

Managing tablegrape vineyards during wet weather

Periods of wet weather bring two major issues for managing grapevines: firstly, inundation or flooding of vines, and secondly, the effects of rain on foliage and fruit.

Inundated vineyards

Waterlogging of the root system will lead to root death, particularly smaller diameter roots.

Mature vines can survive inundation lasting up to two weeks and possibly longer. Plant deaths can be expected amongst young vines submerged for an extended period (ie more than a week).

Severe inundation that submerges the vine canopy for several days is likely to lead to leaf death and defoliation of the vine. Secondary budburst will occur once floodwaters recede, at least on the woody section of current season shoots. See the section below for managing secondary budburst.

Vine canopy management following harvest

The major objectives are to:

- control fungal diseases of the foliage
- prevent secondary budburst

The most important objective is to retain the primary (or current season) leaves on the vine, as this will prevent or minimise secondary budburst.

Secondary budburst occurs when the current season shoot is defoliated, often as a result of fungal disease attack, and a new shoot grows from the primary bud.

In a normal season the primary bud remains dormant until the following season, when budburst occurs and produces new season shoots. The primary bud contains the most fruitful shoot and hence is important to remain dormant for a good crop next season.

Protecting the leaves from fungal diseases is the most important objective following wet weather.

Downy mildew and black spot (anthracnose) are the most common diseases to attack leaves and shoots following wet weather.

A spray programme of protectant fungicides will provide effective control. The Group Y protectant fungicides (mancozeb, chlorothalonil, captan, dithianon) are ideal for frequent use to control both diseases, with minimal risk of disease resistance developing and are cost effective.

An eradicant fungicide will need to be applied where a downy mildew infection period has occurred following rain and the previous application of a protectant fungicide was more than 10 days.

Phosphorous acid and products containing metalaxyl-M (e.g. Ridomil Gold MZ WG®) can provide effective control of downy mildew. Note that phosphorous acid provides no protection against black spot and a suitable fungicide must be added to the tank mix.

Nutrition management

Allow saturated soil to partially dry out before applying fertiliser to replace nutrients that are likely to have been lost following heavy rain or flooding.

As the soil begins to dry the vines will start to produce a root growth flush. Wait for this root growth flush to commence before commencing fertiliser applications.

A nutrition strategy of small amounts of fertiliser at regular intervals is desirable for maximum uptake by the vines, minimal risk of leaching from subsequent rainfall and to avoid promoting growth of root damaging soil borne diseases with excessive nutrients in the soil solution.

Vines with fruit

A botrytis fungicide (eg iprodione, captan, chlorothalonil) will also be necessary after severe wet weather to protect ripening fruit.

Always check the withholding period (WHP) on the product label before use. Winegrape growers will also need to check the WHP's required for fruit likely to be used in exported wine.

Chemical sprays are not available for the control the numerous other bunch rots associated with damaged fruit.

Managing vine recovery next season

Several options exist and the appropriate strategy will depend on the level of budburst, shoot vigour and fruitfulness next season. More information will be prepared closer to the start of next season and the options for each vineyard can be reviewed individually.

More information

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For essential information on important diseases affecting fruit crops grown across Australia, pick up a copy of Diseases of fruit crops in Australia, available for purchase from CSIRO at www.publish.csiro.au

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