

73049-481

9/27/2012

1/12



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Biopesticides and Pollution Prevention Division (7511C)  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

EPA Reg. Number:  
73049-481

Date of Issuance:  
SEP 27 2012

Term of Issuance: **Unconditional**

Name of Pesticide Product:  
**Foray 2WG Biological  
Insecticide Water Dispersible  
Granules**

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Valent BioSciences Corporation  
870 Technology Way  
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 or her 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.

This registration does not eliminate the need for continual reassessment of the pesticide. If EPA determines at any time, that additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA.

This product is unconditionally registered in accordance with FIFRA Sec. 3(c)(5) provided you:

1. Submit and/or cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) and section 4 when the Agency requires all registrants of similar products to submit such data.
2. Revise the EPA Registration Number to read, "EPA Reg. No. 73049-481."
3. Submit two (2) copies of the revised final printed labeling before you release the product for shipment.

Signature of Approving Official:

Keith A. Matthews, Director  
Biopesticides and Pollution Prevention Division (7511P)

Date:

27 Sept 2012

2/12

4. Submit the following data and/or information, determined by EPA to be acceptable, by the due dates specified below:

Study Type Required Data/Information	Due Date
Storage Stability (OPPTS Guideline 830.6317)	September 27, 2013
Corrosion Characteristics (Guideline Number 830.6320)	September 27, 2013

5. Report adverse effects and hypersensitivity incidents. Notwithstanding the information stated in the previous sections, it should be clearly understood that certain specific data are required to be reported to EPA as a requirement for maintaining the federal registration for a pesticide product. Reports of all incidents of adverse effects to the environment must be submitted to EPA under the provisions stated in FIFRA section 6(a)(2). Additionally, all incidents of hypersensitivity (including both suspected and confirmed incidents) must be reported to EPA under the provisions of 40 CFR § 158.2140(d).

A stamped copy of the label is enclosed for your records.

The basic confidential statement of formula (CSF) dated July 15, 2011 is acceptable. A copy has been placed in the file jacket for this registration.

- Enclosures (2):
- Accepted Label
- A-79 Enclosure

Revised 5/82

**A-79 ENCLOSURE**

Final printed labeling is defined as that labeling which will accompany the pesticide product to market, and includes not only the container label, but also all accompanying technical information, brochures, etc.

Final printed labeling for the Agency's files should be of a size that can be stored conveniently in 8 1/2 x 11 inch files. Labels may be mounted or photoreduced to meet the size requirements provided the printing is legible and is of microfilm reproduction quality. Should photo reduction make any of the text illegible, the text must be typed out on an accompanying sheet of paper.

PASTE-ON LABELING: This should be submitted as is, unless it requires photo reduction.

SCREEN PRINTED LABELING: These labels should be printed by taping paper on the container as it goes through the printing process. The actual container should not be submitted.

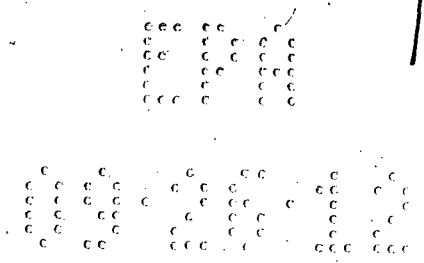
EMBOSSSED LABELING: These labels should be photocopied.

UNUSUAL SIZE LABELING: Large bags or boxes must be photoreduced, either the entire label on one reduction or in sections so that each section is 8 1/2 x 11 inches.

**Type Size Requirements for 3 Front Panel Headings**

<u>Size of front panel square inches</u>	<u>Minimum type size for "RESTRICTED USE PESTICIDE" (if required) and Signal Word in capital letters</u>	<u>Minimum type for "Storage and Disposal" heading &amp; "Keep Out of Reach of Children" warning</u>
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

4/12



**Foray® 2WG**  
Biological Insecticide  
(Water Dispersible Granules)

**ACTIVE INGREDIENT**

<i>Bacillus thuringiensis</i> , subsp. <i>kurstaki</i> , strain VBTS-2546 fermentation solids, spores and insecticidal toxins .....	67.0%
Other Ingredients .....	33.0%
<b>TOTAL.....</b>	<b>100.0%</b>

\*Potency: 110,000 Cabbage Looper Units (CLU)/mg of product (equivalent to 50 billion CLU per pound).

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

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

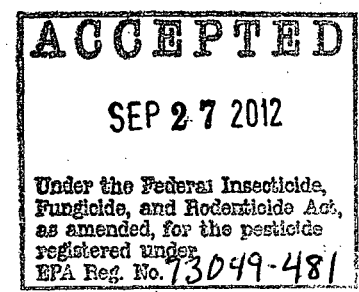
Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048

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

Lot No: \_\_\_\_\_

Net Contents:

Expiration Date:



<b>FIRST AID</b>	
If in eyes	<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>
<b>HOT LINE NUMBER</b>	
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.	

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

Causes mild eye irritation. Avoid contact with eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

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

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 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.

**Engineering Controls:**

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.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided 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 break-down.

**User Safety Recommendations**

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

User should remove PPE immediately after handling the product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**Environmental Hazards**

Except under the forest canopy, 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 wash waters or rinsate.

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

Do not discharge effluent containing this product into lakes streams, ponds, estuaries, oceans or other waters unless in accordance wit the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**DIRECTION 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.

**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 the 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 their 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.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Keep containers tightly closed when not in use. Do not store at temperatures greater than 100°F.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:**

*Small Rigid Containers:* 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: Fill the container ¼ 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. Offer for recycling, if available or puncture and dispose of the container in a sanitary landfill, or by incineration. Do not burn, unless allowed by State and local ordinances.

*Large Rigid Containers:* Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

*Triple rinse as follows:* Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closure. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available or puncture and dispose of the container in a sanitary landfill, or by incineration. Do not burn, unless allowed by State and local ordinances.

*Pressure rinse as follows:* Empty the remaining contents into application equipment or a mix tank. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40PSI for at least 30 seconds, Drain for 10 seconds after the flow begins to drip. Offer for recycling if available or puncture and dispose of the container in a sanitary landfill, or by incineration. Do not burn, unless allowed by State and local ordinances.

*Non-rigid Containers:* Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or puncture and dispose of empty bag in a sanitary landfill, or by incineration. Do not burn, unless allowed by State and local ordinances.



9/12

## **PRODUCT INFORMATION**

Foray 2WG is a biological insecticide for the control of lepidopterous larvae. It contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. Foray 2WG must be ingested by the larvae to be effective. Susceptible larvae that ingest Foray 2WG cease feeding within a few hours and die within 2-5 days.

Foray 2WG can be mixed with water at a central location where a good, clean water source and appropriate mixing equipment is available and transported to the use location.

## **USE RESTRICTIONS**

Not for use on tree crops grown for food.

## **APPLICATION INSTRUCTIONS**

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

Use aerial or ground equipment to apply Foray 2WG. Mix Foray 2WG with quantities of water sufficient to provide thorough coverage to protect the deciduous or coniferous trees. The amount of water needed per acre will depend upon crop size, density, forest canopy, spray equipment, and local experience. Use rotary or other atomizers to provide droplet Volume Median Diameters (VMD) of 60-100 microns for needle conifers and 50-150 microns for deciduous hardwoods.

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

Crop	Pests	Rate <sup>1</sup> (oz Foray 2WG/A)	Dosage <sup>1</sup> (Billion CLU/A)
Forests, Shade Trees, Ornamental Trees, Ornamental Sugar Maple Trees, Ornamental Fruit, Nut & Citrus Trees	Gypsy Moth Elm Spanworm	2.6 – 12.8	8 - 40
	Spruce Budworm Browntail Moth Douglas Fir Tussock Moth Coneworm Buck Moth	2.6 – 9.6	8 - 30
	Tussock Moth Pine Butterfly Bagworm Leafroller Tortrix Mimosa Webworm Tent Caterpillar Blackheaded Budworm Saddled Prominent Caterpillar Saddleback Caterpillar Eastern & Western Hemlock Looper Orangestriped Oakworm Satin Moth	1.9 – 5.2	6 - 16
	Redhumped Caterpillar Spring & Fall Cankerworm California Oakworm Fall Webworm	1.3 – 2.6	4 - 8

**Special Instructions**

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

**MIXING**

Foray 2WG is designed to be mixed with water as a suspension in a mix tank having the capability of mechanical or hydraulic agitation (in-tank or over-the-top circulation).

Use a mixing tank size capable of producing moderate-high circulation of the mix to assure complete suspension of Foray 2WG in the water.

Begin by filling the tank with 50 – 75% of the desired spray volume of water. Start the mechanical or hydraulic agitation of the water to provide moderate –high circulation. Slowly add the required amount of Foray 2WG and then the remaining volume of water. If foaming of the mix occurs during the mixing operation, reduce circulation and/or add a compatible anti-foaming agent. Continue the agitation until all Foray 2WG is suspended.

Agitate as necessary to maintain suspension. After mixing with water, the product should be used within 72 hours.

The use of a spreader-sticker is not required for Foray 2WG. If interested in using commonly used spray-tank adjuvants, it is advisable to test the physical compatibility in a smaller container in proportionate quantities; consult with the adjuvant manufacturer for further information.

**Ground Application:**

Used amount of Foray 2WG in ground equipment with quantities of water sufficient for adequate mixing and spray deposition. The amount of water needed per acre will depend upon plant size, weather conditions, spray equipment used and local experience. Consult with product manufacturer for further information.

**Aerial Application:**

Use amount of Foray 2WG in aerial equipment with quantities of water sufficient for adequate mixing and spray deposition. The minimum amount of water needed per acre will depend upon plant size, weather conditions, spray equipment used and local experience. Consult with product manufacturer for further information.

**AGRICULTURAL USE INSTRUCTIONS**

Use sites: forestry, and ornamental trees grown in nursery and greenhouses.

Monitor treatment areas to detect early infestations.

Apply Foray 2WG when eggs have completed hatching and larvae are small (early instars) and before significant defoliation occurs. Larvae must be actively feeding to be affected.

Repeat applications when high larval populations or extended egg hatch is present. Schedule second application 5-7 days after the first one, to maintain control and protect new plant (tree) growth. Factors affecting spray interval include rate of plant growth, weather conditions, and reinfestations. Monitor pest populations and foliage development to determine proper timing of applications. Under conditions of heavy pest pressures or when large larvae are present, use the higher rate allowed, shorten the application interval, and/or improve spray coverage to enhance control. Thorough coverage is essential.

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

12/12

## NON-AGRICULTURAL USE INSTRUCTIONS

For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, in ornamental gardens or parks, or on golf courses or on lawns and grounds.

Monitor treatment areas to detect early infestations.

Apply Foray 2WG when eggs have completed hatching and larvae are small (early instars) and before significant defoliation occurs. Larvae must be actively feeding to be affected.

Repeat applications when high larval populations or extended egg hatch is present. Schedule second application 5-7 days after the first one, to maintain control and protect new plant (tree) growth. Factors affecting spray interval include rate of plant growth, weather conditions, and reinfestations. Monitor pest populations and foliage development to determine proper timing of applications. Under conditions of heavy pest pressures or when large larvae are present, use the higher rate allowed, shorten the application interval, and/or improve spray coverage to enhance control. Thorough coverage is essential.

Not for use on plants being grown for sale or other commercial use, for commercial seed production, 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 gypsy moth control.

Mix the product with water well before use. Agitate as necessary to maintain the suspension. Use the product within 72 hours after mixed with water.

## WARRANTY AND DISCLAIMER STATEMENT

To extent consistent with applicable law, seller makes no warranty, express or implied, or merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. To extent consistent with applicable law, user assumes all risk of use, storage or handling not in strict accordance with accompanying directions.

*Foray* is a registered trademark of Valent BioSciences Corporation.

@2012