

73049-35

4-14-2006

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

EPA Reg. Number:

Date of Issuance:

73049-35

4-14-06

Term of Issuance:

Unconditional

Name of Pesticide Product:

Foray 48F Biological Insecticide
Flowable Concentrate

NOTICE OF PESTICIDE:

 Registration
 X Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Valent Biosciences Corporation
870 Technology Way
Suite 100
Libertyville, IL 60048

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Document, EPA has reregistered the product listed above, subject to the terms listed below. This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain registration of your product.

A copy of the approved label for the product is enclosed for your records.

Signature of Approving Official:

Date:

4-14-06

Janet L. Andersen, Director, Biopesticides
and Pollution Prevention Division (7511C)

EPA Form 8570-6

CONCURRENCES

SYMBOL	7511C	7511C					
SURNAME	Reynolds	Szuhay					
DATE	4/13/06	4-13-06					

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**FORAY 48F
BIOLOGICAL INSECTICIDE
FLOWABLE CONCENTRATE**

Active Ingredient:

<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> strain ABTS-351 fermentation solids, spores, and insecticidal toxins.....	17.6%
Other Ingredients.....	82.4%
Total.....	100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048

EPA Registration No. 73049-35
EPA Est. No. 33762-IA-1

ACCEPTED
APR 14 2006
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 73049-35

Net Contents:

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • 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 center or doctor for treatment advice.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 for emergency medical treatment and/or transport emergency information. For all other information, contact 1-800-6-Valent.	

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

Mixers/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.

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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco products 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 gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial agricultural uses, do not apply directly to water, or to 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.

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This product must not be applied aerially within ¼ mile of any habitats of endangered species or threatened lepidoptera. No manual application can be made within 300 feet of any threatened or endangered lepidoptera.

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labelling 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 intervals. 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

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.

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STORAGE AND DISPOSAL

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

Storage: Keep containers tightly closed when not in use. Do not store at temperatures below 0° F or above 90° F. Roll or shake the drum before dispensing.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment washwaters.

Container Disposal: Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

DIRECTIONS FOR USE FOREST, TREES AND SHRUBS

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

Foray 48F is an insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of Foray 48F to be affected. Always follow these directions:

- Treat when larvae are young (early instars) before the trees are damaged.
- Larvae must be actively feeding on treated, exposed plant parts.
- Thorough spray coverage is needed to provide a uniform deposit of Foray 48F at the site of larval feeding.
- Under heavy pest population pressure, use the higher label rates and/or consider a second application.
- If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before tree damage occurs.
- An approved spreader-sticker may be added to diluted tank mixes to improve weather-fastness of the spray deposits. Do not add a sticker to undiluted product.

After eating a lethal dose of Foray 48F, larvae stop feeding within the hour and will die within several days. Dying larvae move slowly, discolor, then shrivel, blacken and die.

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Foray 48F is completely water miscible and may be applied through conventional ground or aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The volume of water needed per acre will depend on weather, spray equipment and plant canopy type. Foray 48F can be mixed in any ratio with water. Mild agitation is sufficient to maintain the mixture in suspension during mixing, loading and spraying. Do not mix more Foray 48F that can be used in a 144 hour period.

Foray 48F can also be applied undiluted from aircraft for control of Spruce Budworm, Hemlock Looper, Jack Pine Budworm, and Gypsy Moth. It is recommended that rotary or other atomizers be used to provide droplet Volume Median Diameters (VMD) of 60-100 microns for needle conifers and 50-150 microns for deciduous hardwoods. After prolonged storage, undiluted Foray 48F should be recirculated once to redistribute prior to use. During loading and spraying, agitation of the undiluted product is unnecessary and should be avoided.

Foray 48F may be used to protect trees and shrubs such as in:

Forests

Residential, municipal, and shade tree areas

Recreational areas such as campgrounds, golf courses, parks, and parkways

Ornamental, shade, tree and forest nurseries

Shelterbelts, rights of way, and other easements

Production sugar maples

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 treatment coordinator are responsible for considering all of these factors when making decisions.

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Foray 48F FOR FOREST, TREES AND SHRUBS

Crop	Pest	oz/100 Gal/A* (Ground Equipment)	oz/A (Aerial** Application)
Forest, Shade, Sugar Maple, Seed Orchards, 1 Trees & Shrubs	Bagworm	21 to 43	21 to 43
	Blackheaded Budworm	21 to 64	21 to 64
	Browntail Moth	21 to 80	21 to 80
	California Oakworm	11 to 43	11 to 43
	Douglas Fir	21 to 80	21 to 80
	Tussock Moth		
	Eastern Tent Caterpillar	43 to 64	43 to 64
	Elm Spanworm	21 to 64	21 to 64
	Fall Webworm	21 to 64	21 to 64
	Forest Tent Caterpillar	21 to 64	21 to 64
	Fruittree Leafroller	11 to 21	-
	Green Striped Maple Worm	21 to 43	21 to 43
	Gypsy Moth	21 to 128	21 to 128
	Asian Gypsy Moth	21 to 128	21 to 128
	Jack Pine Budworm	21 to 64	21 to 64
	Mimosa Webworm	11 to 21	-
	Oak Leaf-tier	21 to 64	21 to 64
	Pine Butterfly	21 to 43	21 to 43
	Redhumped Caterpillar	11 to 43	11 to 43
	Saddleback Caterpillar	11 to 43	-
	Saddled Prominent Caterpillar	11 to 43	11 to 43
	Spring & Fall Cankerworm	21 to 64	21 to 64
	Eastern Spruce Budworm ¹	21 to 128	21 to 128
	Western Spruce Budworm ¹	21 to 128	21 to 128
	Western Tussock Moth	21 to 43	21 to 43
	Eastern Hemlock Looper	43 to 64	43 to 64
	Western Hemlock Looper	43 to 64	43 to 64
	Eastern Pine Looper	43 to 64	43 to 64
	Leafrollers	21 to 43	21 to 43
	Buck Moth	43 to 107	43 to 107
	Oak Skeletonizer	21 to 43	21 to 43
	Tortrix	21 to 43	21 to 43
	Coneworm	64 to 96	64 to 96

Note: For Hemlock Looper, Eastern Pine Looper, and Coneworms, use 1 to 2 applications, diluted or undiluted, beginning at peak first instar.

*Water dilution rate for hydraulic sprayer may be varied depending on coverage. For mist blowers, mix the applicable amount (oz.) in up to 10 gallons of water.

** For diluted aerial application, use in up to 10 gallons of water depending on type and density of trees. For best results spray systems which deliver droplet size of 150 microns VMD or less

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should be used. Note: For Hemlock Looper and Eastern Pine Looper use 1-2 applications, beginning at peak first instar. When applying two applications, first application is at peak first instar and second application is at second instar.

¹ Use rates greater than 21 ounces in Northern states for heavy populations.

NON-AGRICULTURAL USE SITE DIRECTIONS FOR USE

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 or 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 enter treated areas without protective clothing until sprays have dried.

Do not apply this product to the non-agricultural use sites through any type of irrigation system.

Do not apply when weather conditions favor drift from treated areas.

Foray 48F is an insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of Foray 48F to be affected. Always follow these directions:

Treat when larvae are young (early instars) before the trees are damaged.

Larvae must be actively feeding on treated, exposed plant parts.

Thorough spray coverage is needed to provide a uniform deposit of Foray 48F at the site of larval feeding.

Under heavy pest population pressure, use the higher label rates and/or consider a second application.

If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before tree damage occurs.

An approved spreader-sticker may be added to diluted tank mixes to improve weather-fastness of the spray deposits. Do not add a sticker to undiluted product.

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After eating a lethal dose of Foray 48F, larvae stop feeding within the hour and will die within several days. Dying larvae move slowly, discolor, then shrivel, blacken and die.

Foray 48F is completely water miscible and may be applied through conventional ground or aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The volume of water needed per acre will depend on weather, spray equipment and plant canopy type. Foray 48F can be mixed in any ratio with water. Mild agitation is sufficient to maintain the mixture in suspension during mixing, loading and spraying. Do not mix more Foray 48F that can be used in a 144 hour period.

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Foray 48F may be used to protect trees and shrubs such as in:

- Forests
- Residential, municipal, and shade tree areas
- Recreational areas such as campgrounds, golf courses, parks, and parkways
- Ornamental and shade trees
- Shelterbelts, rights of way, and other easements

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	Blackheaded Budworm	21 to 64	21 to 64
	Browntail Moth	21 to 80	21 to 80
	California Oakworm	11 to 43	11 to 43
	Douglas Fir	21 to 80	21 to 80
	Tussock Moth		
	Eastern Tent Caterpillar	43 to 64	43 to 64
	Elm Spanworm	21 to 64	21 to 64
	Fall Webworm	21 to 64	21 to 64
	Forest Tent Caterpillar	21 to 64	21 to 64
	Fruittree Leafroller	11 to 21	-
	Green Striped Maple Worm	21 to 43	21 to 43
	Gypsy Moth	21 to 128	21 to 128
	Asian Gypsy Moth	21 to 128	21 to 128
	Jack Pine Budworm	21 to 64	21 to 64
	Mimosa Webworm	11 to 21	-
	Oak Leaf-tier	21 to 64	21 to 64
	Pine Butterfly	21 to 43	21 to 43
	Redhumped Caterpillar	11 to 43	11 to 43
	Saddleback Caterpillar	11 to 43	-
	Saddled Prominent Caterpillar	11 to 43	11 to 43
	Spring & Fall Cankerworm	21 to 64	21 to 64
	Eastern Spruce Budworm ¹	21 to 128	21 to 128
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	Western Tussock Moth	21 to 43	21 to 43
	Eastern Hemlock Looper	43 to 64	43 to 64
	Western Hemlock Looper	43 to 64	43 to 64
	Eastern Pine Looper	43 to 64	43 to 64
	Leafrollers	21 to 43	21 to 43
	Buck Moth	43 to 107	43 to 107
	Oak Skeletonizer	21 to 43	21 to 43
	Tortrix	21 to 43	21 to 43
	Coneworm	64 to 96	64 to 96

Note: For Hemlock Looper, Eastern Pine Looper, and Coneworms, use 1 to 2 applications, diluted or undiluted, beginning at peak first instar.

*Water dilution rate for hydraulic sprayer may be varied depending on coverage. For mist blowers, mix the applicable amount (oz.) in up to 10 gallons of water.

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** For diluted aerial application, use in up to 10 gallons of water depending on type and density of trees. For best results spray systems which deliver droplet size of 150 microns VMD or less should be used. Note: For Hemlock Looper and Eastern Pine Looper use 1-2 applications, beginning at peak first instar. When applying two applications, first application is at peak first instar and second application is at second instar.

¹ Use rates greater than 21 ounces in Northern states for heavy populations.

NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning 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.

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