Sustainable spray regime recognised

Coonawarra viticulturist Hans Loder’s herbicide spraying program considered ‘best practice’

Chris Herden

HANS LODER HAS grapegrowing in his blood. Countless hours trekking through rows of vines while on pruning sessions with his father spawned an early interest in the science of the grape.

“We never owned a vineyard, but my father was a viticulture lecturer and consultant and during my teenage years I spent a lot of time in and around vineyards,” Loder said.

During his studies at Charles Sturt University, Loder tended vines at Rymill in the Coonawarra district and for the past five years he’s been entrenched in all aspects of vineyard management at the Wingara Wine Group’s Katnook Estate.

Two years ago, an application of herbicide delivered a sub-standard result prompting Loder to further investigate the products and spraying techniques being used to protect the Katnook crop. So began a journey that would culminate in him becoming the first person in the wine industry to win a state prize and reach the national finals of the Syngenta & Rural Press SPRAY Awards – an industry accolade that seeks to acknowledge exceptional spraying practices in agricultural industries.

“The starting point was admitting a problem existed and not simply blaming the poor result on the chemicals or the spray operator,” Loder said.

“I took nothing for granted, nor accepted ‘the way it’s always been done’ was necessarily the best way.”

Back to basics

Loder set about devising a spray application with adherence to industry best practice standards. He began his review by approaching chemical suppliers, spraying equipment manufacturers and experts in the field.

He ensured spray carts were being calibrated correctly and the best use was being made of existing controllers. Crop protection equipment specialists, Croplands, assisted with sprayer and fan speed calibration and quantum mist head positioning.

With the help of GrowData tracking software, Loder discovered that up to 200 litres of diluted chemicals was remaining in the storage tanks following each spraying cycle. He then amended tank mixing guidelines to take into account recycled diluted mix in order to reduce chemical waste.

“This further improved our chemical ordering and usages resulting in ‘as designed’ spray round quantities regularly matching the ‘as applied’ figures to within 1 per cent,” he said.

“Over a spray round that can make a difference of around a 15kg bag of sulfur.”

These improvements in chemical inventory control proved invaluable during the heavy rains of the 2010-11 season.

“I was grateful we took these steps because sourcing product was challenging and it took a lot of persistence to ensure our supply,” he said.

“Having those sprays come within 1 per cent meant I knew how much product I’d need for each spray round and any leftovers could then be shuffled up to our sister winery, Deakin Estate.”

Loder became informed on the latest thinking of what constitutes an integrated pest management strategy and adopted a ‘back-to-basics’ approach – chemical storage and bundling, data management and OH&S systems were all examined and modified. Regular weekly toolbox meetings provided a forum for operators to discuss safety concerns.

“This led to identifying several areas requiring improvement and it was easy to action changes, such as improving ventilation in our chemical storage facility,” he said.
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The SPRAY awards are targeted at responsible sprayers and this year’s judging panel noted that Loder understood the basic principles of achieving a responsible spray application.

“One of the things we look for is people doing the best job they can with what they’ve got. We’re not trying to reward people who have gone and spent the most money,” Syngenta technical services’ manager Garth Wickson said.

“Hans has standard but well-calibrated equipment. He understands the environment and spray drift and is developing good operating procedures.”

Katnook Estate’s operators were also trained to distinguish the environmental conditions suitable for effective spraying.

Better understanding of basic meteorology and the use of Bureau of Meteorology resources, such as the interactive weather and wave forecast maps, improved spray scheduling and the ability to recognise conditions which may present high disease pressure.

“Everybody has their own approach to what we are looking for and Hans, in essence, was going through his complete program and providing basic training,” Wickson said.

“He focussed on ensuring all staff had a degree of knowledge in terms of application and making spraying decisions.”

The judging process began with a detailed online survey, which quizzed nominees on a broad range of spraying knowledge and hypothetical scenarios.

This was followed by onsite assessments of spraying procedures and the inspection of equipment and facilities. Loder says receiving the award has been immensely satisfying and he is proud Katnook’s reformed spraying program has delivered demonstrable results.

“It’s certainly reinforced that we are on the right track,” Loder said, his mind on future spraying enhancements.

“In the next few years the use of recycling sprayers, variable rate technology and agricultural sensors will provide the potential to improve spray applications significantly.”

**Q** What do you like most about your job?

**A** Hans Loder: The balance of being in the office and going out in the field to look at things. I enjoy being able to play around with some of the precision viticulture technology and to be able to measure things in the vineyard from a distance.