

Biological Insecticide

# Foray® XG

Flowable Concentrate

For Urban, Home and Garden Use

**ACTIVE INGREDIENT:**

*Bacillus thuringiensis*, subsp. *kurstaki*, strain  
ABTS-351, fermentation solids and solubles . . . . . 17.19%

**OTHER INGREDIENTS** . . . . . 82.81%

**TOTAL** . . . . . 100.00%

POTENCY: 10,600 Cabbage Looper Units (CLU/mg) of product (equivalent to 48 billion CLU/GAL).

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

EPA Reg. No. 73049-46

EPA Est. No. 33762-IA-001

List No. 60178

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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	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.</p>	

2.0

**PRECAUTIONARY STATEMENTS**

2.1

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Causes moderate eye irritation. Avoid contact with skin, eyes, open wounds 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 and long pants
- Waterproof gloves
- Shoes plus socks

2.3

**Non-Agricultural Use Requirements:**

As a general precaution, when exposed to potentially high concentrations of living microbial products such as this, wear a dust particle mask when mixing or applying this product. 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.

2.4

**User Safety Recommendations**

Users should:

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

2.5

**Environmental Hazards**

Do not apply directly to water. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

3.0

**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.

#### 4.0 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.

Exposure of unprotected persons can be mitigated by directed spraying. Spray should be allowed to dry undisturbed.

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 landscapes, 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 wide-area public pest control programs sponsored by government entities, such as mosquito abatement, gypsy moth control, and Mediterranean fruit fly eradication.

Foray XG contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. Foray XG 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. Before use, shake or stir the product. Add some water to the tank mix, pour the required amount of Foray XG into the tank and then add the remaining amount of water to obtain the proper mix ratio. Agitate as necessary to maintain the suspension. Use the diluted mix within 72 hours.

##### Ground Application

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

High-volume hydraulic sprayers	100 gallons
Mist blowers	10 gallons

#### 5.0 APPLICATION

Foray XG may be applied by ground, 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.

#### 6.0 MIXING

Shake or stir Foray XG before use. If dilution is desired, fill spray or mixing tank half of the desired water. Begin agitation and pour Foray XG 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.

To improve weather-fastness of the spray deposits for hard to wet crops, such as cole crops, use a spreader-sticker approved for use on growing crops. Combinations with commonly used spray tank adjuvants are generally not deleterious to Foray XG, if the mix is used promptly. Before mixing in the spray tank, the testing of physical compatibility by mixing all components in a small container in proportionate quantities will identify possible problems. Checking with an adjuvant supplier for advice on spray adjuvants that are compatible with biological pesticides such as Foray XG, will help avoid incompatibilities.

#### 7.0 SPRAY VOLUMES

**Ground Application:** Use indicated amount of Foray XG 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.

#### 8.0 GENERAL AGRICULTURAL USE INSTRUCTIONS

Foray XG is a biological insecticide for the control of lepidopterous larvae. It contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. Foray XG 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 XG cease feeding within a few hours and die within 2-5 days. Foray XG may be applied up to and on the day of harvest. For maximum effectiveness follow the instructions listed below:

Monitor to detect early infestations.

Apply Foray XG 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 reinfestation. 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 can enhance control.

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

## 8.1 Application Rates

Crop	Pests	Rate <sup>(1)</sup> (oz./1000 ft <sup>2</sup> )
Forests and Shade Trees,	Gypsy Moth & Asian Gypsy Moth, Elm Spanworm	0.5 - 2.5
Ornamentals, Shrubs, Sugar Maple Trees,	Spruce Budworm, Browntail Moth, Douglas Fir Tussock Moth, Coneworm, Buck Moth	0.5 - 1.9
Seed Orchards, Ornamental Fruit, Nut and Citrus Trees <sup>(2)</sup>	Tussock Moths, Pine Butterfly, Bagworm, Leafrollers, Tortrix, Mimosa Webworm, Tent Caterpillar, Jackpine Budworm, Blackheaded Budworm, Saddled Prominent, Saddleback Caterpillar, Eastern and Western Hemlock Looper, Orangestriped Oakworm, Satin Moth	0.3 - 1.0
	Redhumped Caterpillars, Spring and Fall Cankerworm, California Oakworm, Fall Webworm	0.25 - 0.5
Fruiting Vegetables such as: Eggplant, Peppers, Tomatoes	Imported Cabbageworm, Diamondback Moth, Green Cloverworm	0.3 - 0.5
	Hornworms	0.15 - 1.0
	Tomato Fruitworm (Heliothis), Variegated Cutworm, Saltmarsh Caterpillar, Loopers	0.5 - 1.0
	Armyworms*	0.5 - 1.8
	European Corn Borer	1.0 - 1.3
Small Fruit and Berries such as: Blackberries, Blueberries, Currants, Raspberries, Strawberries, Cranberries	Gypsy Moth & Asian Gypsy Moth, Blueberry Leafroller, Loopers, Fruittree Leafroller, Grape Berry Moth, Oblique Banded Leafroller, Achema Sphinx Moth (Hornworm)	0.5 - 1.0
	Armyworms*	0.5 - 1.8
Brassica (Cole) Vegetables such as: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kohlrabi	Hornworms	0.15 - 1.0
	Webworms, Loopers, Cutworms, Saltmarsh Caterpillar, Omnivorous Leafroller	0.5 - 1.0
	Diamondback Moth, Imported Cabbageworm, Green Cloverworm	0.3 - 1.0
	Armyworms*	0.5 - 1.8
	European Corn Borer	1.0 - 1.3
Ornamentals, Flowers, Bedding Plants	Armyworms*	0.5 - 1.8
	Azalea Moth, Diamondback Moth, Ello Moth (Hornworm), Io Moth, Loopers, Oleander Moth, Omnivorous Leafroller, Omnivorous Looper, Tobacco Budworm	0.3 - 0.5
Greenhouse and Outdoor Nursery Crops such as: Flowers, Brassica, Fruiting Groups, Herbs, and Leafy Vegetables	Armyworms*	0.5 - 1.8
	Heliothis spp, Loopers	0.3 - 0.5

### Special Instructions

\* Armyworm Control: Foray XG may be used to control small armyworms (first and second instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If late instar larvae or heavy populations are present, greater control can be achieved by adding a contact insecticide.

- (1) Use the higher rates on advanced larval stages or under high density larval populations.
- (2) In treating Gypsy Moth and Asian Gypsy Moth infected 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.

This product can be mixed and used with other pesticides only in accordance with the most restrictive of label limitations and precautions. This product cannot be mixed with any product containing a label prohibition against such mixing. No label dosage rates may be exceeded.

For smaller spray volumes mix the proper number of teaspoons of Foray XG from the following chart to attain the desired rates:

If the rate is:	Add this amount per gallon of mix:
0.15 oz./1000 ft. <sup>2</sup>	1/2 teaspoon
0.3 oz./1000 ft. <sup>2</sup>	1 teaspoon
0.5 oz./1000 ft. <sup>2</sup>	1-1/2 teaspoons
1.0 oz./1000 ft. <sup>2</sup>	3 teaspoons
1.3 oz./1000 ft. <sup>2</sup>	4 teaspoons
1.8 oz./1000 ft. <sup>2</sup>	5-1/2 teaspoons

## 9.0 STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place. Keep containers tightly closed when not in use. Store in temperatures above freezing and below 32°C (90°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.

### Home Garden Use Disposal Instructions

Securely wrap original container in several layers of newspaper and discard in trash.

## 10.0 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 risks of use, storage or handling not in strict accordance with accompanying directions.

