



Beating botrytis by planning ahead

Botrytis is a major threat to vineyards dramatically reducing value by attracting penalties and damaging the reputation of a vineyard. The business lost through botrytis is difficult to regain and usually subject to long scrutiny. The surest, most obvious way to solve the problem is with a systematic, pre-planned approach.

Jessica Habner Technical Officer at Coonawarra Vineyard Management Services (CVMS), has a science degree in environmental management and has worked with wineries in Langhorne Creek and the Riverland.. She has also worked with SARDI (South Australian Research Development Institute) and has been with CVMS for nearly three years.

Jessica develops and oversees her clients spray programs, having tailored them specifically for the region's climate, with special regard to pre-harvest rains. She expects the vineyards crops to be protected against attack by botrytis mould. Approximately eighty percent of the 340 hectares managed is already under full spray programs with the remainder soon to follow.

CVMS contract grow for various large wineries in South Australia and interstate, mainly in the varieties Chardonnay, Sauvignon Blanc, Shiraz, Petit Verdot, Merlot and Cabernet Sauvignon. They have established an excellent reputation for quality and Jessica said that the quality will continue to increase as their vines age and produce a more consistent crop.

"Of our varieties, whites like Chardonnay and Sauvignon Blanc can be the most prone to botrytis, especially if rains before harvest increase berry size. The grapes split and let in the mould, which thrives on the high sugar content in near-ripe berries. Some varieties are more prone to botrytis attack, due to their skin thickness and tight, compact bunches. The berries in these are more likely to split and it is difficult to get the sprays right into the bunch. Berry size and bunch density need to be closely monitored, and can be controlled to some extent by irrigation".

"We find that reds like Shiraz and Merlot are usually less subject to botrytis but still need to be watched, especially if it rains near the end of the season." Continued Jessica.

"The heavy rains last February caused some concern, especially as they fell when the Sauvignon Blanc and Chardonnay were starting to ripen. There was no botrytis in the Chardonnay, but the tight, sweet Sauvignon Blanc bunches needed to be closely monitored, especially given that the region finishes late and rain is common".

"We spray at early flowering and at 80% capfall," she said. "It's obviously essential to prevent entry of botrytis through the nicks and scars that occur when the petals fall." uses both Teldor[®] and Scala[®], chosen simply for their efficacy, applying them at 80% capfall towards the end of November. The sprays are alternated annually on each half of the vineyard to prevent resistance from developing.

This year's concentrate spraying program on canopies will again include both sprays. Scala is applied at a rate of 2 L/ha and Teldor at 1 L/ha. Water volumes of 500 L/ha are used at the start of flowering, at 80% capfall and before bunch closure.



The vineyard's integrated approach to botrytis management also extends to strict control of light brown apple moth (LBAM) which, at the caterpillar stage, spreads the fungal spores through the bunches. As LBAM caterpillars nibble on the berries, they create openings for the fungus to easily enter the berries, resulting in rapid infestation.

"We keep the mounds under the vines free of the broadleaf weeds that the moth feeds on. We use a ryegrass cover crop and add a biological insecticide to our foliar spray program attacking the caterpillars while they are still small, for maximum success.

Other strategies include strict canopy management, through a trellis system that lifts the foliage, allowing better penetration of sprays into the bunches while helping ensure that bunches dry out after rain.

Nutrition is also closely monitored; Petiole tests are taken at 80% flowering, soil tests are taken in August and the crop is fertigated according to the plants' needs.

Although the vineyard faces the region's typical challenges of pre-harvest rains and cool weather (which extends the flowering period), their systematic approach to botrytis control ensures yields that are high, both in quality and quantity.

"By using a full preventative program, we're out to prevent problems before they start," said Jessica. "We can cope with a reasonable amount of rain and keep out botrytis before it can attack the grapes and our yield.

"You just have to keep an eye on your crop; once botrytis gets in, it spreads very fast. It's also important to rotate your sprays according to their active ingredients, to prevent resistance. That's one reason we don't use Group A sprays."

To further assist their management programs, CVMS is changing over to 60 litre returnable drums. This reduces handling, the need for triple rinsing and the problem of storage for DrumMuster.

The new 60 litre drums allow chemicals to be pumped straight into the tanks, with minimal operator contact.

Jessica concluded: "At CVMS, we're firm believers in prevention, especially given the aggressiveness of botrytis if it's allowed to take hold. Teldor and Scala fungicides are vital components of our pre-emptive crop management strategy."