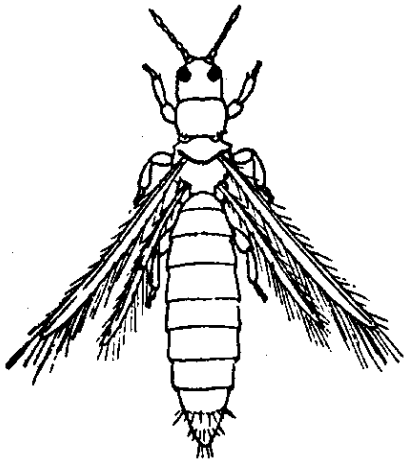
RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION $1.50 JULY 1, 1998



INSIDE

Pest Notes

Gerald M. Ghidiu, Ph.D., Vegetable Entomology

✔ **General:** The federal EPA has announced that the Agency has no plans to cancel all organophosphate pesticides. Some pesticides will undoubtedly be lost, but it was not the intent of the federal EPA to cancel all organophosphates.

Growers report that **thrips** are found in many crops, including tomato, pepper, eggplant, greens, snap beans, cucurbits, and others. Tomato and snap beans have suffered damage from **thrips**, both to the leaves and to the fruit. Materials labeled for control of **thrips** include Lannate, Metasystox-R, methyl parathion, Guthion, diazinon, and Penncap-M, and many pyrethroids (Ammo, Pounce, Ambush, Karate, and Baythroid) (**note:** pyrethroids may be less effective as temperature increases and as the **thrips** population increases). Other materials labeled include malathion, Pyrellin, Pyrenone, and rotenone. Consult label for registered crop use, rates, and restrictions before application of any pesticide.

✔ **Corn (Sweet):** Low levels of **corn earworms** and **fall armyworms** are still being caught in the blacklight trap at RAREC. These pests are likely here to stay, and numbers being caught in the traps should begin increasing during the next several weeks. Monitor the populations reported from the various blacklight/pheromone traps, then watch for these pests in the field. Thresholds are presented in the sweet corn section of the 1998 Commercial Vegetable Production Recommendations for New Jersey, as well as treatment materials, days to harvest, restrictions, etc.

✔ **Cucurbit:** Several growers report that **flea beetle** populations have been increasing in cucurbit fields. If damage is observed and still increasing, **flea beetles** can be controlled using any of a number of pesticides, including carbaryl (Sevin), Asana XL, Guthion 2L, Lannate 1.8L, Ambush 2EC/Pounce 3.2EC, methoxyclor, or Thiodan 3EC. **Flea beetles** have no resistance to any of the insecticides listed, although 2-3 applications may be necessary because of the habits of the **flea beetle**. After application, walk the fields to determine how effective the control program was, and re-apply if necessary.

✔ **Eggplant:** Some fields in Gloucester County are infested with flower **thrips**, found on the leaf undersides and in the flowers. These pests suck plant juices from the tissue, causing flowers to drop and leaves to become chlorotic. **Thrips** are not normally a pest of eggplant, but can cause heavy damage if the population becomes too high. Treat

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with Guthion or Provado for effective control of **thrips** on eggplant. The use of an insecticide such as Thiodan for control of **aphids** or **beetles** will also reduce the **thrips** population.

✔ **Tomato:** Tomato plants from the Swedesboro area have high numbers of **thrips** (at least 5-6 per leaf or more). Leaves have a stippling appearance, similar to a pesticide application phytotoxicity. As damage progresses, leaves dry up and drop off the plant. Small green fruit have a whitish to brownish speckling, and have a "rough" feel to them. Several species of **thrips** will attack tomatoes, and the **thrips** are easily seen on the stems and leaf undersides with a small handlens. Treatments are justified when **thrips** are observed. Treat with Guthion, Monitor or Provado. Monitor effectiveness. Consult label for all rates and restrictions.

Also in tomato, the numbers of adult **stink bugs** are increasing. If fruit is present, **stink bugs** are present, and damage is showing, a pesticide spray may be warranted. Effective materials for **stink bug** control include Monitor 4EC, Warrior 1EC and Baythroid 2EC. After any spray application, monitor the field to determine efficacy and status of **stink bug** population. ❑

Vegetable Crops Diseases

Stephen A. Johnston, Ph.D., Plant Pathology

✔ **Beans, snap:** For all fields seeded after July 1, be sure to apply Ridomil Gold 4E in a 7-inch band over the row after seeding for control of **damping-off**, caused by **Pythium.** In fields where there is some plant debris from the previous crop, moldboard plow the field to bury the debris, and apply Ridomil Gold PC 11G as an in-furrow treatment at seeding for control of **damping-off** caused by **Rhizoctonia** as well as **Pythium**.

✔ **Cole crops:** Maintain applications of maneb or Bravo as a foliar spray every 7-10 days for control of **Alternaria leaf spot**.

✔ **Cucumber: Bacterial wilt** is present in some fields at this time. Initially infected plants have a few wilted leaves that turn necrotic, then the entire plant wilts. The disease is caused by a bacterium that is transmitted by the **cucumber beetle**. Control of the **cucumber beetle** from plant emergence until flowering is essential for preventing **bacterial wilt** from developing. **Phytophthora fruit rot** is present in some fields at this time. Infected fruit are covered with a white, slimy mold, and the fruit collapse. Apply a copper fungicide every 7-10 days for control. Maintain foliar applications of Bravo + Benlate or Topsin M every 7-10 days for control of **anthracnose**.

✔ **Eggplant: Verticillium wilt** is present in some fields at this time. Infected plants have a portion of the plants with chlorotic leaves, and the stem eventually wilts. Control measures involve crop rotation away from eggplants for several years and preplant soil fumigation.

✔ **Muskmelon:** Maintain applications of mancozeb or chlorothalonil every 7-10 days for control of **Alternaria leaf blight**.

✔ **Pepper:** After applying Ridomil Gold 4E at transplanting, 30 and 60 days later, wait 2 weeks and start to apply a copper fungicide + a spreader sticker every 7-10 days for control of **Phytophthora blight**.

✔ **Potato (white): Early dying disease** is present in some fields of 'Superiors' at this time. Infected plants have one or more branches with chlorotic leaves, numerous leaflets have a black tip-burn, and eventually the plant dies. Control measures involve crop rotation away from potatoes, and control of the **lesion nematode** with preplant soil fumigation or an at planting application of Mocap.

✔ **Pumpkin & winter squash:** When the vines begin to run, apply maneb as a foliar spray and repeat once in 7 days. Then apply Bravo every 7-10 days until the end of the season. Scout fields for the presence of **powdery mildew**, and once observed, add Bayleton to the Bravo application, and repeat once in 14 days.

✔ **Squash (Summer):** Apply Ridomil Gold/Bravo as a foliar spray every 14 days for control of **Phytophthora blight.**

✔ **Tomato:** Quadris is being used by many growers for disease control. It is important to note that Quadris is extremely phytotoxic (causes defoliation) to certain apple varieties; therefore, do not spray tomato fields with Quadris where there is a possibility of spray drift on apples. Also, sprayers used to spray Quadris should not be used to spray apples. **Thrips** are present in some fields at this time (see **Pest Notes**). Be sure to control them to prevent spread of **Tomato Spotted Wilt Virus** into the field. Once crown fruit are 1/3 their final size, apply Bravo every 14 days and Quadris every alternate 14 days for control of **foliar** & **fruit diseases**.

✔ **Watermelon:** Maintain foliar applications of Bravo + Benlate or Topsin M every 7 days for control of **anthracnose** & **gummy stem blight**. ❑

Deer Fencing Installation Seminars

August 4, 1998
4 PM - 8 PM
Rutgers University, Snyder Research Farm
140 Locust Grove Road
Pittstown, NJ 08867

August 5, 1998
4 PM - 8 PM
Rutgers University, Agricultural Research and Development Center
121 Northville Road
Bridgeton, NJ 08302

The New Jersey Department of Agriculture and the New Jersey Division of Fish, Game and Wildlife in a cooperative program will be awarding over 700,000 feet of deer fencing to New Jersey farmers.

The Snyder Research Farm will be hosting the above noted seminars to educate farmers and other interested parties in the proper installation procedures. Representatives from the fence manufacturer and distributor, as well as commercial installers will be on hand to demonstrate fence installation.

Call the Snyder Research Farm at 908-730-9419, ext. 11, to register for either seminar.

Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged much above normal. Extremes were 96 degrees at Pemberton on the 27th, and 53 degrees at Charlotteburg on the 28th. Weekly rainfall averaged 0.15 inches north, 0.41 inches central, and 0.29 inches south. The heaviest 24 hour total was 0.63 inches at Newton on the 26th to 27th. Estimated soil moisture, in percent of field capacity, this past week averaged 69 percent north, 58 percent central and 39 percent south. Four inch soil temperatures averaged 72 degrees north, 70 degrees central and 75 degrees south.

Weather Summary for the Week Ending 8 a.m. Monday 6/29/98

	RAINFALL			TEMPERATURE				GDD BASE50		MON
WEATHER STATIONS	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	%FC
BELVIDERE BRIDGE	.42	24.47	9.35	89	63	74.	4	1057	207	61
CANOE BROOK	.09	23.84	7.60	95	59	76.	6	1239	421	56
CHARLOTTEBURG	.02	25.99	9.55	90	53	72.	5	913	274	61
LONG VALLEY	.16	24.23	7.62	86	62	72.	4	919	218	62
NEWTON	.04	20.20	5.38	88	57	72.	3	922	204	65
FREEHOLD	.35	24.85	9.62	93	59	75.	3	1065	124	69
LONG BRANCH	.20	27.15	11.87	93	62	74.	3	1017	146	32
NEW BRUNSWICK	.13	24.82	9.96	94	60	75.	1	1161	161	70
PEMBERTON	.79	18.01	3.27	96	60	76.	4	1266	291	50
TOMS RIVER	.75	31.77	16.63	95	60	75.	3	1220	353	47
TRENTON	.23	23.12	9.27	93	60	74.	1	1118	69	40
CAPE MAY COURT HOUSE	.14	18.07	4.62	94	63	76.	4	1197	249	25
DOWNSTOWN	.39	17.78	4.07	93	63	76.	3	1307	239	36
GLASSBORO	.60	17.66	2.81	94	64	76.	3	1331	284	47
HAMMONTON	.25	17.60	3.15	94	62	76.	3	1258	218	26
POMONA	.17	22.11	9.03	94	62	76.	4	1237	284	30
SEABROOK	.48	20.57	7.40	93	64	77.	4	1380	305	55
ATLANTIC CITY MARINA	.00	22.92	10.40	87	65	75.	4	1158	273	19
WOODSTOWN	.72	17.65	3.85	95	63	78.	NA	1422	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW

Last Week	251 (Ending 6/22/98)
This Week	253 (Ending 6/29/98)

Vegetable IPM Update

Kristian E. Holmstrom and Sally Walker, Program Associates in Vegetable IPM

Cole Crops

Diamondback moth (**DBM)** continues to be a problem in some plantings in central counties. As well as monitoring and spraying for this pest, it is essential that nearby cole crop plantings be destroyed quickly after harvest. This will prevent existing DBM infestations from moving into neighboring plantings.

Peppers

Beet armyworm (**BAW**) adults are beginning to show up in low numbers in pheromone traps placed in peppers in the southern region. When scouting for other pests, check the foliage in the upper canopy for **BAW** feeding damage. The larvae will be found on the undersides of damaged leaves. In the past, this pest has mainly been a problem in the southern counties, particularly Cumberland County.

Fall armyworm (**FAW**) adults are also appearing in the pepper pheromone traps. **FAW** mainly attacks pepper fruit, and is a more difficult pest to monitor in the field since they are usually seen after the fruit damage has occurred. The egg masses are light brown and covered with moth scales, which makes them look furry/fuzzy. **BAW** egg masses look the same, but **BAW** larvae can usually be seen feeding on the plant before they damage fruit. Both of these pests are usually more of a problem for peppers later in the season.

Tomatoes

In our research traps in Cedarville, Cumberland County, stinkbug catches have begun to increase. Stinkbugs may cause blemishes to fruit that render them unmarketable. Treatments may be warranted for stinkbugs if fruit are present and surrounding vegetation is becoming dry or is mowed.

This week a tomato fruitworm (CEW) was found at the same location. This is an indication that the recent adult population may be high enough to cause damage to tomatoes. Watch local trap catches, and consider treating for this pest as numbers increase.

Sweet Corn

We are now between adult generations of **European corn borer** (**ECB**) with only light catches occurring primarily in the northern counties. Sweet corn plantings now in the pretassel and full tassel stages are likely to have ECB infestations. These plantings should be treated if greater than 12% of the plants have live borers in the tassels.

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

Becket	2	Denville	1	Flanders	1
Sergeantsville	2	Eldora	1	Folsom	1
Woodstown	2	Ellisdale	1	Morristown	1
Cohansey	1	Flagtown	1	Shirley	1

Corn earworm (**CEW**) adults are still being caught in low numbers throughout the southern and central counties. These adults represent a potentially damaging population in some areas requiring adherence to a silking spray schedule.

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

Elmer	2	Eldora	1	Pemberton	1
Cedarville	1	Jamesburg	1	Sewell	1
Crosswicks	1	Manalapan	1	Shirley	1
Egg Harbor	1	New Egypt	1	Woodstown	1

Sap beetles (**SB**) have been observed recently in sweet corn plantings throughout the state. These small dark beetles may be found feeding on pollen in leaf axils. Sap beetles may gain entrance to corn ears through ECB entry holes or through the silks in loose husked varieties. ECB control is key to minimizing SB infestations. Sprays to control ECB and CEW should reduce SB populations.

General Sweet Corn Spray Schedule

Silking stage:	North	6 day *
	Central	3 – 5 days*
	South	3 – 5 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.

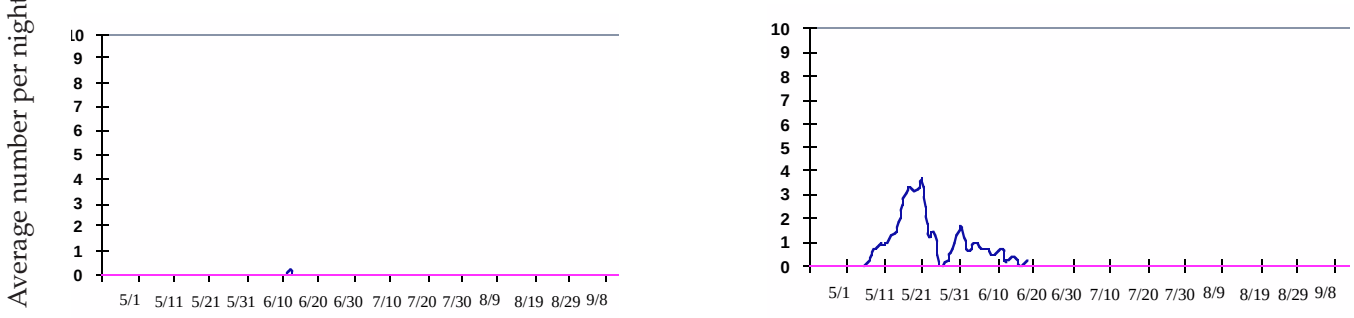
See Blacklight Trap Catches on page 5

Blacklight Trap Catches

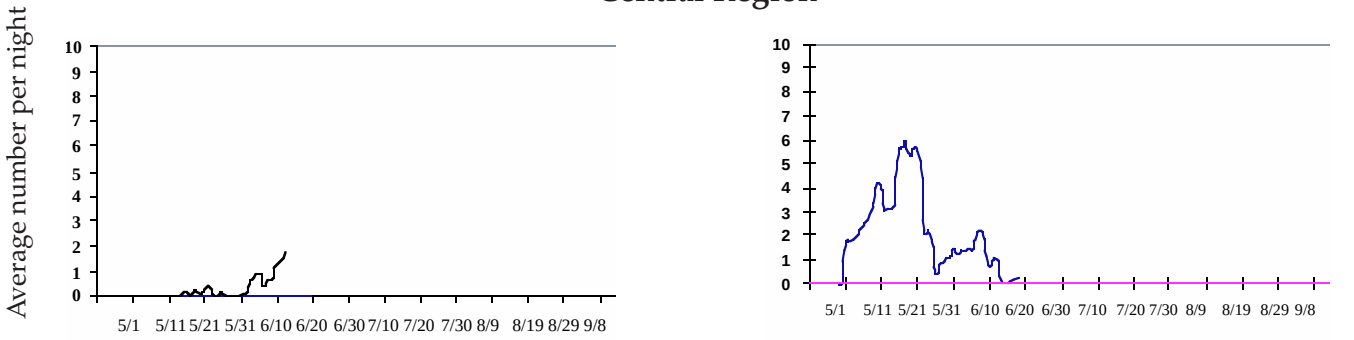
Corn Earnworm

European Corn Borer

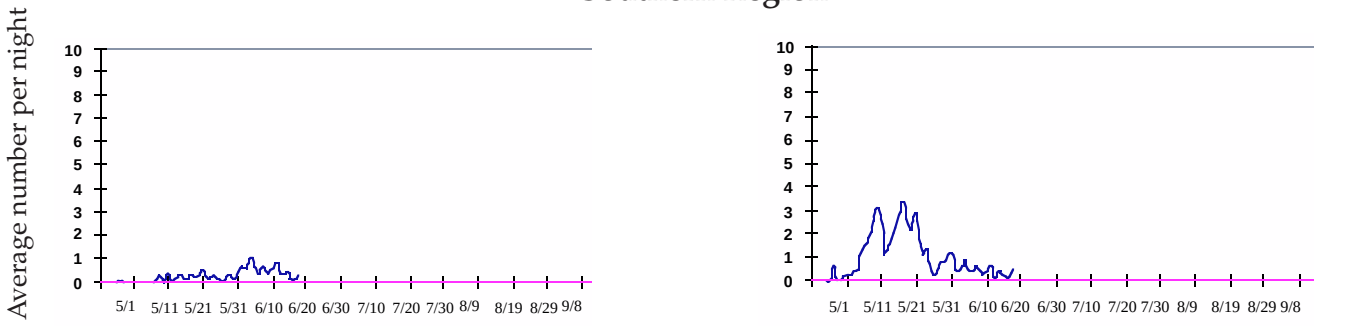
Northern Region



Central Region



Southern Region



Date

Date

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers -The State University of New Jersey

88 Lipman Drive
Cook College
New Brunswick, N.J. 08901-8525

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. Ghidiu, 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
Craig A. Storlie, Ph.D. Agricultural Engineering
Rutgers Cooperative Extension County Agricultural Agents, Assistants and Program Associates
Atlantic, Richard W. VanVranken (609-625-0056)
Burlington, Raymond J. Samulis (609-265-5050)
Cape May, Larry E. Newbold (609-465-5115)
Cumberland, Wesley Kline, Ph.D. (609-451-2800)
Gloucester, Michelle Infante (609-863-0110)
Hunterdon, Winfred P. Cowgill, Jr. (908-788-1338)
Mercer, Daniel Kluchinski (609-989-6830)
Middlesex, William T. Hlubik (732-745-3443)
Monmouth, Richard G. Obal (732-431-7260)
Morris, Peter J. Nitzsche (973-285-8300)
Salem, Peter R. Probasco (609-769-0090)
Somerset, Betsey Saul, Agricultural Assistant (908-526-6293)
Warren, William H. Tietjen (908-475-6505)
Kristian E. Holmstrom, IPM Program Associate
Sarah Walker, IPM Program Associate
Newsletter Production
Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer

Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The user is reponsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact Rutgers Cooperative Extension of your County.

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