



The miracles of science™

Griffin Mancozeb WDG

fungicide

Technical Information

Active Constituent:
Mancozeb 750 g/kg

Pack Sizes:
20 kg

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

For the control of certain diseases of fruit, vegetables, turf and field crops as per the Directions For Use.

SAFETY DIRECTIONS

The product may irritate eyes, nose, throat and skin. **DO NOT** inhale dust or spray mist, wear appropriate clothing. Wash hands after use. Avoid contact with the eyes and skin.

FIRST AID

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

GENERAL INSTRUCTIONS

Griffin Mancozeb WDG is a protectant fungicide for the control of certain fungus diseases in many crops. Its mode of action affects the germination of spores by inhibiting the respiration process. For best results, apply in a regular spray program. Thorough coverage of the treated crop is essential.

Griffin Mancozeb WDG is not translaminar and may be washed off by heavy rain following application (> 20mm).

FUNGICIDE RESISTANCE WARNING

Some naturally occurring fungal populations resistant to Griffin Mancozeb DF fungicide and other Group Y fungicides may exist through normal genetic variability in any fungal population. These resistant fungi will not be controlled by this product or other Group Y fungicides, thus resulting in a reduction of efficacy and possible yield loss. The resistant individuals can eventually dominate the fungi population if these fungicides are used repeatedly. **UNLESS OTHERWISE STATED DO NOT APPLY MORE THAN 10 TIMES PER SEASON.** Since the occurrence of resistant fungi is difficult to detect prior to use, Griffin accepts no liability for any losses that may result from failure of Griffin Mancozeb WDG fungicide to control resistant fungi.

APPLICATION

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 runoff. 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 advise.
- 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.

- Always apply sufficient water to cover the crop to the point of runoff, otherwise under dosing will occur and disease control may be inadequate.

These water volumes may be used as a guide only (see above instructions to determine correct water volumes):

CROPS	SPRAY VOLUMES
Vines	200 – 2200 L/ha
Pome and Stone fruit	1100-4000 L/ha
Citrus	4000-8000 L/ha

Concentrate Spraying

- Use a sprayer designed and set up for 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 times (i.e. 1500 L divided by 500 L = 3)
4. If the dilute label rate is 150 g/100 L, then the concentrate rate becomes 3 x 150, that is, 450 g/100 L of concentrate spray.

- 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.

AERIAL APPLICATION

The product may be applied by agricultural aircraft. Use at least 30-50 litres of spray solution per hectare. For Bananas use a total spray volume of 30 - 35 L/ha.

SPRAY TIMING

The product treatments should begin prior to disease infection and continue until the threat of disease has passed. Repeat applications are necessary to protect new plant growth. Where two rates of application and/or two time intervals are recommended use the higher use rate and / or shorter time interval when weather conditions favour disease development.

MIXING

Slowly place into spray tank as it is being filled, or thoroughly pre-mix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, surfactants etc after Griffin Mancozeb WDG has been placed into suspension. Maintain sufficient agitation during mixing and spraying to prevent the product settling out and to ensure a uniform spray mixture. Rinse out spray-tank, pumps and nozzles at the end of the day. When preparing spray solutions for use in a hand sprayer, pre-mix as a slurry in a small container, and then add to sprayer containing one-third to half the desired volume of water.

SURFACTANTS

For improved coverage and spray retention add a surfactant according to label instructions.

TANK/EQUIPMENT CLEANOUT

Immediately after application, completely drain equipment. Thoroughly rinse sprayer and flush the hoses, boom and nozzles with clean water. Apply rinsate to the next mix or crop. **DO NOT DISPOSE OF RINSATE IN WATER WAYS OR DRAINS.** Take all necessary precautions when cleaning equipment.

COMPATIBILITY

This product is compatible with most other fungicides and common insecticides. This product is not compatible with lime sulphur. Before preparing tank mixes, the user is advised to check the compatibility with other manufacturers' recommendations.

PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT

This product is toxic to fish.

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

STORAGE AND DISPOSAL

Never allow the product to become wet during storage. This may lead to certain chemical changes, which will reduce the effectiveness of the product as a fungicide and create vapours, which may be flammable. Store in the closed, original packaging in a dry, well ventilated area, as cool as possible out of direct sunlight. Store below 30° C. Store in a locked room or place away from children, animals, food, feedstuffs, seeds and fertilizers. Shake empty bag into spray tank. DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty bags in a local authority landfill. If no landfill is available, bury the bags below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty bags and product should not be burnt.

<p>IN A MEDICAL EMERGENCY CALL 1800 674 415 All hours</p>
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MATERIAL SAFETY DATA SHEET

For further information, refer to the Material Safety Data Sheet.

NOTICE TO BUYER

To the extent permitted by law all conditions and warranties and statutory or other rights of action which buyer or any other user may have against DuPont or Seller are hereby excluded. DuPont hereby gives notice to buyer and other users that it will not accept any responsibility for any indirect or consequential loss arising from reliance on product information or advice provided by DuPont or on its behalf unless it is established that such information or advice was provided negligently and that the product has been used strictly as directed. DuPont's liability shall in all circumstances be limited to replacement of the product or a refund of the purchase price paid therefore.

APVMA Approval No: 51496/0705

DIRECTIONS FOR USE

RESTRAINTS

DO NOT use on hydroponically grown crops.

DO NOT use on container, greenhouse or glasshouse grown crops.

DO NOT use on ornamentals.

NON-TREE AND VINE CROPS

CROP	DISEASE	STATE	RATE / 100L	RATE / HA	WHP	CRITICAL COMMENTS
Bananas	Leaf spot (Sigatoka) (<i>Mycosphaerella musicola</i>)	Qld, WA Only	200g + 600 mL miscible summer oil	2.2 to 4.5 kg + 3.5 to 4 L miscible summer oil	Not required when used as directed	Apply when weather conditions favour disease outbreak. Repeat treatments in accordance with locally recommended spray schedules. Use sufficient water to ensure coverage. In circumstances where application will be made to rapidly growing fruit in hot conditions with strong direct light, it is recommended that all emerged bunches be bagged prior to spraying to minimise risk of fruit marking. New South Wales and South Queensland: Apply at 3 week intervals from December or January until May. North Queensland: Apply every 2 weeks Between January and the end of March. Extend to 3 week intervals after this and then to 4 to 5 week intervals in the drier months later in the year.
		NSW Only		2.2 kg + 3.5 to 4 L miscible summer oil.		
	Black pit Cordana leaf spot Fruit speckle Leaf speckle	Qld Only	200g	2.2 kg		
	Anthracnose (<i>Colletotrichum musae</i>)	NSW Only	200g + 600mL miscible summer oil	2.2 kg + 3.5 to 4 L miscible summer oil		
Beetroot	Cercosopora leaf spot Downy mildew	All States	150 to 200g	1.7 to 2.2 kg	14 days	Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. If the crop is dense and disease symptoms severe, then use the higher rate. DO NOT apply more than 4 applications per season.
Carrots	Cercosopora leaf spot Alternaria leaf spot	All States	150 to 300g	1.7-2.2 kg	7 days	Apply when disease symptoms first appear and repeat at 7 to 10 day intervals. If the crop is dense and the disease symptoms are severe, then use higher rate. DO NOT apply more than 4 applications per season.
Celery	Septoria leaf spot (leaf blight)					
Capsicum	Target spot	All States	150 to 200g	2 to 3 kg	14 days	* Apply when disease symptoms first appear and repeat at 7 to 10 day intervals. DO NOT apply more than 8 applications per season.
Cole Crops including Broccoli Brussel sprouts Cabbage Cauliflower	Alternaria spot Ring spot Downy mildew Anthracnose	All States	150 to 200g	1.7 to 2.2 kg	7 days	
Cucurbits including Cantaloupe Cucumber Melons Pumpkin Squash Zucchini Pumpkins	Anthracnose Downy mildew Gummy stem blight	All States	150 to 200g	1.7 to 2.2 kg	7 days	* Apply when disease symptoms first appear and repeat at 7 to 10 day intervals. DO NOT apply more than 8 applications per season.
	Septoria spot	Qld, WA Only				
Fennel	Leaf Blight (<i>cercorporidium</i>)	Tas only	-	2.2 kg	14 days	Apply as a ground spray if disease symptoms are present in November, allowing for one repeat treatment 10-14 days later. Aerial application may be required in prolonged wet periods.
Lettuce	Anthracnose Downy mildew Septoria leaf spot	All States	150-200g	1.7-2.2 kg		Apply when disease symptoms first appear and then repeat at 7-10 day intervals. DO NOT apply more than 8 sprays per season.
Peas	Downy Mildew	Tas only	150 – 200g	1.7 – 2.2 kg	7 days	If crop is dense and disease symptoms severe, use the higher rate. Commence spraying when the disease first appears and repeat at 7-14 day intervals.
Onions and Garlic	Downy Mildew Purple Blotch	All states		2.2 to 3.5 kg		
Peanuts	Cercosopora leaf spot Rust	Qld, WA , NSW only	-	1.7 to 2.2 kg	14 days	* Apply at 10 to 14 day intervals commencing when disease symptoms first appear. If rust is present apply at 7 to 10 day intervals. DO NOT graze livestock on peanut crops treated with Griffin Mancozeb or feed treated crops and/or trash to livestock

CROP	DISEASE	STATE	RATE / 100L	RATE / HA	WHP	CRITICAL COMMENTS
Poppies	Downy mildew	Tas only	–	2.5 kg	7 weeks	Apply as a protectant spray when weather conditions favour disease. Repeat spray on 14 day intervals if conditions persist.
Potatoes	Early blight (Target spot) Late blight (Irish blight)	All States	150-200 g	1.7 to 2.2 kg	–	* Apply when disease symptoms first appear then repeat at 7 to 10 day intervals. DO NOT apply more than 8 applications per season.
Potato seed pieces	Fusarium seed piece decay	WA Only	250 g	–	–	Clean potatoes and dip whole or pre-cut tubers in the mixture. Place treated tubers in clean container following treatment and plant as soon as possible. Spread in a cool place if held before planting.
PEAS AND BEANS (grown for fresh consumption)						
Broadbeans/ faba beans	Rust Cercospora leaf spot	All States	-	1.7 – 2.2 kg	14 days (Harvest)	Apply when disease symptoms first appear and then repeat at 7 – 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development. Spray when leaves, flowers and pods show first signs of infection and weather conditions are likely to remain humid or wet and favour disease development. DO NOT apply more than 4 applications per season. If disease pressure is severe and weather conditions favour spread of the disease, repeat the spray treatment at 2 – 3 week intervals in order to protect new growth and developing pods. Use higher rate for dense crops and if disease pressure is severe. Volume of application: for ground apply 100 L/ha; for aircraft apply at least 30 L/ha. DO NOT apply more than 4 applications per season.
Peas (<i>Pisum</i> spp.)	Rust				14 days (Grazing)	
Green Beans (<i>Phaseolus</i> spp.)	Rust Anthracnose Angular leaf spot					
Broadbeans/ faba beans	Chocolate spot Ascochyta blight (suppression only)			1.7 – 2.5 kg		
Peas (<i>Pisum</i> spp.)	Ascochyta leaf blight (suppression only)					
PULSE CROPS (grown for dry beans)						
Broadbeans/ faba beans	Ascochyta blight Black spot Botrytis grey mould Chocolate spot Rust	All States	-	1 - 2.2 kg	4 weeks (Harvest) 14 days (Grazing)	Spray when leaves, flowers or pods show first signs of infection and weather conditions are likely to remain humid or wet and favour disease development. If disease pressure is severe and conditions favour spread of disease, repeat sprays at 2 - 3 weeks to protect new growth and developing pods. Use higher rate for dense crops and if disease is severe. Repeat more frequently if severe disease persists. For improved coverage add a registered surfactant at 10 - 20 mL/100 L of spray. DO NOT apply more than 4 applications per season.
Chickpeas	Ascochyta blight Botrytis grey mould					
Field Peas	Ascochyta blight Black spot Botrytis grey mould Rust					
Lentils & Vetch	Ascochyta blight Botrytis grey mould Rust					
Lupins	Botrytis grey mould Anthracnose					
Beans (<i>Phaseolus</i> spp.)	Rust Anthracnose Ascochyta blight Angular leaf spot					
Rhubarb	Downy mildew Rust	All States NSW, WA Tas only	150 to 200 g	1.7 to 2.2 kg	14 days	* Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals.
Spinach Silver beet	Cercospora leaf spot Downy mildew	All States				
Soybeans	Rust	All States	–	2.2 kg	28 days	* Apply when diseases symptoms first appear and repeat at 7 to 10 day intervals from flowering to pod filling. Do not graze livestock on soybean crops treated with Griffin Mancozeb of feed treated crops and/or trash to livestock.
Tobacco	Blue Mould Brown Spot	Qld , NSW, Vic only	200 g		7 days	Field Treatments: Apply at 7 day intervals commencing 10 days after transplanting and ceasing 7 to 10 days before the first harvest. Increase the spray volume accordingly as plant size increases. Seed Bed Treatments : As a substitute to control blue mould by fumigation, apply the product when seedlings are 1.5 cm across and then repeat twice weekly. Wet the seedlings evenly without runoff.
	Frog eye leaf spot	Qld only				

CROP	DISEASE	STATE	RATE / 100L	RATE / HA	WHP	CRITICAL COMMENTS
Tomatoes	Anthracnose Leaf mould (<i>Fulvia fulva</i>) Early blight (target spot) Late blight (Irish blight)	All States	150 – 200 g	2 to 3 kg	7 Days	* Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. DO NOT apply to tomato seedlings before transplanting. There is a 7 day WHP for Tomatoes.
	Grey leaf spot Phoma rot	NSW, Qld, WA Only				Apply as a protective spray schedule at 7 day intervals throughout the susceptible season. Use sufficient water for adequate coverage. DO NOT feed grass clippings from treated areas to poultry or animals.
Turf	Fusarium Rhizoctonia Helminthosporum	All States	200 to 250 g/ 100 m ²	–	–	

TREE AND VINE CROPS

RATE					CRITICAL COMMENTS
In the following table, all rates given are for dilute spraying. For concentrate spraying, refer to the Application section					
CROP	DISEASE	STATE	RATE / 100L	WHP	
Citrus	Black spot	WA, Qld, NSW, Tas, Vic, SA	200 g	–	* Refer to Surfactant section For all uses in this table, apply by dilute or concentrate spraying equipment. Apply the same amount of product to the target crop whether applying by dilute or concentrate spraying methods. On heavy soil : Add 250mL miscible summer oil/100L. Spray at 8 and at 15 weeks following a Kocide® spray at petal fall. On light soil : Add 250mL miscible summer oil/100L plus 12mL of a surfactant. Spray at 6 and 13 weeks following a Kocide® spray at petal fall. Add 600mL of miscible summer oil / 100L and spray at 6 and 12 weeks after a Kocide® spray at ½-¾ petal fall. Apply at first sign of mite activity on fruit, usually between December and May. Apply when blossom malformation is observed usually in February.
		Qld, WA only			
	Brown citrus mite Citrus rust mite Citrus bud mite				
Grapevines	Black spot	All states	200 g	14 days	* For Black spot control apply at budburst and then repeat 10 to 14 days later. If Downy Mildew is expected continue spray program at 10 to 14 day intervals until the threat of disease has passed
	Downy mildew	NSW, Qld, SA, Vic, Tas, WA only			* For Black spot control apply at budburst and then repeat 10 to 14 days later. If Downy mildew is expected continue spray program at 10 to 14 day intervals until the threat of disease has passed.
	Dead arm	Qld only	150 to 200g		Apply at budburst and repeat 7 to 10 days later.
Mangoes	Anthracnose (<i>Colletotrichum gloeosporioides</i>)	Qld, NSW, WA only	200g	14 days	* Apply at weekly intervals during flowering and then at monthly intervals until near harvest.
Passionfruit	Anthracnose	NSW only	200 g + 600 mL miscible summer oil	1 day	* Spray at weekly intervals during flowering and then fortnightly until near harvest.
	Septoria spot Brown spot (<i>Alternaria passiflorae</i>)	Qld, WA only	150g		Apply at 10 to 14 day intervals from October to May and for every 21 to 28 days for remainder of year.
Pome Fruit including Apples and Pears	Black spot Target spot Bitter rot Sooty blotch Fly speck	WA, Qld, NSW, Tas, Vic, SA	150 to 200 g	14 days	* Apply at 7 to 14 day intervals following a Kocide® spray at green tip. Use the higher rate and shorter spray interval during prolonged wet conditions. Griffin Mancozeb WDG may be harmful to <i>Typhlodromus pyri</i> and its use in orchards where integrated control is practiced should be avoided.
Stone Fruit including Apricots Cherries Peaches Plums (except Wilson plums) Almonds Nectarines	Freckle Rust Shot hole	All States	150 to 200 g	14 days	* Apply at early bloom (1-10%) then repeat at mid to full bloom (50-100%); at petal fall and shuckfall. Then continue with a protective spray program at 2 week intervals.
		Brown rot			
	SA, WA only				
	Tas, SA, WA only				

*Refer to surfactant section

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

WITHHOLDING PERIODS

PASSIONFRUIT:

DO NOT HARVEST FOR 1 DAY AFTER APPLICATION

GREEN BEANS, PEAS, CELERY, CARROTS, ONIONS, COLE CROPS, CUCURBITS, TOMATOES, TOBACCO:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

ALMONDS, BEETROOT, FENNEL, GRAPEVINE, LETTUCE, MANGOES, NECTARINES, PEANUTS, POME AND STONE FRUIT, RHUBARB, SILVERBEET, SPINACH:

DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

FABA BEANS, BROAD BEANS, SOYBEANS:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 28 DAYS AFTER LAST APPLICATION

GREEN LEGUMES, PULSE CROPS:

GREEN CROPS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

GRAIN CROPS: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION

DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 14 DAYS AFTER LAST APPLICATION

POPPIES:

DO NOT HARVEST FOR 7 WEEKS AFTER APPLICATION

POTATOES, CITRUS, BANANAS:

WITHHOLDING PERIOD NOT REQUIRED WHEN USED AS DIRECTED

PEANUTS:

DO NOT GRAZE LIVESTOCK ON PEANUT CROPS AND/OR TRASH TREATED WITH GRIFFIN MANCOZEB WDG.

DO NOT PROVIDE LIVESTOCK ANY FEED MATERIAL THAT MAY HAVE BEEN CONTAMINATED WITH GRIFFIN MANCOZEB WDG.

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