

LOOPEX®

Sublabel A: Agricultural Use

Sublabel B: Homeowner Use

Active Ingredient:

Autographa californica multiple nucleopolyhedrovirus (AcMNPV)
strain FV#11*0.1%

Other Ingredients:99.9%

Total:100.0%

*Contains a minimum of 1.5×10^{10} viral occlusion bodies per fluid ounce of product.

KEEP OUT OF REACH OF CHILDREN

Net Contents:

EPA Reg. No.: 69553-I

EPA Est. No.: 87956-CAN-001

Product of Canada

Manufactured for: Andermatt Biocontrol AG
Stahlermatten 6
CH-6146 Grossdietwil
Switzerland

Distributed by: Andermatt USA Corp.
107 Gilbreth Parkway
Mullica Hill
New Jersey 08062, USA
302-724-6888
contact@andermattUSA.com

Shake well before use

Store below 41°F

ACCEPTED

09/10/2019

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 69553-8



**where Nature
leads Innovation**

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www.andermattusa.com

Sublabel A: Agricultural Use

LOOPEX[®]

Insecticidal Virus for Use in Greenhouses and Open Fields for the
Control of Cabbage Looper Larvae (*Trichoplusia ni*)



FOR ORGANIC PRODUCTION



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Autographa californica multiple nucleopolyhedrovirus (AcMNPV)

strain FV#11*0.1%

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PRECAUTIONARY STATEMENTS

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks

Mixer/loaders and applicators must wear a NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d) and (e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must provide all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

User Safety Recommendations

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This product may be pathogenic to nontarget Lepidoptera exposed to direct treatment. Do not apply this product while nontarget Lepidoptera are actively visiting the treatment area. Minimize spray drift away from target area to reduce effects to nontarget Lepidoptera.

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Do not apply by aerial application.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water) is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

Product Information

SHAKE WELL BEFORE USING.

Loopex[®] contains a baculovirus that is infectious to cabbage looper larvae (*Trichoplusia ni*). To be effective, deposits of **Loopex**[®] must be ingested by the larvae. Thus, thorough coverage of target foliage where the larvae are feeding is essential. When ingested by the host larvae, the viral occlusion bodies in **Loopex**[®] dissolve in the larval midgut and infect and replicate within insect cells, causing a

fatal infection. The infected larvae stop eating, become sluggish, and die of viral infection. Following death, the larvae liquify and virus is released into the surrounding environment and can infect neighboring cabbage looper larvae following ingestion. Cabbage looper larvae mortality occurs between 4 and 9 days after ingestion of **AcMNPV** depending on ambient temperature.

Compatibility

Loopex[®] is compatible with most commonly used insecticides, fungicides, or liquid fertilizers. To determine compatibility when mixing this product with other products, conduct a jar test. Using a quart jar, add the proportionate amounts of the products to approximately one quart of water with agitation. Add dry formulations first, then flowables, and then emulsifiable concentrates last. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding products to the spray tank. Follow the more restrictive labeling requirements of any tank-mix partner. Do not tank mix with products whose labeling prohibits tank mixing.

Do not tank mix **Loopex**[®] with copper products, as the protective protein capsule of the virus may be destroyed and the virus inactivated. Spraying of copper one day before or after a **Loopex**[®] application has no adverse effect on the virus.

Mixing Instructions

Fill the mix tank with the desired quantity of clean water. Ideal pH is between 5 and 8.5; adjust highly alkaline (pH>8.5) or acidic (pH<5) water to a pH around 7 with a buffering agent before adding **Loopex**[®]. Shake the **Loopex**[®] container well, or invert it several times before pouring to ensure uniform suspension. Keep the tank agitated during mixing. If a spreader/sticker or ultraviolet (UV) screening agent is used, add these substances to the tank prior to the addition of **Loopex**[®]. Mixing time can be reduced by premixing **Loopex**[®] with a small amount of clean water and agitating vigorously before adding to the tank. Spray as soon as possible after mixing; do not allow the spray mix to stand overnight.

In general, it is not necessary to add feeding stimulants, surfactant/wetting agents, or other adjuvants, though use of a non-ionic or oil-based spreader/sticker or UV screening agent may enhance the performance of this product, especially in *Brassica* (cole) leafy vegetable crops.

Application Instructions

Loopex[®] can be applied up to and including on the day of harvest.

Start spraying before larvae hatch from the eggs and onto young instar larvae after hatching. If moths are still flying and laying eggs, reapply weekly as directed in the crop-specific table below. Development of cabbage looper is highly dependent on climatic conditions. Under unfavorable conditions such as cold and rainy weather, the flight, egg laying, and hatching may extend over a longer period of time, making more applications necessary. Frequent applications at low rates may be more effective than one or two applications at high rates.

Use sufficient water to obtain thorough, uniform coverage. Because **Loopex®** acts through insect ingestion of treated plant material, thorough spray coverage is essential for optimum control of cabbage looper larvae. Using increased water volumes will typically result in better spray coverage, especially under adverse conditions such as dry, hot weather or dense plant foliage.

For greenhouse applications: The reapplication interval can be extended to 7 to 14 days because of reduced UV radiation. In general, 2 to 3 sprays per pest generation are sufficient; however, make sure to cover young tissue during fast plant growth.

For chemigation applications: See the chemigation section of this label for additional instructions.

Crop-Specific Application Table

CROP	APPLICATION RATE OF LOOPEX®	APPLICATION METHOD	COMMENTS
*ROOT AND TUBER VEGETABLES such as: Beet, carrot, parsnip, potato, sweet potato, radish, rutabaga, turnip; LEAFY VEGETABLES (except <i>Brassica</i> Vegetables) such as: Celery, lettuce, endive, spinach; BRASSICA (COLE) LEAFY VEGETABLES such as: Broccoli, cabbage, cauliflower, Chinese cabbage, collards, kale, kohlrabi, mustard greens, watercress; *LEGUME VEGETABLES such as: Bean (<i>Lupinus</i> spp., <i>Phaseolus</i> spp., <i>Vigna</i> spp.), soybean, pea; FRUITING VEGETABLES such as:	0.7 – 2.75 fluid ounces per acre	Sprayer, Sprinkler, Mist Sprayer	Repeat application weekly if monitoring indicates that reapplication is necessary. Lower application rates may be used during vegetative stages of the crop or when tank mixed with other insecticides. When flowers, fruits, or other harvested structures of the plant are present or under high pest pressure, use the higher application rates. Cover the whole larval hatching period of the treated generation until harvest.

CROP	APPLICATION RATE OF LOOPEX®	APPLICATION METHOD	COMMENTS
Pepper, tomato, eggplant; *OILSEEDS such as: Cottonseed, sunflower, canola; *CUCURBIT VEGETABLES such as: Cucumber, pumpkin, squash, watermelon, cantaloupe; *CEREAL GRAINS such as: Corn, sweet corn, wheat, sorghum, rice; *OTHER SPECIALTY CROPS: Tobacco, peanut, asparagus, turf, flowers, and ornamentals.			

*Not for use on these crops in California

Chemigation

Instructions for All Chemigation Types:

1. Apply this product only through pressurized sprinkler irrigation systems (i.e., impact, micro, overhead boom, solid set, lateral move, end tow, side roll, center pivot, hand move, or mist type). Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system and flush with clean water before use. Failure to provide a clean tank, free of scale or residues, may reduce effectiveness of this product.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Application must be continuous in sufficient water to apply the specified application rate evenly to the entire treated area.

Instructions for Chemigation Systems Connected to Public Water Systems:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Instructions for Sprinkler Chemigation Systems:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store this product in original sealed container in a cool, dry place inaccessible to children and pets. Keep container tightly sealed when not in use. Store at temperatures below 41°F (5°C). Storing the product in a freezer will extend its shelf life.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank, and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

Warranty

Andermatt Biocontrol AG warrants that the material contained herein conforms to the description on this label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of the soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage or handling of this material not in accordance with directions given on this label. To the extent consistent with applicable law, NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

Sublabel B: Residential Use

LOOPEX®

Insecticidal Virus for Use in Home Greenhouses and Home Gardens for
the Control of Cabbage Looper Larvae (*Trichoplusia ni*)



FOR ORGANIC GARDENING

Active Ingredient:

Autographa californica multiple nucleopolyhedrovirus (AcMNPV)
strain FV#11*0.1%

Other Ingredients:99.9%

Total:100.0%

*Contains a minimum of 1.5×10^{10} viral occlusion bodies per fluid ounce of product.

KEEP OUT OF REACH OF CHILDREN

Net Contents:

Lot No.:

EPA Reg. No.: 69553-I

EPA Est. No.: 87956-CAN-001

Shake well before use

Store below 41°F

Product of Canada

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PRECAUTIONARY STATEMENTS

Environmental Hazards

This product may be pathogenic to nontarget Lepidoptera (i.e., moths or butterflies) exposed to direct treatment. Do not apply this product while nontarget Lepidoptera are actively visiting the treatment area. Minimize spray drift away from target area to reduce effects to nontarget Lepidoptera.

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid runoff to water bodies or drainage systems.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Product Information

SHAKE WELL BEFORE USING.

Loopex®, which contains a baculovirus (insect virus), acts very specifically against larvae of the cabbage looper (*Trichoplusia ni*) and is to be used as a pre-harvest biological insecticide on *Brassica* (cole) leafy vegetables, other listed vegetables (e.g., beans, cucumbers, and tomatoes), ornamentals, and flowers. After ingestion by a cabbage looper larva, the virus multiplies within the cells of the host insect, causing a fatal infection. Rapid virus multiplication within the host insect's cells results in cell destruction and death of the organism between 4 and 9 days after ingestion of the virus depending on ambient temperature.

Use Restrictions

For use on *Brassica* (cole) leafy vegetables, other listed vegetables (e.g., beans, cucumbers, and tomatoes), ornamentals, and flowers in residential settings. Not for use on plants grown for sale or other commercial use.

Mixing and Application Instructions

Loopex® must be mixed with water. Mix ½ teaspoon of **Loopex®** per 3 gallons of water, and apply with hand-held sprayers or a watering can to all plant foliage to cover an area of 1000 square feet. Apply at first sign of infestation and repeat at weekly intervals when needed to maintain control of cabbage looper larvae on *Brassica* (cole) leafy vegetables, leafy vegetables (e.g., celery), beans, peas, cucumbers, tomatoes, peppers, melons, ornamentals, and flowers.

Start spraying before larvae hatch from the eggs and before the larvae grow bigger and cause more serious damage. In general, one to two sprays per generation are sufficient. Development of cabbage looper is highly dependent on climatic

conditions. Under unfavorable conditions such as cold and rainy weather, the flight, egg laying, and hatching may extend over a longer period of time and more applications may be needed.

Loopex® can be applied up to and including on the day of harvest.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE:

Keep in original container. Store away from direct sunlight, feed, or foodstuffs. Keep container tightly sealed when not in use. Store at temperatures below 41°F (5°C). Storing the product under freezing temperatures will extend its shelf life.

PESTICIDE DISPOSAL AND CONTAINER HANDLING:

Nonrefillable container. Do not reuse or refill this container.

If empty:

Place in trash or offer for recycling, if available.

If partly filled:

Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

Warranty

Andermatt Biocontrol AG warrants that the material contained herein conforms to the description on this label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of the soil, the insect problem, condition of the plant, incompatibility with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage or handling of this material not in accordance with directions given on this label. To the extent consistent with applicable law, NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.