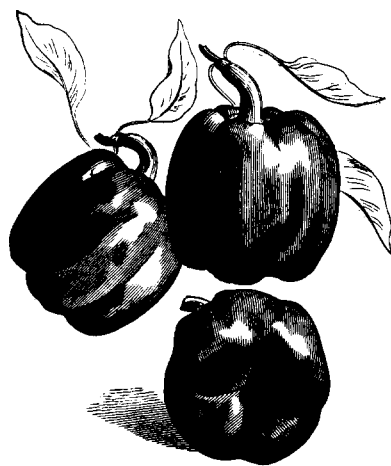


# PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

AUGUST 16, 2000



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## Pest Notes

*Gerald M. Ghidui, Ph.D., Vegetable Entomology*

✓ **General:** The current cool weather and heavy rains have likely had a positive effect on the insect populations in vegetable crops, from the growers' viewpoint. First, the cool weather keeps the adult moths of **European corn borers**, **armyworms** (various), **hornworms**, and **cutworms** from their normal night activities of mating and oviposition. This is especially true of the **European corn borer**, which is more sensitive than the others about having just the right temperature, humidity and wind conditions for mating/oviposition. For crops like tomatoes (**hornworms**, **fruitworms**), peppers (**beet armyworms**), leaf lettuce (**earworms**), and others where leaf feeding is a problem, growers can hold their sprays and monitor the crops for damage. But for crops like sweet corn (**earworms**) and peppers (**corn borers**), however, where the pest enters the fruit directly, the insects can deposit their egg(s) during any one good night, even between storms. Hence a management program still must be considered because the sprays are actually a preventative, not a corrective management tactic.

The frequent, and in some cases constant, rainfall has likely decimated the populations of insects such as **aphids**, **spider mites**, and **thrips** on the exposed areas of most crops (foliage, fruit, etc). These pests are easily removed with heavy rains, and will not make it back to the plant. For growers that had developing populations of **mites**, **thrips** or **aphids**, closely inspect the entire field to determine if the population is still present!

✓ **Pepper:** The NJ DEP has denied the request for a Special Local Needs label, 24-C, for the return to the old acephate (Orthene) label which allowed multiple applications of Orthene (the new label allows only 2 applications). With additional data, the original request from the manufacturer (Valent) can be redone for next year, for the 2001 growing season. Fortunately, this denial will not affect pepper growers this year, as Orthene has a 7-day to harvest spray interval, and thus can not be used during picking season. Also, Orthene is not effective against the **corn earworm** and the **beet armyworm**, two pests that will be present in the field at this time. Other materials are more effective against the entire worm complex (**corn borers**, **armyworms**, and **earworms**), and you can find the recommended materials listed under the pepper section of the *2000 Commercial Vegetable Production Recommendations for New Jersey*.

SEE PEST NOTES ON PAGE 3

# Vegetable IPM Update

Kristian Holmstrom and Sarah Walker, Program Associates in Vegetable IPM

## Peppers

The cooler wet weather over the weekend resulted in lower **European corn borer (ECB)** and **corn earworm (CEW)** adult blacklight trap counts early this week. However, counts of both **ECB** and **CEW** were moderate to extremely high in some areas at the end of last week. Small **ECB**, **CEW**, **fall armyworms (FAW)**, and **beet armyworms (BAW)** were found infesting immature and mature fruit in a field in Atlantic County this week. The **BAW** pheromone trap counts in the southern counties still remain light, and only sporadic infestations have been found so far. Maintain a weekly spray schedule for worm control for pepper fruit targeting primarily **ECB** and **CEW**.

The foliar phase of **phytophthora** is beginning to appear in some fields now. Fruit will have white mold growth on the surface and leaves will have grayish brown water-soaked lesions or spots that become bleached in appearance. The stems will also become infected, causing the typical wilt symptoms. Consult the *2000 Commercial Vegetable Production Recommendations* for recommended materials to control the foliar phase of this disease.

## Beans

The **ECB** adult flight is in full swing in most areas now. Target the bud-early bloom and the late bloom-early pin stages for **ECB** control. At this time, a weekly schedule for **ECB** control is recommended for fresh market snap beans from pin stage to harvest. For processing beans, a 5 to 7 day spray schedule is needed from the pin stage to harvest. **CEW** populations were extremely high at the end of last week, but have dropped this week. A 5 to 7 day schedule to control **CEW** is recommended in areas where populations exceed 20 per night in the blacklight traps. Continue to monitor lima bean fields at least once a week for the presence of **CEW** larvae and treat if 1 larva is found per 6 feet of row.

## Tomatoes

High populations of **tomato fruitworm (CEW)** adults were found in some traps at the end of last week, but in most areas counts have declined this week due to cooler weather. Monitor fields for evidence of larval infestations and consider treating fields if fruit damage is evident or if local trap catches exceed 10 moths per night.

Also monitor fields in the southern counties for the presence of **BAW** larvae feeding in the canopy. Adult pheromone trap counts remain low at this time, and only sporadic infestations are beginning to show up in peppers in parts of Cumberland and Atlantic

Counties. **BAW** infestations can be detected by scouting fields regularly for live larvae and damage. Look for plants with ragged skeletonized leaves. Larvae are dull green with a dark spot on either side of the body behind the head and can be found on the undersides of the leaves.

## Sweet Corn

Monitor pre-silking fields at least weekly for the presence of **ECB** and **FAW** activity and consider treating fields if greater than 12% of the plants are infested with either of these pests. Since most fields have been treated for these pests by now, look for signs of fresh feeding damage to evaluate control or determine if fields are being re-infested. Monitor the youngest plantings in particular for **FAW** activity.

The highest average nightly **ECB** blacklight trap catches are:

Phillipsburg	11	Mannington	5	Shirley	4
Little York	6	Beemerville	4	Chester	3
Belvidere	5	Califon	4	Hackettstown	3
Centerton	5	Milltown	4	Mullica Hill	3

**Corn earworm (CEW)** levels have declined this week in most areas due to the cooler wet weather, but sporadic extremely high catches occurred at the end of last week in several of the southern and central county traps. Silking sweet corn plantings are still at a high risk of infestation at this time. In areas where trap counts (see **CEW** map) are in the 0.8-8.0 moths per night, a 3-day schedule is recommended. In areas where the population exceeds 8.0 moths per night a 2-day silking spray schedule may be necessary to maintain clean ears.

The highest average nightly **CEW** blacklight trap catches are:

Milltown	13	Cranbury	6	East Vineland	5
Indian Mills	9	Fishing Creek	6	Folsom	4
Farmingdale	7	Matawan	6	Pedricktown	4
Burlington	6	Pemberton	6	Sewell	4

## General Sweet Corn Spray Schedule

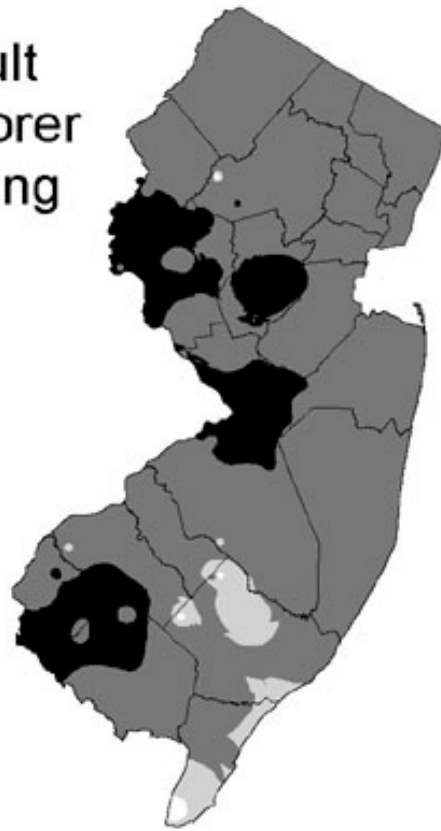
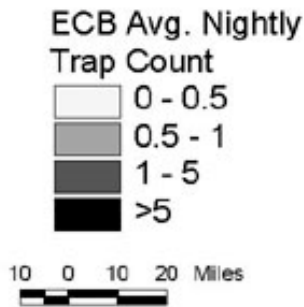
Silking corn:	North	3 days
	Central	3 days
	South	3 days

\*These are general spray recommendations for large areas of the state. Growers can increase or decrease the intervals based on their own local situations.

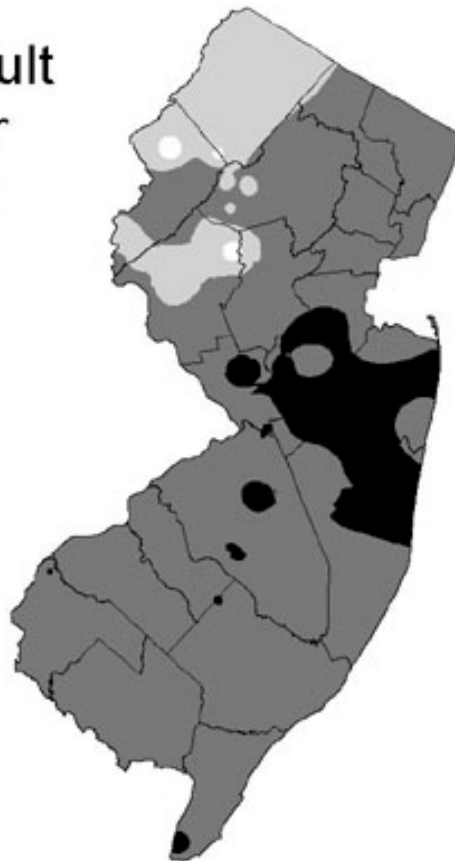
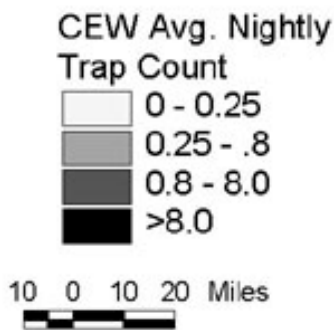
**Corn leaf rust** has reached economically damaging levels in some northern plantings despite fungicide treatments. Recent cool, wet weather has contributed to this situation. Control needs to be achieved prior to the pretassel stage to reduce the yield impact of this disease. Old plantings should be cut down and thoroughly incorporated into the soil as soon as possible after harvest. When checking for worm infestations, note whether rust is present, and consider treating if infected plants are in the whorl stage or younger.

SEE **ECB** AND **CEW** MAPS ON PAGE 3

## Distribution of Adult European Corn Borer for the Week Ending August 16, 2000



## Distribution of Adult Corn Earworm for the Week Ending August 16, 2000



### PEST NOTES FROM PAGE 1

For growers who have had the **cyclamen mite** in peppers in the past: this mite is considered a "cool weather" mite because it flourished during unseasonably cool weather, such as the current temperatures we now have. The mite sneaks up on growers because you don't expect insect pest problems when temperatures are cool, and this mite is extremely tiny and is not easily observed. Inspect the peppers closely, looking for the actual mites (especially near the flowers and buds) and for distorted fruit and leaves. Because these mites inject saliva that affects the plant growth, only a few mites can cause much damage.

✓ **Tomato:** Growers along the Delaware report **thrips** damage to tomatoes (gold-flecking), ranging from a few spots on the tomato to heavy yellow flecking. Once the damage is showing, no corrective measures can be taken that will help damaged fruit, only for the undamaged fruit. Check fields closely for thrips adults or larvae (in flowers, on leaves, at cap of fruit) and if still present, use either SpinTor or Monitor for effective control. **Note:** Monitor is also effective against **stink-bugs** and **aphids**. Also, Monitor on tomatoes is a Special Local Needs Label, or SLN 24-C, and a copy of the label *must* be in possession of user at time of application. □

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

# Vegetable Twilight Meeting

August 21, 2000

Rutgers Agricultural Research  
and Extension Center  
121 Northville Rd.  
Bridgeton, NJ

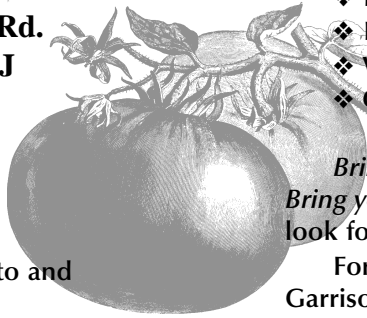
Plots open for viewing at 4:00 p.m.  
Meeting to begin at 5:30 p.m.

Get the Latest Information

- ❖ Disease Updates
- ❖ Insect Updates
- ❖ Weed Control Updates
- ❖ Other Timely Issues

See Field Trials

- ❖ Eggplant Variety Trials
- ❖ Pepper Variety Trials
- ❖ Processing Tomato Trials
- ❖ Central Asian Melon, Tomato and  
Pepper Variety Trials
- ❖ Sweet Corn Variety Trials



*Bring your plant insect samples to be identified.  
Bring your questions for agents and specialists. We  
look forward to seeing you at the meeting!*

For additional information contact Stephen A.  
Garrison, Specialist in Vegetable Crops at Rutgers  
Agricultural Research and Extension Center at (856)  
455-3100.

## Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged above normal. Extremes were 95 at Pomona on the 8th and 48 degrees at Charlotteburg on the 12th. Weekly rainfall averaged 1.63 inches north, 1.62 inches central, and 1.32 inches south. The heaviest 24 hour total was 3.58 inches at Atlantic City Marina on the 12th to the 13th. Estimated soil moisture, in percent of field capacity, this past week averaged 81 percent north, 79 percent central and 56 percent south. Four inch soil temperatures averaged 72 degrees north, 76 degrees central and 77 degrees south.

### Weather Summary for the Week Ending 8 am Monday 8/14/00

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.66	29.17	7.42	89	60	74.	3	1845	-21	78
CANOE BROOK	2.51	22.75	-.12	92	60	75.	3	2031	161	98
CHARLOTTEBURG	.72	23.37	.30	87	48	69.	0	1501	33	73
FLEMINGTON	2.83	23.50	1.41	89	60	73.	1	2062	144	98
LONG VALLEY	1.45	24.11	.33	85	60	72.	3	1674	15	97
FREEHOLD	.38	19.35	-2.13	91	61	76.	3	2222	175	75
LONG BRANCH	1.66	26.76	5.19	92	64	78.	5	1998	30	93
NEW BRUNSWICK	3.37	24.32	2.75	91	60	75.	2	2147	16	98
PEMBERTON	2.57	22.37	.57	94	59	75.	2	2628	538	100
TOMS RIVER	.94	24.18	2.03	93	64	76.	4	2143	185	82
TRENTON	.78	19.06	-1.50	91	62	75.	0	2214	-15	59
CAPE MAY COURT HOUSE	1.67	21.89	2.79	93	63	77.	2	2226	123	87
DOWNSTOWN	.33	22.23	2.03	92	63	77.	3	2325	86	38
GLASSBORO	.08	22.44	1.27	92	64	77.	2	2453	240	42
HAMMONTON	.78	20.11	-1.09	93	62	76.	1	2249	34	53
POMONA	1.62	26.96	7.59	95	62	76.	3	2186	120	100
SEABROOK	1.16	21.99	2.57	94	63	77.	2	2428	180	62
ATLANTIC CITY MARINA	3.60	25.57	7.01	90	67	76.	2	2230	245	94
SOUTH HARRISON	.46	25.73	4.59	91	63	76	NA	2404	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week 260 (Ending 8/07/00) This Week 259 (Ending 8/14/00)										

Rutgers Cooperative Extension - NJAES  
U.S. DEPARTMENT OF AGRICULTURE  
Rutgers - The State University of New Jersey  
Plant & Pest Advisory  
18 College Farm Road  
Cook College  
New Brunswick, N.J. 08901-8551

## PLANT & PEST ADVISORY VEGETABLE CROPS EDITION CONTRIBUTORS

### Rutgers Cooperative Extension Specialists

Joseph A. Fiola, Ph.D., Small Fruit & Viticulture  
Stephen A. Garrison, Ph.D., Vegetable Crops  
Gerald M. Ghidui, Ph.D., Vegetable Entomology  
George Hamilton, Ph.D., Pest Management  
Joseph R. Heckman, Ph.D., Soil Fertility  
Stephen A. Johnston, Ph.D., Plant Pathology  
Bradley A. Majek, Ph.D., Weed Science

### Rutgers Cooperative Extension County Agricultural Agents

Atlantic, Richard W. VanVranken (609-625-0056)  
Burlington, Raymond J. Samulis (609-265-5050)  
Cape May, Russell Blair (609-465-5115)  
Cumberland, Wesley Kline, Ph.D. (856-451-2800)  
Gloucester, Michelle Infante-Casella (856-307-6450)  
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)  
Mercer, Daniel Kluchinski (609-989-6830)  
Middlesex, William T. Hlubik (732-745-3443)  
Monmouth, Bill Sciarappa, Ph.D. (732-431-7260)  
Morris, Peter J. Nitzsche (973-285-8300)  
Salem, Peter R. Probasco (856-769-0090)  
Warren, William H. Tietjen (908-475-6505)

### Vegetable IPM Program (732-932-9802)

Joseph Ingerson-Mahar, Vegetable IPM Coordinator  
Kristian E. Holmstrom, IPM Program Associate  
Sarah Walker, IPM Program Associate

### Newsletter Production

Jack Rabin, Assistant Director, NJAES  
Cindy Rovins, Editor and Designer  
Mary Ann Hughes, Assistant Editor

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