

## Doing things differently at Esk Valley AgriMedia

By DANIEL PILKINGTON

RESEARCH undertaken at the Esk Valley Winery during the 2006 vintage could prompt a significant shift in winemaking convention.

Although it may be too early to predict any major changes for the industry, the results of the Esk Valley winemaking team's malolactic fermentation trials show definite promise, says winemaker Simon McGeorge.

"Enough promise to warrant increasing the size of the trials for the 2007 vintage."

At a technical conference in February last year, McGeorge became intrigued by the positive results of international research involving the timing of malolactic fermentation and the use of alternative malolactic cultures.

Malolactic fermentation traditionally occurs either in the later stages, or at the completion, of a wine's primary alcoholic fermentation. The process is caused when a particular strain of bacteria is introduced into a volume of wine, either naturally, or by inoculation.

These bacteria act to convert a wine's

harsh, malic acids into softer lactic acids.

Trials performed by the McGeorge and the Esk Valley winemaking team involved inoculating batches of wines for primary and malolactic fermentation simultaneously.

When using the more conventional strains of malolactic bacteria, this practice is considered problematic, because it can result in notably high levels of the unpleasant acetaldehyde ester and contribute high levels of volatile acidity.

By using different malo strains, McGeorge found these problems were not as prominent as with conventional strains.

The problems were at a nearly undetectable level and were far out-weighted by the discovery of a number of key benefits, says McGeorge.

Previously, a batch of wine would have two separate periods of fermentation, each of variable duration.

During both forms of fermentation, the vessel containing the wine needs to have empty head-space to cater for the volatile nature of the fermentation process, he says.

This ullaged tank, or barrel space, means

the wine has a larger surface area in contact with oxygen, heightening the possibility of spoilage.

One of the major benefits found during the trials, was that the batches of wine simultaneously inoculated for primary and malolactic fermentation took less time to reach completion.

Once in a stable state, the vessel containing the wine could be fully topped, significantly reducing the potential for oxygen spoilage.

While sulphur dioxide can be used to correct a wine with high levels of dissolved oxygen, the over-use of sulphur can also have a detrimental effect.

By cutting down the time their wines were exposed to oxygen, they also cut down on the volume of sulphur dioxide required.

The shorter time required to get the wine to a stable state also meant Esk Valley would be able to have its wines at bottling standard sooner, allowing earlier sale of product. This could mean an advantage over other wine producers countrywide, says McGeorge.

## Wind management takes a new twist

MANAGING fierce spring winds that drive through a valley bounded by steep topography has seen a Central Otago vineyard breathe new life into wind protection techniques usually used by orchardists and horticulturalists.

Misha's Vineyard, situated on steep eastern slopes and terraces of Lake Dunstan, is prone to unusually strong wind buffeting during spring and early summer due to the effect of the Dunstan Mountains in the north-east and the Pisa Range to the west.

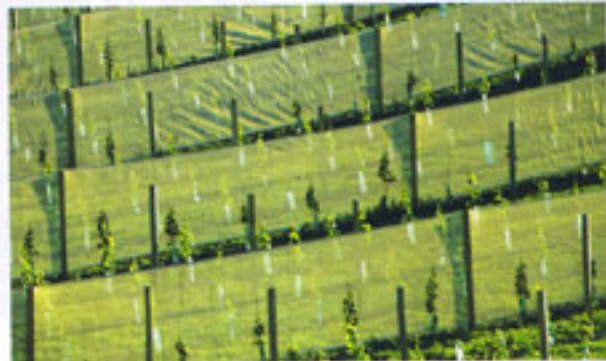
It causes channelling of airflow along the valley and lake.

Misha Wilkinson says there are positive and negative factors associated with wind in a vineyard.

"On the positive side, disease is minimised – especially botrytis, and it can also provide useful natural devigoration in fully established vineyards," she says.

"On the negative side, it can slow canopy growth in the early years, cause damage to young vines, and therefore can increase your overall costs."

Misha's viticulturalist Robin Dicey has found a solution to mitigate the negative effects of the wind through an unusual application involving shelter cloth.



Shelter cloth on the lakelike terraces of Misha's Vineyard, Central Otago.  
photo: Tim Hawkins

Shelter cloth is generally used to protect crops from unfavourable weather conditions or pests, and typically erected as a canopy across the top of crops.

However Dicey's idea was to stretch the shelter cloth the full length of the vineyard posts and along every fourth row to provide shelter for young Pinot Noir vines from the harsh north and north-easterly winds.

The considerations for wind protection were both practical and aesthetic.

The shelter cloth selected was an HPDE monofilament known as "smart shade" which provides up to 50% wind reduction, and the cloth was customised in Australia to a 1.6 metre width, to match the post length with just enough gap at the base to relieve the wind pressure, and specified as sand coloured to blend with the surroundings.

Dicey has also modified the trellis system on Misha's Vineyard to further mitigate the wind issue, to a system with one fruiting wire and three pairs of foliage wires, instead of the usual two pairs, which provides additional canopy support for the young vines.

The innovative application of the shelter cloth along the rows is a first in the area with two other vineyards already following the lead.