



BioBit® DF

BIOLOGICAL INSECTICIDE

WATER DISPERSIBLE GRANULE

An organic insecticide for the control of caterpillars on fruit, vegetable and ornamental crops

Registered to:



870 Technology Way
Libertyville, IL 60048 U.S.A.
Tel.: (1) 847-968-4790

NZ Agent:
Sumitomo Chemical Co., Ltd.
P. O. Box 2278
Wellington, NZ

Distributed by:
AgriNova NZ Limited
15 Sunlight Grove
P. O. Box 50 080
Porirua, NEW ZEALAND
Telephone 04 237 0905

grochem

Registered pursuant to the
ACVM Act 1997 No. P7693
See www.foodsafety.govt.nz/industry/acvm/
for registration conditions.

Approved pursuant to the
HSNO Act 1996
Approval No. 000698
See www.epa.govt.nz/
for approval conditions.

Net: 1 kg

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Valent BioSciences Corporation, U.S.A.

GBIOBI/0719

Batch No.:

D.O.M.:

Active Ingredient: 32000 International Units *Bacillus thuringiensis* subspecies *kurstaki* (H-3a, 3b HD1)/mg in the form of a water dispersible granule.

Hazard Classification: 6.4A, 9.1D

Not to be used for any purpose, or in any manner, contrary to this label unless authorised under appropriate legislation.

Toxicity:

Warning – May cause eye irritation. Avoid contact with eyes. Avoid inhalation of powder or contact with open wounds.

Ecotoxicity:

Has biocidal action against Lepidoptera.

Do not apply this substance in a way that adversely affects native Lepidoptera of a species found only in the region of application. Avoid contamination of any water supply with product or empty container.

HANDLING PRECAUTIONS

Storage: High temperatures will damage the bacterial spores contained in BioBit DF Biological Insecticide. Store in original container, tightly closed, in a cool dry place away from foodstuffs.

Personal Protection: Avoid skin contact. Do not eat, drink or smoke while using. Wash hands and exposed skin before meals and after work.

Equipment: Apply using accurately calibrated spray equipment in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).

Disposal: Ensure container is completely empty. Burn empty container if wind direction permits, otherwise crush and bury in approved landfill.

Dispose of product by using according to label or dilute unused product and pour onto fallow land.

FIRST AID:

If swallowed do not induce vomiting. For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water.

SPILLAGE:

Wear appropriate protective clothing and prevent material from entering waterways. Sweep up solid spills without generating dust (use water to dampen). Contain liquid spills and absorb with inert material. Collect in sealable container for disposal.

TRANSPORT:

Do not carry more than 3 kg of BioBit DF Biological Insecticide on a passenger service vehicle.

List No. 12046-43-04

04-6915/R3

PEEL BACK BOOK HERE AND RESEAL AFTER OPENING

COMPATIBILITY and MIXING:

BioBit DF Biological Insecticide is compatible with most commonly used insecticides and fungicides. Do NOT apply as a tank mix with, or within 2 days of application of alkaline products such as foliar nutrients, liquid fertilisers or Bordeaux mixture. If mixing with cupric hydroxide use immediately. Do not allow mixture to stand.

With the agitators running add the required quantity of BioBit DF Biological Insecticide to the partially filled spray tank. Continue agitation while adding the remainder of the water. Keep agitated during use and reagitrate thoroughly after a stoppage. Use spray within 12 hours of mixing.

SHELF LIFE:

When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

WITHHOLDING PERIOD:

Nil

GENERAL INFORMATION:

BioBit DF Biological Insecticide contains live spores and endotoxin of a natural bacterium. It acts specifically against caterpillars and does not harm mammals, birds, fish or beneficial insects.

As BioBit DF Biological Insecticide has no contact action it must be eaten by caterpillars and activated in their alkaline gut. Larvae stop feeding soon after ingesting BioBit DF Biological Insecticide, but death and disappearance of treated caterpillars may take several days.

DIRECTIONS FOR USE:

The rates suggested are for high volume spraying to the point of run off. Treat when the caterpillars are young (early instars) but before the crop is damaged. A shortened spraying interval is recommended when weather conditions are wet, or when the insect pest population pressure is heavy. Do not use when rain is forecast within 8 hours.

It is an offence to use this product on animals.

CROP	PEST	RATE	NOTES
Avocado	Leafroller caterpillars	50g/100 litres water in at least 2000 litres water/ha	Ensure complete spray coverage. Apply at early, mid and late flowering. Repeat as necessary every 10-14 days until harvest. The addition of a wetter/sticker is recommended.
Berryfruit	Leafroller caterpillars	25-50g/100 litres water	Apply at 10-14 day intervals over the blossom period and as required until harvest.
Brassicac (cabbage, Brussels sprouts, broccoli, cauliflower)	White butterfly, diamondback moth	50-100g/100 litres water (500g-1kg/ha)	Thorough coverage is essential. The addition of a non-ionic wetting agent is recommended. Use the higher rates and shorter spray intervals when insect pressure is high or caterpillars are larger, and lower rates or longer spray intervals when insect pressure is light. Resistance management for diamondback moth is to use Bt products such as BioBit DF Biological Insecticide against young larvae on small plants.
Citrus	Leafroller caterpillars	25-50g/100 litres water	Apply at 10-14 day intervals from the start of flowering until late January. Then apply every 3-4 weeks or as required, until harvest. The addition of an emulsifiable crop oil approved for use on citrus is recommended to give some control of pests not controlled by BioBit DF Biological Insecticide. Follow the label use directions of the oil precisely as oil sprays may increase the amount of fruit russet.
Grapes	Leafroller caterpillars	25-50g/100 litres water (min 500g/ha)	Apply every 10-14 days from the end of September until harvest.
Kiwifruit	Leafroller caterpillars	25-50g/100 litres water. Use min water volume of 2000 litres/ha for complete spray coverage	Use the high rate when pest pressure is high. Make the first application at 75% petal fall followed by two further sprays at 2 week intervals. From January to harvest either spray on a regular basis or where pest levels are monitored repeat as required. The addition of a wetter/sticker is recommended.
Pipfruit	Leafroller caterpillars	To reduce leafroller damage use 50g/100 litres water (min 1kg/ha)	Make the first application in late October to coincide with the first generation egg hatch. A programme of three applications at 7-10 day intervals is recommended. Further applications should be made whenever pest thresholds are exceeded. Ensure complete coverage of sheltered feeding sites. Control may be improved by the addition of milk powder at 250g/100 litres water.
Tomatoes: <i>Glasshouse</i>	Tomato fruitworm, looper caterpillar	25-50g/100 litres water	Apply at first sign of insect attack. Repeat at 2-3 week intervals for as long as necessary. Spray every two weeks when tomato fruitworm is a problem. Where motorised mist blower knapsacks are used, the restrictor should be set for dilute spraying.
<i>Field</i>		1kg/ha	Apply at the first sign of egg-laying or young larvae. Repeat at 7-10 day intervals, or if monitoring (as recommended by Crop and Food Research) when thresholds are exceeded.
Forestry; Ornamentals	Fall webworm	25-50g/100 litres water (500g-1kg/ha)	Apply as soon as larvae are present and repeat as necessary against subsequent generations.
Other fruit, vegetable or ornamental crops	Caterpillars	50-100g/100 litres water (or 1kg/ha)	For the control of susceptible caterpillars, apply every 7-10 days, or as necessary.

Note: The addition of a non-ionic wetter such as Contact Low Foam may improve coverage on hard-to-wet crops.

CONDITIONS OF SALE:**CAUTION: READ THIS NOTICE BEFORE OPENING THE CONTAINER**

If you open this container you will be deemed to have accepted the conditions below.

As no control can be exercised over the manner in which or the condition under which this product is used, all conditions and warranties expressed or implied, other than those required by statute are excluded. No responsibility will be accepted for any damage or injury whatsoever arising from the storage, handling, application or use of this product.

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