

Striped Cucumber Beetle

Acalymma vittatum (Fabricius); Family: Chrysomelidae



UGA1435021

Striped cucumber beetles.

Photo from Clemson University, USDA Cooperative Extension Slide Series, Bugwood.org

Injury

This insect is injurious to cucumber, squash, melon and related plants. It is native to America and can be found wherever its food plants are present except the far west.

Striped cucumber beetles are carriers of bacterial wilt, a serious disease of cucurbits. As they feed they transmit the pathogen from one plant to another, and carry it over the winter when they hibernate. The following spring the beetles may infect new plants with the disease. The greatest injury done by this insect is to the young plants soon after they come up in the spring. The adults feed on them and may even kill them. The larvae cause injury by burrowing into the stem, both above and below the ground. They may also feed on the underside of fruit when it lies on the ground. Adult beetles will feed on flowers and destroy them by eating off pistils. New broods of beetles may feed on the rinds of ripening fruits.

Description

The adult beetle is small, $\frac{1}{4}$ inch in length. The head is black, thorax yellow, and the wing covers are yellow with three longitudinal black stripes. The mature larva is $\frac{3}{10}$ inch in length, white with a brown head, thorax and anal plates.

Life History

The adult beetles hibernate under garden debris or if such protection is not available, they will burrow into the soil below the frost line. The adults emerge from April to June, usually before the cucurbit plants are up, and feed for a time on pollen from flowers of apple, horse chestnut, lilac and many others. When squash and cucumbers start to shoot up the beetles quickly congregate on them.

After feeding for some time, the adults mate and the females begin to lay eggs. Eggs are laid wherever the female is feeding, or sometimes are deposited in crevices in the ground. In a week or more the eggs hatch

and the larvae work their way to the cucurbit. Here they burrow into the tissue and feed for about a month. The mature larva constructs an earthen cell a few inches below the soil surface and pupates. The adult beetles emerge in late August or September and feed on pollen until heavy killing frosts occur.

Management

Control of beetles is important to prevent bacterial wilt in cucumbers, but this insect can be difficult to control because the adults attack plants close to or even below ground level. The larvae also attack below the soil surface.

Yellow sticky traps can be used to monitor populations, and also to catch some of the adult beetles. Often the beetles can be seen clustering in the flowers of cucumber and squash, and the beetles may be removed by hand and destroyed.

Where the garden is small enough to make it practicable, mechanical protectors which exclude the beetles can be used, such as floating row covers, or wire or cloth screen protectors made in the form of cones or hemispheres. The plants should be covered with these protectors from the moment they appear through the ground. Remove these protection devices when the plants start to flower, to allow pollination.

Insecticides registered in 2009 in New York State for home garden use include: carbaryl, insecticidal soap (potassium salts of fatty acids), kaolin clay (for suppression only), neem oil, permethrin, or pyrethrins (with other ingredients). Apply when beetles are excessive, and weekly if needed (check product label).

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