

# POISON

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

**Farmoz**

# Howzat® SC

## SYSTEMIC FUNGICIDE

ACTIVE CONSTITUENT: 500 g/L CARBENDAZIM

GROUP	A	FUNGICIDE
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***A broad spectrum, systemic fungicide for the control of fungal diseases in various crops as per the Directions for Use table.***

[www.farmoz.com.au](http://www.farmoz.com.au)

**DIRECTIONS FOR USE:  
1. TREE AND VINE CROPS**

RATE					CRITICAL COMMENTS
This table shows rates for dilute spraying. For concentrate spraying, refer to the Mixing/Application section.					For all uses in this table: Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.
CROP	DISEASE	STATE	RATE	WHP	CRITICAL COMMENTS
Apples	Powdery Mildew <i>(Podosphaera leucotricha)</i>	All States	40 to 50 mL/ 100 L water	7 days	Apply at 7 to 10 day intervals until petal fall. Use the higher rate when disease pressure is high.
	Black Spot <i>(Venturia inaequalis)</i>	NSW, Vic, Tas, SA, WA only	40 to 50 mL/ 100 L water		
Grapes	Grey Mould (Bunch rot) <i>(Botrytis cinerea)</i>	All States	100 mL/ 100 L water	1 day	Apply at early flowering, 80 to 100% capfall and pre-bunch closure. Further applications may be necessary at veraison and pre-harvest, if wet weather favours infection. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Macadamia nuts	Macadamia Husk Spot <i>(Pseudocercospora spp.)</i>	All States	50 mL plus a wetting agent (at 100 mL/100 L)	14 days (H, G)	Apply at 5 and 8 weeks after main flowering – Stage 2 anthesis (white flowering stage). Remove any fallen nuts from under trees prior to spraying. DO NOT apply more than 2 applications of HOWZAT SC per season.
Pears	Black Spot <i>(Venturia pirina)</i>	NSW, Vic, Tas, SA, WA only	25 to 50 mL/ 100 L water	7 days	Apply at 7 to 10 day intervals until petal fall. Use the higher rate when disease pressure is high.
Stone fruit	Blossom Blight <i>(Monilinia fructicola)</i>	Qld, NSW, Vic, Tas, SA only	25 to 50 mL/ 100 L water	1 day	Apply at pink or white bud stage, 10% blossom and petal fall. Apply the higher rate when disease pressure is high. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
	Brown Rot <i>(Monilinia fructicola)</i>	Qld, NSW, Vic, Tas, SA only	40 mL/ 100 L water		Apply 3 weeks and 1 week prior to harvest following early application of Blossom Blight sprays. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.

## 2. POST HARVEST DIPPING

CROP	DISEASE	STATE	RATE	WHP	CRITICAL COMMENTS
Apples	Blue Mould ( <i>Penicillium expansum</i> )	All States	50 mL/ 100 L water	–	Submerge fruit for approximately 30 seconds. Top up dip at the recommended application rate of 50 mL/100 L. Dipping should occur within 24 hours of harvest. <b>Tas Only:</b> Always apply the treatment whenever the apples are to be dipped in diphenylamine prior to storage. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Bananas	Crown Rot ( <i>Colletotrichum musae</i> )	Qld, NSW, WA only	40 mL/ 100 L water	–	Submerge fruit for approximately 30 seconds. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Citrus	Blue and Green Moulds ( <i>Penicillium</i> spp.)	Qld, NSW, Vic, SA, WA only	100 mL/ 100 L water	–	Submerge fruit for approximately 30 seconds. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Mangoes	Anthrachnose ( <i>Colletotrichum</i> spp.), Stem End Rot ( <i>Dothiorella</i> spp.)	Qld, NSW, WA, NT only	100 mL/ 100 L water	–	Submerge for approximately 5 minutes at 52°C. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Pears	Blue Mould ( <i>Penicillium expansum</i> )	All States	50 mL/ 100 L water	–	Submerge fruit for approximately 30 seconds. Top up dip at the recommended application rate of 50 mL/100 L. Dipping should occur within 24 hours of harvest. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Rockmelons	Fusarium Fruit Rot ( <i>Fusarium</i> spp.), Sour Rot ( <i>Geotrichum candidum</i> ), Alternaria Fruit Rot ( <i>Alternaria</i> spp.), Rhizopus Soft Rot ( <i>Rhizopus stolonifer</i> ), Pink Mould Rot ( <i>Trichothecium roseum</i> )	Qld, NSW, Vic, SA, WA, NT only	100 mL plus 130 mL FARMOZ Panocline plus 10 mL Agral*/ 100 L water	–	Dip fruit for 45 seconds within 24 hours of harvest.
Stone fruit	As post-harvest dip for Brown Rot ( <i>Monilinia</i> & <i>Sclerotinia</i> spp.)	Qld, NSW, Vic, Tas, SA only	50 to 100 mL/ 100 L water	–	Submerge fruit for approximately 30 seconds. Use higher rate where disease pressure is severe or where longer term storage is required. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.

## 3. OTHER CROPS

CROP	DISEASE	STATE	RATE	WHP	CRITICAL COMMENTS
Cucurbits	Powdery Mildew ( <i>Sphaerotheca fuliginea</i> )	Qld, NSW, Vic, Tas, SA, WA only	High volume: 40 to 50 mL/ 100 L water Low volume: 450 or 550 mL/ha	–	Begin application when disease first appears, repeat at 7 to 14 day intervals. Use the higher rate and shorter intervals when disease pressure is high and plants are growing rapidly. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Ginger seed pieces	Rhizome/Seed Piece Rot ( <i>Fusarium</i> spp.)	Qld, WA only	200 mL/100 L	–	Cut seed pieces to desired length from Rhizomes free of rot. Submerge for 5 minutes and allow to dry before planting.
Pasture	Clover Scorch ( <i>Kabatiella caulivora</i> )	Vic, Tas, SA, WA only	300 or 550 mL/ha plus 1 L/100 L summer spray oil	14 days	Apply at 'closing-up' of pasture in a minimum spray volume of 150 L/ha. Repeat 30 days later if there is a build up of disease. Use the higher rate if disease is well established at 'closing-up'; repeat at this rate 30 days later if disease continues to develop.
	Cercospora ( <i>Cercospora zebrina</i> )	WA only			
Chickpeas, faba beans, lentils and vetch	Chocolate Spot ( <i>Botrytis fabae</i> ), Grey Mould ( <i>Botrytis cinerea</i> )	All States	500 mL/ha	4 weeks (H, G)	Apply a maximum of two consecutive applications at a 14 day intervals. Apply a minimum of 100 L of water per hectare.
Red clover, Subterrean clover	Clover Scorch ( <i>Kabatiella caulivora</i> )	Vic, Tas, SA, WA only	300 to 550 mL/ ha plus 1.5 L summer spray oil in 150 L water	14 days	Apply at "closing-up" of pasture in a minimum spray volume of 150 L/ha. Repeat 30 days later if there is a build up of disease. Use the higher rate if disease is well established at "closing-up", repeat at this rate 30 days later if disease continues to develop.
	Cercospora ( <i>Cercospora zebrina</i> )	WA only			

### 3. OTHER CROPS – continued

CROP	DISEASE	STATE	RATE	WHP	CRITICAL COMMENTS
Roses	Powdery Mildew ( <i>Oidium</i> spp.)	All States	25 mL plus 1 L Oil (98-99% summer oil) per 100 L water	–	Begin application when disease first appears and repeat at 7 to 14 day intervals throughout the growing season. Shorten intervals during humid weather.
	Black Spot ( <i>Diplocarpon rosae</i> )		50 mL/100 L water		
Strawberries	Grey Mould ( <i>Botrytis cinerea</i> )	NSW, Vic, Tas, SA, WA only	40 to 50 mL/100 L water	2 days	Begin application when disease first appears or at flowering and repeat at 7 to 14 day intervals. Use higher rates and shorter intervals when disease pressure is high. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.
Sugar cane	Pineapple Disease ( <i>Ceratocystis paradoxa</i> )	Qld, NSW only	65 mL/100 L water	–	Apply to cut seed pieces as a dip or spray so as to obtain thorough wetting. After dipping allow to drain. When replenishing dip, top up with 65 mL HOWZAT SC in 100 L water.
Turf	Dollar Spot ( <i>Sclerotinia homoeocarpa</i> )	Qld, NSW, Vic, SA, WA only	60 mL/100 m <sup>2</sup>	–	Apply in sufficient water to give good coverage. Commence application at beginning of damp weather and repeat at intervals of 4 weeks. This use is subject to an Avcare Resistance Management Strategy: Refer to Resistance Management Strategy under General Instructions.

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

#### WITHHOLDING PERIOD:

**GRAPES, STONE FRUIT: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.**

**STRAWBERRIES: DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION.**

**APPLES, PEARS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.**

**MACADAMIA NUTS: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.**

**DO NOT ALLOW LIVESTOCK TO GRAZE VEGETATION IN TREATED PLANTATIONS FOR 4 WEEKS AFTER APPLICATION.**

**DO NOT CUT VEGETATION IN TREATED PLANTATIONS FOR STOCK FEED FOR 4 WEEKS AFTER APPLICATION.**

**PASTURE:**

**DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION.**

**CHICKPEAS, FABA BEANS, LENTILS AND VETCH:**

**DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.**

**DO NOT GRAZE OR CUT FOR STOCKFEED FOR 4 WEEKS AFTER APPLICATION.**

**TURF:**

**DO NOT FEED GRASS CLIPPINGS FROM TREATED AREAS TO POULTRY OR ANIMALS.**

#### GENERAL INSTRUCTIONS

##### MIXING

SHAKE WELL BEFORE USE. HOWZAT SC is a liquid suspension to be mixed with water for application as a spray or a dip. Add the required quantity of HOWZAT SC to a partly filled spray tank and agitate. Complete filling while agitating. Ensure the spray mixture is properly agitated before restarting after stoppage.

##### Important

Dip ingredients MUST NOT be mixed together in concentrated form. Add separately to the full volume of water in the dip tank. To restore the original volume in the dip tank, add the required volume of water and then the appropriate amounts of products. Dip should be replaced when dirt begins to accumulate. To ensure effective coating of the fruit, the temperature of the fruit and the dip solution must be the same.

##### ADDITION OF WETTING AGENT

The addition of a wetting agent eg. Wetspray®, to the spray mixture improves the distribution of the spray on hard to wet plants.

##### APPLICATION

###### 1. TREE AND VINE CROPS

###### Dilute Spraying

Use a sprayer designed to apply high volumes of water 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 water to cover the crop to the point of run-off. Avoid excessive run-off.

The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or 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 will change and the sprayer set up and operation may also need to be changed, as the crop grows.

###### Concentrate Spraying

Use a sprayer designed and set up for the concentrate spraying (that is a sprayer which applies water 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 water 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 (ie 1500 L ÷ 500 L = 3).

4. If the dilute label rate is 10 mL/100 L, then the concentrate rate becomes 3 x 10, that is 30 mL/100 L of 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.

##### 2. OTHER CROPS

###### High Volume (dilute spraying)

Apply in sufficient water to thoroughly wet the crop to the point of run-off. The water volume should increase as the crop size and bulk increases. Where a range of rate is specified, use the higher rate when disease pressure is high.

###### Low Volume (concentrate spraying)

Where a rate per hectare (ha) is specified, apply in sufficient water to ensure thorough, even coverage of all plant parts. Where a range of rates is specified, use the higher rate when disease pressure is high. Where no rate per hectare is specified, the rate per hectare should be based on that which would be applied per hectare if high volume (dilute) application was used.

##### FUNGICIDE RESISTANCE WARNING

FARMOZ HOWZAT® SC Fungicide is a member of the benzimidazole group of fungicides. For fungicide resistance management HOWZAT SC is a Group A fungicide. Some naturally occurring fungal populations resistant to HOWZAT SC and other Group A fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungi population if

**GROUP A FUNGICIDE**

these fungicides are used repeatedly. These resistant fungi will not be controlled by HOWZAT SC and other Group A 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, FARMOZ Pty. Ltd. accepts no liability for any losses that may result from the failure of HOWZAT SC to control resistant fungi.

Refer to specific Avcare Resistance Management Strategies, below.

#### **Stone Fruit Blossom Blight and Brown Rot – Resistance Management Strategy**

1. If applying Group A, B or C fungicides, DO NOT apply more than two consecutive sprays of fungicides from the same group before changing to another group.
2. A post-harvest dip should also be counted as an application.
3. The last blossom blight spray and the first pre-harvest brown rot spray should be regarded as consecutive applications.
4. The spray program should be considered and the strategy applied on a whole-orchard basis.
5. Sound management practices such as good control of insects, removal of fruit mummies by pruning, and burying diseased fruit will help to reduce disease pressure and further help to avoid resistance.

#### **Grape Grey Mould (Bunch Rot) – Resistance Management Strategy**

1. DO NOT apply more than 2 Group A sprays in a season unless tank mixed with a registered multi-site (Group Y) fungicide.
2. Late season fungicide treatments should be applied before botrytis infection reaches unacceptably high levels in the vineyard.
3. DO NOT apply more than 2 consecutive sprays from the same fungicide group, including from the end of one season to the next.

#### **Grey Mould of Strawberries – Resistance Management Strategy**

1. Apply a program of protectant fungicides during flowering. If conditions favour disease development during this period, tank mix the protectant with a Group A or B fungicide.
2. Applications of Group A or B fungicides on their own should be confined to the harvest period only.
3. Avoid applying more than two successive sprays of a fungicide of the same chemical group during flowering and fruit ripening.
4. Alternate or tank mix different fungicide groups during fruit ripening.
5. Reduce background levels of disease by removing plant debris and rotted fruit.

#### **Curcubits Powdery Mildew – Resistance Management Strategy**

1. Start disease control early. DO NOT wait for powdery mildew to appear before spraying, but start as soon as practicable after crop emergence.
2. Use protectant sprays in early crop growth. Apply protectant sprays up to the fruit set stage of the crop if the disease normally occurs during this period. If this schedule is interrupted (eg. by rain) use a tank mix of protectant plus systemic before recommencing the protectant program.
3. After fruit set, use systemic fungicides in one or more of the following ways:
  - (a) Tank mix systemic fungicides with a protectant fungicide AND use fungicides from at least 2 different systemic activity groups per crop.
  - (b) Alternate systemic fungicides with a protectant fungicide AND use fungicides from at least 2 different systemic activity groups per crop.
  - (c) Alternate systemic fungicides from at least 3 different activity groups per crop.

#### **Post-Harvest Dipping of Fruit – Resistance Management Strategy**

1. Handle fruit carefully to minimise potential infection sites caused by injury.
2. Ensure diseased fruit is promptly removed from the field and packing house and destroyed.
3. Dip fruit with a recommended fungicide promptly after harvest.
4. Don't store fruit in the packing house – move it through the packing house quickly.
5. Dispose of mouldy fungicide-treated fruit at harvest – do not bring it into the packing house.
6. For the last pre-harvest spray, use a fungicide with a different mode of action to the fungicide planned for use as a post-harvest dip.
7. Resistant strains of fungi can develop within the packing house. Where alternatives are available, rotate to use as many different modes of action as possible.
8. Remove mouldy fruit from storage – isolate from other fruit.
9. DO NOT move fruit between packing houses – especially mouldy fruit.

**PACK SIZES: 5 L, 20 L**

#### **Turf Diseases – Resistance Management Strategy**

DO NOT apply more than two consecutive sprays of fungicides from the same activity group, unless mixed with a fungicide from a different activity group.

#### **EXPORT OF TREATED PRODUCE**

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with HOWZAT SC. If you are growing produce for export, please check with FARMOZ for the latest information on MRLs and import tolerances BEFORE using HOWZAT SC.

#### **COMPATIBILITY**

HOWZAT SC is compatible with many insecticides and fungicides, however to be sure of compatibility with any particular product check with your local dealer first.

#### **PROTECTION OF LIVESTOCK**

HOWZAT SC is of low toxicity to bees.

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

DO NOT contaminate dams, rivers or waterways with this product or the used containers.

#### **PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

**Drift Warning** – DO NOT apply under weather conditions or from spraying equipment that may cause drift onto nearby susceptible plants/crops, cropping lands or pastures.

#### **PRECAUTION**

Keep away from foodstuffs. Grapevine leaves treated with HOWZAT SC must not be used for human consumption.

#### **RE-ENTRY PERIOD**

DO NOT allow entry into treated areas until the spray deposits have dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow-length PVC gloves. Clothing must be laundered after each day's use.

For glasshouses and other confined areas, DO NOT re-enter until spray deposits have dried and area has been thoroughly ventilated.

#### **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 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 and product should not be burnt.

#### **DIP DISPOSAL**

Dispose of remaining dip in a pit specifically marked and set up for this purpose clear of waterways (including domestic water supply), desirable vegetation and tree roots. Degradation of the dip may be enhanced by adding a caustic solution to the dip prior to disposal.

#### **SAFETY DIRECTIONS**

**WARNING** – Contains carbendazim which causes birth defects in laboratory animals. Women of child bearing age should avoid contact with carbendazim.

May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container, preparing the spray or dip and using the product, wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves 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 HOWZAT SC is available from FARMOZ on request. Call Customer Service on (02) 9431 7800.

**CONDITIONS OF SALE:** The use of FARMOZ HOWZAT SC Systemic Fungicide 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.

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