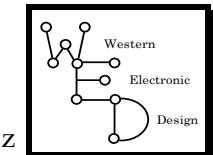




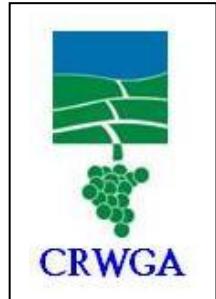
MAGAREY PLANT PATHOLOGY

GrowCare Clare

Brought to you by your local Regional association



This message was posted on **Friday 10th December 2010** at 5pm.
It will be updated as necessary for best management of downy mildew.



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GrowCare Clare Continues to Develop

- **The three automatic weather stations (AWS) recently installed by GrowCare Clare have been enhanced by the addition of a direct link that allows remote access by the GrowCare team. Through the efforts of David Olssen and Mike Western, the latter from Western Electronic Design, the three new AWS can now be accessed much more efficiently, saving time and expense.**
- The three *Model T MetStations* are located at Stanley Flat, Sevenhill (S/East) and Sevenhill (N/West). A fourth AWS is presently at Clare South (Auburn).
- Data from these AWS were reviewed for risk of downy mildew from the big rains earlier this week – from Tuesday 7th to Wednesday 8th December.



Three *Model T MetStations* (automatic weather stations) were recently installed in vineyards in the Clare Region. The main AWS is partly hidden in the canopy. The data transmission unit and solar cell are above, with the rain gauge. This system provides weather data which are reviewed for risk of downy mildew infection at each location. This week's rains brought risk of both a primary and a secondary infection event.

Next generation oilspots are likely to be seen from Tuesday 14th December.

Downy Mildew Symptoms Are Found.

- **In recent days, monitors within the district have reported a few downy mildew oilspots and some infection of the young bunches in several vineyards. These have arisen from the 'low risk infection events' reported previously.**
- This disease in the vineyard provided a base for downy to spread given the recent favourable weather.



Greasy yellow, young oilspots of downy mildew are often surrounded by a faint chocolate halo which fades as the oilspots mature. Look for oilspots like these in your vineyard canopies now.

These spots may or may not show the white down of downy mildew on the undersides of these spots. [See photo next page.]

Downy Mildew Infection Events.

- **The conditions** across the Clare region, as measured at each weather station, were more or less uniformly wet. Given the rain fronts that came through, this was no surprise!
- **At these sites**, the conditions were favourable for both primary and secondary infection. This means there was sufficient rainfall on Tuesday-Wednesday to wet the soil for 16 hours while temperatures were above 10°C. This allowed soilborne oospores to germinate and release zoospores which were then splashed to the vine canopy. The foliage remained wet and warm for long enough for **primary infection** to occur.

- When a primary infection has occurred and an oilspot has subsequently appeared, if the conditions are suitable, a secondary infection event can occur.
- This seems likely to have occurred overnight Tuesday 7th - Wednesday 8th when the conditions were warm enough ($\geq 13^{\circ}\text{C}$) and humid enough ($\geq 98\%$ RH) for the white down to be produced on the undersides of primary oilspots (see photo below).
- The conditions that followed were sufficient for the downy mildew sporangia (spores) to be blown to neighbouring leaves and young bunches and for leaves to be sufficiently wet while it was warm enough to cause **secondary infection**.



This is an aged oilspot (probably from a primary infection) which has produced many sporangia (the white downy spores) in a secondary spread of disease. The centre of the oilspot has died out in an earlier sporulation event.

(Photo: Richard Hamilton)

- **The developing young bunches** are still very susceptible to downy infection. It is important to check your vines now to look closely for any signs of downy mildew infection.



Look in your vine canopies now for young flower bunches browned and killed by downy (left) or for berries with typical fresh sporulation (the white down) of downy mildew (right).

(Photos: Andrew Weeks & David Olssen)

- **If the infection** did occur, new generation oilspots are expected to appear on or after Tuesday 14th December. **Carefully monitor your vines for oilspots at that time.**

Control Action for Downy

- **If you find existing oilspots with white down** on the undersides and/or infected bunches, **OR if you suspect that you had a primary infection event before last Tues-Wed.**, apply a post-infection spray eg Ridomil, **as soon as possible and before Tuesday 14th December** ie before any new generation oilspots might appear.
- **If your vines** were unprotected just prior to the recent rains **and you find no oilspots now**, it is wise to apply a cover spray **as close as possible before** the next suitably warm, wet rain event.

Powdery Mildew

- The higher humidity this season has been favourable for the multiplication of powdery mildew by increasing the levels of spore production. The disease is likely to be progressing well in unsprayed or poorly sprayed vineyards.
- It pays to have a close look inside the canopy now for both mildews. If disease is found, if needed, trim the vines back to allow free flow of air through the canopy. This will assist in better spray penetration of fungicides.
- **If powdery is present** in your vines, **apply a registered spray** such as Sulphur, a DMI or a Strobilurin, **as soon as possible** and, if necessary, use slower than usual ground speed and higher rates of water to maximise spray coverage.

Botrytis and Other Bunch Rots

- The frequent very humid conditions so common this season and especially the rains around the time of flowering, has increased the risk of botrytis and other bunch rotting organisms.
- **If your vines have a history of bunch rotting organisms** either from the shaded parts of vineyards and/or from the tightness of bunches and/or the thinness of the skins of that variety, **it is worth considering a spray with Switch® before vines exceed EL 31.**

NOTE: Sources of fact sheets and other helpful information:

Downy Mildew:

<http://www.gwrdc.com.au/webdata/resources/files/DownyMildewFactShee.pdf>,

Powdery Mildew

<http://www.gwrdc.com.au/webdata/resources/files/PowderyMildewFactShee.pdf>;

Botrytis

<http://www.gwrdc.com.au/webdata/resources/files/BotrytisFactSheet.pdf>

- **For diagnosis of symptoms** in your vineyard using photos rather than words, go to the **Disease Diagnosis** module at www.GrowCare.com.au

- **For information on the mildews** and other diseases of grapes, for Bureau of Meteorology weather forecasts, rainfall forecasts, radar images and similar data relevant to your vineyard, 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 event