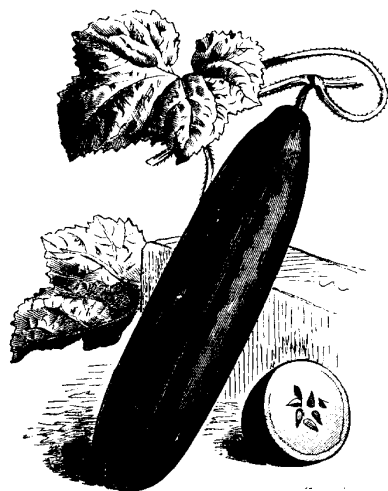


PLANT & PEST ADVISORY

VEGETABLE CROPS EDITION \$1.50

JULY 9, 1997



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Vegetable Crops Diseases

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

- ✓ **Bean:** Be sure to apply Ridomil Gold 4E in a 7-inch band over the row at seeding for the control of **damping-off** caused by **Pythium**.
- ✓ **Carrot:** Maintain applications of Bravo every 10 days for the control of **leaf blights**.
- ✓ **Cole crops:** Maintain applications of Bravo or maneb on a 7-10 day schedule for control of **Alternaria leaf spot**.
- ✓ **Corn (Sweet):** **Rust** is present in South Jersey at this time on young plantings. Infected lower leaves have numerous, narrow, slit-like lesions containing a mass of "rusty-colored" spores. If **rust** occurs in fields prior to the whorl stage of growth, then fungicide applications are warranted. Fields infected with **rust** prior to the whorl stage can be defoliated by harvest, and high yield and quality reductions can occur. Observe fields now for the presence of **rust** (be sure to look at the older leaves on young plantings) on a regular basis. Once lesions are observed prior to the whorl stage, apply a fungicide on 7-day schedule, unless using Tilt, which is applied on a 14-day schedule.
- ✓ **Cucumber: Phytophthora blight** is present in some fields at this time. Infected plants are completely wilted. The disease is generally located in wetter portions of fields. Apply Ridomil/Bravo or Ridomil/Copper as a foliar spray every 14 days to protect against spread. Add Benlate or Topsin M to the above fungicides, and add with Bravo on alternate 14 days for control of **anthracnose**.
- ✓ **Eggplant: Phytophthora blight** is present in some fields at this time. Infected plants are completely wilted, and there is a black girdling lesion at the base of stems near the crown of the plant at the soil line. Apply Ridomil Gold 4E as a soil surface application in a 6-8 inch band on each side of the row 30 and 60 days after transplanting. 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.
- ✓ **Pepper: Blossom end rot** is present in fields being harvested. Symptoms include a soft brown spot at the blossom end of fruit. This is a physiological disorder in which calcium levels are reduced in the plant brought about by an uneven amount of soil moisture during the growth of the crop. Maintain uniform watering via irrigation to avoid excessive wet and dry periods. Also maintain high calcium levels in the soil. **Phytophthora blight** continues to spread in several fields of plastic mulch and drip irrigation. Maintain applications of Ridomil Gold 4E by

SEE DISEASES ON PAGE 3

Pest Notes

Gerald M. Ghidui, Ph.D. Vegetable Entomology

✓ **General:** The current weather conditions (dry, hot) are ideal for population explosions of **spider mites**. These pests have already been reported in eggplant and other crops, and suck the juices from the plants, turning them a whitish or bronzed color. Leaves dry up and drop from the plant. With the hot weather, populations will appear virtually overnight, so close monitoring at this time is important. Several miticides are labeled in some vegetable crops and are highly effective: Kelthane, AgriMek and Vendex. Other materials that are effective against low **mite** populations included Dibrom 8E and Vydate. **Note:** overuse of broad spectrum insecticides, especially pyrethroids, at this time will flare **mite** populations. If growers use such insecticides, it is wise to alternate these products with narrow-spectrum insecticides and to closely monitor their fields.

Also, it is important to monitor for **aphids**. **Aphid** populations rapidly increase during hot weather that begins right after a spell of cold weather. **Aphids** then rapidly reproduce, and the natural enemies (predators, parasites) can't keep up with the population. These pests suck plant juices, and high populations can rapidly reduce yields. They also transmit diseases such as plant viruses to many crops, including peppers and cucurbits. In some leafy greens, high populations tend to become infected with a fungus that kills the **aphids** but causes them to stick to the leaves, and they are impossible to wash off. In either case, it is best to prevent the **aphid** populations from becoming unmanageable. Effective materials for **aphids** include Orthene, Dibrom, Lannate, MetaSystox-R, Guthion, and Provado. Consult label for all rates, crops, and restrictions.

As of 1 July, the Novartis Crop Protection company (the old Ciba Geigy Company) merged with Merck AgVet Division (producers of AgriMek). The Merck products will continue to be produced and marketed.

✓ **Corn:** **European corn borer** populations are still low, which is likely representative of the 1-generation summer **corn borer** (univoltine **borers**). The second generation of the 2-generation **borer** (bivoltive) should not appear for another 2-3 weeks. For effective borer control, refer to page 136 of the [1997 Commercial Vegetable Production Recommendations for New Jersey](#).

✓ **Potato:** Potato leaf hopper populations are still very high in areas throughout southern New Jersey. This pest feeds on several important crops, including potato, and causes "hopper burn" to the foliage. If potato **leafhoppers** are not controlled, yields will be reduced. Effective pest management materials include Vydate, Thiodan, Furadan 4F, Imidan, and dimethoate. Consult label for all rates, labeled crops, and restrictions. □

Vegetable IPM Update

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

◆ Pepper

Adult **European corn borer** is low in pepper growing areas of Southern New Jersey. Egg laying should be low at this time, however, some larvae have been found from eggs laid by the first generation adults in Gloucester and Ocean counties.

◆ Tomato

Blacklight traps situated in tomato plantings in Hunterdon and Morris counties continue to catch **stinkbugs**. These low level catches indicate **stinkbug** activity in and around tomato plantings. As yet no damage has been detected in these counties. Look for white blotches on green fruit, or hardened, yellow blotches on ripening fruit.

Low numbers of **two-spotted spider mite** have been found on Burlington county tomato plantings. This recent occurrence is noteworthy given that **spider mite** populations can increase rapidly during periods of hot, dry weather. Look for a light colored stipple on the upper surface of leaves, and webbing around the veins on the undersides of leaves.

The first **tomato fruitworm larva** (also called **corn earworm**) was found on green fruit in Burlington county this week. This occurrence should become more common as adult populations increase. Watch area blacklight catches of **corn earworm** for increases in adult activity.

Small instar tomato **hornworms** were also found in Burlington county tomato plantings this week. These larvae can be difficult to spot, but defoliation in the area of the **hornworm** is usually apparent.

◆ Sweet Corn

Corn leaf rust can be found in many plantings around the state at this time. If this infection appears in whorl stage or younger sweet corn, fungicide applications may be warranted depending on the level of varietal resistance.

A light population of **Corn earworm (CEW)** is active in the southern and central counties as indicated by sporadic blacklight catches in those areas. The highest nightly **CEW** blacklight trap catches are as follows:

Ellisdale	1	Manalapan	1	Pemberton	1
Green Creek	1	Medford	1	Rosenhayn	1
Indian Mills	1	New Egypt	1	Sewell	1

Blacklight catches of **European corn borer (ECB)** have dropped to very low levels in most areas of the state. In southern Hunterdon, Mercer and Somerset counties, however, moderate activity continues. Sweet

SEE IPM ON PAGE 3

Correction:

In last week's issue in "Renovating Chandler Strawberries for a 2nd Harvest Season" the 1st sentence of the second paragraph should read: One of the main costs in growing Chandler strawberries is the cost of the plants (17,400 plants/acre). □

IPM FROM PAGE 2

corn now entering whorl stage should have little feeding from this pest at this time. Plantings approaching silk stage may require insecticide applications to prevent ear damage from ECB. The highest nightly ECB blacklight trap catches are as follows:

Hopewell	5	Ellisdale	2	Milltown	2
Sergeantsville	5	Hackettstwn	2	Ringoes	2
Flagtown	3	Harding	2	Allentown	1
Cranbury	2	Lawrenceville	2	Blairstown	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.

DISEASES FROM PAGE 1

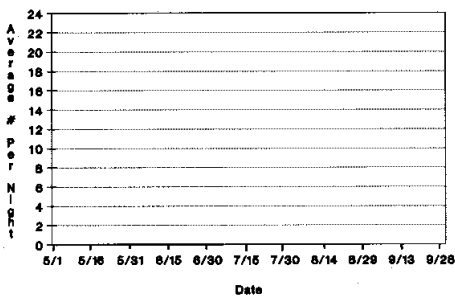
injection via drip irrigation systems 30 and 60 days after transplanting. Beginning two weeks after the last Ridomil application, make a foliar application of a copper fungicide + maneb with a spreader sticker, and repeat every 7-10 days for control of the aerial and fruit rot phase of the disease.

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

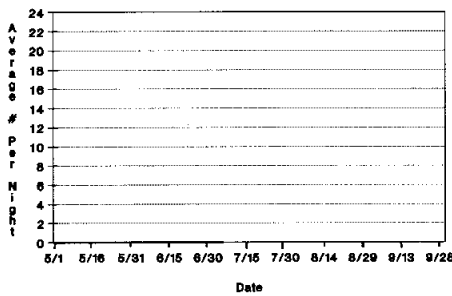
✓ **Squash (Summer):** All fields seeded after the first of July need to be produced on reflective (aluminum) mulch. Several suppliers of reflective mulches are available. Reflective mulch prevents **winged aphids** from landing and feeding on squash plants, thereby preventing spread of **mosaic viruses**. Also, do not seed squash fields near existing cucurbit fields. Older cucurbit fields provide a reservoir for **mosaic viruses**, and **winged aphids** move them from older fields to nearby younger plantings.

✓ **Tomato:** Maintain applications of Bravo or Quadris for the control of **foliar and fruit diseases**. Be sure when spraying staked tomatoes, that a drop nozzle sprayer is used to get coverage of the lower leaves. Lower leaves are the first to get infected, and will supply inoculum (spores) that infect the leaves the rest of the way up the plant. Make applications on a 7-10 day schedule, and do not apply more than 4 consecutive applications of Quadris. Do not apply any sooner than 7 days prior to harvest with Quadris. □

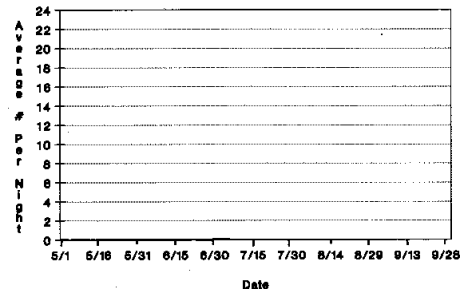
Northern NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



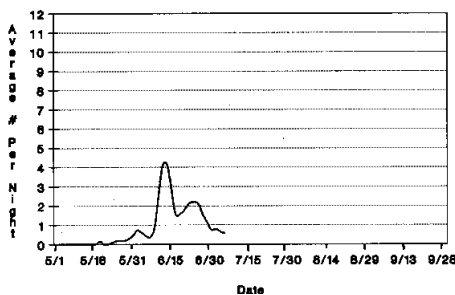
Central NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



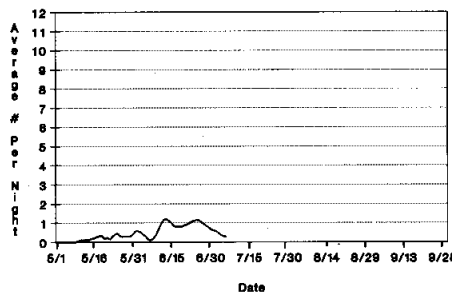
Southern NJ- CORN EARWORM (CEW)
Blacklight Trap Catches



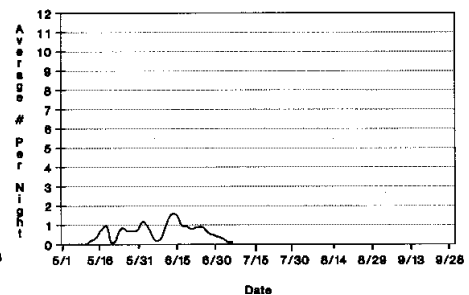
Northern NJ- EUROPEAN CORN BORER (ECB)
Blacklight Trap Catches



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



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



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