

COMMON VEGETABLE INSECT

For safe and effective use of insecticides, always identify the problem correctly.



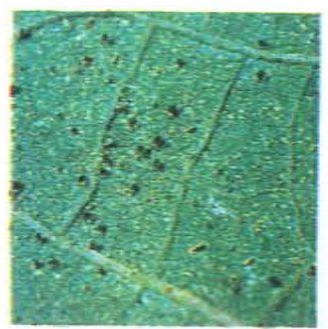
1. Cabbage looper (light green) and imported cabbageworm (dark green)



2. Cabbage aphid. Other species damage many crops.



3. Hornworm showing cocoons of parasite on back



4. Two-spotted spider mite (enlarged). Not an insect.



5. Bean leaf beetle



6. Mexican bean beetle adult, pupa, larvae, eggs, and damage



7. Thrips (enlarged)



8. Root maggot and damage



9. Striped cucumber beetle



10. Spotted cucumber beetle



11. Colorado potato beetle larvae and adults



12. Potato flea beetle and damage



3. Potato leafhopper (greatly enlarged) and leafhopper damage



14. Squash vine borer and damage



15. Squash bug nymphs and adult

Common Vegetable Insects

1. **Cabbage loopers** and imported cabbageworms both overwinter as pupae. The grayish-brown cabbage looper moth emerges in the spring, and eggs are laid singly on the upper leaf surfaces at night. The greenish larvae feed for 2 to 4 weeks. The larvae have three pairs of prolegs and get their name from their looping manner of movement. The familiar white butterflies of the imported cabbageworm have three to four black spots on the wings and also emerge in the spring. Eggs are deposited singly on the underside of the leaves. The green, velvet-like caterpillars have five pairs of prolegs and feed for 1 to 2 weeks. There are several generations of each insect each year.

2. **Cabbage aphids** are small, whitish-green aphids, about the size of bird shot. They suck sap from cabbage plants. This aphid overwinters as an egg. Wingless females are produced without mating, and large populations appear quickly when environmental conditions are favorable. Overcrowding appears to be the single factor in producing a winged generation which then flies to a new food source.

3. **Hornworms** feed on tomato and potato plants. Both the tobacco and tomato hornworms are found in Iowa. Both species overwinter as pupae in the soil. Large, swift-flying hawk moths or hummingbird moths appear in May or June and feed at dusk on nectar from flowers. The worms require 3 to 4 weeks to become full grown at a length of 3 to 4 inches. A partial second generation may occur in Iowa. The tobacco hornworm shown in the picture has been parasitized by a tiny Braconid wasp.

4. **Two-spotted spider mites** overwinter as adults under ground debris. During periods of dry weather, they damage beans, corn, tomatoes, eggplant, cucumbers, and melons. Entire leaves appear light in color or may dry up completely. The undersurface of the leaves will be covered with silken threads, eggs, and mites. The complete life cycle from hatching to adult will take from 5 days at 75°F. to 19 days at 55°F. There are 5 to 10 generations each year in Iowa.

5. **Bean leaf beetles** are of minor economic importance in Iowa gardens because of low populations. The larvae feed on bean roots, and adults eat holes in the leaves. They pass the winter as adults, and lay eggs in clusters at the base of the plant. There is one generation each year in Iowa.

6. **Mexican bean beetle** larvae and adults attack garden beans grown in eastern Iowa. Feeding results in a lace-like, skeletonized leaf. This insect overwinters in the adult stage, emerges in the spring, and deposits eggs on the underside of leaves. There are two or three generations each year in Iowa.

7. **Thrips** are tiny insects, about 1/8 inch long and are of minor economic importance in Iowa vegetable gardens. Adults and nymphs feed by rasping the leaf tissue. Several generations are produced. The adults have four characteristic feather-like wings.

8. **Root maggots** are tiny, legless maggots that feed on the roots of cabbage and cauliflower and on the fleshy portions of turnips and radishes. Adults are similar to house flies, but their legs appear to be longer. There are several generations each year. Winter is spent in the pupal stage in the soil.

9. **Striped cucumber beetles** carry and spread the disease organisms that cause bacterial wilt and cucumber mosaic of cucurbits. The larvae feed on the roots, and the adults feed on leaves and may girdle stems at or near the soil surface. Unmated adults overwinter and may start feeding on cucurbits as soon as the plants emerge. There is one generation each year in Iowa.

10. **Spotted cucumber beetles** are also known as southern corn rootworms. The adults transmit the pathogen that causes bacterial wilt. The larvae develop on the roots of corn, beans, small grains, and alfalfa. Adults feed on many garden plants in addition to cucurbits. There are at least two generations each year in Iowa.

11. **Colorado potato beetles** feed on potato leaves and on other garden crops and weeds to a lesser extent. The adults overwinter buried deep in the soil. Orange-yellow eggs are deposited in batches of 20 to 25 each on the underside of leaves. The brick-red, black-spotted, hump-backed larvae feed for 2 to 3 weeks. There are several generations each year.

12. **Potato flea beetles** are tiny insects with hind legs well developed for jumping. Several different species of flea beetles feed on eggplant, spinach, radishes, cucumbers, tomatoes, peppers, and sweet corn, as well as potatoes. Most flea beetles overwinter as adults. The larvae feed on roots, underground stems, or leaves. Adult feeding causes very small, irregular holes through or into leaves. Some plant disease organisms are carried by the insects. There are one to two generations each year.

13. **Potato leafhoppers** apparently do not overwinter in Iowa but fly into the state each year from the South. They are green, wedge-shaped, and feed by piercing leaf tissue and sucking up sap. Because the feeding causes tip burn or hopperburn, this insect is capable of causing severe damage. Hopperburn starts as a triangular brown spot at the tip of the leaf. Later the entire margin rolls upward and turns brown. Eventually only a narrow strip of the leaf along the midrib remains green. There are several generations each year in Iowa.

14. **Squash vine borers** may damage squash, pumpkins, cucumbers, and muskmelons by tunneling in the stem, causing the runners to wilt and die. The insect overwinters as a larva or pupa in the soil. The wasp-like moth with transparent wings emerges about the time the vines are beginning to run. Eggs are laid on the stems, usually near the base of the plant. The newly hatched larvae burrow into the stem and complete their growth in about a month. There is only one generation each year.

15. **Squash bugs** feed by sucking sap from the leaves of all cucurbits. Leaves may suddenly become blackened and die. Unmated adults overwinter under trash. Several dozen eggs are laid in a group, and the resulting nymphs remain close together during their development. There is only one generation each year.

Descriptive information prepared by entomologists at Iowa State University.

Insect Picture Sheet Series- No. 9
File: Pest Management 4



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Cooperative Extension Service, Iowa State University of Science and Technology and the United States Department of Agriculture cooperating. Elizabeth A. Elliott, interim director, Ames, Iowa. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

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