



Fungicide Programs for Grapevines

Fungicide Program for Grapevines (cool/wet climates)

Phomopsis, Black Spot, Powdery and Downy Mildew, and Botrytis Rot Control

DORMANT		WOOLY BUD	BUD BURST	SHOOT GROWTH	UP TO 5% CAP FALL	5%-80% CAP FALL	BERRY SET	BUNCH CLOSURE	10 DAYS AFTER BUNCH CLOSURE	VERAISON	PRE-HARVEST	POST-HARVEST						
H I G H D I S E A S E P R E S S U R E																		
Shirlan	← Delan → +	← Sulfur → x2	Captan +	Prosper ¹ +	Barrack 720 +	Viva x2	Cabrio	Cabrio +	Filan	Captan +	DMI	Legend ¹ +	Corvette	Sulfur + Cuprofix or Medley Plus ² x3	Captan	Corvette	Sulfur +	Cuprofix

¹ Information on the IPM compatibility of Prosper and Legend is not available.

² Use **Medley Plus** instead of **Cuprofix** if there has been an infection period for downy mildew and/or downy mildew infection is detected in the vineyard. Do not apply more than two consecutive sprays of Medley Plus.

Resistance:

All uses comply with AFRMG recommendations for fungicide resistance management.

Suggested total volumes for dilute spraying:

Dormant.....200L/ha
Wooly bud to early flower500L/ha
Late flower to pre-bunch closure 750L/ha
Bunch closure to vintage.....1,000L/ha

Withholding Periods:

All suggestions comply with AWRI recommendations, provided the last Captan spray is at least 30 days before harvest and the last Corvette spray is at least 7 days before harvest.

**SEE REVERSE FOR
SPRAY GUIDELINES**

Fungicide Program for Grapevines (warm/dry climates)

Phomopsis, Black Spot, Powdery and Downy Mildew, and Botrytis Rot Control

DORMANT		WOOLY BUD	BUD BURST	SHOOT GROWTH	UP TO 5% CAP FALL	5%-80% CAP FALL	BERRY SET	BUNCH CLOSURE	10 DAYS AFTER BUNCH CLOSURE	VERAISON	PRE-HARVEST	POST-HARVEST				
H I G H D I S E A S E P R E S S U R E																
Shirlan		← Delan → +	← Sulfur → x2	Captan +	Prosper ¹	Captan +	Viva	Cabrio +	Corvette	Captan +	Legend ¹	Sulfur + Cuprofix or Medley Plus ² x3	Captan	Corvette	Sulfur +	Cuprofix

¹ Information on the IPM compatibility of Prosper and Legend is not available.

² Use **Medley Plus** instead of **Cuprofix** if there has been an infection period for downy mildew and/or downy mildew infection is detected in the vineyard. Do not apply more than two consecutive sprays of Medley Plus.

Resistance:

All uses comply with AFRMG recommendations for fungicide resistance management.

Suggested total volumes for dilute spraying:

Dormant.....200L/ha

Wooly bud to early flower500L/ha

Late flower to pre-bunch closure 750-1,000L/ha

Bunch closure to vintage.....1,000-1,500L/ha

Withholding Periods:

All suggestions comply with AWRI recommendations, provided the last Captan spray is at least 30 days before harvest and the last Corvette spray is at least 7 days before harvest.

Fungicide Program for Grapevines Spray Guidelines

The spray program for warm dry climates is designed to give you the best options for disease control throughout the season in districts such as Barossa, Riverland, Sunraysia, Murrumbidgee Irrigation Area (MIA), Hunter Valley and Inland Queensland grape growing regions.

The spray program for cool wet climates is designed to give you the best options for disease control throughout the season in districts such as Margaret River, Coonawarra, Yarra Valley, Mudgee/Orange and Stanthorpe grape growing regions.

In both situations the number of sprays needed will vary with disease pressure and the diseases present. The programs provided are for conditions of high disease pressure. Important factors considered when preparing these programs are outlined below.

Strategic Coverage: The viticulture industry has become more focused on good phomopsis control, thanks to research over recent years, which has identified different strains with different pathogenicity, the importance of pruning methods and effective fungicides. The importance of early season control of this disease is supported by pre-budburst application of Shirlan®. This is followed by applications of Delan® and Captan between budburst and pre-flowering. These two fungicides have been shown to be very effective as protectant fungicides against phomopsis.

Another example is the control of Botrytis with a balance between high value systemic products at critical times of the crop/disease life cycle. In this case the highly effective bunch rot fungicides Filan® and Corvette® are recommended in cool wet climates at the critical stages of 80% capfall, pre-bunch closure and pre harvest. Where Botrytis pressure is much lower or the stage of the crop/disease life cycle is less critical, the protectants Barrack and Captan are recommended.

Mode of action: To reduce the chance of fungicide resistance developing, a range of modes of action are recommended for control of diseases. Fungicides are also recommended at times of the disease life cycle where they will be most effective according to their mode of action.

For example, for powdery mildew control we recommend the protectant fungicide sulphur (Group Y) for early and late sprays, while during flowering, which is the most critical period for powdery mildew control, we recommend 2 sprays of Cabrio® (Group K). Fungicides from 3 other different modes of action, Prosper® (Group E), Viva® (Group C) and Legend® (Group M) are recommended during the period between early shoot growth and bunch closure.

Fungicide Resistance Management: The maximum number of sprays as recommended by Australian Fungicide Resistance Management Group (AFRMG) is always adhered to so as to minimise the risk of the development of fungicide resistance. In some cases the number of sprays of a product in the program may be less than the recommended maximum, but never more.

Relatively cheap and effective fungicide options such as Viva (DMI) and sulphur are included. However, reduced effectiveness of some DMI's has been reported and we have therefore restricted the number of Viva sprays to one or three, depending on climate, and introduced products from different modes of action for powdery mildew control. A maximum of 1 or 2 dicarboximides (depending on the total sprays for this disease) are recommended by AFRMG for Botrytis control in vines. Therefore two applications of Corvette® are recommended in our programs.

Integrated Pest Management: The effect of fungicides on biological control agents such as predatory mites is carefully considered. Fungicides which are known to have an adverse affect are generally not included in the spray program unless there is no alternative product with a better IPM profile.

Captan WG and Delan 700 WG control a wide spectrum of diseases (Phomopsis cane and leaf blight, downy mildew and black spot) and at the same time have excellent IPM profiles. Some other protectant fungicides such as those based on mancozeb are known to have a damaging affect on a range of predatory mites which assist in the management of bud mite and rust mite in vines. We **do not** recommend them.

Withholding Period: Withholding requirements for export wines, as recommended by the Australian Wine Research Institute (AWRI) have been strictly adhered to.

Although Barrack 720 has a 7 day withholding period in Australian grapes, MRL's do not exist in some important overseas wine markets and therefore it is not recommended past 80% capfall as recommended by AWRI.

Cost Effectiveness: Where there are 2 alternative products or product combinations that will fulfil a similar role, the one, which costs less, is recommended.

Several products are registered for protective and post infection control of downy mildew, but these are generally more expensive than straight protectants. We only recommend these products (e.g. Crop Care's new Medley® Plus) where there has been a downy mildew infection and curative activity is required. Otherwise we recommend the protectant copper product Cuprofix® Disperss®.

Crop Effects: Where a large number of sprays of a product may have an adverse affect on vines or the environment, the total sprays are reduced (or sometimes eliminated) and another product with similar activity is recommended.

For example copper products used throughout the season will cause a bronzing of leaves of many varieties and may result in pollen sterility at flowering. We recommend our copper product Cuprofix Disperss only after flowering and later in the season after earlier sprays of Delan 700WG, Barrack 720 and Captan WG.

**For more information, please contact your local Technical Sales Representative.
Customer Service (Australia-wide):
1800 111 454, or visit www.cropcare.com.au**

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