MAGAREY PLANT PATHOLOGY

GrowCare Clare

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CRWGA

Western Electronic Design

This message was posted on **Friday 24th December 2010** at 5pm.
It will be updated as necessary for best management of downy mildew.

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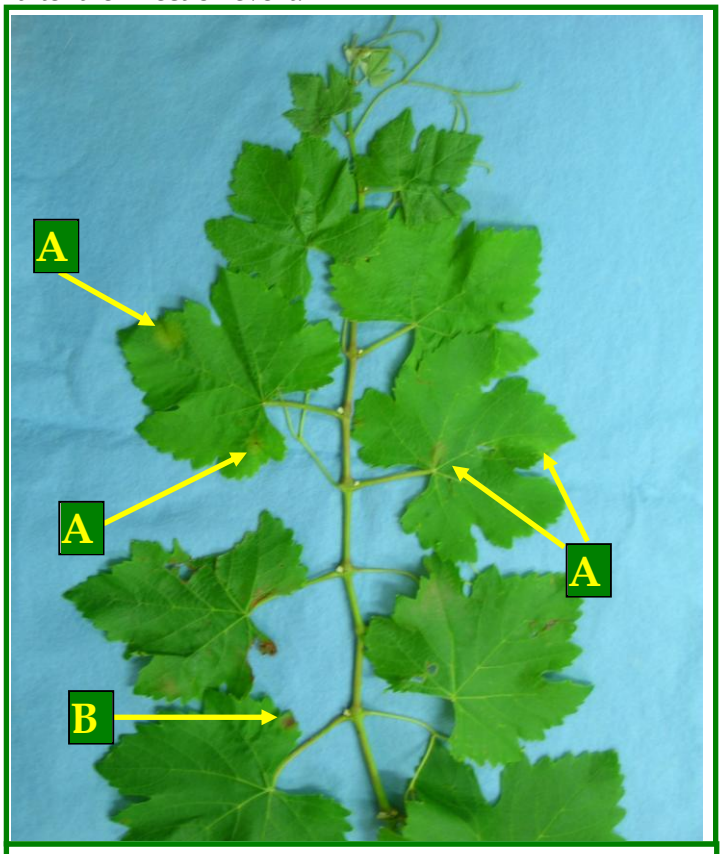
Downy Mildew Develops

- **A new generation of** downy mildew oilspots has been reported recently in a number of vineyards across the Clare Region. These are likely the result of infection during the deluge of 6-8th December and to have first appeared on Wednesday 15th onwards.
- **As the oilspots grow**, they become easier to see. The photo below shows oilspots from a strong secondary infection event that produced many new generation oilspots. Each has the potential to produce many more new oilspots, if suitable conditions occur again.
- **This follows possible** primary infection events during the rains of 12-14th and/or 24-25th November and/or 30th Nov – 1st December. It was possible that these rain events also triggered a secondary infection. If so, oilspots from these would have appeared around 23rd November, 2nd and 8th December respectively.

Fresh oilspots of downy mildew are now showing up in a number of vineyards in the region. Newly appearing spots have a slight chocolate halo as seen on this leaf. The many oilspots indicate a strong secondary infection event with spores (sporangia) coming from an older oilspot nearby. (Photo: Peter Magarey)

Difficulty in Perfecting Spray Timing

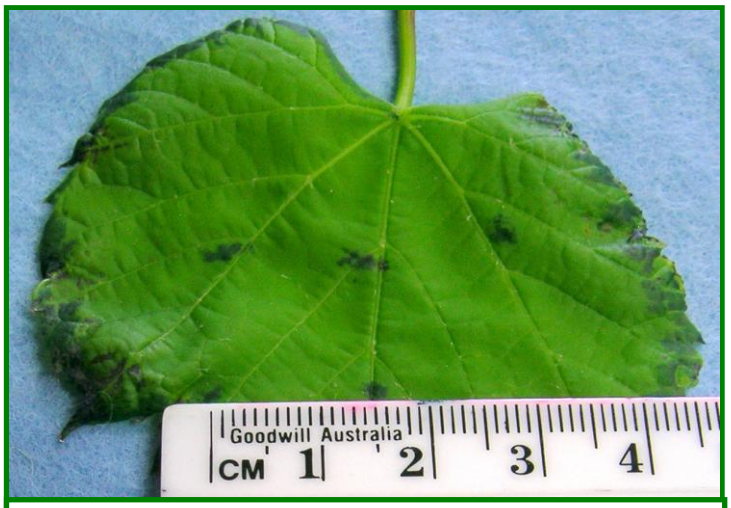
- **It is difficult to spray** with perfect timing in a season like this. As a result, some vineyards are now showing shoots with a band of oilspots on leaves below the shoot tip. Downy-free leaves show above and below this band.
- **This phenomenon is the** result of the older, lower leaves being sprayed successfully with a protective fungicide before the infection event occurred. The spraying finished two or three days before the rains that triggered a secondary infection and, during this time, the rapidly growing shoot produced several new leaves that were of course, not covered by the spray. These were exposed to the infection event and, as a result, later developed the oilspots. The downy-free leaves at the tip developed after the infection event.



Some fresh oilspots (A) have developed in a band of leaves currently at say, leaf position five and six. Downy has infected leaves that grew (and, as a result, were unprotected) between spraying and the rain event that caused secondary infection. The new spots developed from spread of downy from existing oilspots on older leaves (B). (Photo: Peter Magarey)

Spray Cover Reduces as Leaves Grow

- **When sprays are** applied to rapidly growing foliage, it is difficult to achieve perfect spray cover for long while the leaves expand. This is particularly true for pre-infection contact fungicides like copper and mancozeb.
- **As a young** leaf grows, it expands across its entire surface as the leaf cells enlarge. The spray cover applied to a leaf is then spreads out like dots spread on a balloon as it is blown up. This creates gaps in the spray cover and opens the possibility of downy and powdery mildew spores landing in the gap to cause infection on the sprayed leaf!



The grid of dots on this rapidly expanding young leaf were marked out at 10mm intervals three days before the photo was taken. This grid illustrates how gaps between spray deposits and, as a result, the level of spray cover, decreases as vine leaves grow. The grid is now at 15mm spacing and downy infection could occur much more easily in the increased 'spray gaps'. This accounts for how some oilspots develop on leaves '*... even though I applied a good spray cover three days ago!*' (Photo: Peter Magarey)

Risk from Downy

- **Young berries become** resistant to downy mildew when they reach pea-size. Berry stalks remain susceptible but the foliage also develops some level of (ontogenic) resistance (as the leaves age).
- **The new oilspots** that are showing up in recent days, are primed to produce many new oilspots if another suitable secondary infection event were to occur soon.
- **Be sure to check** your vines closely now to determine if you have oilspots in your vine canopy AND look for signs of bunch infection.

Risk from Powdery

- **When monitoring for** downy mildew, also look very carefully for powdery mildew spots on leaves and look for white powdery growth in and on the bunches.
- **It is common** for observations to be made for powdery after the Christmas – New Year break, only to find a powdery mildew 'outbreak' has 'apparently' developed at that time. Powdery mildew develops from bud-burst onwards and spreads steadily in shaded, dense canopies.

Control Action for Downy and Powdery

- **Most downy oilspots** at present have no white down on their undersides. They have not spread downy but are ready to do so if a warm humid night is followed by leafwetness the next morning.
- **If you find existing oilspots** and/or infected bunches, you may choose to apply a post-infection spray eg metalaxyl (Ridomil®), as soon as possible. This has the potential to reduce the viability of the oilspots and their capacity to spread the disease. However, metalaxyl is in short supply and you might elect to keep it in store and instead, apply a thorough spray of a pre-infection fungicide (eg copper or mancozeb, or a strobilurin like Cabrio®) before the next rain event. The strobilurin also controls powdery mildew ... but be sure to check your winery for spray curfews prior to harvest!
- **If you find no oilspots** now, maintain vigilance for new oilspots and for powdery mildew. If you are in any doubt, maintain a downy cover spray and include sulphur, a DMI or a strobilurin etc, for powdery control.

Botrytis and Other Bunch Rots

- **If your vines** have a history of bunch rot, it is worth considering a spray with Switch® before vines exceed EL 31.

New Easy-To-Read Publications

- There are some new sources of information on the web that may be of interest. These include **answers to frequent questions on downy, powdery and the bunch rots**. Go to the GWRDC website www.gwrdc.com.au – see under 'Latest News'.
- **For the *Disease Diagnosis*** module to identify symptoms in your vineyard using photos rather than words, go to www.GrowCare.com.au
- **For Bureau of Meteorology** weather and rainfall forecasts, radar images, specific information on the mildews and other diseases of grapes, go to www.GrowCare.com.au.

This message has been prepared by Clare Region Grape Growers Association, Magarey Plant Pathology and Western Electronic Design. It will be updated as soon as possible after the next rain even.

The GrowCare Team wish you a blessed Christmas, a Happy New Year, and fruitful progress toward a successful and profitable vintage 2011!

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