highest in the Hammonton area but also indicate a 3 day spray schedule.

Beet armyworm

BAW is active now mostly in the Salem/Cumberland/Atlantic County area, however these counts remain low, 4 or less per night. Greens, peppers and tomatoes are most vulnerable to BAW.

Black cutworm

BCW moths are flying now in Salem/Cumberland County area. Larvae will be active by mid-July through mid-August. Root crops especially, including potatoes, sweet potatoes, and carrots will be at risk of damage.

Brown marmorated stinkbug

Numbers of BMSB caught in blacklight traps increased across the state due largely to warm nights, but with the cool weather front of the last couple of days their activity will decline. Only the Centerton area has

See IPM on page 3
Preventing Your Farm
Food Safety Plan
Part 11: Packinghouse Facility

Meredith Melendez, Mercer County Senior Program Coordinator and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

Part 11 of your farm food safety plan addresses your packinghouse activities. This includes transportation of the product from the field to the packinghouse, product storage once it has been delivered to the packinghouse, the washing/packing line, ice, worker health and hygiene and packinghouse general housekeeping. Keep in mind that not all areas of the audit will apply to your farm based on your production practices. Those areas not applicable would be marked not applicable by the auditor. Areas that do apply but you are deficient in would result in a reduction of audit points. A minimum of 80% must be achieved in each section to pass the final audit. Conducting a mock audit is the best way to determine deficiencies and changes that will need to be made to your farm infrastructure and/or production practices.

The following statements and procedures should be considered to be included in your packinghouse facility section:

✔ Transported product is covered in a safe manner
✔ Product is stored properly in the packinghouse facility
✔ Product that will be packed several hours or days later is stored in a refrigerated cooler
✔ Water source used on washing and packing lines is tested and is potable
✔ Check the water temperature in dunk tanks on a scheduled basis (if applicable)
✔ Chlorine or other disinfectant is used to treat water and the labels are followed as to concentration, pH, water temperature and they are monitored (if applicable)
✔ Water contact surfaces are cleaned and sanitized prior to grading and packing
✔ Contact surfaces are cleaned and sanitized prior to grading and packing
✔ Packinghouse is thoroughly cleaned at the end of each day, including washing, grading, sorting and packing lines
✔ If ice is used during packing and the source of this ice (if you manufacture your own ice show that the water source is potable, if you purchase ice you will need a copy of the manufacturing and storage procedures from the manufacturer on file)
✔ State how the ice is transported from the truck/ice machine to the packing area
✔ Break areas are away from packing areas
✔ State your employee policies including: hairnet policy, jewelry policy and glove policy
✔ Train all employees on worker hygiene
✔ Indicate if produce is packed in new boxes and how it is stored once packed
✔ State where your box/container storage areas are located
✔ Use only food grade lubricants on the packing machinery and equipment

Note: There are no insect maps for this week.
Food Safety from Page 3

✔ Store non-food grade chemicals away from the packing area
✔ Keep packinghouse areas free from litter, debris and standing water
✔ Dumpsters are located away from the packinghouse or if close are covered
✔ Garbage cans inside the packinghouse have lids
✔ Check floor drains in the packinghouse weekly to ensure proper drainage
✔ Clean all pipes, fans and ceilings in the packinghouse on a scheduled basis
✔ Cover glass lights, in case of breakage, with shatterproof covers
✔ State your commitment to make sure that wastewater spillage does not occur and describe your cleanup procedures should it occur
✔ Describe your procedure for cleaning or disposing of product that comes in contact with the floor
✔ Do not allow animals, including pets, in the packing area
✔ Describe the measures you use to keep pests out of the packinghouse
✔ Describe how contamination is prevented from motors, pipes and other equipment in the packinghouse
✔ Describe how harvested product coming into the packinghouse is identifiable to the field it was grown in, the harvest crew, and the date it was harvested

This is the eleventh article in a series dedicated to preparing a farm food safety plan. For previous articles refer to earlier editions of the Plant and Pest Advisory, or visit the Rutgers Vegetable Crops blog at: http://jerseyvegcropsagupdates.blogspot.com. Remember you may not need a third party audit; it depends on who is purchasing your produce. However, everyone should have a food safety plan.

For more information on Farm Food Safety visit: http://njveg.rutgers.edu/html/mf-food-safety.html.

Next week: Storage and Transportation

Weekly Weather Summary
Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much above normal, averaging 74 degrees north, 76 degrees central and 75 degrees south. Extremes were 99 degrees at Hammonton on the 22nd, and 46 degrees at Freehold on the 19th. Weekly rainfall averaged 0.31 inches north, 0.91 inches central, and .76 inches south. The heaviest 24 hour total reported was 1.68 inches at Toms River on the 22nd to 23rd. Estimated soil moisture, in percent of field capacity, this past week averaged 74 percent north, 71 percent central, and 65 percent south. Four inch soil temperatures averaged 71 degrees north, 72 degrees central and 71 degrees south.

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<td>TOTAL UNITS BASE 40 FOR FEBRUARY=55</td>
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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

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For back issues of the Plant & Pest Advisory: www.rce.rutgers.edu/pubs/plantandpestadvisory