

# GrowCare Clare



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This message was posted on **Friday 16<sup>th</sup> September 2016** by 6pm.  
and will be updated when new vineyard management issues arise.

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## Downy Mildew Infection Alert

*The rains of recent days have been wet enough for long enough in some localities to have favoured primary infection of downy mildew.*

*You may or may **not** need to take action!  
Read on.*

### Recent rains

- The rainfall events of 8-9<sup>th</sup> (eg 19mm at Stanley Flat) and 12-15<sup>th</sup> September (see table) have been welcomed but they have brought a risk of downy in some vineyards.
- This message applies mainly to the early-bursting varieties such as Chardonnay, Malbec and Grenache and less so, to Riesling and Shiraz. This is because the earlier varieties have more foliage developed as a bigger target for spores of downy to infect during the recent wet conditions.

- Later bursting varieties may not have had sufficient exposed foliage and will need to be considered appropriately.
- The following table summarises the weather data as collected from the network of weather stations (AWS) provided by CRWGA. It presents an indication of the likely risk of primary infection from downy mildew from the recent rain events.
- You will note that the rainfalls in most localities were variable and often-times, of long duration but that the temperatures were, at some AWS, too cold for downy mildew infection (ie <8°C).
- The risk of downy mildew primary infection that we list is from the 8-9<sup>th</sup> and 12-16<sup>th</sup> September.

AWS Location	Temperature (°C)	Relative Humidity (%)	Rain (mm)	Leaf-wetness (hours)	DMildew Primary (from 8 <sup>th</sup> - 9 <sup>th</sup> Sept)	DMildew Primary (from 6pm 12 <sup>th</sup> to 6am 16 <sup>th</sup> Sept)
Auburn	4.0 – 11.0C	90 – 100%	38.0mm	79hr (93%)	n/a	Probably No (too cold)
Sevenhill	4.8 – 12.3C	90 – 100%	36.6mm	75hr (89%)	n/a	Yes
Stanley Flat	2.8 – 11.8C	88 - 100%	47.8mm	79hr (94%)	Yes	Probably No (too cold)

### Using the data

- Review this table and assess your vineyard for the development of this season's foliage. Remember that any green tissue is susceptible to downy mildew infection – the more new foliage present, the higher the risk of infection if the conditions were favourable.
- Differing durations of wetness and temperature during the rain events led to differing conditions at the various AWS sites. This meant that there were differing lengths of time that the conditions favoured infection and, as a result, to the different risks of downy mildew in each locality.
- Given that nearest AWS may be some distance away from your vineyard and that the conditions in your vineyard may be a little different, use the data table above as a guide to the risk of infection in your vineyard. **Note:** Downy primary infection can occur if temperature is above 8°C.

### Managing the risk

- If in your vineyard, the vines had not burst prior to the recent rains, you have no risk from the recent rain event.
- Similarly, if in your locality there was no risk or at best, a low risk of primary infection, you have little or no need to spray for downy mildew now.
- And also, if you had effectively sprayed your block with a downy mildew pre-infection spray such as copper within 3-5 days before 9<sup>th</sup> or 12<sup>th</sup> September, your vines were protected from downy and you are not at risk from these events.

### Where infection occurred in unprotected vines

- If your locality had a significant risk of primary infection and your vines were not protected before the recent rains, evaluation of the data by GrowCare® predicts that oilspots from the recent rain events are likely to appear sometime after 26<sup>th</sup> September.
- In this, you have several options:

#### Option 1.

- **For best protection**, plan to spray with a post-infection fungicide such as metalaxyl as soon as possible and certainly before oilspots appear (ie before 26<sup>th</sup> Sept). If so, consider including a fungicide for control of powdery mildew.

#### Option 2.

- Alternatively, you may elect to spray as close as possible before the next suitably warm, moist rain event (for downy secondary infection) using a downy mildew protectant fungicide such as copper or mancozeb. This will defend against any new rain event that causes a risk of the spread of downy mildew.

#### Option 3.

- Otherwise, you may elect to not apply a spray for downy mildew now but to include a suitable downy protectant with your next spray for powdery. If so, remain vigilant for oilspots sometime after 26<sup>th</sup> September.

### Comments

- Any protectant fungicide applied to the rapidly expanding foliage will give limited defence against downy as it will not control the infection that may have occurred during the recent rain events and it will not protect any new foliage that will develop as the shoots and foliage expands in the next few weeks.
- In any case, from and after September 26<sup>th</sup> monitor for oilspots of downy mildew to determine if downy infection did occur in your vineyard recently.

### Monitoring for oilspots

- In looking for oilspots, it is helpful to tag several shoots now. This will provide a guide to the foliage most likely to show oilspots in the next two weeks.
- Do this by tying some ribbon or a bread-bag clip to the tip of several young stems just below the youngest fully expanded leaf. The leaves below this tag are those at most risk from downy mildew from the recent rain events.
- After 26<sup>th</sup> look for oily-yellow spots in these lower parts of the canopy.
- To check for symptoms go to the recently released website for grape growers at: [growcare.com.au](http://growcare.com.au) and click on **Disease Diagnosis** (on the grey menu bar on the left of screen) (free access).
- If you find only a few oilspots about 50m apart along the vine row it is likely you will have discovered the site of a primary infection.

### Future rain events

- Be prepared to take action against a future secondary infection:
  - 1) Monitor for any rain events in the next month. Check if the conditions are likely to be conducive to a secondary infection event – ie, look for suitable conditions ie warm (>13°C) and humid (>98%) at night with the leaves then wet sufficiently for 4-6 hours; and
  - 2) Spray if needed:
    - a) Apply a suitable downy mildew pre-infection fungicide eg a copper or mancozeb spray, as close as possible before the event; or
    - b) Apply a post-infection fungicide eg metalaxyl, as soon as possible after the event and before any new oilspots appear.
- For easy access to your local Bureau of Meteorology data and forecasts for your locality, go to [growcare.com.au](http://growcare.com.au).
- You may wish to subscribe to this web-site to be provided with an SMS and/or e-mail alert to any future infection events for downy mildew.

### Powdery mildew

- Where new shoot growth is appearing, remember early-season sprays are critical.
- Flag shoots which emerge with powdery mildew already on the leaves, are now releasing spores and spreading the disease in your vineyard.
- To manage powdery mildew, the level of control you achieved early this season will have a big bearing on how much inoculum (spores) you will carry into your vine block next season as diseased buds that will produce more flag shoots.
- **The more effectively you control powdery in the next 4 – 6 weeks will have a big effect on how much powdery you will have at harvest** and the amount of inoculum you will carry into next spring!
- The better the spray coverage and timing now, the fewer sprays you will need this season and the fewer early next season.

### Other diseases

- The recent rains will have also created a risk of rarely seen diseases such as Phomopsis. This disease can damage the young shoots and cause tiny black leaf spots surrounded by a small yellow halo.
- Control of Phomopsis is rarely needed but if your vineyard has a history of damage from this fungus, a spray of fungicides such as mancozeb, or Delan® at budburst and two weeks later is usually sufficient.

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GrowCare® will keep you advised of outcomes from forecast rain events.

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