

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

Blue Shield[®] DF

COPPER FUNGICIDE

Active Constituent: 500 g/kg COPPER (Cu) present as copper hydroxide

GROUP Y FUNGICIDE

A dry flowable granule fungicide for the control of various diseases of fruit and vegetables

GENERAL INSTRUCTIONS

Fungicide Resistance Warning

Blue Shield DF is a member of the multi-site activity group of fungicides. For fungicide resistance management Blue Shield DF is a Group Y fungicide.

Some naturally occurring individual fungi resistant to Blue Shield DF and other Group Y 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 Blue Shield DF and other Group Y 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, Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Blue Shield DF to control resistant fungi.

Mixing

Fill the spray tank to three quarters of the required volume with water, then **slowly** pour Blue Shield DF into the spray tank, with the agitation system actively moving. Add tank-mix products after Blue Shield DF is thoroughly mixed. Top up to the required volume with water. Pre-mixing Blue Shield DF with a small quantity of water is NOT recommended.

Application

Good disease control requires even, thorough coverage of the target area. Application should be made using appropriate spray equipment and sufficient water to provide adequate penetration and coverage. Equipment settings and water volume may need to vary, depending on the growth stage of the crop.

Instructions for Vegetables and 'Other' Crops

High volume

Mix specified rates of product per 100 L water and spray plants to "point of run-off" stage, thoroughly covering all plant surfaces.

Low volume

Use specified rates per hectare in a convenient volume of water, using effective low volume boom sprays, misters etc. Aim to apply an even small droplet coverage over all plant surfaces. Water volumes may range from 30 to 500 L/ha depending on crop and equipment.

Special Instructions for Tree and Vine Crops

Dilute Spraying

- ◆ Use a sprayer designed to apply high spray volumes, up 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 volume 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 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

- ◆ 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 L ÷ 500 L = 3)
4. If the dilute label rate is 200 g/100 L, then the concentrate rate becomes 3 x 200, that is 600 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.
- ◆ Do not use a concentrate rate higher than that specified in the Critical Comments for the relevant crop.
- ◆ Concentrate spraying of this product is only appropriate for apples, apricots, avocados, cherries, grapevines, mangoes, nectarines, peaches, pears and plums.
- ◆ For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

Compatibility

This product is compatible with wettable powder, water dispersible granule, suspension concentrate and most emulsifiable concentrate formulations of most commonly used fungicides, insecticides and miticides.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with this product or the used container.

DRIFT WARNING

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto adjacent crops, crop lands, pasture or livestock.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.

Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. 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.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with the eyes and skin. Wash hands after use.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (telephone 13 11 26). If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet, which can be obtained from www.bayercropscience.com.au.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no responsibility for loss or damage arising from failure to follow such directions and instructions.

APVMA Approval No.: 46869/0705

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| FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111 |
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DIRECTIONS FOR USE**Restraints**

DO NOT apply when either hot or frost prone conditions prevail.

DO NOT apply when poor drying conditions exist.

VEGETABLES

| CROP | DISEASE | STATE | RATE | | CRITICAL COMMENTS |
|-----------|---|----------------------------------|------------------------|--------------------|---|
| | | | High Vol: Per 100 L | Low Vol: Per ha | |
| Beans | Common blight | NSW, Vic, Tas, SA, WA only | 200 g | 2.2 kg | Apply as a protectant at first sign of infection from time plants are 15 to 30 cm high. Repeat every 10 to 14 days as required. |
| | Bacterial brown spot | | | | Spray within 21 days of emergence and repeat at 10 to 14 day intervals. |
| | Halo blight | All States | 200 to 300 g | 2.2 to 3.5 kg | Apply as a protectant at first sign of infection when plants are 15 to 20 cm high. Repeat every 10 to 14 days as required. Use higher rate when conditions favour disease. |
| | Rust | | 200 g | 2.2 kg | Spray at first sign of infection. Repeat every 10 to 14 days while conditions allow infection. |
| | Chocolate spot | Qld, NSW, Tas, SA, WA only | | | |
| Brassicas | Black rot, peppery leaf spot, ring spot, downy mildew | All States | 200 g | 2.2 kg | Spray at first sign of disease. Repeat every 10 to 14 days while conditions favour disease. Do not use on copper shy varieties. |
| Capsicums | Bacterial spot, Bacterial canker | Qld, NSW, Tas, SA, WA only | 200 g | 2.2 kg | Field - Begin spraying at first sign of disease and repeat every 7 to 14 days depending upon weather conditions and severity of disease. This product used as directed will reduce the spread of bacterial canker but will not control seed or soil borne infection. Seedbeds - Under wet weather conditions spray every 7 days. |
| Carrots | Leaf spot | All States | 200 g | - | Spray at first sign of disease. Repeat every 10 to 14 days while conditions allow infection. |
| Celery | Leaf spot | All States | 200 g | - | Spray every 10 to 14 days. When weather conditions favour disease (i.e., cool weather) spray every 7 days. |
| | Bacterial soft rot | Qld, NSW, Tas, SA, WA only | | | |
| | | Vic only | 280 g | - | |
| Cucurbits | Angular leaf spot, bacterial leaf spot | All States | 200 g | - | Spray at first sign of disease and repeat every 7 to 10 days. |
| Lettuce | Downy mildew | All States | 200 g | 2.2 kg | Apply at first sign of disease and repeat every 7 to 10 days if necessary. Alternating treatment between this product and Polyram® DF is desirable. Do not use on copper shy varieties. This product predisposes lettuce to frost damage. Lettuce should not be treated with the product if frosts are likely since crop damage may occur. |
| | Bacterial leaf spot | Qld, NSW, Tas, SA, WA only | | | |
| | | All States | | | |
| | Anthracnose | All States | | | Spray on a 7 to 10 day schedule. Do not use on copper shy varieties. |
| Onions | Downy mildew | All States | 200 g | 2.2 kg | Spray at first sign of disease. Repeat application at 10 day intervals. |
| Parsnips | Leaf spots | Vic, SA, WA only | 200 g | 2.2 kg | Spray at first sign of disease. Repeat application every 10 to 14 days if necessary. |
| Peas | Ascochyta blight, bacterial blight | All States | 200 g | 2.2 kg | Spray at first sign of disease. Repeat application every 10 to 14 days. |

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| Potatoes | Target spot (early blight), Irish blight (late blight) | All States | 200 g | 2.2 kg | Spray every 10 to 14 days as necessary until maturity. |
| Red Beet | Downy mildew, rust | All States | 200 g | 2.2 kg | Spray from seedling stage and repeat every 10 to 14 days if necessary. |
| Rhubarb | Crown rot | All States | 200 g | - | Dip rhubarb crowns before planting. |
| | Downy mildew | | | | Spray every 10 to 14 days. |
| Silver Beet | Downy mildew | All States | 200 g | 2.2 kg | Spray from seedling stage and repeat every 10 to 14 days if necessary. |
| Spinach | Downy mildew | All States | 200 g | 2.2 kg | Spray from seedling stage and repeat every 10 to 14 days if necessary. |
| Tomatoes | Target spot (early blight), septoria leaf spot | All States | 200 g | 2.2 kg | At onset of disease spray every 7 to 14 days depending on severity of disease and weather conditions. |
| | Bacterial spot, bacterial speck, bacterial canker | | 150 to 200 g | 1.7 to 2.2 kg | Seedbeds - Spray every 7 days under wet weather conditions. Fields - Begin applying at first sign of disease and spray every 7 to 14 days depending on weather and disease severity. This product will minimise the spread of bacterial canker but will not control seed or soil borne infection. |
| | Irish blight (late blight) | | 200 g | 2.2 kg | Begin applying at first sign of disease and repeat every 10 to 14 days. At seedling stage spray only when necessary (minimum sprays) as this may inhibit growth. |

TREE and VINE CROPS - FRUIT

| RATE | | | | CRITICAL COMMENTS |
|--|----------------------|----------------------------------|------------------------------|--|
| CROP | DISEASE | STATE | RATE/100 L (Dilute spraying) | |
| In the following table, all rates given are for dilute spraying. Where appropriate, for concentrate spraying, refer to the Special Instructions for Tree and Vine Crops section in the GENERAL INSTRUCTIONS. | | | | Where appropriate, 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. For concentrate spraying do not use at rates greater than those specified for each crop. |
| Apples | Black spot | All States | 200 g | Apply at green tip and repeat 10 to 14 days later if conditions favour disease (extended wet weather). Refer to Department spray charts for recommendations on timing rates and precautions that may be necessary. For concentrate spraying, do not use at rates greater than 400 g per 100 L of water (i.e. at a concentration factor greater than 2 X). |
| Apricots | Shothole, freckle | All States | 200 g | Spray at bud swell prior to earliest signs of leaf/bud movement. Spray at least one post harvest application. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Bacterial gummosis | Vic, Tas, SA, WA only | 250 g | Autumn: Apply at 25 to 50 % leaf fall. Apply again at 90 to 100 % leaf fall. Winter: Apply in mid-winter. For concentrate spraying, do not use at rates greater than 500 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | | NSW only | 200 g | Spring: Apply at first sign of bud movement. Repeat applications 7 to 10 days later. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | | NSW, Vic, SA, WA, Tas only | 130 g | Apply 1 week after petal fall. Repeat application 7 to 10 days later. These sprays control the high leaf population of the bacteria in mid to late spring. For concentrate spraying, do not use at rates greater than 260 g per 100 L water (i.e. at a concentration factor greater than 2 X). |

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|----------------|--|----------------------------|-----------------------------------|---|
| Avocadoes | Anthracnose | Qld, NSW, Vic, SA, WA only | 200 g | Spray every 30 days from flowering to harvest. During extended wet periods spray every 14 days. For concentrate spraying, do not use at rates greater than 600 g per 100 L water (i.e. at a concentration factor greater than 3 X). |
| | Refer also to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Cherries | Shothole | All States | 200 g | Spray at bud swell prior to early sign of leaf/bud movement. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Bacterial canker (bacterial gummosis) | NSW, Tas, WA only | | Apply at bud movement, again when leaves are beginning to fall, again at mid to complete leaf fall, and 1 or more sprays during winter. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| Citrus | Black spot, melanose | NSW, Vic, SA only | 200 g | Spray at flower petal fall. Apply only as a dilute spray. |
| | Black spot, melanose, smoky blotch, scab | Qld, WA only | 200 to 300 g + 600 mL summer oil. | Spray at a half to three quarter flower petal fall. Apply the higher rate in coastal districts. Apply only as a dilute spray. |
| Grapevines | Downy mildew | NSW, Vic, Tas, SA, WA only | 180 to 250 g | First spray when shoots are 10 cm long and re-apply as necessary. Use higher rates when infection levels are high. For concentrate spraying, do not use at rates greater than 540 to 750 g per 100 L water (i.e. at a concentration factor greater than 3 X). |
| Kiwifruit | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Lychees | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Mangoes | Anthracnose | NSW, Qld, SA, WA, NT only | 300 g | Spray every 4 weeks from flowering to harvest. During extended wet weather, spray every 14 days. When using a per hectare rate apply in not less than 300 litres of water per hectare. Use in rotation with alternate chemistry. For concentrate spraying, do not use at rates greater than 600 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Bacterial Black Spot | | 200 to 300 g | Apply at first sign of infection or as a preventative spray. Repeat at 10-14 day intervals while conditions allow infection. Use higher rate when conditions are favourable for infection. Use in rotation with alternate chemistry. For concentrate spraying, do not use at rates greater than 600 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| Nectarines | Leaf curl | All States | 200 g | Spray at bud swell prior to early signs of leaf/bloom development. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Refer also to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Passionfruit | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Peaches | Leaf Curl, shothole | All States | 200 g | Spray at bud swell prior to early signs of leaf/bloom development. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Refer also to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Pears | Black spot (scab) | All States | 200 g | Spray at green tip and repeat 10 to 14 days later if necessary. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| Plums | Shothole | All States | 200 g | Spray at bud swell prior to early signs of leaf/bloom development. For concentrate spraying, do not use at rates greater than 400 g per 100 L water (i.e. at a concentration factor greater than 2 X). |
| | Refer also to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Tropical fruit | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |

TREE and VINE CROPS - NUTS

| RATE | | | | CRITICAL COMMENTS |
|------------|---|--------------------------|---------------------------------|--|
| CROP | DISEASE | STATE | RATE/100 L (Dilute spraying) | |
| Almonds | Leaf curl | Qld, Tas, SA, WA only | 200 g | Spray at bud swell prior to early signs of leaf/bloom development. |
| | Shothole | Vic, WA only | | |
| Macadamias | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Pecans | Refer to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section | | | |
| Walnuts | Walnut blight | All States | 300 g | Apply first spray at early pre-bloom when catkins are partially expanded. Make three additional applications during bloom and early nutlet stage at 7 to 10 day intervals. Additional applications may be necessary when frequent rainfall occurs. Add 175 mL of summer oil/100 L spray. |

OTHER CROPS

| CROP | DISEASE | STATE | RATE/100 L | CRITICAL COMMENTS |
|-------------------|--------------------------------|---------------------------|---------------------------------|--|
| Bananas | Cercospora leaf spot | Qld, NSW, WA only | 200 g + 600 mL summer oil | Spray monthly from December to May when weather conditions favour disease. Ensure complete coverage. Refer also to FRUIT AND NUTS – PHYTOPHTHORA STEM CANKER section |
| | | | | |
| Strawberries | Leaf Spot, grey mould | Vic, Tas, SA, WA only | 200 g | Spray when plants are established and continue on a 7 to 10 day schedule throughout the season. Discontinue application if signs of phytotoxicity appear (reddening of leaf veins or new growth inhibition). Early in the season alternating with carbendazim will assist in reducing the development of grey mould. |
| Tobacco seed beds | Wildfire, angular leaf spot | Qld, NSW, Vic, WA only | 400 g | Apply every 7 days. |
| | Algae | Qld, WA only | | Apply when algae first appear. |

FRUIT AND NUTS - PHYTOPHTHORA STEM CANKER

| CROP | DISEASE | STATE | RATE | CRITICAL COMMENTS |
|----------------|--------------------------|-------------------|---|---|
| Avocados | Phytophthora stem canker | Qld, NSW, WA only | 100 g/L water or 100 g/L of water based paint | Mix to a smooth consistency. Apply only to stems of trees or vines wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season. |
| Macadamias | | Qld, WA only | | |
| Pecans | | Qld, NSW, WA only | | |
| Kiwifruit | | | | |
| Lychees | | | | |
| Nectarines | | | | |
| Passionfruit | | | | |
| Peaches | | | | |
| Plums | | | | |
| Tropical fruit | | | | |
| Bananas | | NSW, WA only | | |

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

WITHHOLDING PERIOD

Crops - DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.