

Environmental management systems in New Zealand wineries: is SWNZ the answer?

Tracy-Anne De Silva and Sharon L. Forbes

IN RECENT YEARS, various formal environmental management systems (EMS) have been developed and promoted by national and regional wine industry associations worldwide. Specifically, New Zealand Winegrowers, the national industry association, has encouraged wineries and grapegrowers to implement a formal industry-specific EMS. They've developed and named Sustainable Winegrowing New Zealand (SWNZ).

A review¹ of the New Zealand wine industry described the SWNZ programme as 'a self-audited, independently analysed, world-leading environment management system for sustainable winery practices that assists growers, wineries and consumers'. The SWNZ programme is based on a scorecard approach which provides targets or benchmarks with the aim of continually improving sustainability in both vineyards and wineries. It offers three tiers of participation, including a level at which accredited wineries are independently audited to ensure compliance to SWNZ protocols. The SWNZ programme was designed to: (a) provide a best practice model of environmental practices; (b) provide quality assurance from vineyard to winery; (c) address consumer concerns; and (d) protect New Zealand's global wine export markets.

This paper explores the implementation of the SWNZ programme along with other formal EMS in New Zealand wineries. Insights are provided about specific aspects of implementation including the benefits of implementation, changes to environmental practices, disadvantages associated with implementation and areas where environmental improvement is still needed. The paper then concludes with the practical implications of the study.

The study surveyed 100 New Zealand wineries with SWNZ accreditation and 176 New Zealand wineries without SWNZ accreditation. The sample contained both small and large wineries from across all wine regions and was therefore found to be representative of the New Zealand wine industry.

EMS implemented

The number of EMS implemented in New Zealand wineries is shown in Table 1. Half of the responding SWNZ-accredited wineries had implemented at least one other formal EMS, and 14 of the SWNZ-

accredited respondents (37%) stated they were currently working towards membership in another EMS. SWNZ-accredited wineries have, on average, implemented 1.8 formal EMS, while non-SWNZ-accredited wineries have, on average, implemented 1.0 formal EMS.

Wineries choosing to implement multiple EMS did so because they believed each EMS had a different focus. For example one EMS "assists with systems, process, documentation and control in the winery and bottling line", while another EMS "focuses on reducing carbon emissions". Comments from SWNZ-accredited wineries suggest the SWNZ programme was not understood or widely recognised internationally, and this was one of their main reasons for implementing additional EMS.

Table 2 identifies the specific EMS implemented in New Zealand wineries. Reasons for adopting these EMS include their recognition of the winery as an organic operation, requirement to be certified for production and export marketing, minimal or no membership fees and minimal or no audit fees.

Benefits of EMS implementation

Some wineries acknowledged that they implemented EMS so that they had certification to a recognised system for marketing and to 'show what is happening within the business'. However, the key benefits of EMS implementation, regardless of the specific EMS implemented, are predominantly environmentally related. Very few wineries indicated that they received any significant economic or marketing benefits from implementing an EMS. Specifically, EMS implementation was found to have no effect on access to international markets, nor did it not increase sales within New Zealand or

improve profitability. This may be because environmental practices need to underpin the wine industry. EMS implementation needs to be coupled with a belief that caring for the environment is the right thing to do. Simply adopting an EMS as a marketing tool or because a winery feels it should have an EMS will not lead to changes being embedded in the winery. The main benefit of implementing an EMS appears to be the raised awareness that the EMS creates among staff to be aware of the impacts of the winery and to think about new or better ways to perform tasks around the winery. Wineries also acknowledged the benefit of formalising environmental practices.

Changes to environmental practices

The implementation of an EMS led to a number of changes in environmental practices in the wineries. Specific changes that were identified were: an increased level of monitoring and record keeping; formalising of environmental practices that were already in place; increased focus on environmental improvements that were already occurring; external audit of environmental practices; rubber stamping

Table 1. Number of formal EMS implemented in NZ wineries.

	Number	Per cent
SWNZ-accredited wineries		
SWNZ only	19	50
SWNZ + one other EMS	8	21
SWNZ + two other EMS	10	26
SWNZ + three other EMS	1	3
Non-SWNZ-accredited wineries		
No EMS	4	22
One EMS	10	55
Two EMS	4	22

Table 2. Formal EMS implemented in NZ wineries.

	SWNZ-accredited		Non-SWNZ-accredited	
	Number	Per cent	Number	Per cent
Biogro	12	39	4	29
ISO 14001	10	32	0	0
CarboNZero	3	10	1	7
Demeter	1	3	1	7
CertNZ	1	3	0	0
CEMARS	1	3	0	0
Other formal	3	10	8	57

of existing management practices; and increased awareness of issues such that they are always in the foreground.

Disadvantages associated with implementation

Indications that New Zealand wineries were concerned by the costs associated with EMS were found in this study, with 20 (5 per cent) of the surveyed SWNZ-accredited wineries stating that time and financial costs were both disadvantages associated with their EMS.

Specifically, the disadvantages with implementing EMS that were identified in this study include: increased time and administrative burden; more paper usage completing required documentation; costly to manage; making no difference to the consumer; compliance costs; extra work; and involvement in endless audits. The implementation of an EMS were often incremental, making it difficult to see or measure any short-term benefit.

Areas needing environmental improvement

The main areas of winery operation identified as requiring environmental improvement were the use and management of water, and the use and management of electricity. These areas

were identified by both SWNZ-accredited wineries (16 wineries, 42 per cent) and non-SWNZ-accredited wineries (5 wineries, 29 per cent).

Summary

The results of this study highlight the benefits from implementing EMS are largely environmental, but come at a high cost to wineries. This study also provided views about the SWNZ programme, developed and promoted by New Zealand Winegrowers. The results suggest that the SWNZ programme is not seen as sufficiently meeting the needs of New Zealand wineries, and wineries are seeking additional environmental guidance elsewhere.

Practical implications

If improvements were made to the SWNZ programme, wineries may be able to address all their environmental issues through the use of a single EMS, and reduce the costs and time involved with implementing and maintaining accreditation in additional EMS. A more comprehensive SWNZ programme could help to improve the financial viability of New Zealand wineries at what is a particularly difficult time for producers in the wine industry.

Acknowledgements

The authors wish to thank Dr Michaela Balzarova and Anne Spicer who both contributed to the study. In addition, the financial contribution from Lincoln University's Research Fund is acknowledged. 

References

- Clayton, G. and Stevens, N. (2007), "False idol economy: The New Zealand wine industry", *International Journal of Systems Applications, Engineering & Development*, Vol. 3 No. 1, pp. 69-74.
- Hughey, K. F. D., Tait, S. V., and O'Connell, M. J. (2005), "Qualitative evaluation of three environmental management systems in the New Zealand wine industry", *Journal of Cleaner Production*, Vol. 13, pp. 1175-1187.
- Renton, T., Manktelow, D., and Kingston, C. (2002), "Sustainable winegrowing: New Zealand's place in the world", in *Proceedings of the Romeo Bragato Conference*, Christchurch, September 2002. Christchurch, New Zealand: New Zealand Winegrowers.

Dr Sharon L. Forbes is a lecturer in marketing at Lincoln University. Her research focuses on the wine industry in the areas of consumer behaviour, country or origin effects, usage situations, supply chain co-ordination and sustainability.

Dr Tracy-Anne De Silva is a senior lecturer in accounting at Lincoln University. Her research focusses on understanding why businesses engage in environmental activities including environmental reporting and environmental management systems.

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