

CAUTION

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

FMC

Mancozeb

750 DF FUNGICIDE

ACTIVE CONSTITUENT: 750 g/kg MANCOZEB

GROUP **M3** FUNGICIDE

For the control of certain fungus diseases of fruit, field crops, tobacco, turf, vegetables and ornamentals as specified in the DIRECTIONS FOR USE table.

IMPORTANT: READ THIS LEAFLET BEFORE USE



FMC

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DIRECTIONS FOR USE

NON-TREE & VINE CROPS

FIELD CROPS

Crop	Diseases Controlled	Rate/ 100 L	Rate / ha	WHP Harvest (H) Grazing (G)	Critical Comments
Cotton – Pima var. only	Alternaria leaf spot	-	2.5 kg	14 days (H)	FMC Mancozeb 750 DF is a protectant fungicide. To maximise control ensure thorough coverage of all plant surfaces. Begin applications as soon as disease symptoms appear. Repeat before each infection period (e.g. dew or rain) but no later than 7 to 10 days after the last application. DO NOT apply more than 4 sprays per season.
Fennel (Tas only)	Leaf blight (<i>cercosporidium</i>)	150-200 g	2.2 kg		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.
Peanuts	Cercospora leaf spot Rust	-	1.7 to 2.2 kg	14 days (H) 14 days (G)	Apply at 10 to 14 day intervals commencing when disease symptoms first appear. If rust is anticipated, apply at 7 to 10 day intervals. Use higher rate and shorter spray interval during weather conditions favourable to disease development.
Sunflowers For parent & hybrid seed production	Rust	-	2.2 kg	DO NOT GRAZE	Apply when disease symptom first appear and repeat at 7 to 10 day intervals while warm rainy weather conditions prevail. It is crucial to ensure application provides excellent coverage.

Crop	Diseases Controlled	Rate/ 100 L	Rate / ha	WHP Harvest (H) Grazing (G)	Critical Comments
Poppies	Downy mildew	-	2.5 kg	7 weeks (H)	Apply as protectant spray when weather conditions favour disease development. Repeat spray on 14-day intervals if conditions persist.
Tobacco	Blue mould Brown spot Frog eye leaf spot	200 g	2.2 kg	Not required	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: Apply when seedlings are 1.5 cm across and then repeat twice weekly. Wet the seedlings evenly without run-off.
Soybeans	Rust	-	2.2 kg	7 days (H) 14 days (G)	Apply when disease symptoms first appear and repeat at 7 to 10 day intervals while warm rainy weather conditions prevail.

FRUIT

Crop	Diseases Controlled	Rate / 100L	Rate / ha	WHP Harvest (H) Grazing (G)	Critical Comments
Bananas	Leaf spot (<i>Mycosphaerella musicola</i>) Leaf speckle Cordana leaf spot Fruit speckle Black pit	200 g plus spray oil (used according to its label directions)	1.25 to 1.60 kg plus 4 to 6L Polyphase summer oil	Nil (H)	Apply when weather conditions favour disease outbreak. Good deleafing practices are essential for effective disease control. Remove infected leaf regularly. Use higher rates when spray coverage of FMC Mancozeb 750 DF is compromised by aerial application conditions or terrain. Control of leaf spot may be improved by aerial application and suppression of leaf speckle may be improved with application by airblast sprayers from the ground. North Queensland, WA, NT: Repeat sprays at 2-4 week intervals. DO NOT extend spray intervals beyond 2 weeks until the plantation has been thoroughly deleafed. DO NOT extend spray intervals beyond 2 weeks if conditions are favourable for disease, for example, wet and/or humid weather or if disease pressure is high. South Queensland, NSW: Repeat sprays at 2-3 week intervals during the warm, humid and/or wet months (i.e. December or January to May).

VEGETABLES

Crop	Diseases Controlled	Rate / 100 L	Rate /ha	WHP Harvest (H) Grazing (G)	Critical Comments
Capsicum	Target Spot	150 to 200 g	2 to 3 kg	14 days (H)	Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development.
Tomatoes	Early blight (target spot) Late blight (Irish blight) Anthracnose Leaf Mould (<i>Fulvia fulva</i>) Grey leaf spot Phoma rot			7 days (H)	
Onion and Garlic	Downy mildew Purple blotch		2.2 to 3.5 kg		Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development.
Celery	Septoria leaf spot (leaf blight)		1.7 to 2.2 kg		
Carrots	Cercospora leaf spot Alternaria leaf spot				
Lettuce	Anthracnose Downy Mildew Septoria leaf spot			14 days (H)	
Spinach Silver Beet Beetroot	Downy mildew Cercospora leaf spot				
Rhubarb	Downy mildew Rust				
Potatoes	Early blight (Target spot) Late blight (Irish blight)			Not required	

COLE CROPS AND CUCURBITS

Crop	Diseases Controlled	Rate / 100 L	Rate / ha	WHP Harvest (H) Grazing (G)	Critical Comments
Cabbage Cauliflower Brussels Sprouts Broccoli	Anthraxnose Downy mildew Alternaria spot Ring spot	150 to 200 g	1.7 to 2.2 kg	7 days (H)	Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development
Cucumber Cantaloupe Pumpkin Melons Zucchini Squash Pumpkin	Downy mildew Anthraxnose Gummy Stem blight Septoria spot				

PULSES GROWN FOR DRY BEANS

Crop	Diseases Controlled	Rate / ha	WHP Harvest (H) Grazing (G)	Critical Comments
Broad beans / Faba beans	Ascochyta blight Cercospora leaf spot Chocolate spot Rust	1.0-2.2 kg	4 weeks (H)	Spray when leaves, flowers or pods on most plants first show signs of infection and weather conditions are likely to remain humid or wet and favour disease development and repeat at 7-10 day intervals. 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 is severe. Repeat more frequently if severe disease persists. For improved coverage add a registered surfactant at 10-20mL/100L of spray.
Chickpeas	Ascochyta blight Botrytis Grey Mould		14 days (G)	
Field peas	Ascochyta blight Black spot Botrytis Grey Mould Rust			
Lentils and Vetch	Ascochyta blight Botrytis Grey Mould Rust			
Lupins	Botrytis Grey Mould Anthraxnose			
Beans (<i>Phaseolus spp.</i>)	Rust Anthraxnose Ascochyta blight Angular leaf spot			

PEAS & BEANS GROWN FOR FRESH CONSUMPTION

Crop	Diseases Controlled	Rate /ha	WHP Harvest (H) Grazing (G)	Critical Comments
Broad beans / Faba beans	Rust Cercospora leaf spot	1.7-2.2 kg	7 days (H) 14 days (G)	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 or pods show first sign of infection and weather conditions are likely to remain humid or wet and favour disease development. 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 is severe. Volume of application: for ground equipment apply 100 L/ha; for aircraft spray apply at least 30 L/ha
	Chocolate spot Ascochyta blight (suppression only)	1.7-2.5 kg		
Peas (<i>Pisum spp</i>)	Rust	1.7 - 2.2 kg		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 or pods show first sign of infection and weather conditions are likely to remain humid or wet and favour disease development. 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 is severe. Volume of application: for ground equipment apply 100 L/ha; for aircraft spray apply at least 30 L/ha
	Ascochyta leaf blight (suppression only)	1.7-2.5 kg		
Green Beans (<i>Phaseolus spp.</i>)	Rust Anthraxnose Angular leaf spot	1.7-2.2 kg		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 or pods show first sign of infection and weather conditions are likely to remain humid or wet and favour disease development.

TURF

Crop	Diseases Controlled	Rate / 100 L	Critical Comments
Turf	Fusarium Rhizoctonia Helminthosporium	200 to 250 g /100 sq. metres	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.

ORNAMENTALS

Crop	Diseases Controlled	Rate / 100 L	Critical Comments
Roses	Black spot	150 to 200 g	Apply when disease symptoms first appear and then repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development. Caution: This product may be Phytotoxic to some ornamental species (in particular some varieties of ferns). It is recommended to test a few plants before widespread use.
Gladioli Chrysanthemums	Grey mould (<i>Botrytis</i>) Septoria leaf spot Rust		
Carnations	Rust Alternaria leaf spot		
Flowers Shrubs	Septoria leaf spot		
Ferns	Botrytis leaf spot		

TREE AND VINE CROPS

Rate				Critical Comments
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application Section.				For all uses in this table: Apply by dilute or concentration spraying equipment. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.
Crop	Diseases Controlled	Rate / 100 L	WHP Harvest (H) Grazing (G)	
POME FRUITS Apples Pears	Pear scab Apple scab (Black spot) Target spot Bitter rot Sooty blotch Fly speck Ripe fruit spot	150 to 200 g	14 days (H)	Apply at 7 to 14 day intervals following a copper spray at green tip. Use the higher rate and shorter spray interval during prolonged wet conditions. This product may be harmful to <i>Typhlodromus pyri</i> and its use in orchards where integrated control is practiced should be avoided.
STONE FRUIT Almonds Peaches Apricots Plums (except early plums such as Wilson & Wickson) Nectarines Cherries	Rust Shot Hole Freckle Brown Rot			Apply at early bloom (1-10%), then repeat at mid to full bloom (50-100%); at petal fall, and at shuck fall. Continue with a protective spray programme at two-week intervals. Caution: This product may be Phytotoxic to Wilson and Wickson Plums. It is advisable to test any new plum variety on a small scale with FMC Mancozeb 750 DF before applying to the whole crop.

TREE AND VINE CROPS

Rate				Critical Comments
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application Section.				For all uses in this table: Apply by dilute or concentration spraying equipment. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.
Crop	Diseases Controlled	Rate / 100 L	WHP Harvest (H) Grazing (G)	
Passion Fruit	Septoria spot Brown spot (<i>Alternaria passiflorae</i>)	150 g	1 day (H)	Apply at 10 to 14 day intervals from October to May and every 21 to 28 days for remainder of year.
	Anthraxnose	200 g plus 600 mL miscible summer oil		Spray at weekly intervals during flowering and then fortnightly until near harvest.
Paw paws (Papaya)	Black spot	200 g		Apply FMC Mancozeb 750 DF plus a wetting agent at 10-14 day intervals during periods conducive to disease.
Custard apples	Pseudocercospora fruit spot			Do not apply during flowering. Apply as 3-4 week intervals from first fruit set until harvest. Apply at 2 week intervals in wet, cloudy weather.
Mangoes	Anthraxnose (<i>Collectotrichum gloeosporioides</i>)		Apply at weekly intervals during flowering and then monthly intervals until harvest.	
Grapevines	Blackspot Downy mildew		30 days (H)	For Black spot control apply at budburst and then repeat 10 to 14 days later. If Downy mildew is expected, continue spray programme at 10 to 14 day intervals until the threat of disease has passed. Use the shorter spray interval during weather conditions favourable to disease development.
	Phomopsis Cane and Leaf spot	150 to 200 g		Apply at budburst and then repeat 7 to 10 days later.

TREE AND VINE CROPS

Rate				Critical Comments
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application Section.				For all uses in this table: Apply by dilute or concentration spraying equipment. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.
Crop	Diseases Controlled	Rate / 100 L	WHP Harvest (H) Grazing (G)	
Citrus	Black spot Citrus rust mite Brown citrus mite	200 g plus spray oil (used according to directions)	Not required	Add an adjuvant (spreader/sticker) according to the adjuvant label recommendation per 100 L. Choose a spray oil recommended for use on citrus. On heavy soil: Spray at eight and at fifteen weeks following a Bordeaux (5-5-100) spray at petal fall. On light soil: Spray at six and at thirteen weeks following a Bordeaux (3.5-3.5-100) spray at petal fall. Queensland: Spray at six and twelve weeks after a copper spray at ½ to ¾ petal fall. Apply at first sign of mite activity on fruit, usually between December and May
	Citrus bud mite			Apply when blossom malformation is observed, usually February. Choose a spray oil recommended for use on citrus.

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

WITHHOLDING PERIOD PRIOR TO HARVEST

Bananas – NOT REQUIRED WHEN USED AS DIRECTED

Mangoes, Passion Fruit, Custard Apples – DO NOT Harvest for 1 day after application

Pawpaws (Papaya) – DO NOT HARVEST FOR 1 DAY AFTER APPLICATION. Papaya leaves must not be made available for Human consumption

Bulb Vegetables, Celery, Carrots, Cole Crops, Cucurbits, Tomatoes, Soybeans, Green Beans - DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

Capsicums, Lettuce, Spinach, Silver Beet, Beetroot, Rhubarb, Pome and Stone Fruit, Nectarines, Almonds, Peanuts, Fennel - DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

Grapevines - DO NOT HARVEST FOR 30 DAYS AFTER APPLICATION

BROAD BEANS, FABA BEANS, PEAS

Harvest for fresh consumption - DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

Harvest for dry consumption - DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION

Chickpeas, Field Peas, Lupins, Lentils, Vetch - DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION

Poppies – DO NOT HARVEST FOR 7 WEEKS AFTER APPLICATION

Citrus, Potatoes, Tobacco – NOT REQUIRED WHEN USED AS DIRECTED

WITHHOLDING PERIOD PRIOR TO GRAZING

Soybeans, Peanuts - DO NOT GRAZE OR CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION

Beans, Field Peas, Chickpeas, Lentils, Lupins, Vetch - DO NOT GRAZE OR CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION

Pawpaws (Papaya) – DO NOT USE OR SUPPLY TREATED PAPAYA INCLUDING LEAVES FOR STOCK FOOD

Cotton - DO NOT GRAZE LIVESTOCK ON TREATED CROPS OR FEED TREATED CROPS, STUBBLE AND/OR TRASH (INCLUDING COTTON GIN TRASH) TO LIVESTOCK

Sunflowers - DO NOT GRAZE LIVESTOCK ON TREATED CROPS OR FEED TREATED CROPS AND/OR TRASH TO LIVESTOCK

GENERAL INSTRUCTIONS

FMC Mancozeb 750 DF Fungicide is a protectant fungicide for the control of certain fungus diseases in many crops. For best results, apply as a regular spray programme. Thorough coverage of the treated crop is essential.

FUNGICIDE RESISTANCE WARNING

GROUP M3 FUNGICIDE

For fungicide resistance management FMC Mancozeb 750 DF is a Group M3 fungicide. Some naturally occurring individual fungi resistant to FMC Mancozeb 750 DF and other Group M3 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 FMC Mancozeb 750 DF and other Group M3

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, FMC Crop Protection Pty Ltd accepts no liability for any losses that may result from the failure of FMC Mancozeb 750 DF to control resistant fungi.

MIXING

- Slowly place into spray tank as it is being filled, or thoroughly premix in a nurse tank for concentrate or aircraft sprayers. Add other co-applied fungicides, insecticides, surfactants etc. after FMC Mancozeb 750 DF Fungicide 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 hand sprayer, premix as a slurry in a small container, and then add to sprayer containing one-third to half desired final water volume.

SURFACTANTS

The addition of agricultural surfactants to FMC Mancozeb 750 DF Fungicide will improve initial spray deposits, fungicide redistribution and weatherability. Use a spreader-sticker per label directions if needed.

APPLICATION

DILUTE SPRAYING – TREE AND VINE CROPS ONLY

- Use a sprayer designed to apply high volumes of water up to the point of run-off and match 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 first 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 – TREE AND VINE CROPS ONLY

- 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. Consult your local advisor, agronomist or Department of Agriculture to determine this volume. This is needed to calculate the concentrate-mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way.

Concentrate Spraying Example

- 1 Dilute spray volume as determined above: e.g. 1,000 L/ha;
 - 2 Your chosen concentrate spray volume: e.g. 500 L/ha;
 - 3 The concentration factor is $2 \times (1,000 / 500)$, and;
 - 4 If the dilute label rate is 150 g/100 L, then the concentrate rate becomes 2×150 , i.e. 300 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.
 - For concentrate application, use a spray volume of 20 L or more per hectare.
 - For dilute application, apply to run-off. See Dilute Spraying above.

AERIAL APPLICATION

May be applied by agricultural aircraft. Use at least 30 to 50 litres of spray mixture per hectare. Consult the Direction For Use for the correct rate to be applied in specific crop situations.

SPRAY TIMING

Treatments should begin prior to disease infection and continue until the threat of disease has passed.

Repeated applications are necessary to protect new plant growth. Reduce the spray interval when weather conditions favour disease development.

COMPATIBILITY

FMC Mancozeb 750 DF Fungicide may be harmful to *Typhlodromus pyri*, and its use in orchards where integrated control is practiced should be avoided. This product is compatible with most commonly used agricultural fungicides and insecticides, however, before preparing tank mixes, the user is advised to check compatibility with the other manufacturer's recommendations.

PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT

This product is toxic to fish. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighbouring areas. Do not contaminate ponds, waterways or drains with the chemical or used containers. Do not re-use container.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Keep away from fire and sparks. Do not allow to become wet or overheated in storage: decomposition, impaired activity or fire may result. Do not store near food, feedstuffs, fertilizers or seed. Users are reminded this product should be used before the stated expiry date.

Shake empty bag into spray tank. Do not dispose of undiluted chemicals on site.

Puncture or shred 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 bags and product should not be burnt.

SAFETY DIRECTIONS

May irritate the eyes, nose, throat and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. After use and before eating, drinking and smoking wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

For further information refer to the Material Safety Data Sheet (MSDS), which can be obtained from your supplier.

WARRANTY

FMC Crop Protection Pty Ltd makes no warranty expressed or implied, concerning the use of this product other than that indicated on the label. Except as so warranted the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

APVMA Approval No: 68341/58174

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