

88.06.29

FUTURA

Suspension

BIOLOGICAL INSECTICIDE
FOR FOREST AND WOODLAND USE

RESTRICTED

NET CONTENTS: 200 Litres

GUARANTEE: *Bacillus thuringiensis* Berliner,
var. *kurstaki* potency of 12,000
international units per milligram of
formulated product (equivalent to 14.4 Billion
International Units of potency per Litre)

REGISTRATION NO. 17778 PEST CONTROL PRODUCTS ACT

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

DUPHAR B.Y.
CROP PROTECTION DIVISION
WEESP, HOLLAND

Canadian Agent:
Chemagro Limited
256 Britannia Road East
Mississauga, Ontario, L4Z 1S6

NOTICE TO USER:

This control product is to be used only in accordance with the directions on this label. It is an offense 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.

DIRECTIONS FOR USE:

For biological control of the spruce budworm and jackpine budworm, application of Futura should commence when most of the larvae are in the 3rd or 4th instar to obtain maximum foliage protection.

For best control of gypsy moth, apply when young larvae are present and when leaf expansion is 40-50%. Repeat in 1-3 weeks if necessary.

For best control of hemlock looper (*Lambdina fiscellaria fiscellaria*) 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 sufficient 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.

MODE OF ACTION:

To be effective, Futura (B.t.) must be ingested. Once ingested, larvae stop feeding. Mortality occurs in 3 to 6 days.

RESTRICTED AERIAL APPLICATION:

For aerial application, either small (Agricultural type) or large multi-engined aircraft with conventional boom and nozzle systems may be used. Aircraft should be calibrated before application to deliver droplets of 100-200 microns diameter on emission.

Spray deposits of 10-20 droplets/cm² are desirable. Futura is a water based formulation. Therefore, to ensure good deposit, it should be applied only under conditions of high relative humidity and low wind velocity, i.e. in early morning or late afternoon. Chevron sticker is recommended as an option.

AERIAL APPLICATION IN URBAN AREAS:

Futura may be applied for control of spruce and jackpine budworms, gypsy moth and hemlock looper in residential, industrial and municipal recreational areas (including parks, parklands, vacant lots, shelterbelts and right-of-way under municipal jurisdiction) by fixed wing or rotary (helicopter) aircraft. Consult regional office of Transport Canada regarding air regulations.

RATE FOR AERIAL APPLICATION:

Pest	Rate of Futura per hectare		Chevron Spray Sticker (Optional)	Total Emitted volume per hectare
	Litres	BIU		Litres
Spruce budworm	1.4-2.1	20-30	1 part in 1600 parts of final volume or 0.6 mL per Litre	2.5
Jackpine budworm	2.1	30		2.5
Gypsy moth	1.4-2.1	20-30		2.5
Hemlock looper	2.1	30		2.5

Federal or Provincial forestry or regulatory officials may recommend the inclusion of a tracer dye for purposes of monitoring spray deposit.

MIXING - AERIAL:

If pumps are used for handling Futura before mixing with water, positive displacement or diaphragm types are recommended.

To prepare an application mixture:

- 1) Fill the mixing tank with the required amount of water.
- 2) Start the agitation and add the recommended amount of Futura.
- 3) Add the Chevron Spray Sticker (optional) and agitate thoroughly.

It is recommended that agitation be maintained during spraying. The spraying mixture should be used as soon as possible after mixing. Reagitate before use if dilute spray is allowed to stand.

GROUND APPLICATION: For control of spruce and jackpine budworms, gypsy moth, and hemlock looper.

This product may be applied by ground equipment to woodlands, along right-of-ways, in tree nurseries or seed orchards and in treed areas in municipal parks. It may be used as an ornamental application in treed areas. Apply at first sign of infestation when larvae are small. Treatment may be repeated in 7-10 days if infestation warrants. Wet foliage thoroughly but not to the

point of excessive runoff.

RATES FOR GROUND APPLICATION:

Pests	Rates of Futura per hectare		Remarks
	Litres	BIU	
Spruce Budworm, Gypsy Moth	1.4-2.1	20-30	Hydraulic sprayer: apply specified rate in 300-1500 litres of water per hectare. Mist blower: 100-500 L/ha.
Jackpine Budworm	2.1	30	
Hemlock looper	2.1	30	

Chevron sticker at 1 part in 1600 parts or 0.6 mL per Litre of final volume is recommended as an option.

MIXING - GROUND:

If pumps are used for handling Futura before mixing with water, positive displacement types are recommended.

To prepare an application mixture:

- 1) Partially fill the mixing tank with about three quarters of the required amount of water.
- 2) Start the agitation and add the recommended amount of Futura.
- 3) Add the Chevron Spray Sticker (optional) at the recommended rate and the remaining water and agitate thoroughly.

It is recommended that agitation be maintained during spraying. The spray mixture should be used as soon as possible after mixing. Reagitate before use if dilute spray is allowed to stand.

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN

Do not spray suspension into lakes, streams, rivers, or ponds. Do not contaminate any body of water by cleaning equipment or disposal of wastes.

Store in a cool place and tightly reclose containers of unused FUTURA.

DISPOSAL OF EMPTY CONTAINER:

1. Do not reuse the container.
2. Completely empty the container into application equipment and add all rinsings to the spray mixture in the tank.
3. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
4. Dispose of the empty container in accordance with provincial requirements.
5. For information on the disposal of unused, unwanted product and the cleanup of spills contact the regional office of the Environmental Protection Service, Environment Canada.

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.

SUPPLEMENTAL LABEL

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READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

KEEP OUT OF DIRECT SUNLIGHT

DUPHAR B.Y.
CROP PROTECTION DIVISION
C.J. van Houtenlaan 36
1381 CP, Weesp, Holland

Canadian Agent:
Chemagro Limited,
256 Britannia Road East,
Mississauga, Ontario, L4Z 1S6

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NATURE OF RESTRICTION:

This product is to be used only in the manner authorized; consult local pesticide regulatory authorities about use permits.

DIRECTIONS FOR USE:

For best control of the hemlock looper (*Lambdina fiscellaria fiscellaria*) apply when larvae are young (early instars) before extensive damage occurs, and/or when majority of buds have flushed or shed bud caps. Repeat applications at intervals sufficient 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.

MODE OF ACTION:

To be effective, Futura (B.t.) must be ingested. Once ingested, larvae stop feeding. Mortality occurs in 3 to 6 days.

RESTRICTED AERIAL APPLICATION:

For aerial application, either small (Agricultural type) or large multi-engined aircraft with conventional boom and nozzle systems may be used. Aircraft should be calibrated before application to

deliver droplets of 100-200 microns diameter on emission.

Spray deposits of 10-20 droplets/cm² are desirable. Futura is a water based formulation. Therefore, to ensure good deposit, it should be applied only under conditions of high relative humidity and low wind velocity, i.e. in early morning or late afternoon. Chevron sticker is recommended as an option.

AERIAL APPLICATION IN URBAN AREAS:

Futura may be applied for control of hemlock looper in residential, industrial and municipal recreational areas (including parks, parklands, vacant lots, shelterbelts and right-of-way under municipal jurisdiction) by fixed wing or rotary (helicopter) aircraft. Consult regional office of Transport Canada regarding air regulations.

RATE FOR AERIAL APPLICATION:

Pest	Rate of Futura per hectare		Chevron Spray Sticker (Optional)	Total Emitted volume per hectare
	Litres	BIU		Litres
Hemlock looper	2.1	30	1 part in 1600 parts of final volume or 0.6 mL per Litre.	2.5

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GROUND APPLICATION: For control of hemlock looper.

This product may be applied by ground equipment to woodlands, along right-of-ways, in tree nurseries or seed orchards and in treed areas in municipal parks. It may be used as an ornamental application in treed areas. Apply at first sign of infestation when larvae are small. Treatment may be repeated in 7-10 days if infestation warrants. Wet foliage thoroughly but not to the point of excessive runoff.

RATES FOR GROUND APPLICATION:

Pests	Rates of Futura per hectare		Remarks
	Litres	BIU	
Hemlock looper	2.1	30	Hydraulic sprayer: apply specified rate in 300-1500 litres of water per hectare. Mist blower: 100-500 L/ha.

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