

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Farmoz

Full-Bac® WDG

BIOLOGICAL INSECTICIDE

ACTIVE CONSTITUENT: *Bacillus Thuringiensis* subspecies *kurstaki* (Manufactured for Becker Microbial Products by ADM Bioproducts, Illinois, USA) solids and solubles.

GROUP **11C** INSECTICIDE

For the control of Lepidopteran caterpillars in Agricultural and Non-Agricultural Uses: Vegetables, Fruit, Vines, Oilseeds, Cereal Grains, Herbs, Tobacco, Ornamentals, Forestry, Amentiy Trees and Turf as specified in the Directions for Use table.

www.farmoz.com.au

SITUATION	PEST	RATE	CRITICAL COMMENTS
Agricultural and Non-Agricultural Uses: Vegetables, Fruits, Vines, Oilseeds, Cereal Grains, Herbs, Tobacco, Ornamentals, Forestry, Amenity Trees, Turf	Lepidopteran larvae susceptible to FULL-BAC WDG including: Armyworm (<i>Spodoptera</i> spp.), Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>), Cabbage Moth (<i>Plutella xylostella</i>), Cabbage White Butterfly (<i>Pieris rapae</i>), Green Looper (<i>Chrysodeisix eriosoma</i>), Lightbrown Apple Moth (<i>Epiphyas postvittana</i>), Pear Looper (<i>Ectropis excursaria</i>), Soybean Looper (<i>Thysanoplusia orichalcea</i>), Vine Moth (<i>Phalaenoides glycinae</i> , <i>Agarista agricola</i>), Tobacco Looper (<i>Chrysodeisix argentifera</i>)	Hectare 0.5 to 2.0 kg/ha Dilute Spraying (to point of run-off) 25-100 g/100 L Concentrate Spraying 100-1000 g/100 L	<ol style="list-style-type: none"> 1. Crops must be monitored regularly for lepidopteran eggs or first instar larvae (caterpillar stage). The suitability of FULL-BAC WDG as a control measure should be determined through consultation with local industry advisers, company representatives or small scale tests before treatment of a large area or number of plants begins. 2. If FULL-BAC WDG is suitable, time the commencement of spraying to coincide with egg hatch or first instar larvae and before the damage to the plant. 3. The activity of FULL-BAC WDG commences to decline immediately after application. Under continual pest pressure or rapid plant growth (eg sweet corn silks, tomato shoots etc), a minimum of 2 sprays separated by no more than 3 days initially, and then reapply at 3-5 day intervals. 4. Use the higher rates of FULL-BAC WDG for higher egg laying activity, longer residual or larger first instar larvae. Higher rates should be used against <i>Helicoverpa</i> spp. Control of <i>Helicoverpa</i> is most effective if larvae less than 8 mm long. Control of <i>Spodoptera</i> is most effective if larvae are less than 15 mm long. 5. Spray late in the afternoon or early evening (before dew begins to settle) when larvae are actively feeding. Reapplication after rainfall or overhead sprinkler irrigation may be necessary. 6. Ensure complete and thorough coverage of all plant surfaces. A non-ionic wetting agent such as Agral¹ may need to be used on difficult to wet plants. 7. Larval control is only achieved when the larvae ingest FULL-BAC WDG and activation begins in the alkaline gut. Feeding ceases once the larvae ingest FULL-BAC WDG and death of treated larvae may take up to 3-5 days. Under low temperatures, when larvae are less actively feeding, control may be slower. 8. Larvae in sheltered positions such as the centre of the sweet corn whorls or in the heart leaves of lettuce and crucifers will not be controlled. In these cases spraying to achieve run-off may be desirable for the FULL-BAC WDG to reach the target area to achieve efficacy. 9. FULL-BAC WDG is safe to beneficial arthropods and is best used in conjunction with these beneficial species (eg. <i>Trichogramma</i> spp. parasitoids). To obtain maximum assistance from beneficial arthropods, avoid the use of broad spectrum insecticides before and during the use of FULL-BAC WDG. 10. FULL-BAC WDG should be used in an Insecticide Resistance Management Strategy.

FULL-BAC WDG can be applied with 0.01% wetting agent to assist in coverage of certain plants (eg. crucifers).

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

FARMOZ FULL-BAC® WDG is specific to Lepidopterous larvae. It does not effect other insect species including; pollinators, parasites, predators, invertebrates, fish, amphibians, reptiles and mammals including man. FULL-BAC WDG is a biologically derived, stomach acting insecticide which causes mouth-part paralysis and mid-gut disintegration. FULL-BAC WDG MUST BE INGESTED BY THE LARVAE TO BE EFFECTIVE. FULL-BAC WDG acts within the gut of the larvae. The caterpillar stops feeding, protecting the crop from further damage. There is no contact activity. Sick and dying larvae can be seen on the crop for 3 to 4 days. Death will be quicker under dry, hot conditions, as the larvae desiccate quicker.

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management FARMOZ FULL-BAC® **GROUP 11C INSECTICIDE** WDG is a Group 11C Insecticide. Some naturally occurring insect biotypes resistant to FULL-BAC WDG and other Group 11C insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if FULL-BAC WDG or other Group 11C insecticides are used repeatedly. The effectiveness of FULL-BAC WDG on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use FARMOZ Pty. Ltd. accepts no liability for any losses that may result from the failure of FULL-BAC WDG to control resistant insects.

FULL-BAC WDG may be subject to specific resistance management strategies. For further information contact your local supplier, FARMOZ representative or local agricultural department agronomist.

MIXING

Pre-mix FULL-BAC WDG to a slurry using 1 part FULL-BAC WDG to a minimum 5 parts water. Fill spray or mixing tank 1/2 - 3/4 full with water and start agitation. Add slurry whilst maintaining continuous agitation. Add other spray material and balance of water until tank is full. Maintain the agitation throughout the mixing, standing and spraying operations.

DO NOT allow diluted sprays to remain in the tank for more than 24 hours.

FULL-BAC WDG is formulated to provide desirable coverage and adhesion on leaf surfaces. Additional adjuvants, spreaders or stickers may be added to improve product performance, especially under heavy dew or rainy conditions. It is recommended to use Wetspray 600 or similar non-ionic wetting agent when applying this product.

APPLICATION

High Volume (dilute) Sprays: Fully wet plant foliage to the point of runoff and typically utilise a minimum water volume of 1000 L/ha.

Low Volume Sprays (Broadacre applications): When applying by ground boom spray, use the highest practical water volume. DO NOT apply less than 200 litres total spray volume per hectare, unless otherwise stated.

As this product must be ingested, thorough spray coverage is essential. If rain falls shortly after treatment, re-treatment may be necessary. To obtain maximum assistance from beneficial insects, avoid use of broad spectrum insecticides during a programme of the above sprays.

For most consistent control, apply at first sign of newly-hatched larvae. Re-apply as necessary under a pest management programme that includes frequent scouting.

COMPATIBILITY

FULL-BAC WDG is compatible with most 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 mixtures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a cool, well-ventilated area out of direct sunlight. FULL-BAC WDG is a biological insecticide containing bacterial spores which are damaged by exposure to heat and SHOULD BE PROTECTED AT ALL TIMES FROM HIGH TEMPERATURES. DO NOT store this container in direct sunlight or hot storage areas. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers should not be burnt.

SAFETY DIRECTIONS

Will irritate the eyes and skin. Avoid contact with eyes and skin and open wounds. DO NOT inhale spray mist. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves, face shield or goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, face shield or goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126.

MSDS

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for FULL-BAC WDG is available from FARMOZ on request. Call Customer Service on (02) 9431 7800.

CONDITIONS OF SALE: The use of FARMOZ FULL-BAC WDG Biological Insecticide being beyond the control of the manufacturer, no warranty expressed or implied is given by FARMOZ Pty. Ltd., regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and FARMOZ Pty. Ltd. accepts no responsibility for any consequence whatsoever resulting from the use of this product.

® Registered trademark of FARMOZ Pty. Ltd.

NOT A DANGEROUS GOOD ACCORDING TO THE AUSTRALIAN DANGEROUS GOODS (ADG) CODE.

PACK SIZES: 1 kg, 5 kg, 10 kg, 50 kg