



## Sileni Estates Sustainable Winegrowing Projects

We are fully committed to continuously working towards improving our environmental, social and economic sustainability. We have implemented and maintain the ISO14001 and Sustainable Winegrowing New Zealand (SWNZ) certification.

### ISO14001

Sileni Estates achieved ISO14001 certification in May 2002. ISO14001 is an environmental management system that requires analysis of inputs and outputs and the effects these have on the environment. In understanding and measuring these we can continuously improve our performance.

<http://www.iso.org/>



### SUSTAINABLE WINEGROWING VINEYARD AND WINERY (SWNZ)

SWNZ provides the framework for companies to continually work towards improving aspects of their performance in terms of environmental sustainability in both the vineyard and winery. SWNZ was introduced in 1997 for the vineyard and adopted by growers from all the grape growing regions. The winery scorecard was introduced in 2002 - the scorecard enables benchmarking of industry practices and sustainability. Wines that are produced from 100% accredited vineyards and made in accredited wineries can carry the sustainable winegrowing logo.

<http://www.nzwine.com/sustainability/>



## Current Projects

### ENERGY USE

- Since 2012 processes in the winery have been switched to lower energy alternatives which have kept total energy consumption below original levels, despite production rising more than 50% over the same time period.
- A 19% reduction in power use was made during the first year by turning off some obsolete heating units, putting timers on chillers to utilise low cost power, using waste heat from compressors to pre-heat hot water, and by encouraging staff to turn off unnecessary lighting and electrical machinery.

### PACKAGING

- 90% of all production is now lightweight glass, resulting in a reduction of over a kilogram per case and over a tonne per container leading to fuel savings on freight.
- Where possible we have moved to using wine cases without cardboard dividers to reduce another area of potential waste material.
- Employing offshore bottling and packaging when possible has optimised production and use of glass, carton and labels close to the point of consumption.

### RENEWABLE ENERGY

- All solid waste (skins, stalks, etc) is composted and returned to the vineyards to suppress weeds and to retain soil moisture and structure, or used as a feed supplement for cattle, sheep and deer during drought conditions.
- The vineyard team have moved from mechanical leaf plucking and mowing to nature's own way of keeping vineyards tidy by 'employing' local farm sheep to graze in most of our blocks. This has led to a significant reduction of tractor passes and fuel use in the vineyards.

- New blocks planted with low growing grass species to reduce the number of mowing passes required, whilst the vehicle fleet is now close to fully replaced with diesel vehicles which are 25-30% more efficient than petrol.

### WINERY PROCESSES

- Shift from conventional cold stabilising to using the addition of a plant based material to bind with tartrates and prevent their crystallisation, without any chilling needed, and therefore significantly reducing power consumption.
- Move from conventional red wine pumpovers using electric pumps to irrigate the cap, to a system of compressed air bubbles which push the fermenting juice up through the cap from the bottom, which is a much more energy efficient system.
- We put all of our wines through a crossflow filter which takes them from cloudy to sterile in a single pass without the need to use a non-reusable filter media and the traditional three filter passes process.

### THE FUTURE

- Installation of solar water heating and photovoltaic cells to provide pre-heating and base load aiming at a minimum of 20% of total power consumption savings.
- Switch to more energy efficient light bulbs and sensor technology.
- Retrofit double glazing to offices.