

Crop(s) Grape

Disease(s) Grey mould (*Botrytis* bunch rot)

Resistance management strategy for:

Group 2 Dicarboximides;

Group 7 Succinate dehydrogenase inhibitors (SDHI); **Group 7 + 3** SDHI + Demethylation inhibitors (DMI);

Group 7 + 12 SDHI + phenylpyrroles (PP); **Group 9** Anilinopyrimidines (AP);

Group 9 + 12 AP + PP;

Group 11 Quinone outside inhibitors (QoI);

Group 11 + 3 QoI + DMI;

Group 17 Keto reductase inhibitors (KRI); and

Group 19 Chitin synthase inhibitor;

Group 21 Quinone inside inhibitors (QiI); and

Group 52 DHODHI-fungicide (dihydroorotate dehydrogenase

inhibitor).

Guidelines

- Always use an integrated disease management approach to grey mould management in vines.
 Manipulate the bunch zone microclimate to reduce humidity and enable rapid drying of wet
 bunches. Always aim to reduce spore load, flower and fruit infection and limit regrowth of
 latent infections and disease spread by timely fungicide application in an IDM approach. Use
 fungicides registered to control Botrytis at label rates from as many different mode of action
 groups as possible when needed.
- 2. Apply all these fungicides as protectants before the first sign of disease.
- 3. Consecutive applications include from the end of one season to the start of the next, for products applied either stand alone or in mixtures.



4. Varying the number of fungicides applied targeting *Botrytis* changes the relative resistance risk to any one fungicide group. When three or fewer sprays are applied, it is recommended that three different groups of fungicides are used (see table below). When four sprays are applied, try to use 3 or 4 different groups of fungicide.

		Maximum recommended number of sprays which can contain Group									
		2	7 (inc. 7+3 & 7+12)	7 + 12	9	11 (inc. 11 + 3)	12 (inc. 9 + 12)	17	19	21	52
Total number of Botrytis targeting	1	1	1	1	1	1	1	1	1	1	1
	2	1	1	1	1	1	2	1	1	1	1
	3	1	1	1	1	1	2	1	1	1	1
	4	2	1	1	2	2	2	2	2	1	2
	5	2	1	1	2	2	2	2	3	1	2
T Bc	6+	2	2	1	2	2	2	2	3	2-3	2

- 5. If a **Group 11** or **7** fungicide is used solo, it should only be used in strict alternation with fungicides from a different mode of action group.
- 6. **Do not** apply more than two consecutive sprays from the same fungicide group, for any **Group** 2, 7, 9 (including combinations with **Group 12**), 11+3, 17, 19 or 21 or fungicide, including from the end of one season to the start of the following season.
- 7. If two consecutive applications of **Group 11+3** fungicides are used, then they must be followed by at least the same number of applications of fungicide(s) from a different group(s) before a **Group 11** (including combinations with **Group 3**) fungicide is used again, either in the current or following season.
- 8. **Do not** apply more than three **Group 21** containing products per crop, or a maximum of 33% of total applications (whichever is lower). Continue alternation of fungicides between successive seasons.
- 9. **Do not** apply **Group 52** as consecutive applications, or more than 2 times per season.
- 10. If resistance to a fungicide group has been detected within a region, only use that fungicide group in mixtures or in strict alternation with fungicides from a different cross resistance group. A fungicide group that has been applied as the final application of the season should not be the first fungicide in the following season.

Please note