



GrowCare Barossa



Brought to you by Barossa Grape & Wine Association

This message was posted **by 10am on Friday 16 September 2016** and will be updated as necessary for best management of vineyard issues.

2016/17 V4 # 2

Downy Mildew Infection Alert

The rains of recent days have been wet enough for long enough in many 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 and 12-15 September have been welcomed but they have brought risk of downy.
- Given that a number of varieties are just bursting, this message applies mainly to the early-bursting varieties such as Chardonnay. This is because these varieties had sufficient foliage developed for a target for spores to infect during the wet conditions.

- Later bursting varieties may not have had sufficient exposed foliage and will need to be considered more carefully.
- The following table summarises the weather data as collected from the network of weather stations provided by Barossa Grape & Wine Association. It presents an indication of the likely risk of primary infection from downy mildew from this and the earlier rain event.
- You will note that the rainfalls were variable and at times of long duration in most localities. This induced variable risks of downy mildew infection.
- The risk of downy mildew primary infection that we list is from possible infection events on 8-9 and on 12-15 September.

AWS Location	Temperature (°C)	Relative Humidity (%)	Rain (mm)	Leaf-wetness (hours)	DM Primary (from 8-9 th Sept)	DM Primary (from 12-15 th Sept)
Craneford	6.0 – 12.0C	98 – 100%	34.7mm	63hr	Yes	Yes
Ebenezer	7.0 – 11.5C	78 – 94%	43.8mm	62hr	Yes	Yes
Gomersal	7.0 – 12.0C	91 - 100%	44.4mm	63hr	Yes	Moderate
Lyndoch	n/a	50 – 100%	48.6mm	61hr	Moderate	Low

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 and temperatures during the rain events led to differing conditions at the various AWS sites. This led to differing lengths and timing of soil and leaf wetness and as a result, to the different risks of downy mildew infection in each locality.
- Given the 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.

Managing the risk

- If in your vineyard, the vines had not burst prior to the recent rains, you have little or 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 effectively sprayed your block with a downy mildew pre-infection spray such as copper within 3-5 days before 9 September, your vines were protected and you are not at risk of downy mildew 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 20 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 20 Sept). If so, include a fungicide for control of powdery mildew.

Option 2.

- Alternatively, you may elect to spray now with a suitable downy mildew protectant fungicide such as copper or mancozeb. This will defend against any new rain event that causes a risk from downy mildew.

Option 3.

- 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 mildew.

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 20 September monitor for oilspots of downy mildew to determine if downy infection did occur in your vineyard.

Monitoring for oilspots

- In looking for oilspots, it is helpful to have tagged 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.
- 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 and click on **Disease Diagnosis** (on the grey menu bar on the left of screen).
- If you find only a few oilspots about 50m apart down 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 suitably warm humid conditions 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.
- You can subscribe to this website 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.

*This message has been prepared by
Barossa Grape & Wine Association in partnership with
Magarey Plant Pathology and Western Electronic Design. It
will be updated as soon as possible after the next significant
rain event.*
