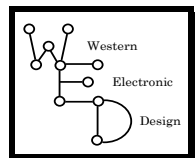




MAGAREY PLANT PATHOLOGY



GrowCare Clare

Brought to you by your local Regional association

This message was posted on **Tuesday 16th November 2010** at 3pm.
It will be updated as necessary for best management of downy mildew.



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Progress in GrowCare Clare!

- **The Clare Region** Winegrape Growers' Association and the team developing the **GrowCare Clare** service, have been busy. In an interim measure prior to the delivery of the three new **Model T MetStations** (the weather stations (AWS) purchased for this region), a loaned unit was installed in a vineyard at Clare South 2. This has provided timely data on rainfall, temperature, relative humidity and leaf wetness at 10 minute intervals at that site, as a result of the weekend rain. These data, along with those from the two existing AWS at Clare North and Clare South, have been reviewed for risk of downy mildew infection as a result of last weekend's events.

Downy Mildew

- The table below outlines the predicted infection events as a result of the weekend rain.

Primary Infection.

- **The conditions** at the **Clare North** site were wet enough to begin but not complete the downy mildew primary infection process on either Friday-Saturday or Saturday-Sunday. At the **Clare South 1** site, there was only a slight risk of primary infection on Friday-Saturday, while at the **Clare South 2** site, there was a moderate risk of primary infection on Friday-Saturday.
- **The conditions** at these sites were at best marginal for infection and are unlikely to cause concerns **but** be sure to evaluate your vineyard micro-climate in relation to the location of these AWS. It is possible that in some parts of the vineyard, the microclimate was more favourable than shown by the positions of the AWS.
- **Oilspots** from this possible infection event are expected to show up from Monday 22nd to Wednesday 24th November (if at all).
- **Carefully check** your vineyards toward the end of next week to find any oilspots that might occur. This will give critical insight into the future risk of downy mildew in your vineyard.

Secondary Infection.

- **The requirements** for secondary infection are:
 - Oilspots present in the vineyard
 - Relative Humidity (RH) \geq 98%
 - Temperature \geq 13^oC;
 - During 4 hours of darkness; then
 - Leaves need to be wet enough in the morning
- **The table below** shows a possible risk of secondary infection occurred in the Clare South 2 site on both Friday-Saturday and Saturday-Sunday nights and at the Clare South 1 site overnight from Friday, **EXCEPT** that, to-date, there have been **no reports of primary infection** oilspots showing in any vineyard.
- **Check your vines** closely for any sign of downy mildew oilspots now and keep alert to any oilspots that might develop from late next week in your vineyard from conditions that might vary from the AWS sites.

Control Action

- **If your vines** were unprotected just prior to the recent rains **and you find no spots**, it is wise to apply a cover spray as close as possible before the next suitably warm, wet rain event, **OR**
- **If you find oilspots** with white down on the undersides, apply a post-infection spray eg Ridomil, as soon as possible before Sunday 21st November.

NOTE:

- **The national** supplies of most fungicides including Ridomil, are very limited so, use your supply wisely that is, only when essential.
- **The risk** of downy in the Clare Region seems low at present but the vines are at the time of flowering and are very susceptible to downy mildew infection.

GrowCare will continue to assess the vineyard weather and advise of the risk of downy mildew at the AWS sites being monitored. Don't forget to maintain **controls for powdery mildew** too!

For a fact sheet on downy mildew, click on: <http://www.gwrdc.com.au/webdata/resources/files/DownyMildewFactShee.pdf>

*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.*

GrowCare Clare Weather Stations: Fri 12th - Sun 14th November 2010 - Primary Infection

District	Total Rain (mm)	Rain sufficient to wet soil & T>8C to begin germinating oospores [If dry soil - 5 mm rain; If wet soil - 3 mm rain]	Soil-wet 16 hrs & T>8C to germinate oospores... and release zoospores [Soil wet for 16hrs]	Soil wet & >8C for zoospores to survive until rain to splash to leaves. [Soil must not dry for ≥ 3 hrs]	Rainfall & T>8C for zoospore splash to infect leaves. [Rain after 16th hr & soil wet]	Leaves wet and warm enough for zoospores to infect leaves. [Leaves wet 45C-hrs ie ≥ 2.25 hours @ 20C]	Risk of Primary Infection [All conditions met = warm (>8C) and wet enough]	Oilspots [IP = 9-11 days] Expected on or after
Clare North 12-13 th November	11.0	+	+(just)	+	-	-	No	No
Clare North 13-14th	5.4	+	+(just)	+(just)	+(just)	No	No	No
Clare South 1 12-13th	8.4	+	+(just)	+	-	+	Slight	M.22-W.24 Nov
Clare South 1 13-14th	3.4	+	-	-	-	-	No	No
Clare South 2 12-13th	6.9	+	+	+	+(just)	+	Yes	M.22-W.24 Nov
Clare South 2 13-14th	4.6	+	-	-	-	-	No	No

(+) = condition satisfied

(-) = condition not satisfied

Note the leafwetness sensor at Clare North is not functional

GrowCare Clare Weather Station: Fri 12th - Sun 14th November 2010 - Secondary Infection

District	Total Rain (mm)	Oilspots Predicted from Primary Infection	Oilspots Observed	RH >98% & T>13C during 4hrs darkness for oilspots to produce white down (sporangia)	Leaves wet and warm enough for infection. [Leaves wet 45C-hrs ie ≥ 2.25 hours @ 20C]	Risk of Secondary Infection [All conditions warm (>8C) and wet enough]	Oilspots [IP = X days] Expected on or after
Clare North 12-13 th November	11.0	No	No	-	-	No	No
Clare North 13-14th	5.4	No	No	-	-	No	No
Clare South 1 12-13th	8.4	No	No	+	-	+(but no oilspots)	No
Clare South 1 13-14th	3.4	No	No	-(too cold)	+	No	No
Clare South 2 12-13th	6.9	No	No	+	+	+(but no oilspots)	No
Clare South 2 13-14th	4.6	No	No	+	+	+(but no oilspots)	No

(+) = condition satisfied

(-) = condition not satisfied

