

**CAUTION**  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Crop Care  
**Vivando<sup>®</sup> Fungicide**

ACTIVE CONSTITUENT: 500 g/L metrafenone

|       |           |           |
|-------|-----------|-----------|
| GROUP | <b>U8</b> | FUNGICIDE |
|-------|-----------|-----------|

For the control of powdery mildew in cucurbits and grapes as per the  
Directions for Use table.

**CONTENTS: 1 - 20L**

Crop Care Australasia Pty Ltd, Unit 15/16 Metroplex Avenue, Murarrie Qld 4172

## DIRECTIONS FOR USE

### Restrictions

DO NOT apply with aircraft.

### Spray Drift Restrictions

DO NOT apply with spray droplets smaller than a MEDIUM spray droplet size category according to nozzle manufacturer specifications that refer to the ASAE S572 Standard or the BCPC Guideline.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour as measured at the application site.

DO NOT apply in vineyards when the wind speed is less than 3 or more than 20 kilometres per hour as measured 15 metres outside of the vineyard on the upwind side.

DO NOT direct the spray above vines during airblast applications.

TURN OFF outward pointing nozzles at row ends and outer rows during airblast applications.

DO NOT apply during surface temperature inversion conditions at the application site.

Mandatory No Spray Zones for livestock, pasture or any land that is producing feed for livestock downwind from the application area are not required when used as directed.

Users of this product MUST make an accurate written record of the details of each spray application within 24 hours following application and KEEP this record for a minimum of 2 years. The spray application details that must be recorded are: 1) date with start and finish times of application; 2) location address and paddock/s sprayed; 3) full name of this product; 4) amount of product used per hectare and number of hectares applied to; 5) crop/situation and weed/pest; 6) wind speed and direction during application; 7) air temperature and relative humidity during application; 8) nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application; 9) name and address of person applying this product. (Additional record details may be required by the state or territory where this product is used.)

| CROP      | DISEASE  | RATE            | WHP    | CRITICAL COMMENTS   |
|-----------|--|-----------------|--------|---|
| Cucurbits | Powdery mildew<br>( <i>Podosphaera xanthii</i> ) | 150 – 300 mL/ha | 7 days | Apply two consecutive VIVANDO spray applications 7 to 10 days apart commencing before powdery mildew becomes established. VIVANDO should only be applied as a protectant spray.<br>Applications beginning before disease is evident on the undersides of the older leaves are recommended.<br>A second block of two VIVANDO sprays may be applied if required providing that it is preceded and followed by at least two applications of fungicides from a different fungicide Group (e.g. Colliss® Fungicide) for resistance management.<br>As a precaution, DO NOT apply more than four applications of VIVANDO per crop and DO NOT exceed more than one third of the total powdery spray program with VIVANDO.<br>Refer to the Application directions below for information on the use of Du Wett® Low Volume Application Spreader with VIVANDO. |

| CROP       | DISEASE                                       | RATE   | WHP     | CRITICAL COMMENTS  |
|------------|---|--|---------|--|
| Grapevines | Powdery mildew<br>( <i>Erysiphe necator</i> ) | <u>Dilute spray</u><br>20 mL/100L<br><br><u>Concentrate spray</u><br>Refer to the application section. | 5 weeks | Apply as part of a protectant spray program commencing when shoots are 10 cm in length. DO NOT apply more than two consecutive applications of VIVANDO 7 to 10 days apart before changing to an alternative fungicide group for powdery mildew control (e.g. Cabrio® Fungicide).<br>DO NOT apply more than four applications of VIVANDO per crop.<br>Apply by dilute or concentrate spraying equipment.<br>Apply the same amount of total product to the target crop whether applying this product by dilute or concentrate spraying methods.<br>The addition of Du Wett® will assist spray coverage on leaves and bunches especially if spray volumes are less than dilute. |

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

**WITHHOLDING PERIODS:**

**Cucurbits - DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.**

**Grapes - DO NOT HARVEST FOR 5 WEEKS AFTER APPLICATION.**

**GENERAL INSTRUCTIONS**

**Fungicide Resistance Warning**

|              |           |                  |
|--------------|-----------|------------------|
| <b>GROUP</b> | <b>U8</b> | <b>FUNGICIDE</b> |
|--------------|-----------|------------------|

VIVANDO Fungicide is a member of the unspecified group of fungicides. For fungicide resistance management VIVANDO is a Group U8 fungicide.

Some naturally occurring individual fungi resistant to VIVANDO and other Group U8 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungi population if these fungicides are used repeatedly. These resistant fungi will not be controlled by VIVANDO and other Group U8 fungicides, thus resulting in a reduction in efficacy and possible yield loss.

Since the occurrence of resistant fungi is difficult to detect prior to use, Crop Care Australasia Pty Ltd accepts no liability for any losses that may result from the failure of VIVANDO to control resistant fungi.

**Mixing**

To ensure even mixing, half-fill the spray tank with clean water and add the required amount of product. If required, add compatible products and agitate thoroughly, then add the remainder of the water. Agitate again before spraying commences.

**Application**

Apply to cucurbits by boom equipment using spray volumes between 250 to 500 L/ha. Du Wett® Low Volume Application Spreader will assist the performance of VIVANDO at all spray volumes but is especially recommended when reduced water volumes are used.

**Dilute Spraying**

- ◆ Use a sprayer designed to apply high spray volumes, up to the point of run-off and matched to the crop being sprayed.
- ◆ Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient spray solution to cover the crop to the point of run-off. Avoid excessive run-off.

- ◆ The required spray volume to achieve point of run off may be determined by applying different test volumes, using different settings on the sprayer, or from industry guidelines or other expert advice.
- ◆ Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of run-off.
- ◆ The required dilute spray volume to achieve point of run off will change and the sprayer set up and operation may also need to be changed, as the crop grows.

### **Concentrate Spraying (Grapevines Only)**

- ◆ Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies spray volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- ◆ Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen spray volume.
- ◆ Determine an appropriate dilute spray volume (See Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- ◆ The mixing rate for concentrate spraying can then be calculated in the following way:

#### **EXAMPLE ONLY**

1. Dilute spray volume as determined above: For example 1500 L/ha
  2. Your chosen concentrate spray volume: For example 500 L/ha
  3. The concentration factor in this example is: 3 X (i.e.  $1500 \text{ L} \div 500 \text{ L} = 3$ )
  4. If the dilute label rate is 20 mL/100 L, then the concentrate rate becomes 3 x 20, that is 60 mL of product per 100 L water for concentrate spraying.
- ◆ The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows.
  - ◆ For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

### **Compatibility**

For information on compatibility please contact your local Crop Care Australasia Pty Ltd representative.

### **EXPORT OF TREATED FRUIT OR WINE**

Growers should note MRLs or import tolerances do not exist in all markets for fruit treated with VIVANDO Fungicide. If you are growing fruit for export (either fresh, dried or for wine production), please check with your industry representative, Crop Care Australasia Pty Ltd or the Australian Wine Research Institute (AWRI) <http://www.awri.com.au/> for the latest information on MRLs and import tolerances BEFORE using VIVANDO.

### **RE-ENTRY PERIOD**

DO NOT allow entry into treated areas until the spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

### **PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

DO NOT apply under weather conditions or from spraying equipment which could be expected to cause spray drift. Very toxic to aquatic plants and moderately toxic to aquatic invertebrates. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

### **STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

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 deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a

disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

### **SAFETY DIRECTIONS**

When opening the container and preparing spray, wear elbow length PVC gloves. After each day's use, wash gloves. Wash hands after use.

### **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. *Phone Australia 13 11 26.*

### **MATERIAL SAFETY DATA SHEET**

Additional Information is listed in the Material Safety Data Sheet which can be obtained from your supplier or from the Crop Care website: [www.cropcare.com.au](http://www.cropcare.com.au)

### **Conditions of sale**

Crop Care Australasia Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply or use of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crop Care Australasia Pty Ltd is limited to the replacement of the goods or (at the option of Crop Care Australasia Pty Ltd) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the goods to enable proper examination being returned to Crop Care Australasia Pty Ltd within thirty days of delivery.

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|--|---|
| In a Transport<br>Emergency Dial<br><b>000</b><br>Police or Fire Brigade | SPECIALIST ADVICE<br>IN EMERGENCY ONLY<br><b>1800 033 498</b><br>ALL HOURS - AUSTRALIA WIDE |
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'Vivando', 'Colliss' and 'Cabrio' are registered trademarks of BASF.

'Du Wett' is a registered trademark.



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bar code and  
print code to be  
inserted

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