

Fungicide Program for Pomefruit

DOMINANT DISEASE(S)	CROP STAGE							
	Greentip	Pre-bloom	Blossoming (Pink to petal fall)		Fruit development	Pre-harvest	Post-harvest	Leaf fall
Black spot	Cuprofix ¹	Delan +/- Viva x2	Stroby	Stroby x2	Delan +/- Viva x2	Captan x4		Urea
Powdery mildew (apples only)			Stroby	Stroby x2	bupirimate x2	bupirimate ³	Viva ³	
Bitter rot and storage rot	Copper oxchloride				Delan ² x2	Captan ² x4		
All diseases above (full program)	Cuprofix ¹	Delan +/- Viva x2	Stroby	Stroby x2	Delan + bupirimate or Viva x2	Captan x2 Captan + bupirimate ³	Captan + Viva ³	Urea

+/- Viva should be mixed with **Delan** if there has been an infection warning for black spot and the spray interval has extended beyond 10 days, during blossoming or there is carry over or primary infection of powdery mildew. ¹Cuprofix is not registered on apples. Use copper oxchloride instead on apples. ²Delan and Captan are not currently registered in Australia for bitter/storage rots but trial data indicates efficacy. ³Apply bupirimate or Viva only to varieties highly susceptible to powdery mildew in late summer.

Resistance: All uses comply with AFRMG recommendations for fungicide resistance management.

Fungicide Program for Pomefruit Guidelines

This program is designed to give you the best options for disease control at strategic times throughout the season in all pomefruit growing regions. Factors considered in preparing this spray program are:

Withholding Period: All products are recommended at times within the spray program that comply with Australian withholding periods and recommended overseas market withholding periods. For example, Captan WG is recommended instead of Delan® 700WG for late cover sprays for black spot because it has a 7 day withholding period instead of 21 days.

Fungicide Resistance Management: The maximum number of sprays as recommended by the Australian Fungicide Resistance Management Group (AFRMG) is always adhered to in the spray program 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. For example a maximum of 3 Strobilurins are recommended by AFRMG for black spot and powdery mildew control in pomefruit. In accordance with this we recommend three applications of Stroby®. A maximum of four DMI sprays are recommended for black spot control by AFRMG. If more than four sprays are required, they must be tank mixed with a multisite protectant (Group Y) fungicide or another fungicide with a different mode of action. This is followed in our strategies with Viva®.

Integrated Pest Management: We have considered the effect of fungicides on biological control agents such as predatory mites. 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.

We have not recommended some fungicides that have been commonly used in pomefruit because there is now ample evidence that they have a damaging affect on a range of predatory mites which assist in the management of two spotted mite and European red mite in pomefruit. Instead we recommend the protectants Captan WG and Delan 700WG for controlling black spot, because they have an excellent IPM profile.

Mode of action: To further reduce the chance of fungicide resistance developing, we have recommended products with different modes of action where possible.

Fungicides are recommended at times of the disease life cycle where they will be most effective according to their mode of action. The standard Group Y multisite protectant fungicides for black spot control are included, together with two fungicides offering alternative chemistry groups, different modes of action and post infection activity: Viva (Crop Care's DMI product) and Stroby (Strobilurin). Along with bupirimate (Hydroxy-pyrimidine), these products also represent three alternative chemistry groups for powdery mildew control. Stroby is recommended from pink through to petal fall, which utilises its dual mode of action against both black spot and powdery mildew during a period of high susceptibility for black spot infection and initiation of fruit russetting.

Crop Affects: Where there is a risk of increased russetting or other undesirable affects after the use of a product we have recommended alternatives.

Dodine is not recommended in the program, due to the increased risk of russet under slow drying and/or cold conditions. Delan 700WG and Captan WG are recommended instead. Delan 700WG is not recommended later in the season (after December) as a cover spray for apples as cold storage is not recommended.

Effects on Pollination: Products that have an adverse affect on bees, are not recommended in the spray program during flowering.

**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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