

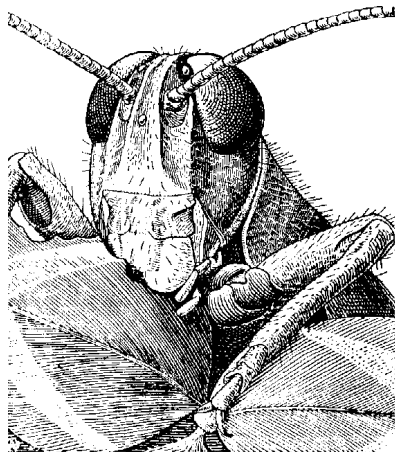
PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

JULY 16, 1997

Pest Notes

Gerald M. Ghidui, Ph.D. Vegetable Entomology



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✓ **General:** Outbreaks of **spider mites** have been reported in several different crops, including cucurbits, eggplant, and white potato. Various pesticides are available that will control **spider mites** on vegetable crops. Applicators with a pesticide license can apply miticides such as AgriMek (Avid), dimethoate, Kelthane, Vydate L, and Dibrom 8E. For those without such a pesticide license, miticides such as Vendex or Metasystox-R are available. More than one application may be necessary. Consult label for all rates, crops, and restrictions before using. Thorough coverage of foliage is extremely important. Apply the miticide in the late afternoon or early morning for best results.

Small **grasshoppers** are found in many vegetable crops, causing minor leaf feeding damage at this time. **Grasshopper** populations increase in fields with other crops (field crops, weed fields, etc.) and move into the attractive vegetable crops as the field crop or weed fields dry up in the heat. If numbers of **grasshoppers** are increasing or damage caused by **grasshoppers** is increasing, several insecticides are labeled for effective control, including the pyrethroids and carbaryl (Sevin).

✓ **Pepper:** **Aphid** populations are causing pepper fruit to become encrusted with the clear, sticky honeydew noticed in some fields. This material is an excellent substrate for black sooty mold and is difficult to wash off after peppers become coated. An **aphid** management program is best for this problem, and current weather conditions (hot, dry) are ideal for **aphid** population buildups. Monitor the field and look on the underside of the leaves for **aphids** or colonies (note: with heavy populations, leaves tend to curl downward). Several effective **aphid** pesticides are available; and depending on crop, include: Metasystox-R, Provado, Thiodan, Lannate, Dibrom, Orthene, and dimethoate. Consult label for all rates, restrictions, and crop usage.

✓ **Tomato:** Numbers of **stinkbugs** are slowly increasing in tomato crops. Damage appears as yellowish to whitish spots on the green or red fruit. **Stinkbugs** can be controlled using Baythroid, Monitor (Special Local Needs Label—a copy of label must be in possession of applicator at time of use), Thiodan, or Warrior. It is likely 2-3 applications spaced 7-10 days apart are needed for control of **stinkbugs** if populations are high or if bugs are migrating into the field from a nearby source (field crop, etc.). Consult label for all rates, restrictions, and crop uses. □

Vegetable Crops Diseases

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

✓ **Carrot:** Maintain applications of Bravo every 10 days for the control of **leaf blights**.

✓ **Cole Crops:** Maintain applications of Bravo or maneb on a 7- to 10-day schedule for control of **Alternaria leaf spot**.

✓ **Corn (Sweet):** Scout fields for the presence of **rust**. Once lesions are observed prior to the whorl stage, apply a fungicide on a 7-day schedule, unless using Tilt which is applied on a 14-day schedule.

✓ **Cucumber:** Maintain applications of Bravo + either Benlate or Topsin M every 7-10 days for the control of **anthracnose**. In areas where **Phytophthora blight** is present, apply Ridomil/Bravo or Ridomil/Copper every 14 days.

✓ **Eggplant: Verticillium wilt** is present in some fields at this time. Infected plants have various stages of wilt. In some cases only 1/2 of a leaf will wilt, and in other cases an entire branch will wilt. Some chlorosis is also present. Eventually the entire plant wilts. No control measures are available at this time in the growth of the crop. Control measures need to be applied prior to planting the crop in the spring. Crop rotation and preplant soil fumigation should be used in future plantings for control. Apply Ridomil Gold 4E as a soil surface application in a 6- to 8-inch band on each side of the row 30 and 60 days after transplanting. Beginning 2 weeks after the last Ridomil application, make a foliar application of a copper fungicide + maneb with a spreader sticker; and repeat every 7-10 days for control of **Phytophthora blight**.

✓ **Muskmelon:** Maintain applications of Bravo or mancozeb every 7 days for the control of **Alternaria leaf blight**.

✓ **Pepper: Blossom end rot** is severe in several fields at this time. This is the result of uneven soil moisture which brings about a calcium deficiency resulting in the injury. Symptoms include a brown lesion on the blossom end of fruit, and makes the fruit unmar-

ketable. Maintain uniform soil moisture with timely applications of irrigation to reduce the incidence of this disorder. Make applications of Ridomil Gold 4E via drip irrigation systems 30 and 60 days after transplanting for the control of **Phytophthora blight**. Beginning two weeks after the last Ridomil application, make a foliar application of a copper fungicide + maneb with a spreader sticker; and repeat every 7-10 days for control of the aerial and fruit rot phases of the disease.

✓ **Pumpkin & Squash (Winter):** Maintain applications of Bravo every 7-10 days for prevention of **foliar diseases**.

✓ **Tomato: Pith Necrosis** is present in several fields of staked tomatoes on plastic mulch and drip irrigation. Symptoms include stunted plants with a dark lesion on the main stem 1-2 feet above the soil line. In many cases adventitious roots are growing out of the central portion of the lesion. The central portion of the stem within the lesion has a brown to black discoloration present. The disease is caused by a common bacterium in the soil that infects tomatoes when there are low night temperatures, high nitrogen content in the soil, and high humidity. The disease will not spread, and there are no control measures available at this time. **Bacterial leaf spots** are present in some fields. Infected plants have leaves containing numerous small, angular-shaped lesions that are water-soaked on the underside. Maintain applications of Bravo C/M or a copper fungicide + mancozeb as a foliar spray every 7 days for control.

Alfalfa mosaic virus is present at a low incidence in some fields at this time. Infected plants have no obvious foliar symptoms; however, fruit have a brown discoloration present over the majority of the surface. The virus is spread by **aphids**, and fields should be sprayed to reduce the **aphid** populations in order to assist in preventing spread. **Leaf mold** is present in greenhouse tomatoes at this time. Infected leaves have chlorotic lesions present; and an olive-green, velvety mass of spores is present on the underside of the lesion. The disease is caused by a fungus, and is favored by high temperatures and relative humidity greater than 85%. Reduce the humidity in the greenhouse as much as possible, and apply a Termil (chlorothalonil) bomb for control. □

Weather Summary for the Week Ending 8 a.m. Monday 7/14/97

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	2.01	13.63	-3.57	90	52	71.	-1	1043	-104	82
CANOE BROOK	.38	12.71	-5.59	95	55	76.	3	1273	126	60
CHARLOTTEBURG	.94	16.04	-2.45	89	50	70.	0	974	53	68
FLEMINGTON	.35	13.69	-3.93	94	54	74.	0	1080	-104	59
LONG VALLEY	1.20	15.59	-3.26	87	55	71.	0	958	-35	72
NEWTON	1.32	13.82	-3.00	89	50	71.	0	860	-156	74
FREEHOLD	.82	14.47	-2.70	95	58	77.	3	1249	-36	62
LONG BRANCH	.00	14.12	-3.01	89	59	74.	0	1196	-14	25
NEW BRUNSWICK	1.23	17.42	.47	93	56	75.	0	1229	-133	77
PEMBERTON	.18	14.40	-2.52	97	56	76.	2	1418	96	32
TOMS RIVER	.50	13.82	-3.53	95	54	75.	1	1227	7	43
TRENTON	1.10	17.15	1.12	93	53	74.	-2	1230	-189	61
CAPE MAY CRT HSE	.51	14.41	-.76	91	58	75.	0	1271	-31	28
DOWNSTOWN	.42	13.23	-2.52	94	56	75.	0	1296	-136	40
HAMMONTON	.54	13.98	-2.66	95	55	75.	-1	1283	-123	35
POMONA	.28	14.70	-.32	94	56	76.	2	1290	-10	29
SEABROOK	.74	14.42	-.78	94	59	77.	1	1402	-39	45
ATLANTIC CTY MRINA	.39	10.83	-3.55	89	61	75.	1	1274	52	29
WOODSTOWN	.20	13.78	-3.16	97	55	76	NA	1421	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
This Week 248 (Ending 07/14/97)										

IPM Update

Kristian E. Holmstrom, Vegetable IPM Program Associate and Sally Walker, Vegetable IPM Program Associate

◆ Pepper

European corn borer adult catches in the southern part of the state remain low in blacklight and pheromone traps, indicating low egg laying pressure at this time.

A low population of **two-spotted spider mite** was found in a Salem county field this week. **Mites** can be difficult to detect at low levels, but hot, dry weather can result in rapid population increases. Look for **mites** in stippled areas between veins on the undersides of older leaves.

◆ Sweet Corn

Adult **corn earworm (CEW)** activity remains low in the southern and central counties. Sporadic trap catches continue as far north as Middlesex County. The highest nightly **CEW** blacklight trap catches are as follows:

Burlington	1	Ellisdale	1	Milltown	1
Cranbury	1	Hammonton	1	New Egypt	1
Egg Harbor	1	Medford	1		

Experience has shown that repeated use of synthetic Pyrethroid insecticides on sweet corn at this time of the season can result in populations of **aphids** in the tassels and on the husks. It may be prudent to alternate chemicals periodically to prevent this occurrence. Check the

1997 New Jersey Commercial Vegetable Production Recommendations for labeled products on sweet corn.

A **fall armyworm (FAW)** infestation was found in whorl stage sweet corn in Monmouth County this week. The earliest feeding from this pest is usually found in coastal counties. **FAW** will feed on very young corn plants so seedling and young whorl stage plantings should not be overlooked when scouting at this time.

Adult **European corn borer (ECB)** activity is now low throughout the state. Larval infestations resulting from earlier **ECB** activity continue in plantings at the pre-tassel and older stages. Insecticide applications may be necessary on these plantings to prevent ear damage, with special emphasis on the transition between pre-tassel and full tassel to maximize **ECB** exposure to the insecticide. The highest nightly **ECB** blacklight trap catches are as follows:

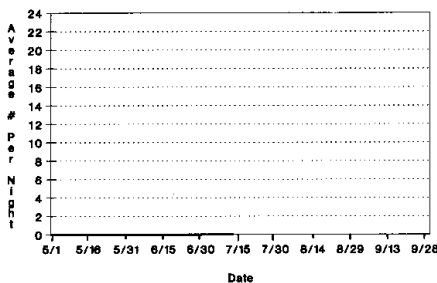
Crosswicks	2	Blairstown	1	Egg Harbor	1
Ellisdale	2	Chapel Heights	1	Manville	1
Fishing Creek	2	Chester	1	New Egypt	1
Milford	2	Cranbury	1	Woodstown	1

◆ General Sweet Corn Spray Schedule

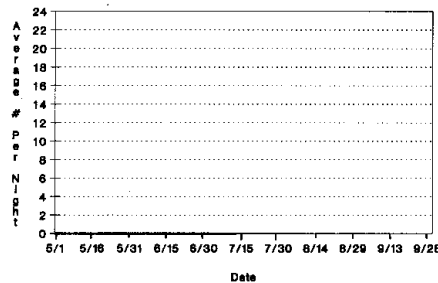
Silking stage: Central 5 - 6 days*
South 5 - 6 days*

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

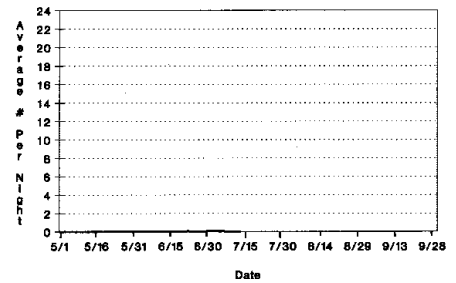
Northern NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



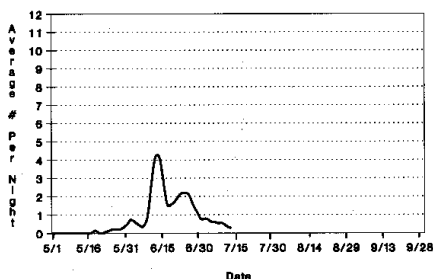
Central NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



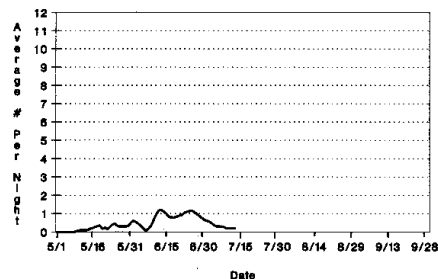
Southern NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



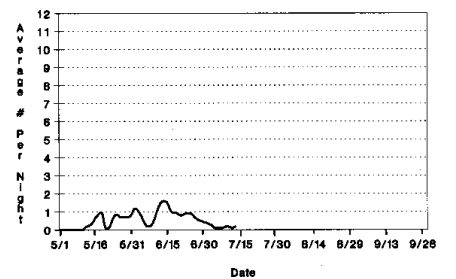
Northern NJ- EUROPEAN CORN BORER (ECB)
Blacklight Trap Catches



Central NJ- EUROPEAN CORN BORER (ECB)
Blacklight Trap Catches



Southern NJ- EUROPEAN CORN BORER (ECB)
Blacklight Trap Catches



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