



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 04 1991

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Novo Nordisk A/S
c/o Ms. Janet M. Overholt
Novo Nordisk Bioindustrials, Inc.
33 Turner Road
Danbury, Ct. 06813

Dear Ms. Overholt:

Subject: Foray 48 B Flowable Concentrate Final Printed Labeling
EPA Registration No. 58998-7

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable subject to the following comments.

1. Based on your declared potency of 10,600 IU/mg, adjust your declaration of active ingredient to 2.1%.
2. Replace kin with skin in the Hazards to Humans and Domestic Animals statements.
3. Replace the Environmental Hazard Statements with Do not contaminate water when disposing of equipment washwaters.
4. Provide an expiration date based on potency loss in storage.

A stamped copy of the label is enclosed for your records. Submit five (5) copies of final printed labeling.

Sincerely,

A handwritten signature in black ink, appearing to read "Phil Hutton".

Phil Hutton
Product Manager 1/
Insecticide-Rodenticide Branch
Registration Division (H7505C)

FORAY™ 48B FLOWABLE CONCENTRATE

KEEP OUT OF REACH OF CHILDREN

CAUTION

If in eyes, flush with plenty of water.
medical attention if irritation persists.

Get

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 04 1991

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide
registered under EPA Reg. No.

5898-7

ACTIVE INGREDIENT:

<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i>	
10,600 International Units (IU)/mg of product (equivalent to 48 billion IU/gallon)	2.2%
Inert Ingredients.	97.8%
Total	100.0%

PRECAUTIONARY STATEMENTS:

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May cause eye irritation. Avoid contact with skin, eyes, open wounds or clothing. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Aerial and ground application is permissible where tree canopy exists. Do not contaminate water when disposing of equipment washwaters.

BEST AVAILABLE COPY

DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

FORAY contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. **FORAY** is a stomach poison and has high specific activity 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 48B Flowable Concentrate** 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 48B** 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.

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 48b** in the following amounts of water:

High Volume Hydraulic Sprayers	100 gallons
Mist Blowers	10 gallons

Aerial Application: **FORAY 48B** may be applied aurally, either alone or diluted with water at the dosages shown in the application rates table. Spray volumes of 32-128 ounces per acre are recommended. Best results are expected when **FORAY 48B** is applied to dry foliage.

RE-ENTRY: **FORAY** may be applied up to and including the day of harvest.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal.

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

BEST AVAILABLE COPY

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.

APPLICATION RATES:

<u>Crop</u>	<u>Pests</u>	<u>Rate*</u> (pts/acre)	<u>Dosage*</u> (BIU/Acre)
Forests, Shade Trees, Ornamentals, Shrubs, Sugar Maple Trees, Seed Orchards, Ornamental Fruit, Nut and Citrus Trees	Gypsy moth	1.3-6	8-36
	Spruce budworm, browntail moth Douglas fir tussock moth, coneworm	1.3-5	8-30
	Tussock moths, pine butterfly, bagworm, leafrollers, tortrix, mimosa webworm, tent caterpillar, jackpine budworm, black headed budworm, elm spanworm, saddled prominent saddleback caterpillar and hemlock looper	1-2.7	6-16
	Redhumped caterpillars, spring and fall cankerworm, California oakworm, fall webworm	0.7-1.3	4-8

* Use the higher recommended rates on advanced larval stages or under high density larval populations.

<u>Crop</u>	<u>Pests</u> (pts/acre)	<u>Rate*</u> (BIU/Acre)	<u>Dosage*</u>
Cotton (Except AC & AZ)	Loopers	1.3-2.3	
	Armyworms	1.3-4.6	
	Cotton bollworm, Tobacco Budworm	1.0-4.6**	

****Special Instruction:** For early season management of *Heliothis* species. Initiate applications when 50% of plants are at pinhead square cotton stage independent of *Heliothis* egg and larval counts or at first egg lay, whichever occurs earlier. Continue applications on a five day spray interval up to the pyrethroid spray window.

Cotton (CA & AZ)	Armyworms	1.3-4.6	
	Cotton leaf perforator, Cotton leafworm, Saltmarsh caterpillar	1.3-2.3	
	Loopers	1.3-2.3	
	Cotton bollworm, Tobacco budworm	1.3-4.6***	

*****Special Instructions:** Repeat as necessary throughout the season to maintain control. If egg laying frequency indicates future moderate to heavy larval populations, time application spray to coincide with the second instar larvae. During periods of high temperatures, larvae will progress through first to third instars very rapidly and early application timing is necessary for control. When plant cover is dense and larvae are feeding in the lower 2/3 portion of the plant, aerial application may not provide adequate control.

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EPA Reg. #58998-7
EPA Est. #58998-DN-001

WARRANTY NOTICE: NOVO NORDISK MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, concerning this product or its uses which extend beyond the use of the product under normal conditions in accord with the statements made on this label. In no case shall the seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer.

MANUFACTURED FOR:

**NOVO NORDISK
33 Turner Road
Danbury, CT 06813-1907**

NET CONTENT ____ (U.S. GALLONS)

1/91