Much of the sweet corn and field corn acreage is approaching the growth stage – about six inches tall - where the crop will begin taking up N very rapidly and in large amounts. An adequate N supply at this stage is critical to crop development and economic optimum yield.

Important decisions need to be made about the need to apply sidedress N fertilizer and if so, how much.

Growers that have been building on-farm soil fertility with crop rotation, cover crops, or applications of compost or manure may not need sidedress N fertilizer. But the only way to really know with confidence that N fertility is adequate is to perform the Presidedress Soil Nitrate Test (PSNT). PSNT soils samples can be submitted to the Rutgers Soil Testing Lab. Instructions on how to perform the PSNT test are on web: http://njaes.rutgers.edu/pubs/publication.asp?pid=E285

However, in many cropping systems growers can predict with a high level of confidence that sidedress N fertilizer is needed without doing the PSNT soil test. Soils with low soil organic matter content and no recent history of legume rotation or organic amendments will almost certainly need sidedress N fertilizer. Taking PSNT soil samples from such field situations would just be a waste of time. In this case refer to the Commercial Vegetable Production Recommendations as a guide to how much sidedress N to apply.

On sandy soils it is more effective to split the total application of sidedress N fertilizer into multiple applications.

Keep in mind that if the sidedress N fertilizer source contains urea, loss of N by volatilization is a concern. There are several good cultural practices that can be used to minimize this potential loss. Injecting the urea below the soil surface is one way to protect against this loss. Another way is to apply irrigation water to move that urea into the soil shortly after sidedressing.
Disease Briefs
Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology

- **Cucurbit downy mildew** has been reported on cucumber in New Jersey. 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://cdm.ipmpipe.org.

- **Late blight** has been confirmed on potato and tomato in PA this week. To track the progress of Late blight in the US please visit: http://usablight.org. There have been no new reports of Late blight in New Jersey this past week.

- The **Late blight found on potato in NJ last week was typed as US23**. US23 (A1 mating type) is pathogenic on both tomato and potato and sensitive to mefenoxam. Potato and tomato growers should be diligent in their scouting of fields and be on regular preventative fungicide maintenance program.

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

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

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IPM Update
Kristian Holmstrom, Research Project Coordinator II, Vegetable IPM Program

**Sweet Corn**

**European corn borer (ECB)** adult catches have decreased in black-light traps over the past week. Cooler evening temperatures have played a part in this decline, although we may be on the down side of the first flight. The most consistent catches are in Monmouth County and the Cumberland/Atlantic County border area (see ECB Map). Plant injury will now increase dramatically in all parts of the state as adult numbers decline and their offspring begin feeding. Consider treating if 12% or more plants exhibit the characteristic “shot-hole” type feeding on leaves and/or droppings or ECB larvae in emerging tassels. Remember to make a full-tassel application to control ECB larvae as they leave the tassel and travel down the stalk to re-enter the plant near the ear shank. This last application is often critical to controlling ear infestations from ECB. Consider weekly applications through the silk stage unless local corn earworm catches dictate a tighter schedule. This will help prevent ear infestations resulting from eggs laid on or near the developing ear.

The highest nightly ECB catches for the previous week are as follows:

- East Vineland: 2
- Centerton: 1
- Lawrenceville: 1
- Farmingdale: 2
- Griggstown: 1
- Little York: 1
- Belvidere: 1
- Hillsborough: 1
- Pedricktown: 1
- Burlington: 1
- Indian Mills: 1
- Shirley: 1

**Corn earworm moths (CEW)** continue to appear in blacklight traps, although in somewhat lower numbers than last week. The most consistent catches are occurring near the Cumberland/Atlantic County border (see CEW Map). Pheromone catches near the Camden/Atlantic County border are moderate at this time. These moths represent a threat to the earliest sweet corn plantings now in the silk stage. As silks begin to appear, pay close attention to CEW catches in local blacklight traps, and treat silking plantings accordingly.

The highest nightly CEW catches for the previous week are as follows:

- East Vineland: 2
- Folsom: 1
- Milltown: 1
- Cinnaminson: 1
- Green Creek: 1
- Shirley: 1
- Elm: 1
- Indian Mills: 1
- Farmingdale: 1
- Matawan: 1

**Silking Spray Schedules***:

- South – 5 days
- Central – 5- 6 days

*Note: These are general recommendations. Local trap catches may indicate some variation in the frequency of insecticide applications to silking corn.

Scouts in the all parts of New Jersey report infestations of **yellow striped armyworm (YSAW)**, and in some cases **fall armyworm (FAW)** in sweet corn. It is exceptionally early for FAW to be active in our area, and its’ presence in whorl corn is an ominous sign for the remainder of the season. This caterpillar is green when small, but turns a two-tone brown color as it grows. The head capsule has a characteristic “upside-down Y” pattern on it. FAW can do a lot of damage to small corn

*S*ee IPM on page 3
plants, and feeding results in large, ragged holes in the leaves accompanied by large quantities of droppings. In recent years, this pest has shown a marked tolerance for commonly used synthetic pyrethroid insecticides. If you suspect you have a FAW infestation, consider using one of the newer materials on this pest. See the 2012 Commercial Vegetable Production Recommendations for materials useful in controlling FAW. YSAW is not a typical corn pest, but has been found northward through Sussex County, and has exceeded the 12% feeding threshold in some southern NJ fields. This caterpillar is generally black with a prominent yellow stripe down each side. YSAW damage in corn will be similar to FAW damage. Materials applied for ECB management should control this pest.

Cole Crops

Heavy egg laying by imported cabbage butterflies (ICW), and diamondback moth (DBM) continues. Cabbage looper (CL) larvae are present to lesser degrees as well. Infestations of these pests have been found throughout the state. Scout plantings weekly. Check 5 consecutive plants each in 10 random locations throughout the planting, paying particular attention to the innermost leaves where ICW often feed. Consider treating if caterpillars are found on 10% or more plants that are in the 0-9 true leaf stage. From 9-leaf to the early head stage (in broccoli, cauliflower and cabbage) infestations up to 20% may be tolerated. Once heads begin to form, a 5% threshold should be observed to protect the marketable portion of the plant. For leafy greens such as collards and kale, 10% plants infested is the threshold throughout.

Crucifer flea beetle is active on many plantings, particularly when conditions are warm. When scouting cole crops for caterpillar pests, check for the presence of flea beetles. Consider treating if flea beetles are present on 50% or more plants, and feeding injury is evident on the plants. Be sure to monitor newly emerged or transplanted fields for the presence of this pest. Ye ASW damage in corn will be similar to FAW damage. Materials applied for ECB management should control this pest.

Peppers

Pepper transplants are now going into fields. At the same time, the first ECB flight is increasing. Be sure to scout fields regularly for the presence of ECB egg masses. If two or more egg masses are found in a 50 plant (two leaves/plant) sample, consider treating even if no fruit are present. In the absence of fruit, ECB larvae will bore into the central stem, topping the plant. This will result in the loss of crown fruit on infested plants. Generally, where blacklight trap catches average one or more ECB per night (shaded and crosshatched areas on the map, and blue and green areas on the web version), found at http://www.pestmanagement.rutgers.edu/IPM/Vegetable/Pest%20Maps/maparchive.htm, 5% of fruit are greater than ½” in diameter, insecticides are warranted. See the 2012 Commercial Vegetable Production Recommendations for materials useful in controlling ECB. Several beet armyworm (BAW) adults were captured in Salem County pheromone traps recently. This pest is typically a threat to peppers, and as new plantings become established, growers should be on the alert for this pest. BAW larvae feed on leaves near the growing points on plants. This feeding can result in significant defoliation and ultimately fruit damage, as the larvae begin to feed there as they grow. BAW is another of our southern invaders that has shown up much earlier than expected. Like FAW, BAW can be difficult to control with older materials. See the 2012 Commercial Vegetable Production Recommendations for newer materials useful in controlling BAW.

Brown Marmorated Stinkbug (BMSB)

BMSB adults declined in blacklight traps over the past week. This decrease is due to cooler evening temperatures, and BMSB should rebound somewhat with warmer weather. At present, the weekly averages do not exceed 5 per night in any trap. As such, no map image is included in this edition. As adult captures increase, maps will be produced to show where activity is highest. BMSB has shown a preference for peppers in the past. Growers should pay close attention to activity from local traps to determine when to initiate field monitoring of this pest.

The highest nightly BMSB catches for the previous week are as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Catches</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Vineland</td>
<td>2</td>
</tr>
<tr>
<td>Folsom</td>
<td>1</td>
</tr>
<tr>
<td>Green Creek</td>
<td>1</td>
</tr>
</tbody>
</table>

Distribution of Adult European Corn Borer for the Week Ending June 06, 2012

Data collected and processed by: Kris Holstrom, Marilyn Hughes Rutgers Cooperative Extension & Center for Remote Sensing

See CEW Maps on page 4
Preparing Your Farm Food Safety Plan
Part 8: Creating Logs to Document Compliance – Storage and Transportation Logs
Meredith Melendez, Mercer County Senior Program Coordinator and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

The USDA Good Agricultural Practices audit requires that certain activities on the farm be documented. These logs should accurately reflect what you have done on the farm to ensure food safety. If you do not write your activities down the auditor will assume that the activity never happened. This documentation may be new for many growers, so making it as easy as possible for you to comply will ensure that the documenting happens in a manner that is acceptable to an auditor. This is the eighth 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.

Storage Temperature Log
Storage facilities that are refrigerated should be monitored daily during use. Make sure to check the temperature the same time each day to ensure correct temperatures. This log should indicate:

- Date
- Time
- Temperature
- Any necessary comments
- Employees signature

Thermometer Calibration Log
Thermometers used in storages need to be checked for accuracy once a month during the growing season. The thermometer used to check storage temperatures should be calibrated before using your calibration log which should include the following:

- Date
- Thermometer location number
- Time
- Temperature
- Were corrective measures needed? (Yes or No)
- If corrective measures were needed briefly describe them.
- Date corrective action was completed
- Employees initials

Calibration can be easily done. The following method is recommended by the USDA Food Safety Inspection Service:

Using the ice water method, fill a large glass with finely crushed ice. Add clean tap water to the top of the ice and stir well. Immerse the food thermometer stem a minimum of 2 inches into the mixture, touching neither the sides nor the bottom of the glass. Wait a minimum of 30 seconds before adjusting. (For ease in handling, the stem of the food thermometer can be placed through the clip section of the stem sheath and, holding the sheath horizontally, lowered into the water.) Without removing the stem from the ice, hold the adjusting nut under the head of the thermometer with a suitable tool and turn the head so the pointer reads 32 °F. If a digital thermometer is used it can be checked in the same way. If the digital thermometer is not reading correctly check the instruction for adjustments or replace.
**Weekly Weather Summary**

*Keith Arnesen, Ph.D., Agricultural Meteorologist*

Temperatures averaged much above normal, averaging 69 degrees north, 71 degrees central and 71 degrees south. Extremes were 97 degrees at Seabrook on the 30th, and 47 degrees at Charlotteburg on the 4th.

Weekly rainfall averaged 1.54 inches north, 1.17 inches central, and 0.68 inches south. The heaviest 24 hour total reported was 1.75 inches at Long Branch on the 1st to 2nd. Estimated soil moisture, in percent of field capacity, this past week averaged 89 percent north, 80 percent central, and 62 percent south. Four inch soil temperatures averaged 71 degrees north, 72 degrees central and 72 degrees south.

<table>
<thead>
<tr>
<th>WEATHER STATIONS</th>
<th>RAINFALL</th>
<th>TEMPERATURE</th>
<th>GDD BASE50</th>
<th>MON</th>
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<tbody>
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<td></td>
<td>WEEK TOTAL</td>
<td>DEP</td>
<td>MX MN AVG</td>
<td>DEP TOT</td>
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</table>

WES KLINE -- GDD BASE 40 PINEY HOLLOW  
LAST WEEK 224 (Ending 5/28/12)  THIS WEEK 216 (Ending 6/4/12)  
TOTAL UNITS BASE 40 FOR FEBRUARY=55
Rutgers NJAES Cooperative Extension Specialists
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George Hamilton, Ph.D., Pest Management
Joseph R. Heckman, Ph.D., Soil Fertility
Bradley A. Majek, Ph.D., Weed Science
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Salem (856-769-0090)
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Joseph Ingerson-Mahar, Vegetable IPM Coordinator
Kristian E. Holmstrom, Research Project Coordinator II

Newsletter Production
Jack Rabin, Associate Director for Farm Services, NJAES
Cindy Rovins, Agricultural Communications Editor

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www.njveg.rutgers.edu

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