

## Premium defence against downy mildew

Vineyard  
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As with successful powdery mildew management there are good pre-infection strategies for downy. Pre-infection fungicides defend against downy mildew attack and must be applied as close as possible, before infection begins, to ensure new growth is well covered.

There is a broad range of pre-infection fungicides to choose from, including copper oxychloride/hydroxide, dithianon, mancozeb, REVUS<sup>®</sup>, BRAVO WEATHERSTIK<sup>®</sup> and AMISTAR<sup>®</sup>. Growers should maintain a regular program of cover sprays and if inclement weather and an infection risk is likely, the rainfast alternatives of REVUS, AMISTAR and BRAVO WEATHERSTIK are proven performers.

Prior to and during flowering the leaves and shoots expand rapidly. After flowering, the bunches grow quickly. Most pre-infection sprays act on the surface of the vine tissue. They need to be present in sufficient coverage and dose before a spore lands on that surface so that the fungus contacts enough chemical and is killed.

As the vine grows, it expands. This spreads out the layer of fungicide like dots spread on a balloon when it is blown up. With this expanding tissue, the downy spores have a much better chance of landing in a gap in the spray cover and growing into and infecting the vine.

Early in the season when vines are growing rapidly, the protective spray cover with the basic sprays like copper, mancozeb and metiram can remain effective for as few as three to five days. Later, as vine growth slows, effective spray cover with these products might be 10 to 14 days. A good spray program will take these factors into account.

Finally, don't forget to adjust water spray volumes. Larger vine canopies need more water for

coverage. Insufficient water and subsequent under dosing of chemical with dilute spraying has clear implications for product performance and resistance development.

**Products:**

Revus

Bravo Weather Stik

Amistar 250 SC