

94.10.13

BACTOSPEINE

SUSPENSION

BIOLOGICAL INSECTICIDE

FOR USE IN AGRICULTURAL CROPS,
FORESTRY AND OTHER TREED AREAS

COMMERCIAL

READ LABEL BEFORE USING

GUARANTEE: Bacillus thuringiensis Berliner, var.
kurstaki...potency of 8800 International Units per
milligram of formulated product (equivalent to
9.68 Billion International Units of potency per
Litre)

REGISTRATION NO. 17781 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 5 LITRES

KEEP OUT OF DIRECT SUNLIGHT

DUPHAR B.V.

Crop Protection Division
C.J. van Houtenlaan 36
1381 CP, 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 of this label. It is an offence
under the PEST CONTROL PRODUCT ACT to use a control product under
unsafe conditions.

DIRECTIONS FOR USE

AGRICULTURAL CROPS

Bactospeine provides best control when caterpillars are newly
hatched (1st and 2nd instar) and most susceptible to the product
which must be ingested. Good leaf coverage is essential to

achieve effective insect control. Higher rates are generally necessary when infestations are heavy and foliage is dense. For typical treatments, Bactospeine may be applied with hydraulic sprayers or mist blowers in a volume of water suitable for available equipment to provide adequate coverage of the crop without runoff. Treatment may be repeated in 7-10 days if infestation warrants. For small quantities, use 2.3 mL of Bactospeine per Litre water to provide an application rate of 2.3 Litres/hectare in 1000 Litres of water. Do not mix this product with any materials other than those listed on this label.

RATES OF APPLICATION

Crops	Pests	Litres Bactospeine per hectare
Cabbage, Cauliflower Broccoli, Brussel sprouts, Kohlrabi	Cabbage looper Imported cabbageworm, Diamondback moth	0.6-2.3
Flue-cured tobacco	Tomato hornworm	0.45 - 0.65

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

WOODLANDS AND OTHER TREED AREAS - GROUND APPLICATION

Bactospeine may be applied for control of spruce and jackpine budworms and gypsy moth 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 Bactospeine per hectare		Remarks
	Litres	BIU	

Spruce Budworm, Gypsy Moth	2.1-3.1	20-30	Hydraulic sprayers: apply specified rate in 300-1500 litres of water per hectare. Mist blowers: 100-500 L/ha.
Jackpine budworm	3.1	30	

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

MIXING PROCEDURE:

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 Bactospeine.
3. Add the Chevron sticker (optional) at recommended rate and the remaining water and agitate thoroughly.

It is recommended that agitation be maintained during spraying. Reagitate before use if dilute spray is allowed to stand. Spray mixture should be used as soon as possible after mixing. Spray mixture should not be allowed to remain in mixing tank for more than 12 hours.

RESTRICTED USES

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 which may be required.

DIRECTIONS FOR USE

For biological control of the spruce budworm and jackpine budworm, Bactospeine should be applied when most of the larvae are in the 3rd and 4th instar to obtain maximum foliage protection. Treat infested foliage when buds or shoots have opened. To be effective, Bactospeine must be Ingested. Once ingested, larvae stop feeding. Their mortality occurs in 3 to 6 days.

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.

Do not mix this product with any materials other than those listed on this label.

RESTRICTED AERIAL APPLICATION

The aircraft should be calibrated to spray a deposit of at least 20 droplets/cm² with a droplet diameter of 50-150 microns. Either small or large capacity airplanes can be used with conventional boom and nozzle systems or rotary atomizers. Aircraft and spray systems may be cleaned with water.

Best results are obtained when Bactospeine is applied during early morning or evening hours, when winds are low and relative humidity is high.

AERIAL APPLICATION IN URBAN AREAS:

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

RATES FOR AERIAL APPLICATION

Pests	Rates of Bactospeine per hectare		Total Emitted volume per hectare
	Litres	BIU	Litres
Spruce budworm, Gypsy moth	2.1-3.1	20-30	4.7 - 7.0
Jackpine budworm	3.1	30	

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

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

MIXING - AERIAL

To prepare an aerial application spray 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 Bactospeine.
3. Add the Chevron 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. Spray mixture should not be allowed to remain in mixing tank for more than 12 hours. 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.

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 Conservation and Protection, Environment Canada.

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

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.

CHEMAGRO LIMITED

256 Britannia Road East
Mississauga, Ontario, Canada L4Z 1S6

SUPPLEMENTAL LABEL FOR CONTROL OF EUROPEAN

CORN BORER ON SEED CORN

BACTOSPEINE (R)

SUSPENSION

BIOLOGICAL INSECTICIDE

FOR USE IN AGRICULTURAL CROPS

COMMERCIAL

READ THE LABEL BEFORE USING

GUARANTEE: Bacillus thuringiensis Berliner, var.
kurstaki...potency of 8800 International Units per
milligram of formulated product (equivalent to
9.68 Billion International Units of potency per
Litre)

REGISTRATION NO. 17781 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 5 LITRES

KEEP OUT OF DIRECT SUNLIGHT

DUPHAR B.V.
Crop Protection Division
C.J. van Houtenlaan 36
1381 CP, Weesp - Holland

Canadian Agent:
Chemagro Limited
256 Britannia Road East
Mississauga, Ontario, L4Z 156

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.

DIRECTIONS FOR USE

CONTROL OF EUROPEAN CORN BORER IN SEED CORN:

Southwestern Ontario Only

Bactospeine provides best control of European corn borer when applications are timed for newly hatched (1st instar) larvae. Bactospeine must be ingested, therefore, good leaf coverage is essential to achieve effective insect control. For application prior to tasseling, direct the spray over the leaf whorl. After tasseling, apply to foliage as a full coverage spray. Use the higher rate when infestations are heavy and/or when foliage is dense. Bactospeine may be applied with hydraulic sprayers in a volume of water suitable for available equipment to provide thorough coverage of the crop without runoff. Treatment may be repeated in 3-5 days if infestation warrants. Do not apply by air. Do not mix this product with other materials.

TIMING OF THE APPLICATION IS CRITICAL. For best control the newly hatched European corn borer larvae must have time to ingest the product before boring into the corn plant. Delayed timing of application may result in reduced control. Scout fields regularly for early detection of European corn borer infestation.

RATES OF APPLICATION

Crops	Pest	Litres Bactospeine per hectare
Seed corn: Southwestern Ontario only	European Corn Borer (newly hatched larvae)	1.6 - 2.6

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

Avoid inhalation. Avoid contact with skin, eyes or clothing. In case of contact, flush eyes or skin with plenty of water. Get medical attention if irritation persists.

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 Bactospeine.

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 Conservation and Protection, 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.

BACTOSPEINE is a Reg. TM of Pasteur Institute.

This label transcript service is offered by the Pest Management Regulatory Agency to provide efficient searching for label information. This service and this information do not replace the official hard-copy label. The PMRA does not provide any guarantee or assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.

+))