LOOPEX®
Against Cabbage looper (Trichoplusia ni)

Loopex offers highly efficient biological control of cabbage looper larvae. Besides preventing damage and controlling looper populations, Loopex is a valuable resistance management tool that can be included in any integrated pest management program (IPM), especially for the control of insecticide resistant populations. Loopex is a valuable tool for growers of both conventional and organic vegetable crops.

Pest distribution and life cycle
Cabbage looper is an important agricultural pest with an exceptionally broad range of host plants throughout the US, but only survives the winter in the Southern states. Adult moths annually migrate to the Northern US from early July to late August, depending on the weather and airflow patterns. There can be as many as 3 generations in the North and up to 7 in the South, depending on arrival time or late summer temperatures.

- Female moths can lay 300 – 600 eggs, usually over a 10 – 12 day period.
- Larvae hatch 3 to 6 days after being laid.
- The larvae will feed for 2 to 4 weeks, about three times its own body weight per day.

Early instar larvae begin feeding on the underside of the leaf, producing small holes that do not break through the upper surface of the leaf, while larger caterpillars cause more conspicuous damage. Plants can be severely defoliated and stunted, producing no heads or becoming unfit for consumption.

ADVANTAGES OF LOOPEX

- Efficient cabbage looper control
- Excellent resistance management tool
- Zero residues
- Minimum pre-harvest interval
- Highly selective
- Non-toxic and safe
- Harmless to beneficial insects
- For conventional and organic pest management

See back page for additional useful information about the product >>
**LOOPEX®**

**Mode of Action**
Larvae need to ingest the virus particles sprayed onto the plant surface in order to get infected. Particles enter the larval midgut, where their DNA is incorporated and replicated in the host cells. Larval organs are infected within a few days; the larva stops feeding, eventually dies and releases new viruses into the environment, ready to infect other cabbage loopers.

**General instructions**
For best crop protection, adult flight is monitored and Loopex is applied as soon as first catches of moths are recorded. Since young larvae are most vulnerable, they should be infected at the earliest possible stage of their development, when they are most susceptible and not yet hidden inside fruits, flowers or stems. Older instars cause more feeding damage and take a longer time to die.

**Field trial results**

![Graph showing population control over different treatments and time intervals.](image)

2 applications, 7 days interval — Kwantlen Polytechnic University, Canada 2015

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**PRODUCT-FACTS**

<table>
<thead>
<tr>
<th>Against</th>
<th>Cabbage looper (Trichoplusia ni)</th>
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<tbody>
<tr>
<td><strong>Active ingredient</strong></td>
<td>Autographa californica nucleopolyhedrovirus (AcNPV)</td>
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<td><strong>Formulation type</strong></td>
<td>Suspension concentrate</td>
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<tr>
<td><strong>Concentration</strong></td>
<td>$1.5 \times 10^{10}$ NPV/fluid ounce</td>
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<td><strong>Standard dosage</strong></td>
<td>0.7 – 2.75 fl. oz/a every 6 – 8 days</td>
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<td><strong>Crops</strong></td>
<td>Typically on brassica crops e.g. cabbage, broccoli, cauliflower, collards, kale, etc. Also present on: tomato, lettuce, pepper, snap bean, potato, watermelon and other crops.</td>
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<td><strong>Compatibility</strong></td>
<td>Compatible with most insecticides, fungicides and fertilizers. A pH level between 5 and 8.5 in the tank mix has to be respected.</td>
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<td><strong>Storage</strong></td>
<td>Storage stability: &gt; 2 years at 0°F, 2 years at 40°F, 1 month at 77°F. Avoid temperatures above 100°F.</td>
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Broccoli: 8 applications, 7 days interval — Two Bees Ag Research, Escalon, CA, USA 2016