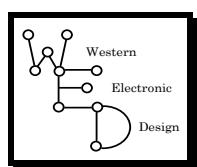




GrowCare Clare



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Vineyard Observations

- GrowCare monitors have recently noted an high level of variability with vine growth stage not only from blocks within the Clare Valley but also within a block. Some shoots have shot away and are at 50cm while others are still at 10cm.
- This variability is probably caused by one or more factors. Mite damage (bud and rust) may account for some. If any damage occurred in your vineyard this season, record your observations as a reminder for next season's spraying at woolly-bud with sulphur.
- In some blocks, vine scale may also be holding vines back. The scale looks to have developed earlier this season – they have now grown and are hardening and eggs can be seen under scale.
- The best time to control vine scale is during dormancy. It is also good to encourage natural enemies of scale such as wasp parasites and lacewings. These live in mid-row ground covers. An insecticide spray of vines at this time of the season is to be avoided if possible since it will kill the 'good bugs'.

Frost Damage

- The frost earlier this week has been patchy but quite severe in places with some vineyards completely burnt off back to basal buds. Others have burnt off shoots from 20+ cm back to 10cm just above the second bunch.
- Overnight temps ranged anecdotally from -4°C to +1°C depending on the lie of the vineyard. The lower flats north of Clare were severely hit while at higher elevations, there was little or no damage.
- Temperatures at the GrowCare weather station (AWS) at canopy height approx. 1.5m at Stanley Flat on Tuesday 14th and Wednesday 15th October were <2°C for 4 hours. On 14th, the temperatures fell to <1°C for 2 hours.
- On 16th October, the temperature dropped to <2°C for about 6 hours.
- Temperatures at the AWS at Auburn and Sevenhill were not quite so cold. Some varieties and vineyards were more affected than others. Vines with tall grass in the vine-row radiate heat more quickly than a fallowed vineyard and so were more frost prone than a mowed vineyard or a cultivated patch.
- Vines at this time of the season are very susceptible to frost damage, especially at Stanley Flat, suffered accordingly.

Management Options

- In the main, the best action is to observe the canopy!

For the Frost-damaged Foliage

- The cost effectiveness of any spring pruning treatment is highly doubtful. New shoot-growth will appear in 10-14 days after the frost (ie in the next week or so) depending on the vigour of the vines.



Frost damaged shoots in the Barossa in October 2013 with upper leaves, shoot tips and most bunches killed by the frost. Buds from low on the shoots produced new shoot growth (and a few fruitful buds) in about 10 days. Photo: Nicki Robins.

- The roots will supply lots of energy to a reduced canopy and this will produce a surge of new growth from buds on surviving shoots and a new budburst from basal buds on shoots killed by the frost.
- On moderately damaged vines, the foliage might look seriously affected now but by harvest it will probably prove less than thought. Where bunches survive, their growth will compensate for the frozen bunches and often yield better than might be supposed at present.
- In these vines, there will also be some new shoots from basal buds and as a result, a delayed second crop. The two stages of maturity may interfere with harvest... but there is no economic treatment that can prevent this.
- To protect against or help to reduce the risk of a future frost, mow the mid-rows and if appropriate, keep the soil suitably wet to retain heat in the soil.

Earwigs

- High earwig numbers should equate to good natural control of LBAM early in the season.
- Although earwigs have caused some problems this season, in the main, the early-bursting varieties are passing through the critical stage for damage to occur.
- Sprays to control earwigs are not likely to be needed in most vineyards.

Snails

- If snails are a problem, it may be worth considering an application of copper with sprays for powdery mildew (and downy if needed).
- While the weather remains dry and temperatures increase, snails are not going to cause problems but if you wish to apply snail baits consult your winery rep first.

LBAM

- GrowCare monitors have recently seen some LBAM moths in some vineyards of the Clare Valley.
- Now is the time to monitor for early-instars (young larvae) of LBAM in your vineyard. Levels are likely to be low, of the order of 1-2 grubs/patch.
- Keep an eye out for instars on young leaves, in shoot tips and in flower clusters – especially where LBAM was a problem last season.



LBAM caterpillar. Photo: Andrew Weeks and Nicole Pitman, 'Lightbrown Apple Moth', Fact Sheet No. 4., CCW, Berri, SA.

- The next generation of LBAM are generally expected to show up later – perhaps around EL 31, but control at that time (pea-size), is difficult to achieve. If in doubt, contact your winery rep for advice on action required, if any.

Monitoring for LBAM

LBAM lifecycle stage	How to monitor	When to monitor	Common threshold*
Egg masses	Inspect the upper side of expanded leaves on 100 shoots	Once first leaves have expanded and then through the season	>3 viable egg masses per 100 shoots
Larvae on shoots	Inspect shoot tips and leaves webbed together on 100 shoots	Throughout the season	>20 larvae on foliage per 100 shoots
Larvae in bunches	Inspect inflorescences and bunches on 100 shoots	From inflorescence development onwards	>10 larvae within bunches per 100 shoots

Source: Andrew Weeks and Nicole Pitman, 'Lightbrown Apple Moth', Fact Sheet No. 4., CCW, Berri, SA.

Powdery Mildew

- **Controls still needed.** The vine canopies are currently developing quickly (where not frosted) and this will continue with the warmer weather forecast for the next few days.
- As the canopy expands, the higher humidity within the denser, more shaded canopy creates conditions more favourable for powdery spores to develop and spread in an environment more protected from effective fungicide cover.
- In unprotected vineyards, the expanding leaves and developing flower clusters are increasingly being exposed to these spores. Further infection of the foliage by powdery at this time, provides inoculum (spores) that risk infecting the fruit at and after flowering.
- Well-applied sprays now will control infection in the foliage and prevent infection of the young berries when they develop after fruit set.
- It is critical at this time of the season to keep infection within the canopy at a very low level. This provides the best foundation for the production of powdery mildew free fruit at harvest.
- As the leaf tissue expands, existing spray coverage reduces in effectiveness – the spray droplets are separated as the tissue expands like dots on an expanding balloon. Take care to ensure best spray coverage when spraying for powdery mildew.
- Any registered fungicide is effective against powdery. Sulphur is cheaper than most equivalent products. Though it has no trans-laminar (across the leaf) coverage like the DMI's, it does have volatile activity which helps compensate for reduced spray coverage in dense canopies.
- If using sulphur, apply at the highest recommended rates (600 g/100L) in a high volume of water to ensure the best spray coverage and maximum control of powdery mildew while the canopies are still accessible to spray cover.

Downy Mildew

- When monitoring for frost damage or LBAM, keep a lookout for other diseases – eg downy mildew oilspots. It is remotely possible some may be present following the rains of late September.

*This message was prepared for
The Clare Region Grape Growers Association by
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