



CAUTION

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

Nufarm

Penncozeb[®] 750DF

Fungicide

ACTIVE CONSTITUENT: 750 g/L MANCOZEB

GROUP **M3** FUNGICIDE

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

READ COMPLETE DIRECTIONS FOR USE BEFORE USING THIS PRODUCT.

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APVMA Approval No.: 53987/0406

DIRECTIONS FOR USE

For use in all States when appropriate for the crop and/or disease

CROP	DISEASE	RATE /100L	RATE /ha	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
FIELD CROPS Cotton - Pima var. only	Alternaria leaf spot	-	2.5kg	14 days (H)	To maximise control ensure thorough coverage of all plant surfaces. Begin applications as soon as disease symptoms appear. Repeat before each infection period but no later than 7-10 days after the last application. DO NOT apply more than 4 sprays per season.
Peanuts	Cercospora leaf spot, Rust	-	1.7-2.2kg	14 Days (H) 14 days (G)	Apply at 10 to 14 day intervals commencing when disease symptoms first appear. Use the higher rate and shorter intervals during weather conditions favourable to disease development.
Pulse crops (grown for dry beans), including but not limited to: Broadbeans Chickpeas Faba beans Field peas Lentils Lupins Vetches	Ascochyta blight, Blackspot, Botrytis grey mould, Chocolate spot Rust	-	1.0-2.2kg	4 weeks (H) 14 days (G)	Spray when leaves, flowers or pods on plants first show 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 and repeat more frequently if severe disease persists. For improved coverage and spray retention add Bond Adjuvant at 100-140mL/100L of spray.
Faba beans	Cercospora				
Lupins	Anthrachnose				
Tobacco	Blue mould, Brown spot, Frog eye leaf spot	200g	2.2kg	Not required	Spray at 7 day intervals following a spray at transplanting. Spray to wet seedlings without runoff. Start spraying when plants are 1.5cm across then twice weekly. Field treatments: Apply at 7 day intervals commencing 10 days after transplanting and ceasing 7 to 10 days before the first harvest
Poppies	Downy mildew	-	2.5kg	7 weeks (H)	Apply as a protectant spray when weather conditions favour disease development. Repeat spray on 14 day intervals if conditions persist.
Soybeans	Rust	-	2.2kg	7 days (H) 14 days (G)	Commence spraying at first sign of disease and then at 7-10 day intervals while warm, rainy weather conditions prevail.

CROP	DISEASE	RATE /100L	RATE /ha	WHP Harvest (H) Grazing (G)	CRITICAL COMMENTS
VEGETABLES Beans, green Broadbeans (including faba beans) Peas (including sugar snap and snow peas)					Volume of application for ground equipment apply 100L/ha; for aircraft apply at least 30 L/ha. For improved coverage and spray retention add Bond Adjuvant at 100-140ml/100 L of spray
	Anthrachnose Rust Rust (<i>Uromyces viciae-fabae</i>), Angular leaf spot, Chocolate spot, (<i>Botrytis fabae</i>), suppression of Leaf blight (<i>Ascochyta fabae</i>)	150-200g	1.7-2.2kg	7 days (H) 14 days(G)	Apply when disease symptoms first appear and repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development. 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. If disease pressure is severe and conditions favour spread of disease, repeat the spray treatment at 2-3 week intervals 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.
Peas	Downy mildew	150-200g	1.7-2.2kg	7 days (H)	Apply when disease symptoms first appear and repeat at 7 to 10 day intervals. Use the higher rate and shorter spray interval during weather conditions favourable to disease development
Capsicum	Target spot	150-200g	2-3kg	14 days (H)	Spray at first sign of disease. Repeat at 7- 10 day intervals
Carrots	Alternaria leaf spot, Cercospora leaf spot	150-200g	1.7-2.2kg	7 days (H)	Spray at first sign of disease, then at 7-10 day intervals or more frequently depending on blight conditions
Celery	Septoria leaf spot (leaf blight)	150-200g	1.7-2.2kg	7 days (H)	Spray at first sign of disease. Repeat at 7-10 day intervals
COLE CROPS Broccoli Brussel Sprouts Cabbage Cauliflower	Alternaria spot, Anthrachnose, Downy mildew, Ring spot	150-200g	1.7-2.2kg	7 days (H)	Spray at first sign of disease. Repeat at 7- 10 day intervals. Add a surfactant such as Chemwet 1000
CUCURBITS Canteloupe Cucumber Melons Pumpkin Squash Zucchini	Anthrachnose, Downy mildew, Gummy stem blight, Septoria spot	150-200g	1.7-2.2kg	7 days (H)	Apply when disease symptoms first appear and then repeat at 7-10 day intervals. Use higher rate and shorter intervals during weather conditions favourable to disease development
Fennel (Tas only)	Leaf blight (<i>Cercosporidium</i>)	-	2.2k	14 days (H)	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.
Potatoes	Early blight (Target spot), Late blight (Irish blight)	150-200g	1.7-2.2kg	Not required	Apply when disease symptoms first appear and then repeat at 7-10 day intervals. Use higher rate and shorter intervals during weather conditions favourable to disease development.
Rhubarb	Downy mildew, Rust	150-200g	1.7-2.2kg	14 days (H)	
Spinach Silverbeet Beetroot	Cercospora leaf spot, Downy mildew	150-200g	1.7-2.2kg	14 days (H)	
Tomatoes	Anthrachnose, Early blight (Target spot), Grey leaf spot, Late blight (Irish blight), Leaf mould (<i>Fulvia fulva</i>), Phoma rot	150-200g	2-3kg	7 days (H)	Spray at first sign of disease. Repeat at 7- 10 day intervals. Do not apply to tomato seedlings before transplanting.
Lettuce	Anthrachnose, Downy mildew, Septoria leaf spot	150-200g	1.7-2.2kg	14 days (H)	Apply when disease symptoms first appear and then repeat at 7-10 day intervals. Use higher rate and shorter intervals during weather conditions favourable to disease development.
Onion and Garlic	Downy mildew, Purple blotch	150-200g	2.2-3.5kg	7 days (H)	
FRUIT Bananas	Leaf spot (Sigatoka), (<i>Mycosphaerella musicola</i>)	200g plus 600ml summer oil	2.2-4.5kg (NSW 2.2kg) + 3.5-4.2L summer oil or miscible summer oil	Not required	Apply when weather conditions favour disease outbreak. Repeat treatments in accordance with locally recommended spray schedules. Use sufficient water to ensure coverage. New South Wales: Ground Application: Apply at three week intervals from December or January until May. Aerial Application: Apply at 7-10 day intervals from December or January until May. South Queensland: Apply at three week intervals from December or January until May.
	Black pit, Cordana leaf spot, Fruit speckle, Leaf speckle	200g	2.2kg		North Queensland, WA, NT : Apply every two weeks during the wet season. Extend to three weeks after this and then four to five weeks during the drier months returning to three weeks prior to the next wet season. * For concentrate spraying using misters, refer to Concentrate Spraying under APPLICATION to determine appropriate rate.
	Anthrachnose (<i>Colletotrichum musae</i>)	200g plus 600ml miscible summer oil	2.2kg + 3.5-4L miscible summer oil		Spray at weekly intervals during flowering and then at two week intervals until near harvest

TREE AND VINE CROPS In the following table all rates are given for dilute spraying. For concentrate spraying refer to the Application Section.			For all tree and vine crops in this table: Apply by dilute or concentrate spraying equipment. For concentrate spraying, refer to the Application Section. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.	
CROP	DISEASE	RATE	WHP	CRITICAL COMMENTS
Citrus	Black spot	200g/100L	Not required	On heavy Soil: Add 250ml polyphase summer oil per 100L. Spray at 8 and 15 weeks following a Bordeaux (5-5-100) spray at petal fall.
	Brown citrus mite, Citrus rust mite			On light Soil: Add 250ml polyphase summer oil per 100L plus an adjuvant (spreader/sticker) according to the adjuvant label recommendation per 100L. Spray at 6 and 13 weeks following a Bordeaux (3.5-3.5-100) spray at petal fall.
	Citrus bud mite			Queensland, NT: Add 600 ml polyphase summer oil or miscible summer oil per 100L and spray at six to twelve weeks after a copper spray at 0.5 to 0.75 petal fall.
				Spray at first sign of rust or citrus mite (usually December to May).
Custard apples	Pseudocercospora fruit spot	200g/100L	1 day (H)	Apply when blossom malformation is observed, usually February
OTHER FRUITS Grapevines	Black spot, Downy mildew	200g/100L	30 days	Do not apply during flowering. Apply at 3-4 week intervals from first fruit set until harvest. Apply at 2 week intervals in wet cloudy weather.
	Phomopsis, Cane and Leaf spot	150-200g/100L		For black spot control spray commencing at bud burst. Repeat every 14 days. If downy mildew is expected begin spray application at 10-15cm stage of shoot growth. Continue the program at intervals of 10-14 days until disease threat is over
				Spray at bud burst and repeat 7-10 days later.
Mangoes	Anthracoise (<i>Colletotrichum gloeosporioides</i>)	200g/100L	1 day	Spray at weekly intervals during flowering then monthly until harvest. Use sufficient water for good coverage. DO NOT apply as a tank mix with methidathion (Supracide) as phytotoxicity may result.
Passionfruit	Brown spot (<i>Alternaria passiflorae</i>), Septoria spot	150g/100L	1 day	Apply at 10-14 day intervals from October to May and every 21-28 days for remainder of year.
	Anthracoise (NSW only)	200g plus 600ml miscible summer oil		Spray at weekly intervals during flowering then fortnightly near harvest.
Pawpaws (Papaya)	Blackspot	200g/100L	1 day (H)	Add mancozeb plus a wetting agent at 10-14 day intervals during periods conducive to disease.
POME FRUITS Apples Pears	Apple Scab (Black spot), Bitter rot, Fly speck, Pear Scab, Ripe fruit spot, Sooty blotch, Target spot	150-200g/100L	14 days	Spray at 7-14 day intervals following green tip copper spray. Use higher rate and shorter spray interval during prolonged wet conditions. Product not suitable for use in integrated mite control programs (Tas. only).
STONE FRUITS Almonds Apricots Cherries Nectarines Peaches Plums (except Wilson plums)	Brown rot, Freckle rust, Shot hole	150-200g/100L	14 days	Spray at early bloom (1-10%) mid to full bloom (50- 100%), petal and shuck fall, then at intervals of 14 days.

CROP	DISEASE	RATE	WHP	CRITICAL COMMENTS
ORNAMENTALS Carnations	Rust, Alternaria leaf spot	150-200g/100L	-	Apply when disease symptoms first appear and then repeat at 7-14 day intervals.
Flowers, Shrubs	Septoria leaf spot	150-200g/100L	-	
Ferns	Botrytis leaf spot	75-100g/100L	-	
Gladioli	Grey mould (Botrytis), Septoria leaf spot	150-200g/100L	-	
Chrysanthemums	Rust			
Roses	Black spot	150-200g/100L	-	
Turf	Fusarium, Rhizoctonia, Helminthosporium	200-250g/100m ²	-	Spray in sufficient water for adequate coverage. Apply every 7 days throughout susceptible periods. DO NOT feed grass clippings from treated areas to poultry or animals.

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

WITHHOLDING PERIOD: HARVEST

GREEN BEANS, CARROTS, CELERY, COLE CROPS, CUCURBITS, GARLIC, ONION, PEAS, SOYBEANS, TOMATOES:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

ALMONDS, BEETROOT, CAPSICUM, COTTON, FENNEL, LETTUCE, PEANUTS, POME FRUIT, RHUBARB, SILVERBEET, SPINACH, STONE FRUIT

DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

CUSTARD APPLE, MANGOES, PASSIONFRUIT, PAWPAWS (PAPAYA) - DO NOT HARVEST FOR 1 DAY AFTER 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

GRAPEVINES

DO NOT HARVEST FOR 30 DAYS AFTER APPLICATION.

POPPIES

DO NOT HARVEST FOR 49 DAYS AFTER APPLICATION.

BANANAS, CITRUS, POTATOES, TOBACCO - NOT REQUIRED WHEN USED AS DIRECTED.

WITHHOLDING PERIOD: GRAZING**COTTON**

DO NOT ALLOW LIVESTOCK TO GRAZE COTTON CROP, STUBBLE OR GIN TRASH THAT HAS BEEN TREATED WITH PENNCOZEB 750DF FUNGICIDE.

GREEN LEGUMES, PEANUTS, PULSE CROPS - DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 14 DAYS AFTER LAST APPLICATION .**PAPAYA**

DO NOT USE OR SUPPLY TREATED PAPAYA INCLUDING LEAVES FOR STOCK FOOD.

SOYBEANS

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

GENERAL INSTRUCTIONS

Before opening, carefully read Directions For Use, Precautionary Statements, Safety Directions and First Aid. This product is a protectant fungicide for the control of certain fungus diseases in many crops. For best results, apply product thoroughly to the treated crop in a regular spray program.

FUNGICIDE RESISTANCE WARNING

GROUP	M3	HERBICIDE
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Penncozeb® 750DF Fungicide is a member of the Multi-site activity group of fungicides. For fungicide resistance management Penncozeb® 750DF Fungicide is a Group M3 fungicide. Some naturally occurring individual fungi resistant to Penncozeb® 750DF Fungicide and other Group M3 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by Penncozeb® 750DF Fungicide or 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, Nufarm Australia Limited accepts no liability for the losses that may result from the failure of Penncozeb® 750DF Fungicide to control resistant fungi.

WARNING – BANANAS

Under certain conditions the surface of recently emerged fruit is particularly prone to marking damage from spray applications where a petroleum spray oil is included. Where applications containing a petroleum spray oil will be made to very rapidly growing fruit in hot conditions with strong direct sunlight, it is recommended that bunches be bagged prior to spraying to minimise risk of fruit marking.

MIXING

Partly fill spray tank with water and agitate while adding this product slowly. Continue agitation after filling and during spraying to ensure spray mixture is uniform and to prevent product settling out. For low volume or aerial application prepare a slurry or premix when adding to the spray tank. Additional insecticides, fungicides, surfactants, etc. should be added after the product is in suspension. Rinse out spray tank pumps and nozzles at the end of the day.

ADJUVANTS

The use of Bond Adjuvant may improve spray deposition and rainfastness and should be used according to label directions.

APPLICATION

This product may be applied as a high volume dilute spray to fruit tree and vine crops and some row crops. Apply sufficient spray volume to wet all leaf surfaces to the point of runoff. The spray equipment should be adjusted so that the spray is evenly distributed, thoroughly covering all plant surfaces.

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 100L 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.
- The spray volume will vary according to the treated crop and should be increased when spraying large or dense plants to ensure thorough coverage. The spray volume should also be increased throughout the growing season as the crop increases in size. Suitable spray volumes for mature crops are as follows:

Vine crops–200-1100L/ha.

Pome and Stone Fruit-1100-4000L/ha.

Citrus - 4000 to 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 be then calculated in the following way:

EXAMPLE ONLY

1. Dilute spray volume as determined above: For example 1000 L/ha

2. Your chosen concentrate spray volume: For example 250 L/ha

3. The concentration factor in this example is: 4 X (i.e. 1000 L/250 L = 4)

4. If the dilute label rate is 250mL/100 L, then the concentrate rate becomes 4 x 250, that is 1 L/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 competency training and follow industry Best Practices.

CONCENTRATE AND GROUND APPLICATION SPRAYS

This product may be applied as a concentrate spray through low volume air blast equipment or as a ground application through spray booms. Adjust the rate to ensure that the correct amount is applied per hectare from the particular equipment used. Use the higher rate on larger plants and when weather conditions favour the development of disease.

AERIAL APPLICATION

This product may be applied by agricultural aircraft. Use at least 30-50 litres spray mixture per hectare. Reference should be made to the Directions for Use table for the correct rate of application in specific crop situations.

SPRAY TIMING

Apply treatments when weather conditions favour disease outbreak and continue until the threat of disease has passed. Repeated applications are necessary to protect new plant growth and as conditions favour disease development, reduce the spray interval.

COMPATIBILITY

This product may be harmful to *Typhlodromus pyri* and should not be used in orchards where integrated control methods are practiced. Most commonly used agricultural fungicides and insecticides are compatible with Penncozeb® 750DF, however reference should be made to the other manufacturer's recommendations before preparing tank mixes. With Mango crops this product should not be mixed with Methidathion (Supracide) as the tank mix may cause phytotoxicity.

BANANAS

Foliar fertilisers: Before applying mixtures of foliar fertilisers to this product, seek advice from the manufacturer of the product and/or conduct a jar test with the product(s), with Penncozeb 750 DF and the appropriate volume of water to test physical compatibility. Foliar fertilisers can cause damage to banana leaves and fruit. Test mixtures over a small area initially to check for crop safety. Since Nufarm Australia Limited cannot guarantee the quality of other products mixed with Penncozeb 750 DF, the user accepts all responsibility for the performance of these mixtures.

PRECAUTIONS

DO NOT use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.

RE-ENTRY PERIOD

DO NOT allow entry into treated areas until spray has dried. When prior entry is necessary, wear personal protective equipment as specified in the Safety Directions. Clothing must be laundered after each day's use.

PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT

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

STORAGE AND DISPOSAL

Store in the closed, original container, in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilizers. DO NOT store for prolonged periods in direct sunlight. DO NOT allow container to become wet or over-heated in storage. Users are reminded that this product should be used before the stated expiry date. Single rinse before disposal. Add rinsings to spray tank. Puncture and bury empty bags in a local authority landfill. If no landfill is available, bury the containers below 500mm 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

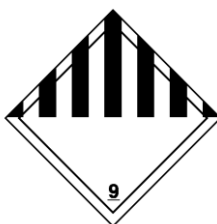
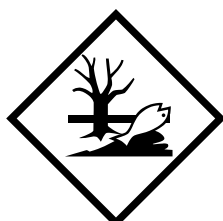
Additional information is listed in the Material Safety Data Sheet that can be obtained from the supplier

In case of emergency: Phone 1800 033 498 Ask for shift supervisor. Toll free 24 hours.

CONDITIONS OF SALE

"Any provisions or rights under the Trade Practices Act 1974 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

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ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS MANCOZEB)
UN No: 3077
PACKING GROUP: III
HAZCHEM: 2 X
IN AN EMERGENCY DIAL: 000 POLICE OR FIRE BRIGADE
IN AN EMERGENCY, SPECIALIST ADVICE NUFARM AUSTRALIA LIMITED 1800 033 498