

Users' guide for grapevines



SCALA®

Powerful protection against botrytis damage to wine quality

Scala® 400 SC Fungicide provides high-level control against the potentially devastating botrytis pathogen, which is a primary cause of bunch rot in both wine and table grapes.

Scala has been proven to significantly reduce laccase, an enzyme produced by botrytis that negatively affects wine quality.

Particularly effective in cool, wet conditions, **Scala** can play an important role in your vineyard's botrytis prevention plan.

Application timing

Scala is especially effective at the critical late flowering stage (i.e. 80% capfall).

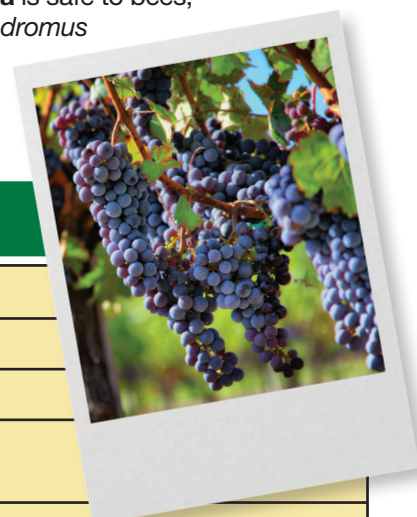
As part of a 4-spray program – and depending on any planned export destinations and your resistance management strategy – **Scala** can be used up until 80% capfall for wine.

As part of your standard resistance management strategy, the same fungicide should never be used for consecutive sprays, including from the end of one season to the start of the next.

Fit with Integrated Pest Management (IPM)

The use of **Scala** in vineyards utilising integrated pest management has been examined independently and has been found to be compatible with IPM programs using a range of beneficial parasitoids, predatory mites and insects.

When used as directed, **Scala** is safe to bees, *Typhlodromus dossei*, *Typhlodromus doreenae* and *Amblyseius victoriensis* and has a low toxicity to earthworms.



SCALA IN GRAPEVINES AT A GLANCE

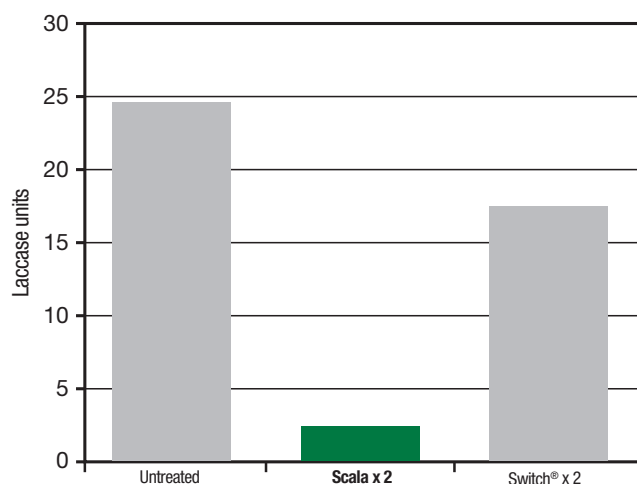
Active ingredient	400 g/L pyrimethanil.
Formulation	Suspension concentrate.
Activity group	Group 9 (previously I) anilinopyrimidine.
Mode of action	Acts on amino acid and protein synthesis; inhibits botrytis enzyme secretion; the fungus starves to death.
Rate	200 mL/100 L for dilute spraying or adjust by concentration factor. Do not exceed 3X concentration factor.
Recommended water rate	Apply sufficient water to provide thorough and even coverage of the bunches. This will vary for each canopy and crop load.
Recommended spray timing	Winegrapes: 80% capfall and/or veraison (consult with your grape purchaser for withholding periods). Table grapes: Fruit set until 7 days pre-harvest.
Maximum sprays	1 in a program of less than 4 botrytis sprays, 2 in a 4-spray program.
Compatibility	<i>Bacillus thuringiensis</i> , dimethoate, Bayfidan®, Blue Shield® DF, Flint® Lorsban® WP, mancozeb, Mycloss®, Oxydul®, ProGibb®, Ridomil® Plus, Spin® Flo and wettable sulphur. Do not mix Scala with products exhibiting an alkaline reaction, including lime sulphur and Bordeaux mixtures. Mixtures with phosphorous acid may cause leaf damage.
Rainfastness	1 hour after application.
WHP/timing of fast spray	Domestic: 7 days. Export wine grapes: 80% capfall (consult your winery for further details). Export table grapes: to be checked against import tolerance.
MRL	MRLs are in place for major wine export markets, including UK, USA, EU, Codex, Canada, NZ. Consult your winery for further details.
Pack sizes	5 L, 10 L & 60 L returnable containers.

Protecting the quality of your wine

Botrytis can reduce yield and may reduce the quality of your wine because taints associated with infection make processing difficult. Botrytis infections can also lead to secondary infections by pathogens such as penicillium, bacteria and yeasts.

The contribution of your fungicide program to wine quality should be a key consideration in your selection of products. As the graph shows, using **Scala** in your program can significantly reduce laccase levels carried through to wine musts.

Laccase levels in grape juice



Source: Trial ID: VB14-00, Yarra Valley, 2001. Treatments applied at 80% capfall and post-veraison.

- The loss of wine quality and its effects on wine style.
- Logistical problems, including harvest scheduling and storage.
- The tangible costs – for example, the increased cost of hand harvesting, price penalties or rejection, and other tangible costs associated with making wine from mouldy fruit, including the impact on your brand's value and reputation.

80% capfall

The late flowering spray – i.e. at 80% capfall – is critical because the wounds left where the caps have detached provide multiple entry points for botrytis. The plant itself challenges the botrytis infection which, in order to survive, secretes the enzyme laccase. Latent botrytis does not grow significantly, but the secreted laccase remains through until harvest, potentially affecting future wine quality.

At this crucial timing, you ideally need a fungicide that will move into the developing fruit to kill the latent botrytis and halt laccase secretion. **Scala** has translaminar activity, so it enters the berry and disperses within the fruit, controlling latent infection in the berry and reducing laccase levels.

Veraison

Veraison is the other critical time for application of a specialty botryticide.

As sugars increase within the berry, there is sufficient nutrition for the botrytis fungus to develop from latent infection, or new infections through damaged berry surfaces caused by insects, wind, hail etc. Laccase is no longer secreted by the fungus, as the chemistry of the berry is changing and the plant's defence mechanisms are switched off.

Scala may be used a second time at this stage, providing another application is compatible with your resistance management strategy and there are MRLs in place for any export destinations you have in mind.

Where Scala fits

It is well established that the critical timings for botrytis management are at flowering, bunch closure, colour change (veraison) and, as appropriate, pre-harvest.

To optimise botrytis control, it is essential to understand what different attributes are required in a fungicide at each of these stages.

Matching the right fungicide's attributes to the critical spray timings for botrytis will minimise the three main problems associated with mouldy fruit at harvest:

The key benefits of Scala:

- Translaminar activity penetrates the berry surface.
- Controls latent infections.
- Reduces laccase (a 'browning' enzyme) levels in wine.
- Ideal tank-mixing partner with Flint® and also compatible with most products used for light brown apple moth (LBAM) control.
- No reduction in pathogen sensitivity in Australia since it was introduced in 1997.
- Low toxicity to birds, earthworms, bees and beneficial mites when used as directed.



For more information, scan here

Disclaimer The information and recommendations set out in this brochure are based on tests and data believed to be reliable at the time of publication. Results may vary, as the use and application of the products is beyond our control and may be subject to climatic, geographical or biological variables, and/or developed resistance. Any product referred to in this brochure must be used strictly as directed, and in accordance with all instructions appearing on the label for that product and in other applicable reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

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