

Biological Insecticide

# Foray® 76B

Flowable Concentrate

For the control of Lepidopterous Larvae

**ACTIVE INGREDIENT:**

<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i> , strain ABTS-351, fermentation solids and solubles . . . . .	18.44%
Other Ingredients: . . . . .	81.56%
Total: . . . . .	100.0%

Potency: 16,700 Cabbage Looper Units (CLU)/mg of product (equivalent to 76 billion CLU/GAL.).

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No. 73049-49  
EPA Est. No. 33762-IA-001

LIST NO. 60176

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**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

1.0

**FIRST AID**

<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

**HOT LINE NUMBER**

Have the product container with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

2.0

**PRECAUTIONARY STATEMENTS**

2.1

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION**

Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

2.2

**Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Waterproof gloves
- Shoes plus socks

2.3

**Agricultural Use Requirements:**

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic reactions. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

2.4

**Non-Agricultural Use Requirements:**

Mixer/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

2.5

**User Safety Recommendations**

Users should:

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

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## 2.6 Environmental Hazards

For terrestrial agricultural 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 cleaning equipment or disposing of equipment washwaters.

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

## 3.0 STORAGE AND DISPOSAL

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

**Storage:** Store in a cool, dry place. Keep containers tightly closed when not in use. Store in temperatures above freezing and below 25° C (77° F).

**Pesticide Disposal:** Pesticide waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with federal and local regulations.

**Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 4.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do not apply this product through any type of irrigation system.

## 5.0 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. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

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

## 6.0 APPLICATION

Foray 76B may be applied by ground or aerial equipment undiluted or with quantities of water sufficient to provide thorough coverage of plant parts to be protected. The amount of water needed per acre will depend upon crop size, weather, spray equipment, and local experience.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower /treatment coordinator are responsible for considering all of these factors when making decisions.

## 7.0 MIXING

Shake or stir Foray 76B before use. Fill spray or mixing tank half full of water. Begin agitation and pour Foray 76B into water while maintaining continuous agitation. Add other spray material (if any) and balance of water. Agitate as necessary to maintain suspension. Do not allow diluted mixture to remain in the tank for more than 72 hours.

The use of a spreader-sticker approved for use on growing crops is recommended for hard to wet crops such as cole crops or to improve weather-fastness of the spray deposits. Combinations with commonly used spray tank adjuvants are generally not deleterious to Foray 76B, if the mix is used promptly. Before mixing in the spray tank, it is advisable to test physical compatibility by mixing all components in a small container in proportionate quantities.

## 8.0 SPRAY VOLUMES

**Ground Application:** Use recommended amount of Foray 76B in ground equipment with quantities of water sufficient to provide thorough coverage of plant parts to be protected. The amount of water needed per acre will depend upon crop size, weather conditions, spray equipment used and local experience.

**Aerial Application:** Use recommended amount of Foray 76B in aerial equipment undiluted or with quantities of water sufficient to provide thorough coverage of plant parts to be protected. In the western US 5-10 gallons per acre is the normal minimum; in the eastern regions a minimum of 2-3 gallons is normally used. The minimum amount of water needed per acre will depend upon crop size, weather conditions, spray equipment used and local experience.

## 9.0 GENERAL AGRICULTURAL USE INSTRUCTIONS

Foray 76B is a biological insecticide for the control of lepidopterous larvae. It contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. Foray 76B must be ingested by the larvae to be effective. For consistent control, apply at first sign of newly hatched larvae (1st and 2nd instar larvae). Susceptible larvae that ingest Foray 76B cease feeding within a few hours and die within 2-5 days. Foray 76B may be applied up to and on the day of harvest. For maximum effectiveness the following is recommended: Monitor fields to detect early infestations.

Apply Foray 76B when eggs start hatching and larvae are small (early instars) and before significant crop damage occurs. Larvae must be actively feeding to be affected.

Repeat applications every 3 to 14 days to maintain control and protect new plant growth. Factors affecting spray interval include rate of plant growth, weather conditions, and reinfestations. Monitor populations of pests and beneficials to determine proper timing of applications.

Under conditions of heavy pest pressures or when large worms are present use the higher rate, shorten the application interval, and/or improve spray coverage to enhance control. When these conditions are present, a contact insecticide should be used to enhance control.

Thorough coverage is essential for optimum performance. Ground applicators equipped with directed drop nozzles can improve coverage.

10.0 Table 1.

Crop	Pests	Rate <sup>1</sup> (oz./acre)	Dosage <sup>1</sup> (BIU/acre)
Forests, Shade Trees, Ornamentals, Shrubs, Sugar Maple Trees, Ornamental Fruit, Nut & Citrus Trees <sup>2</sup>	Gypsy Moth	13.5 - 67.5	8 - 40
	Elm Spanworm		
	Spruce Budworm	13.5 - 50.5	8 - 30
	Browntail Moth		
	Douglas Fir Tussock Moth	10.0 - 27.0	6 - 16
	Coneworm		
	Buck Moth	7.0 - 13.5	4 - 8
	Redhumped Caterpillar		
	Spring & Fall Cankerworm		
	California Oakworm		
	Fall Webworm		

**Special Instructions**

<sup>1</sup>Use the higher recommended rates on advanced larval stages or under high density larval populations.

<sup>2</sup>In treating gypsy moth infested trees and shrubs in urban, rural, and semi-rural areas, exposure of non-target vegetation including, but not limited to, native and ornamental species and food or feed crops is permitted.

**11.0 DIRECTIONS FOR USE FOR NON-AGRICULTURAL APPLICATIONS**

**11.1 NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses 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 the treated areas until sprays have dried.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or on golf courses or lawns and grounds.

Not for use on trees being grown for sale or other commercial use, or for commercial seed production, or for the production of timber or wood products, or for research purposes except for wide-area public pest control programs sponsored by government entities, such as mosquito abatement, gypsy moth control, and Mediterranean fruit fly eradication.

Do not apply this product through any type of irrigation system.

Foray 76B contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. Foray 76B is a stomach poison and is effective against lepidopterous larvae. After ingestion, larvae stop feeding within hours and die 2-5 days later. Maximum activity is exhibited against early instar larvae. Foray 76B may be used for both ground and aerial application. The product should be shaken or stirred before use. Add some water to the tank mix, pour the recommended amount of Foray 76B into the tank and then add the remaining amount of water to obtain the proper mix ratio. Agitate as necessary to maintain the suspension. The diluted mix should be used within 72 hours.

**11.2 Ground Application:**

Use an adequate amount of tank mix to obtain thorough coverage without excessive run off. Use the recommended per acre dosages of Foray 76B in up to the following amounts of water:

High volume hydraulic sprayers	100 gallons
Mist blowers	10 gallons

**11.3 Aerial Application:**

Foray 76B may be applied aerially, either alone or diluted with water at the dosages shown in the application rates table. Spray volumes of 28-128 ounces per acre are recommended. Best results are expected when Foray 76B is applied to dry foliage.

12.0 Table 2.

Crop	Pets	Rate <sup>1</sup> (oz./acre)	Dosage <sup>1</sup> (BIU/acre)
Forests, Shade Trees, Ornamentals,	Gypsy Moth	13.5 - 67.5	8 - 40
	Elm Spanworm		
Shrubs, Sugar Maple Trees, Ornamental	Spruce Budworm	13.5 - 50.5	8 - 30
	Browntail Moth		
Fruit, Nut & Citrus Trees <sup>2</sup>	Douglas Fir Tussock Moth	10.0 - 27.0	6 - 16
	Coneworm Buck Moth		
	Tussock Moth	7.0 - 13.5	4 - 8
	Pine Butterfly		
	Bagworm		
	Leafrollers		
	Tortrix		
	Mimosa Webworm		
	Tent Caterpillar		
	Jackpine Budworm		
	Blackheaded Budworm		
	Saddled Prominent		
	Saddleback Caterpillar		
	Eastern & Western Hemlock Looper		
	Orangestriped Oakworm		
	Satin Moth		
	Redhumped Caterpillar		
	Spring & Fall Cankerworm		
	California Oakworm		
	Fall Webworm		

**Special Instructions**

- <sup>1</sup>Use the higher recommended rates on advanced larval stages or under high density larval populations.
- <sup>2</sup>In treating gypsy moth infested trees and shrubs in urban, rural, and semi-rural areas, exposure of non-target vegetation including, but not limited to, native and ornamental species and food or feed crops is permitted.

13.0 NOTICE OF WARRANTY

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE CONCERNING THE USE OF THIS PRODUCT OTHER THAN AS INDICATED ON THE LABEL. USER ASSUMES ALL RISK OF USE, STORAGE OR HANDLING NOT IN STRICT ACCORDANCE WITH ACCOMPANYING DIRECTIONS.