



## Factors involved in ‘mothballing’ vineyards

From time to time vineyard owners may have reasons to ‘mothball’ a block for a period of time. This involves minimising management costs, while protecting vines to ensure they can be rapidly brought back to productive use when needed. The AWRI helpdesk is sometimes approached for advice by vineyard owners considering this option. This column by Senior Viticulturist, **Marcel Essling**, provides information on the factors to be taken account when thinking about mothballing a vineyard.

*I don't have a contract for one of my blocks and may not find a home for the fruit. I am considering mothballing the block. What do I need to know?*

The principle of mothballing is to reduce vineyard management costs in blocks that are not producing fruit for sale, while still allowing for a rapid return to productive cropping in future. The challenge is to not degrade the vineyard asset while trying to find savings, because the costs to bring the vineyard back into production may negate any short-term savings.

The critical inputs in managing a vineyard are pruning, irrigation, nutrition and pest and disease control. As these inputs vary depending on a wide range of factors including region, variety, trellis/training structure and degree of mechanisation already employed, the extent to which these inputs can be reduced needs to be assessed on a case-by-case basis. Ideally the vines should be managed to suppress growth and yield at a low cost. Points to consider for each of the critical inputs are explored below.

*Do I need to prune a mothballed vineyard?*

Pruning is a significant expense that may be eliminated in mothballed vineyards; however, when bringing the vines back into production, pruning will be a bigger and more expensive task. In addition, bigger canopies produced by non-pruned vines require more irrigation and spraying to maintain health. It is therefore recommended that vines in a block that is to be mothballed are pruned to a lower than normal bud number, ideally mechanically, to suppress growth

and yield and decrease the requirement for other inputs. After a hard prune, more buds may burst from the trunk and cordon than usual. Unwanted buds on the trunk can be cost effectively managed through a herbicide spray that specifies 'desuckering' in vineyards on the label. If left, they will lignify and require pruning the following season. If the vineyard's usual pruning regime is labour-intensive, getting the most out of mechanised pruning is an obvious way to find savings. A slower and more careful use of machine pruning equipment may allow you to keep bud numbers to a level that does not require a hand clean-up.

#### *Can I turn off irrigation when mothballing a vineyard?*

A vineyard with lower yield and growth potential due to fewer buds retained after pruning will have a reduced water requirement. It is important to match the reduced demand by withholding water that would normally be applied to suppress excess growth that the vines may have the capacity to produce. Targeted periods of water stress may also assist to reduce fruit set, leading to smaller and looser bunches, which may also assist to reduce disease pressure and the problem of uncontracted fruit. In some situations, irrigation could be turned off completely; however, careful monitoring is required to ensure vine health is not compromised. Reducing irrigation inputs will significantly reduce costs associated with purchasing water as well as operating, monitoring and maintaining an irrigation system. However it should be noted that water stress ahead of and through flowering will lower the fruitfulness of developing buds and impact yield per shoot the following season.

#### *Do mothballed vineyards still need fertiliser?*

Holding back on nitrogen fertiliser in a mothballed vineyard will have the positive benefit of reducing growth and yield. Micronutrients that are typically applied through foliar sprays to promote flowering and fruitset should also be withheld. If a vineyard is known to be significantly nutritionally deficient, it might be in the interest of long-term vine health and productivity to continue to correct the imbalance.

#### *How important is it to control pests and diseases in mothballed vineyards?*

If the impacts of the pruning, irrigation and nutrition strategies above have resulted in a smaller canopy with fewer, loose bunches, disease pressure will be reduced. Controlling powdery mildew until flowering remains important to prevent infection of buds which can result in flag shoots in the following season. Controlling downy mildew is also important because if allowed to flourish, the inoculum from infected vines will increase the pressure on neighbouring blocks around these vineyards.

If the block has a history of problems with insects such as scale or mealybug, there is an opportunity to consider agrochemical control methods that are typically restricted due to export market requirements. Similarly, if the block has known or suspected chemical resistance, this may be an opportunity to introduce chemical groups that are normally constrained by winery requirements.

#### *Can I discontinue weed control in a mothballed block?*

Some undervine and midrow management may be necessary in a mothballed vineyard block if the weed species

present are noxious or difficult to control when allowed to set seed or proliferate. However, if the plant species present are relatively easy to control, allowing them to grow may provide beneficial competition to vines for nutrients and water. The additional plant growth will also provide soil and biodiversity benefits.


#### *What should be done with the fruit that is produced by a mothballed block?*

Running a mechanical harvester over the block and dropping the fruit on the ground may be a better strategy than leaving the fruit to ripen and attract birds and wasps. This strategy, applied any time after E-L 31 (berries pea-size), will reduce the risk of entrenching a feeding behaviour and creating future pest issues. While fruit left on the vines will largely break down over autumn and winter, it can increase pruning costs the following season and increase the amount of bunch rot inoculum in the vineyard.

*For further information on mothballing vineyards or any other technical winemaking or viticulture questions, contact the AWRI helpdesk on [helpdesk@awri.com.au](mailto:helpdesk@awri.com.au) or 08 8313 6600.*

### References and further reading

AWRI Information pack on mothballing vineyards [https://www.awri.com.au/information\\_services/information-packs/information-pack-mothballing-vineyards/](https://www.awri.com.au/information_services/information-packs/information-pack-mothballing-vineyards/)

Wine Australia's resources on mothballing vineyards: <https://www.wineaustralia.com/growing-making/vineyard-management/mothballing-vineyards> 



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