

CROSS-STRIPED CABBAGEWORM

Evergestis rimosalis (Guenee), Pyralidae, LEPIDOPTERA

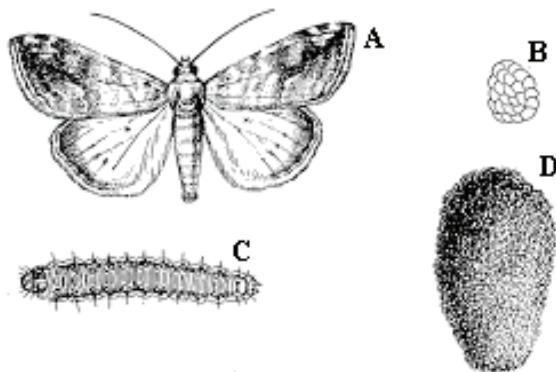
This caterpillar pest of cruciferous crops is a relatively recent introduction to the Cape Cod area. It was first observed on cabbages and other Cole crops in 2004, and has become the main caterpillar pest on these vegetables. The damage is similar to that of the Imported Cabbage worm but the caterpillar is quite different in appearance.



DESCRIPTION

Adult - The yellowish-brown moth has a body about 10 mm long and a wingspan of about 25 mm. The mottled forewings are marked with dark brown zig-zag lines; the pale hind wings have 5 or 6 small dusky spots between the middle of the wing and its inner border.

Egg - The egg mass, laid on the foliage, consists of thin, oval, flattened eggs that overlap like fish scales. Each individual yellow egg is about 1.2 mm long and 1 mm wide.



Cross-striped cabbageworm. A, Adult. B, Eggs. C, Larva. D, Cocoon.

Larva - Only a few millimeters long when newly hatched, the first instar larva has a large head and uniformly gray body sparsely covered with hairs. A mature larva has a bluish-gray body up to 20 mm long with tiny black transverse stripes. A black stripe with a yellow stripe underneath it runs along each side of the body. The underside of the larva is green mottled with yellow.

Pupa - The yellowish-brown to dark brown, 11- to 12-mm-long pupa can be found in a light gray cocoon with particles of sand enmeshed. The cocoon itself is about 16 mm long and 10 mm wide.

BIOLOGY

Distribution – While this pest is relatively new to Cape Cod, the Cross-striped cabbageworms have been reported in many states from Delaware and Nebraska southward and this insect is believed to be primarily southern in distribution.

Host Plants - Cabbage, turnip, and related plants are the only known hosts of this pest.

Damage - Because eggs are deposited in masses, individual plants may be infested with large numbers of cross-striped cabbageworms. These caterpillars feed on all tender plant parts but prefer terminal buds. Young leaves



and buds are often riddled with holes.

Life History – In southern areas, the cross-striped cabbageworm is reported to produce four generations per year. It is not known how many generations might occur on Cape Cod. They may overwinter as larvae and pupate in spring. Pupation occurs just below the soil surface and lasts about 6 days. Moths emerge from pupae and soon deposit eggs in masses of 20 to 30 on the underside of leaves. Under warm, favorable conditions, eggs hatch in about 6 days. Larvae develop in about 2 to 3 weeks in summer, but require longer to develop during cooler periods of weather.

MANAGEMENT

B.t.k., *Bacillus thuringiensis kurstaki*, is a naturally occurring bacterial disease of insects. These bacteria are the active ingredient in some insecticides, such as Dipel. The kurstaki strain is specific to Lepidopteran caterpillars and is not considered toxic for people, animals, birds, fish, and other insects such as bees and ladybugs.

Spinosad is derived from a naturally occurring soil bacterium, which produces compounds (metabolites) while in a fermentation broth. Spinosad has since been formulated into insecticides that combine the efficacy of a synthetic insecticide with the benefits of a biological pest control organism. It is commonly sold to home gardeners under the labels “Monterey Garden Insect Spray” and “Bulls eye Bio-insecticide”.