

96.05.16

Foray(R) 48B

Low Volume Aqueous Concentrate

COMMERCIAL

READ THE LABEL BEFORE USING

GUARANTEE:

ACTIVE INGREDIENT: *Bacillus thuringiensis* sub-species *kurstaki*. Potency: 10,600 International Units per mg, equivalent to 12.7 Billion International Units (BIU) per litre.

REGISTRATION NO. 21464 PEST CONTROL PRODUCTS ACT

NET CONTENTS (LITRES)

Batch No.

Registrant and Distributor:

Chemical and Agricultural Products Division
Abbott Laboratories
1401 Sheridan Road
North Chicago, IL 60064-4000

Canadian Agent:

Chemical and Agricultural Products Division
Abbott Laboratories Limited
Montreal, Canada H3C 3K6

List No. 60175-13
04-1277/R1

FORAY (R) 48B

LOW VOLUME AQUEOUS CONCENTRATE

GENERAL DIRECTIONS FOR USE:

Foray 48B contains the spores and insecticidal crystals of a naturally occurring strain of *Bacillus thuringiensis* sub-species

kurstaki.

Foray 48B is highly specific to some lepidopteran larvae. It is a stomach poison only and therefore must be ingested by the larvae to be effective. After ingestion of a sufficient dose, feeding ceases and death will follow in 2-5 days.

In general, larvae should be treated when they are newly hatched. Young larvae (early instars) are most susceptible to the effects of *Bacillus thuringiensis* sub-species *kurstaki* and less damage will have been caused by larval feeding. Thorough spray coverage with well-distributed deposits of Foray 48B is necessary to assure that the feeding larvae ingest a toxic dose.

Foray 48B is a water based formulation which may be applied undiluted or diluted with clean water. Dilute with minimal quantities of water only when required to improve deposit. Do not use petroleum-based solvents. Foray 48B does not settle out rapidly, so continual agitation is not recommended and should be avoided. Use diluted mixture of Foray 48B within 72 hours of mixing and recirculate mixture before loading and/or application.

Even though Foray 48B deposits are relatively resistant to wash-off, avoid application when significant rainfall is imminent. For early morning applications, foliage should not be wet with dew to the point of runoff.

Consult with recognized forest pest control authority or Abbott Laboratories representative regarding appropriate timing and method of application. The timing and number of applications required for effective control will depend upon foliage development and larval activity. For effective control, applications should coincide with sufficient foliage development (shoot elongation or leaf expansion) to ensure maximum spray deposit. To the extent possible, apply treatments after egg hatch has been completed to assure that the maximum number of larvae are present during the treatment period. If Foray 48B is applied to later larval instars and/or extremely high larval populations, use the higher label rates and/or additional applications.

To control eastern spruce budworm treat prior to 5th instar larval development and when bud flush/shoot development is sufficient to allow good deposit on emerging needles.

For consistently acceptable control of western spruce budworm, higher rates and volumes of spray may be required to achieve satisfactory deposit in mountainous terrain.

Treat against gypsy moth when larvae are 2nd and 3rd instar and

when leaf expansion is 40-50%; when egg hatch is extended, 2 or more applications, 7-10 days apart may be required.

For best control of eastern hemlock looper apply when larvae are young (early instars) before extensive damage occurs and/or when a majority of buds have flushed or shed bud caps. Repeat applications at intervals to maintain control, usually 3-14 days depending on larval growth and weather. If control is sought with a single spray wait until egg hatch is essentially complete.

GROUND APPLICATION:

With ground equipment provide thorough coverage while minimizing runoff. Dilute Foray 48B only to provide sufficient volume for thorough coverage.

For mist blower applications, add the recommended volume of Foray 48B to water, at a mix ratio ranging from 1:20 to 1:50. Do not exceed 150 litres/hectare total mixture.

For high volume hydraulic sprayers, add the recommended volume of Foray 48B to water at a mix ratio ranging from 1:50 to 1:500. Do not exceed 1500 litres/hectare total mixture.

DOSE RATES: AERIAL(1) AND GROUND APPLICATION

FORESTS, WOODLANDS, ORNAMENTALS AND OTHER TREED AREAS

Target Insect	RATE Litres/hectare	DOSE BIU/hectare
Eastern Spruce Budworm	1.6-2.4	20-30
Western Spruce Budworm	2.4-3.1	30-40
Gypsy Moth	1.6-4.0	20-50
Jackpine Budworm	1.6-2.4	20-30
Forest Tent Caterpillar	1.0-1.6	12-20
Spring & Fall Cankerworm	1.0-1.6	12-20
Eastern Hemlock Looper	2.4-3.1	30-40
Satin Moth	4.0	50

(1) See Restricted Uses for aerial application

AGRICULTURAL USES

ORCHARD CROPS: Foray 48B should be applied when trees are in full bloom (pink stage) and at petal fall. Apply the label rates of Foray 48B in sufficient volume of water to achieve thorough coverage and good deposit throughout the orchard canopy. Sticker spreaders are not needed when using Foray 48B. In a conventional orchard apply in approximately 600 litres/hectare of water with an air blast sprayer.

For spindle plantings and dwarf trees, volume and application equipment must be adjusted accordingly. Consult an appropriate orchard pest management guide for further details regarding Tree Row Volume (TRV) applications.

RASPBERRY: Apply in a maximum of 600 litres water/hectare; begin applications at prebloom and bloom at first signs of larval infestation.

GREENHOUSES: Foray 48B is most active against young larvae of the cabbage looper. Apply at the first sign of larval infestation. Repeat applications as necessary to maintain control of young larvae. The exact timing and number of applications will depend on foliage development and larval activity, (including extent of egg hatch, stage of larval development and population pressure).

CROP/SITE	PEST	RATE	DOSE
apples and pears	Early season leafrollers (oblique-banded, three-lined, fruit-tree, and European)	2.8 - 4.0 Litres/Hectare	36 - 50 BIU/hectare
Raspberry	Early season oblique-banded leaf-roller	1.4 - 2.8 Litres/hectare	18 - 36 BIU/hectare
Greenhouse (peppers, lettuce, cucumbers and tomatoes)	Cabbage Looper	80 - 200 mL/1000 sq.m.	10 - 25 BIU/hectare

RESTRICTED USES
FOREST, WOODLANDS, AND RESIDENTIAL AREAS

NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product

under unsafe conditions.

NATURE OF RESTRICTION: This product is to be used only in the manner authorized. Consult local pesticide regulatory authorities about use permits which may be required.

Forestry Use: Ground/Aerial Application for sites greater than 500 ha.

Woodlands Use: Aerial Application for sites 500 ha or less.

Residential Use: Aerial Application in urban or residential areas.

Consult local Transport Canada office regarding air regulations of urban, residential or forestry applications. Foray 48B may be used for aerial application in residential areas, urban areas, industrial areas and municipal recreational areas (including parks, parkland, vacant lots, shelterbelts, and rights of way under municipal jurisdiction).

Undiluted applications, at the rates included in the DOSE RATES table, are recommended for most labeled pests. Foray 48B may be diluted with water when necessary to improve deposit. Total volume of spray material to be applied per hectare depends upon target pest, target foliage, weather, spray equipment and droplet size. Recommended droplet size spectra are from 30 - 80 microns for coniferous foliage and 50 - 150 microns for broadleaf foliage.

PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN

Avoid contact with skin, eyes or clothing. In case of contact, flush eyes or skin with plenty of water. Wash thoroughly with soap and water after handling. Seek medical attention if irritation occurs and persists.

STORAGE:

Store at temperatures between 0 deg C and 25 deg C. Cooler storage temperatures are preferred. Store container upright and keep tightly closed when not in use. After extended storage, shake or stir contents to assure a uniform suspension.

DISPOSAL:

Rinse the emptied container thoroughly and add the rinsings to the spray mixture in the tank.

Follow provincial instructions for any required additional cleaning of the container prior to its disposal or recycling.

Dispose of the container, equipment washings and tank rinsate in accordance with provincial requirements.

For information on the disposal of unused, unwanted product and the cleanup of spills, contact the provincial regulatory agency or the manufacturer.

NOTICE TO BUYER:

Seller's guarantee shall be limited to the terms set out on the label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

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