

READ LABEL BEFORE USE

 **GRANDEVO**<sup>®</sup>  
BIOINSECTICIDE WDG

A biological insecticide for the control of mealybug in grapes.

**ACTIVE INGREDIENT:**

Contains 300g/kg fermentation solids of *Chromobacterium subsugae* strain PRAA4-IT as a water dispersible granule.  
Not less than 2000 Cabbage Looper Killing Units (CLKU)/mg.



**HAZARD CLASSIFICATION:** 9.1C

**ECOTOXIC:** Harmful to aquatic life with long lasting effects. Avoid contamination of any water supply with product or empty container. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly onto or into water. Do not apply to areas vulnerable to runoff. If rainfall is imminent, delay spraying.

**WARNING:** Grandevo WDG might not be compatible with Integrated Pest Management (IPM). The best available technique which minimises off-target drift should be used to reduce effects on wildlife in the field boundary.

This product temporarily repels honey bees for up to 6 days after spraying. Do not apply to plants if bees are foraging or the plants are in flower or part flower and are likely to be visited by non-target invertebrate pollinators (including bees).

**HANDLING PRECAUTIONS****STORAGE**

- Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
- Stores containing 1000kg of Grandevo WDG require signage and emergency response plans

**PERSONAL PROTECTION**

- Avoid skin or eye contact and inhalation of spray mist. When handling wear eye protection, waterproof gloves, boots, hat and cotton overalls. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work.

**EQUIPMENT**

- Apply with well maintained and calibrated equipment.

**DISPOSAL**

- Triple rinse empty container and add rinsate to the spray tank. Recycle empty container, otherwise crush and bury in a suitable landfill.
- Dispose of product only by using according to the label or at an appropriate landfill.

**FIRST AID:** If medical advice is needed, have the product container or label at hand. 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.

**SPILLAGE:** Wear appropriate protective clothing and prevent material from entering waterways. Contain liquid spills and absorb with inert material. Sweep up solids without creating dust. Wash area with water and detergent, absorb with further inert material and dispose of waste safely in an approved landfill.

**RESISTANCE MANAGEMENT:** **GROUP NC INSECTICIDE** Grandevo WDG belongs to a non-classified diverse mode of action group which contains material of biological origin. Resistance to this insecticide could develop from excessive use. To minimise this risk use strictly in accordance with label instructions.

**MIXING and COMPATABILITY:** Use a "pre-mixing" tank if available or add the required quantity of Grandevo WDG to the filler basket of the sprayer, while also adding plenty of water to wash product through the filler screen. Break up any soft lumps of product remaining on the screen and wash these through into the tank. Add any tank mixture product last and follow the warning and safety precautions statements on the partner label. Maintain agitation during spraying.

DO NOT tank mix with fungicides, insecticides, or foliar fertilisers unless compatibility is known.

Grandevo WDG should not be mixed with products that are highly acidic or highly alkaline.

Grandevo WDG is compatible with wettable sulphur, Protector<sup>hml</sup>, Bond Xtra and mineral oil.

DO NOT apply Grandevo WDG plus Bond Xtra after flowering as fruit finish may be affected.

DO NOT apply in hard water as the efficacy of Grandevo WDG will be reduced.

DO NOT allow the spray mixture to stand overnight.

**Tank Cleaning:** Flush spray equipment thoroughly with several rinses of clean water after use.

**GENERAL INFORMATION:** Grandevo WDG is a biological insecticide derived from a naturally occurring bacterium. It does not contain any live bacteria. The mode of action against insect pests is complex - generally via stomach poisoning but it may also have anti-feeding, repellency and reduced fecundity effects. Grandevo WDG is not systemic, so good coverage is essential to ensure pests come into contact with the product.

CROP	PEST	RATE	CRITICAL COMMENTS
Grapes	Mealybug	<p>Apply 340g/100L as a dilute spray to run-off.</p> <p>For a standard canopy* use a constant rate of 22L spray per 100m row. Generally, between 700 and 1100L/ha, based on row spacing.</p>	<p>Apply a directed spray in sufficient water to get good penetration of the canopy and coverage of the trunk, branches, leaves and bunches.</p> <p>Adjust rate of dilute product to your canopy density, growth stage and canopy height.</p> <p><u>Preflowering</u>: Apply when shoots are 20-50cm and repeat 3 weeks later. May be alternated in a programme with conventional insecticides effective against mealybug.</p> <p><u>Post flowering</u>: Apply at least two sprays 3 weeks apart between capfall and pre-bunch closure.</p> <p>Always tank mix with a suitable adjuvant.</p> <p>In organic production systems ensure the adjuvant is approved for use.</p>

\* Where a Standard Canopy is: Three to four vertical shoot position trained, with the canopy up to 1.5m at the final trim and 3 leaf layers in the mid canopy. Represented by a typical Marlborough Sauvignon Blanc.

**WITHHOLDING PERIOD:** Grapes: not required when used according to label directions

**Grazing:** There is no withholding period for sheep used for leaf plucking or grazing inter-rows.

EPA specified controls: Grapes: Apply a maximum of 4 applications per year, at a maximum individual application rate of 5kg product/ha, with a minimum spray interval of 7 days.

Grandevo WDG must only be applied by ground-based methods.

Do not apply when wind speeds are less than 3km/hr or more than 20km/hr as measured at the application site.

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Approved pursuant to the HSNO Act 1996, Approval Code HSR101407.

See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

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®Bond Xtra is a registered trademark of Loveland Products Inc

™Protector<sup>hml</sup> is a trademark of Henry Manufacturing Limited

#### 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.

The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier of manufacturer of the product or any of their employees and agents.

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