Rainfall close to harvest

Q: My grapes are past veraison and heavy rain has caused some berry split in some of my blocks. I'm worried about disease - what I can do about it at this stage of the season?

Heavy rain in the four-to-six weeks before harvest is always a risk to grape yield and quality. The ripening berry becomes increasingly susceptible to bunch rots as sugar level increases and fruit softens. High humidity and cloudy conditions provide ideal conditions for powdery mildew, but it is the bunch rots that are usually the most difficult to control. The potential for Botrytis will depend on how effective the preventative spray program has been, the degree of berry damage (split berries, hail damage, sunburn) and the weather to come. Before taking action, getting a good grasp of your situation can prevent you from making costly decisions that may have little effect.

Figure 1. The back of a bunch can reveal disease that would not otherwise be noticed (Image courtesy of Liz Riley – Vitibit).

The key considerations are:

- Disease levels and weather forecasts;
- Spray options, in terms of both possible coverage and resistance management;
- Managing canopies to reduce humidity in the fruit zone; and
- Consulting with grape buyers and making harvest decisions.

Q: Why do I need to monitor, how often should I do it and what should I look out for?

Monitoring vines for disease after rainfall is vital in the lead up to harvest. Understanding the incidence and severity of disease in your vineyard will help determine the most-appropriate action to take. For example, a block with high-disease severity (diseased bunches that are badly affected) but low overall incidence (less than one per cent of bunches affected) may be managed by dropping diseased fruit or selectively harvesting to avoid the worst-affected area. A low severity, but high-incidence situation, on the other hand, may require management that restricts further disease development such as the promotion of airflow and light into the canopy or use of a chemical spray if good coverage is possible.

Checking vines daily is important because bunch rot can develop quickly and taking action based on monitoring conducted a few days earlier can be misguided. When monitoring, it is important to lift and turn bunches. By handling the fruit you can reveal slip-skin symptoms that may not be obvious visually or find disease symptoms hidden on the back of bunches (Figure 1). By starting your monitoring in known 'hot spots' (areas where disease is always the worst) you can gauge how well your disease controls have worked. If the 'hot spots' are relatively disease free, it bodes well for the rest of the vineyard.

It's also important to check the weather forecast to monitor temperature and rainfall to assist in decision-making. If wet and warm conditions are forecast to continue, the opportunities to control Botrytis decline.

Q: What are my spray options and what should I be thinking about before I spray?

As discussed above, the first thing to think about is disease incidence and severity. The next thing to consider is whether or not you have the capacity to get sprays into bunches given the canopy size and shape as well as the 'tightness' of bunches. If the bunches are hidden and the berries are packed tightly, it is very difficult to get sprays to penetrate to the interior of bunches where they are required. A spray into a large and dense canopy with tight bunches is likely to be largely wasted. If good coverage is possible, a registered botryticide can be applied to protect fruit that is relatively disease-free. However, it is not recommended to apply these chemicals where disease is already established as this increases the risk of chemical resistance. Botryticides may be of limited value against other bunch rots so it is important to confirm that the disease affecting your vineyard is Botrytis before you spray.

For registered spray options and resistance management strategies, consult the AWRI's *Agrochemicals registered for use in Australian viticulture* ('Dog book'). It is also a good idea to contact your grape purchaser and discuss control options early. Early intervention may avert unnecessary action.

Q: What can I do to protect against non-Botrytis bunch rots?

Canopy management is the best way to reduce the risk of non-Botrytis bunch rots. Actions such as trimming or lifting the canopy may limit the establishment and spread of disease by maximising airflow and decreasing canopy and bunch moisture. Care should be taken to minimise damage to bunches when modifying the canopy.

Q: Is there anything else I can do?

In some situations, early harvest may be the best option to minimise losses. This is something that should be considered before spraying because a chemical's withholding period can remove this option. If wet weather is forecast and fruit is close to sugar ripeness, getting the fruit off early rather than incurring the cost of a protectant spray can be better than risking large scale crop loss from disease. With all such decision-making, frequent and open communication with your winery or grape purchaser is important.

For more information contact the AWRI helpdesk team on viticulture@awri.com.au or 08 8313 6600. GW