MAGAREY PLANT PATHOLOGY

Western Electronic Design

GrowCare Barossa

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This message was posted on **Wednesday 20th November 2013** and will be updated as necessary for best management of vineyard issues.

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Downy Mildew Oilspots

GrowCare scouts have recently reported finding scattered low levels of downy mildew in a number of vineyards in the Barossa and Eden Valleys.

Scouts from the Barossa and in the hills around Craneford have reported finding downy mildew from around 8th November. The oilspots appear to be from at least two generations (and maybe three). Some oilspots are about the size of a 50c coin and others, about the size of a 10c coin.

Infection Events

The larger oilspots are likely to have been triggered by a primary infection event (taking the inoculum from soil to the canopy) in September.

Two possibilities for this were in a rain event on 12-13th or more likely, from a second rain event on 16-17th September. At the time, GrowCare reported possible 'low risk infection events' from both rains.

Oilspots from these primary infection events, if they occurred, would have been present (though unseen by most) in the last week of September.

A possible third primary infection and a secondary infection (spreading downy from leaf to leaf or leaf to bunch) was recorded from the GrowCare weather stations at Craneford and Lyndoch on 22nd – 23rd October.

A new generation of oilspots would have appeared in an unprotected block sometime after the 2-3rd November, that is, if an infection actually occurred.

The oilspots found recently are very likely the result of this infection event.

Variations

While our analyses of the data predicted 'low risk events', any variation in rainfall across a locality and variation in soil wetness eg next to a dam or if an irrigation had been applied, would easily account for the different levels of disease being observed at present.

Note, if your vines had been suitably protected by a downy mildew fungicide prior to the above rain events, there will be no oilspots in your vineyard.

Numbers of Oilspots

If infection occurred and your vines were not adequately protected before a primary infection event, you may expect only 1-2 oilspots every 50m occurred, you might see 1-5 oilspots on a leaf on of vine row whereas if a secondary infection has one or more leaves affected per vine.

Downy mildew oilspots on a lower leaf probably from a secondary infection that occurred in late October. There is possibly an older, larger and more aged oilspot hidden in the canopy of a vine within a radius of 3-4 metres or less. Now is a good time to search your vines for oilspots and for powdery mildew! Photo: Richard Langford.

So, what if primary infection has occurred?

May be do nothing! A few oilspots in your vineyard will cause no crop loss. However, they may be important if you leave your foliage unprotected and a suitably warm humid night were to favour secondary infection. In this circumstance you will be at risk of downy spreading rapidly. So, take care!

What if a secondary infection has occurred?

If your vines are unprotected and there are many fresh oilspots in your vineyard, some action is needed. While many vines in the Barossa Valley floor are approaching EL 31 (pea-size), the berries are rapidly gaining resistance, many vines in Eden Valley are still passing through flowering (EL 19-20). The latter are still very susceptible to downy.

The option of applying a post-infection fungicide such as metalaxyl (one of the Ridomil group) is not recommended because these products are best

applied as soon as possible before oilspots appear and not after the oilspot is seen!

Two options remain

Whether there are many oilspots or few in your unprotected vineyard, an application of a pre-infection (protectant) fungicide such as a copper-based product or mancozeb, might be warranted. If so, apply it as close as possible before the next rainfall that risks producing conditions for a secondary infection. This is a relatively low cost approach since that fungicide might be included in your next powdery mildew spray.

The other option is not spray for downy at the moment but 1) watch for a suitable rain event that might trigger a secondary infection – this might be some weeks away when the berries have reached a high level of resistance; and 2) monitor the weather event at the time of that rain (look out for a GrowCare message).

If a secondary infection occurs while the berries are still very susceptible, apply a post-infection fungicide as soon as possible after the event and before the next generation of oilspots appear.

If a secondary infection were to occur only later in the season when the berries have gained some resistance, eg after pea-size, may be a spray will not be needed!

Monitor Vines Now

Given the low risk of downy at most GrowCare AWS sites, many vineyards will have few or no oilspots. However, since there has been a 'low risk event' now is a critical time to look in the canopy and especially at leaves about 1-10 nodes from the shoot base.

If you marked the growing tips at the time of the low risk infection alert on 18th September, return to those shoots and look at leaves below the tag on what is now the lower part of the shoot. Look closely at the leaves below the marked tips. This is where primary oilspots will be found, if present. These spots will be about the size of a 50c coin or bigger and will probably have on the centre of the under surface, a small circle of sporulation (the white down of downy mildew).

Secondary infection oilspots will be easier to find because they will be more common and will usually be higher on the shoots.

Forecast Rains

There is a forecast for rains of 10-15mm around 24th – 27th November. This could trigger a secondary infection at a critical time (near flowering). In unprotected vineyards, if you have an abundance of oilspots, keep an eye on the weather forecast and spray as close as possible before the next major rain event that creates a warm humid night.

Now is also a good time to look carefully for powdery mildew on leaves in the more shaded, protected parts of your vine canopies. Look for grey-white blotches on upper and/or lower surfaces of leaves. Look also on the young bunches just after fruit set. Angle the leaves into the light for best detection of the powdery mildew colonies. Photo: Bob Emmett, Vic DPI

Powdery Mildew

As the canopies grow denser in the next few weeks, the level of shading will increase and the advent of warmer temperatures is likely to increase the favourability of conditions for powdery.

Powdery mildew infection on the flowers and fruit comes from infection on the leaves and foliage. Early season control has been the best preparation for controlling the disease on the fruit at this stage of vine growth. It is increasingly difficult to effectively spray the inner canopy and it is important to know what level of powdery you have at present – if any!

This means that while inspecting vine canopies for downy, have a good look inside the canopy for powdery mildew too.

Any of the registered products for powdery mildew are effective but there is a more restricted range available after withholding periods 'kick in' from 80% capfall onward.

Despite these withholding periods, there is still a useful array of products suitable for powdery mildew control. Some growers like to consider a multi-purpose fungicide such as Cabrio® (permitted until berries are pea-size) because of its dual activity against downy and powdery mildew.

In selecting the best spray to use it is good to check costs of the product against alternatives such as a simple tank mix of two products (eg of copper and sulphur).

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