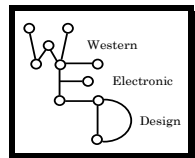




MAGAREY PLANT PATHOLOGY

GrowCare Clare

Brought to you by your local Regional association



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2012/13 Volume 3 Issue 1

GrowCare Clare 2012/13

- Welcome to GrowCare for the new season brought to you through the contributions you make to the Clare Region Winegrowers Association (CRWGA).
- The service will continue to provide disease, pest and other vineyard information to you on an 'as needs' basis. When the risk of a disease is high or there is a significant vineyard event pending, GrowCare will bring this to your attention.
- If you know of other CRWGA levy payers that are not receiving this message, ask them to be in touch with Association.

Season 2012/13

- The [Bureau of Met Seasonal forecasts](#) are indicating the strong likelihood of a drier and warmer period over the next three months. This is likely to maintain the risk of powdery mildew and keep the risk of bunch rots and downy mildew low.
- For other details on the seasonal forecasts, go to the Bureau's website. The following link will take you to information about the [current neutral risk of a La Nina event](#).

Weather Station Network

- As last season, the Association is maintaining a network of automatic weather stations (AWS) across the region. These are located at Clare Valley (Seven Hill), South Clare (Auburn), North Clare (Stanley Flat) and new this season, at **xxxxxxx**



*One of four **Model T MetStations** maintained by CWRGA to collect and transmit weather data. This one is at Auburn. These stations provide data to improve decision making, particularly in relation to downy mildew infection events. (Photo: David Olssen)*

- The recent rain events induced soil wetness and raised the possibility of the early phases of primary infection being triggered. However, the weather stations showed that while the wetness persisted for some time, the consistently cool-cold temperatures were way below the threshold of 8-10°C (preferably 20°C) needed for infection and so the risk of downy mildew can confidently be discounted from the recent rainfalls.
- The risk of this disease will again increase significantly only if wet conditions recur at some time early in the growing season – that is up until berries are pea-size. After this, the canopy and the crop have gained some levels of natural age-related (ontogenic) resistance to downy mildew.

Hail Damage

- The recent weather events also brought some hail damage. The soft green shoot growth is very susceptible to damage from hail at this time and some damage can be seen in vineyards in the region.
- Diseases such as Botrytis can enter leaves, shoots and bunches through wounds made by the hail. Thankfully, the duration of leaf wetness and the cold temperatures at the time, will have reduced the risk of infection by Botrytis.
- If in doubt, consider applying approved protective fungicide but the prevailing warm, dry conditions will have assisted the drying and healing of the scars from the hail damage and the risk of growth of Botrytis will be much reduced.



Hail damage on a shoot of Merlot affected by the recent event. Thankfully, the prevailing warm dry conditions are favouring the drying and healing of the wound sites. This is reducing the risk of infection by the Botrytis fungus which can rot the soft young shoot growth. (Photo: David Olssen)

Recent Rains and Downy Mildew

- For downy mildew primary infection to develop, rain or irrigation is needed to wet the soil for 16hrs at temperatures sufficient for oospores to germinate and release zoospores in the soil. Then rainfall is needed to splash the zoospores to the grapevine canopy and to keep the leaves wet while it was warm enough for long enough for infection to be completed.

Powdery Mildew

- **The recent weather conditions** have suited powdery mildew. The low temperatures of a week or two ago were not as favourable but the warmer temperatures of recent days were more suited.
- Powdery grows best at 20-28°C, so the last couple of days were good for powdery. Spores develop in dry weather over a range of temperatures but 2–3 times more develop when the relative humidity is high (RH >40%).
- **Powdery mildew has an epi-season** (season of epidemic) that extends over two growing seasons. This means that inoculum (spores) from uncontrolled disease last season carries over into this season.
- As early season shoot growth develops, buds infected last season produce diseased shoots known as ‘**flag shoots**’ – they ‘flag’ where powdery will be starting in your vineyard this season.
- **Spores from flagshoots** initially spread the disease in a radius of foliage 30-50 cm diameter. This area gradually expands unless well-timed sprays are applied.
- **The first 40 days from budburst** are critical in the development of the disease. The success of your controls in the next few weeks will have a major influence on the disease status of your crop at vintage this season AND the amount of powdery mildew that will carry over in your vineyard to next season.
- **Shoots 3-5cm in length (EL 7-9)** provide a sufficient target to be worth spraying and this is the ideal time to begin spraying for powdery though it might vary with the design of your canopy and the configuration and effectiveness of your spray machinery.

Monitoring Vine Growth

- As the new shoot growth continues to expand rapidly, the task of maintaining good spray cover for diseases like powdery mildew is very difficult.
- One way to assess the amount of new foliage since you last sprayed is to use a text pen to mark a one centimetre square on an opened leaf and to tie a tag or clip a bread-bag clip to the petiole (leaf stem) of the top-most fully opened (flat) leaf. By returning several days later, you can see how much the leaves have expanded and how many new leaves have formed since your last visit.
- If you do this on the day you spray, the amount of newly expanded and therefore unsprayed foliage tissue there is, can be easily assessed. You can use this approach to judge when the next spray is needed.



A one centimetre square marked on a mature leaf and a small tag placed beneath the youngest flat leaf at the shoot tip give an easy guide to the growth of the foliage and to the need for a spray for powdery mildew.
(Photo: David Olssen)

- Current growth stage on Riesling varies from EL-9 to EL-14 while Shiraz are up to EL-15. Cabernet Sauvignon is less advanced but this is variable depending on when the vines were pruned.

Frost Damage

- The conditions this season have also triggered some frost damage in low lying areas. The symptoms of frost are rather interesting – they look a bit like damage from some weedicides.
- A key point about frost damage is that the symptoms are usually confined to the lower leaves whereas the new growth will be symptomless.



Frost damage to a young leaf. The symptoms are best seen by holding the leaf up to the light – affected tissue is slightly translucent as the damaged cells become thinner and transmit some of the light. (Photo: Peter Magarey)

Use of Fungicides

- When purchasing new stocks of fungicides and other chemicals, particularly if selecting new chemistry, be sure to check with your winery for any restrictions on use and withholding periods.

Monitoring for Diseases and Pests

- Now is a good time to monitor the developing canopy for disease symptoms and for signs of pests. Look out for the yellowish blotches of powdery mildew and for insects such as vine scale.
- If in doubt about the symptoms you see, refer to the online service called [Disease Diagnosis](#). This is a web-based system that helps you almost wordlessly diagnose the symptoms that occur in the vineyard.

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