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VIRGINIA STATE

CABBAGE LOOPER

by Eric Day

Fig. 1: Cabbage Looper adult and caterpillar

DESCRIPTION: Pale green measuring worm with thin white stripes down back and sides. Up to 1 and 1/2 inches long. Caterpillar doubles-up, or loops, when it crawls.

COMMON HOST PLANT(S): Cabbage, lettuce, cauliflower, kohlrabi, collards, brussels sprouts, turnip, mustard, broccoli and kale.

DAMAGE: Feeds on underside of leaves producing ragged holes; large loopers burrow into heads. Loopers are hard to kill. They become a problem in Virginia in late July or early August and remain a problem until a killing frost or light freeze occurs.

DISTRIBUTION: Throughout United States.

LIFECYCLE: Cabbage loopers overwinter as pupae. In spring cabbage looper moths emerge from their cocoons and mate. Eggs are laid during the night on upper leaf surfaces of brassicae plants. Larvae hatch several days later and feed for about a month on leaves. During this time larvae go through several instars. Mature larvae spin a silk cocoon and pupate. Pupation takes about 13 days if the cabbage looper is not overwintering in the cocoon. Several generations of cabbage loopers can occur during a year with the time from egg to adult only taking a few days over a month.

THRESHOLD: Since several pests appear simultaneously on crucifers, all must be considered when applying thresholds. Therefore, the following thresholds take into account the combined levels of the following cole crop caterpillar pests: diamondback moth, imported cabbageworm, cross-striped cabbageworm, and cabbage looper. These thresholds are for fresh market quality cabbage, broccoli, and cauliflower; if more damage is economically acceptable, a 75% infestation may be tolerated before treating plants.

Fig. 2: Caterpillar stage of Cabbage Looper. *David Cappaert, Michigan State University, Bugwood.org*

Fresh Market Cabbage

	Treatment advised if:
Seedbed	10% or more plants infested
Transplant to cupping stage	30% or more plants infested
Cupping to early heading	20% or more plants infested
Early heading to mature	10% or more plants infested

Fresh Market Broccoli and Cauliflower

	Treatment advised if:
Seedbed	10% or more plants infested
Transplant to first flower	50% or more plants infested
Flowering to mature head	10% or more plants infested

CULTURAL CONTROL: Handpick caterpillars off plants. Plow under crop remnants in spring to bury overwintering pupae before the emergence of adults.

ORGANIC/BIOLOGICAL CONTROL: *Bacillus thuringiensis* , or Bt, (Bactur, Dipel, SOK BT, Thuricide) 2.0 to 3.0 tbsp in 1-gallon water. *Bacillus thuringiensis* will work but its results are not quickly observable; loopers (and other caterpillars) get sick the first day and die later. It is not necessary to wait before harvesting after an application of Bt.
Several parasitic wasps (*Hyposoter, Copidosoma, Trichogramma*) attack the cabbage looper as do general predators and virus diseases. Mass releases of *Trichogramma* may provide control in tomatoes.

CHEMICAL CONTROL: Treat with a registered insecticide every 4 days after first true leaves appear until harvest if worms are still present. Direct insecticide to the undersides of leaves.

References: Foster, Rick and Brian Flood. 1995. Vegetable Insect Management, Meister Publishing Company, Willoughby, Ohio. pp. 104-107.