

2022-1390  
2024-08-02

**BoVir**  
**Biological Insecticide**  
**Live Organism**  
**Suspension Concentrate**

**For the Suppression of Spongy Moth (*Lymantria dispar*) in Forests, Woodlands and Residential Areas**

**COMMERCIAL**

BoVir is to be used for the suppression of Spongy Moth under each of these sites and using the following application methods:

- A) Forests, Woodlands and Residential Areas using ground application; and
- B) Forests, Woodlands and Residential Areas using aerial application (Restricted Uses)

**READ THE LABEL BEFORE USING**  
**KEEP OUT OF REACH OF CHILDREN**

ACTIVE INGREDIENT: *Lymantria dispar* Nucleopolyhedrovirus, (LdMNPV)  
Minimum of  $2.8 \times 10^7$  occlusion bodies (OBs)/mL

CAUTION – EYE IRRITANT  
POTENTIAL SENSITIZER

**REGISTRATION NO: 34427 PEST CONTROL PRODUCTS ACT**

Net Contents: 200 mL – 1000 L

Andermatt Canada Inc.  
1350 Regent Street  
Fredericton, New Brunswick, E3C 2G6  
Tel: 506-444-5690

Batch Number:  
Date of Manufacture:

**GENERAL INFORMATION:**

*Lymantria dispar* nucleopolyhedrovirus (LdMNPV) is a naturally occurring baculovirus within the genus *Alphabaculovirus*. It is infectious to larvae of spongy moth (*Lymantria dispar*). To be effective, deposits of LdMNPV must be ingested by susceptible larvae. Thorough coverage of target foliage where larvae are feeding is essential. When ingested by the host larvae, the occlusion bodies (OBs) of LdMNPV dissolve in the larval midgut and release the virus to initially infect midgut cells and then systemically infect other tissues within the larvae. The infected larvae stop eating, become sluggish and die. Mortality occurs typically within 7-10 days.

Baculoviruses co-evolved with and have only been found in insects. Members of the genus *Alphabaculovirus* do not infect Hymenopteran pollinators and parasitoids or insect predators such as praying mantis and ladybird beetles. No member of the Baculoviridae family has been found in vertebrates or plants and LdMNPV does not replicate in mammalian cells. Baculoviruses do not affect or infect fish, wildlife, humans or beneficial organisms.

**Read and understand the entire label before opening this product. If you have questions call the supplier at 506-444-5690 or obtain technical advice from the distributor or your federal, provincial/territorial or municipal forest pest management specialist.**

BoVir is recommended for treatment of moderate density populations of spongy moth. When used precisely according to the dose, timing and application instructions specified below, BoVir treatment of moderate spongy moth populations may result in protection of preferred oak foliage of at least 55-60% and reductions in egg mass density. The extent of egg mass density reduction and the need for re-treatment in the following year is influenced by many variables, especially the pre-spray egg mass density and the health of the spongy moth population.

**PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** May cause sensitization. May irritate eyes. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

Wear a long-sleeved shirt, long pants, protective eyewear (goggles), waterproof gloves, socks and shoes and a NIOSH-approved particulate filtering facepiece respirator with any R or P filter when handling, mixing/loading or applying the product and during all clean-up and repair activities.

For application using aerial equipment: Do not allow the pilot to mix chemicals to be loaded onto the aircraft. The pilot is allowed to load premixed chemicals with a closed system. When handlers/loaders use closed system to load product onto the aircraft, the handler requirement for protective eyewear (goggles) and a NIOSH-approved particulate filtering respirator with any R or P filter may be waived. When reduced personal protective equipment is worn, the facepiece respirator must be immediately available for use in an emergency such as a spill or equipment breakdown.

The requirement for waterproof gloves, protective eyewear (goggles) and a NIOSH-approved particulate filtering respirator with any R, or P filter is waived for the pilot. When reduced personal protective equipment is worn, the facepiece respirator must be immediately available for use in an emergency such as a spill or equipment breakdown.

Wash thoroughly with soap and water after handling the product. Remove contaminated clothing and follow manufacturer's directions for cleaning/maintaining personal protective equipment (PPE) before reuse.

Apply only when the potential for drift to non-target areas of human habitation and human activity is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

**FIRST AID:**

**IF SWALLOWED** - Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING** - Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**IF INHALED** - Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**IF IN EYES** - Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you, when seeking medical attention.

**TOXICOLOGICAL INFORMATION**

Treat symptomatically.

**ENVIRONMENTAL PRECAUTIONS**

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

**DIRECTION FOR USE**

**Use Restrictions:**

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wash water.

DO NOT Apply by any type of irrigation system.

### **Restricted-Entry Interval**

Forests and Woodlands: **DO NOT** allow worker entry into treated areas for 4 hours or until sprays have dried unless wearing waterproof gloves, long-sleeved shirt, long pants, socks and shoes and a NIOSH-approved particulate filtering respirator with any R, or P filter.

For residential areas (including parks, parkland, vacant lots, shelterbelts, and rights of way under municipal jurisdiction): **DO NOT** allow people or pets to re-enter treated areas until sprays have dried.

### COMMERCIAL USES

GROUND APPLICATIONS LESS THAN 500 ha in Forests, Woodlands and Residential Areas

### **Application Rate and Timing for Ground Application**

Apply 2-6 L of BoVir per hectare, diluted in water for a total spray volume of 1000 L/ha. Alternatively, for small areas or individual trees, prepare a 20-60% solution of BoVir diluted in water (e.g., 2-6 L of BoVir in a total volume of 10 L) and apply sufficient volume for full coverage of the foliage.

For optimal efficacy it is recommended that BoVir be applied 2 times with 4-7 days between applications, depending on pest pressure and environmental conditions. Timing of application is critical. Larvae should be in their first instar and actively feeding at the time of first application.

At the time of second application, it is expected that about 50% of larvae will have reached their second instar. Host tree leaves should be at least 50% expanded at the time of application. Thorough, well distributed spray coverage is necessary to ensure that feeding larvae ingest a lethal dose of BoVir. Apply with a backpack motorized atomizer with extension (M3 series, Cifarelli). Avoid application when significant rainfall is anticipated.

SHAKE WELL BEFORE USE!

**INSTRUCTIONS FOR AERIAL APPLICATIONS TO FORESTRY AND WOODLANDS OPERATIONS AND AERIAL APPLICATION IN RESIDENTIAL AREAS (RESTRICTED USES)**

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

NATURE OF RESTRICTION: This product is to be used only in the manner authorized; consult local provincial/territorial pesticide regulatory authorities about use permits that may be required.

**AERIAL APPLICATION INSTRUCTIONS:**

**BEFORE AERIAL APPLICATIONS TO FORESTS, INCLUDING URBAN FORESTS-** Consult the most recent provincially approved topographic maps of the area to be treated (1: 50,000) or more up-to-date information (e.g. GPS systems) to identify sensitive aquatic habitats. Sensitive aquatic habitats include: a) All running (lotic) and standing (lentic) water bodies, including impoundments, beaver ponds and bog ponds, that appear on the map or GPS system; b) Running (lotic) and standing (lentic) water bodies that do not appear on the map or GPS system but are visible from the air. Consult local Transport Canada office regarding air regulations for urban and/or forestry applications.

BoVir may be used for aerial application in urban areas for treatment of residential areas and municipal recreational areas (including parks, parkland, vacant lots, shelterbelts, and rights of way under municipal jurisdiction).

Apply only by fixed wing or rotary wing aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product-specific. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application by using appropriate marking devices and/or electronic guidance equipment. Consult the local Transport Canada office regarding low level flying regulations.

**USE PRECAUTIONS:** Apply on when meteorological conditions at the treatment site allow for complete and even coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides

Avoid drifting of spray onto non-target areas. Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist).

Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift.

Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or non-target aquatic habitat.

**OPERATOR PRECAUTIONS:** DO NOT allow the pilot to mix product to be loaded onto the aircraft. Loading of premixed product with a closed system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear the personal protective equipment described in the PRECAUTIONS section of this label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

**Application Rate and Timing for Aerial Application**

Apply 2-6 L of BoVir per hectare, diluted in water for a total spray volume of 5-10 L/ha, depending on application rate. For optimal efficacy it is recommended that BoVir be applied 2 times with 4-7 days between applications, depending on pest pressure and environmental conditions. Timing of application is critical. Larvae should be in their first instar and actively feeding at the time of first application. At the time of second application, it is expected that about 50% of larvae will have reached their second instar. Host tree leaves should be at least 50% expanded at the time of application. Thorough, well distributed spray coverage is necessary to ensure that feeding larvae ingest a lethal dose of BoVir. Aircraft fitted with rotary atomizers should be used and droplets should be in the 100 – 150 micron range. Avoid application when significant rainfall is anticipated.

**STORAGE:**

Bovir should be used within 2 years from the date of manufacture when stored between -18°C and 5°C and within 3 months from the date of manufacture when stored at 25°C. Store container upright and keep tightly closed when not in use. Shake vigorously to re-suspend contents immediately prior to addition in water.

Store this product away from food or feed.

**DISPOSAL:**

DO NOT REUSE THIS CONTAINER FOR ANY PURPOSE. This is a recyclable container and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial/territorial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use a control product in a way that is inconsistent with the directions on the label.