

Insect Control in the Garden



Dr. Charlie Barden



"What is wrong with my plant?"

- *Environmental stress
- *Nutritional deficiency
- *Chemical injury
- ***Insect damage**
- *Infectious Disease:
fungi, viruses,
bacteria,
nematodes



Alternaria cabbage, mmk

Reducing Insect Damage

- Plant at the best time.
- Keep plants healthy and growing quickly, with good weed control, watering and soil fertility.
- Check plants a couple of times/week.
- ID the pest before taking any action.

Insects I will cover

- aphids
- cucumber beetles
- squash bugs
- squash stem borer
- corn ear worm
- tomato horn worms
- blister beetles
- mites

Aphids- green or reddish



Emerge early in April

- Usually weather and beneficial insects (lady bugs) keep them in check.
- Insecticidal soap, permethrin, malathion, or acephate



Lady bug adult
and larvae



Cucumber beetles+bacterial wilt



- Major pest on cucumbers and cantaloupes, adults overwinter and attack new seedlings.
- Use floating row covers (seal edges).
- Permethrin, rotenone, sevin, insecticidal soap for larvae

Squash bugs



- Adults overwinter, and lay eggs in late June-early July. Nymphs suck juices from the plant and releases a toxin that causes wilting and death.
- Sevin, permethrin, multi-purpose garden dust

Squash bug eggs and nymphs



**This is the
time
for control**

Squash Bug Population Dynamics

- **Overwinter as adults**
- **Begin to lay eggs in late May** **1 adult**
- **First generation mid June-July** **500-600 adults**
- **Second generation lay eggs**
- **Second generation mid Sept-Oct** **62,000 adults**



Strategies for Squash Bug Control

- Reduce overwintering adults (hibernation places).
- Lay shingles near squash plants.
- Spray only after the hatch (mid June).
- Control 1st generation
- Remove vines as soon as fruit are mature.
- Vine removal reduces overwintering and removes hibernation places

Squash vine borer



- Adults emerge in mid-June, laying eggs singly on squash and pumpkin vines.
- Apply borer control chemicals, rotenone, permethrin, Sevin, methoxychlor.
- Stems can sometimes be split, and the borer killed, and the vine will survive.

Corn ear worm (tomato fruit worm)



- Adult moths fly up from Mexico every summer.
- Control requires spraying every 3 days during silking.
- Spinosad (Borer+Bagworm), Cyfluthrin, Sevin

Tomato hornworms



Tobacco above,
and Tomato left

- Also may attack peppers, eggplants, and tobacco
- Usually handpicking is adequate. Look for plants missing leaves, with bare stems.
- Bt, and Sevin will control is needed

Blister beetles



- Tend to appear in July, in large numbers, can cause serious damage.
- Permethrin, cyfluthrin, (Ortho Bug-B-Gone).
- If handpicking, wear gloves!

Mites – love hot dry weather

This is severe spider mite damage, applying Sevin which works for many pests, will only make aphid and mite populations increase.

WHY? Because Sevin is deadly to mite and aphid predator insects.



Instead, apply insecticidal soap, before the damage gets this bad!.

Questions?

