

2013 Marlborough Environment Awards Judges' Feedback, Winegrowing

Sound environmental management is good business



Project name Fromm Winery

Owner/Person interviewed Will Hoare, General Manager

Date 22 November 2012

Judges Bridget Ennals, Doug Holmes, Bev Doole

Award category Winegrowing

Introduction

Vineyard area: 5.66ha

Soil type: Western margin - Awatere shallow and stony; remainder of property more like Wairau - well drained sandy, deep loam.

Ownership: Established 1992

Supply grapes to: Own label

Special features : Dry grape growing

Winegrowing at Fromm follows a simple philosophy: quality over quantity.

They achieve this by referencing their European heritage with closely planted vines, frugal irrigation and low cropping to create textural, intensely flavoured wines.

Their vineyard practices also create a quality result for the environment as they aim for zero irrigation, and transform winery waste into compost to go back on to the land to retain water and feed the soil. Fromm Winery is certified organic with BioGro NZ and also follows biodynamic principles.

Will Hoare estimates they save 9.5 million litres of water per year by encouraging vines to grow deep roots. Instead of irrigating young vines once a day (the industry norm is 5 litres per vine per day) they are watered just once a week or



fortnight, for between four and six hours, which sends the roots deeper in search for water. Over time, the vines are weaned off irrigation completely although the button drippers are left in place in case of a very dry year.

As well as saving water and the power needed to pump it, Will says the vines are producing better fruit with riper flavours and tannins – the vines shut down naturally in autumn which stops green flavours coming through.

The judges found that the high awareness of water use is also reflected in the attention paid to soil structure and building it up using organic and biodynamic methods.

All grape marc goes into the well managed compost heap. This is built on a pad of compacted clay with a plastic liner underneath and sloped to allow leachate to collect. The leachate is diluted with rainwater collected from the winery roof and sprayed to land or back on to the compost heap. Compost is spread over the vineyard in autumn as fertiliser. Fromm Winery has been making compost for 10 years and their expertise is clear from the high standard and efficiency of their compost process.



Animals and gardens are integrated into the Fromm philosophy. Cows and chickens provide meat and eggs for staff and their families, as well as manure and eggshells for biodynamic preparations. A plot of stinging nettles provides potassium for yellowing vines, valerian tea helps protect against frost and the hollow stems of the Jerusalem artichoke are used to aerate the compost.

Observation and problem-solving is part of the Fromm culture, whether it is trialling a plot of horseradish to foil grass grub beetle flying in spring, or providing grape pickers with prams to stop dirty bins coming into the winery.

The judges were impressed by the good simple ideas and integrated approach of the whole Fromm vineyard, which felt like a healthy farm working with the environment to grow quality grapes. Fromm Wine is very good example of understanding the industry's impact on the environment.

Environmental Impacts

Soil Impacts

- Long-term use of cover crops. These planted are planted for three years in every second row of vineyard to build up organic matter and provide biodiversity. Barley, buckwheat, phacelia are mown and cultivated back in.
- Alternate row mowing. Deep rip every three years when rows prepared for sowing the cover crop. This encourages vine roots to spread and promotes worms
- Drought-resistant sheeps burnett planted – large tap root helps break up soil
- Reduce soil compaction from tractor work – undervine weeding and application of leachate fertilizer done in one pass. Cover crops sown by hand
- Reduce soil compaction by hand picking rather than machine harvest
- Soil tested and analysed; Effective Micro-organisms (EM) applied
- CCA treated posts replaced by plastic and steel
- Soil monitoring according to Sustainable Winegrowing NZ and BioGro NZ standards

Water Impacts

- Bore water, used sparingly. Working towards zero irrigation
- Established vines (20 years old) have not been watered for seven years. Current savings 9.5 million litres a year. As rest of vineyard becomes established this is expected to rise to a saving of 19.3 million litres
- Collect rainwater (10,000L tank) off winery roof for canopy spray and to dilute leachate
- Monitoring pH level of winery wastewater and diluting before spraying to land

- Low impact on aquifer water quality

Waste Management

- Grape marc kept on site and used in compost
- Leachate from the compost is captured and diluted to be sprayed on to vineyard as fertilizer
- New box design eliminates need to purchase and dispose of moulded dividers
- Wine now sold as six packs. This reduces numbers of 12-bottle cases broken up for sale at cellar door that have to be disposed of



Energy and Fuel Efficiency

- Reduce fuel consumption of tractor – undervine weeding and application of leachate fertilizer done in one pass
- Some weeding done by hand
- Hand picking saves on diesel use by a machine harvester
- On-site compost making saves cost of transport and disposal of grape marc
- Winery is insulated for energy efficiency
- Electricity savings through low lighting in winery
- CCA posts being replaced by plastic coated pine posts made of recycled dripline.
- Hand picking means few posts are broken

Biodiversity

Indigenous biodiversity

- Limited native planting on the property

Non-indigenous biodiversity

- Good biodiversity through planting of cover crops to build up soil fertility and attract beneficial insects
- More worms and insects noted in vineyard
- Italian Alders, plane and poplar trees for shade and amenity value

Weed, pest and disease control

- Under vines weeded by hand and machine
- Use of cover crops to attract beneficial insects
- Small-leaf white clover grown with Syrah as an experiment to control weed growth
- Netting and screechers used for bird control. No guns (on the airport flight path) and no gas guns (cyclists frightened)



Community values and Education

- Helped from the Mana group of BioGro wineries who mentor each other. Members pool their vineyard knowledge and marketing initiatives.

Positives

- Water savings through drastic reduction in irrigation. This could be adopted by other vineyards
- Strong observation and awareness of soil structure and water conservation
- Long-term view towards soil health and vineyard management
- Strong sense of guardianship of the land and water resources. Fromm shows that significant enhancements to the environment can be made in a relatively short time.
- The vineyard looked and felt healthy, a good example of a farm as a living organism

Suggestions

- Follow through with intention to increase native planting where waste water is sprayed. Tui to Town project is a possibility
- Measure kilowatts/litre power use in the winery – what would be a realistic target to aim for?
- Keep up soil testing and measurement of organic matter to build up data about moisture-holding capability
- Your frugal water use is a point of difference in Marlborough and merits acknowledgement on your website