SUSTAINABLE NEW ZEALAND WINEGROWING

SUSTAINABLE WINEGROWING NEW ZEALAND STANDARDS

NEW ZEALAND WINE
PURE DISCOVERY

The Sustainable Winegrowing New Zealand (Sustainable Winegrowing NZ) programme is a proactive management system that enables winegrowers to produce high quality wine using environmentally responsible and economically viable methods.

The programme is based on continuous improvement and adherence to the Sustainable Winegrowing NZ standards, which ensures members meet international guidelines for sustainability practices in the vineyard and winery.

The standards have seven 'pillars', or key focus areas, which include:

- Biodiversity
- Soil, water and air
- Energy
- Chemicals
- By-products
- People
- Business practices

Sustainable Winegrowing NZ members submit Winery and Vineyard Scorecards annually (entered online via WiSE – our Wine Industry Sustainablity Engine tool), in order to demonstrate compliance with the standards.

The Scorecards have two question categories, 'Compulsary' and 'Voluntary'. 'Compulsory' questions cover sustainable practices that form the minimum requirements of the programme, and must be undertaken (if relevant) to gain or keep accreditation. This category contains key pass or fail elements that generally apply to all members.

'Voluntary' questions in the Scorecard relate to sustainable practices that members can adopt if they want to further demonstrate their commitment to sustainability. Members who complete these questions receive additional personalised reporting, comparing their information with other businesses that provided similar data. This extra reporting assists members to make more informed decisions around how to improve their sustainable practices and business operations.

The bullet points under each of the following headings cover the standards (requirements) for each pillar that all members of Sustainable Winegrowers NZ must meet to achieve accreditation under the programme.

BIODIVERSITY STANDARDS

Biological diversity is important for vineyard health and stability. Members should work to create and conserve an ecologically balanced vineyard environment that has a diverse ecosystem of plants and animals.

- Foster biodiversity to enable biological control of pests, diseases and weeds as a substitute for chemical pesticides, insecticides and herbicides, and to boost soil structure and quality.
- Promote and maintain vineyard swards and cover crops as nectar sources for beneficial insects, and a habitat for fungi, bacteria and soil organisms essential for nutrient uptake and vine health.
- Reduce the area of bare soil or mown grass between vine rows.
- Put in place enhancement programmes where possible to help conserve and encourage the natural environment, its habitats and wildlife within vineyard and winery areas.

SOIL STANDARDS

Responsible management of our land includes improving soil health, avoiding erosion, and minimising waste and harmful discharges. Members should enact a soil management plan, to be reviewed every three to five years, which includes protocols for soil sampling, soil management and soil sustainability; fertiliser and nutrient application and management; ground-cover management (including weed control) and biodiversity conservation.

SOIL QUALITY MANAGEMENT

- Enact a soil management plan: keep soil and plant analysis records to monitor, measure, maintain and improve long-term trends in soil structure, organic matter, soil and plant nutrient status. Test soils every three years to provide a long-term record.
- Monitor and manage erosion risk and soil compaction. Record the amounts of copper sprays used, and monitor soil levels to avoid copper affecting soil organisms or plant growth.
- Follow all protocols and employ practices that preserve and enhance the soil and vine nutrition, including strategies to maintain or increase organic matter.
- Engage in clean production processes and sound management of waste disposal systems in the winery to avoid degradation of soil structure.

FERTILISER AND NUTRIENT MANAGEMENT

- Establish a fertiliser and nutrient management plan for the vineyard that includes protocols and records for evidence of improvements. Review on a regular basis.
- Follow the New Zealand Nutrient Management Code of Practice for assistance in nutrient management decisions, as well as storage and application. Comply with the Fertiliser Association's Code of Practice for Nutrient Management.
- Carry out fertiliser and nutrient applications when tests of soil or plant material show they are justified, and apply in a manner that promotes maximum uptake by the vines. Maintain records of fertiliser and nutrient applications.
- Use and store fertiliser and nutrients safely. Ensure fertilisers or manures comply with

current New Zealand standards to avoid using hazardous substances.

- Ensure procedures are in place to manage compost production and minimise any environmental impacts.

GROUND COVER MANAGEMENT AND WEED CONTROL

Ground cover helps to preserve or enhance soil structure, control erosion, manage nutrients, and improve biodiversity and weed control. It also improves water penetration and retention.

- Maintain cover crops and swards between vine rows to increase biodiversity and provide a habitat for beneficial insects. Keep the strip underneath the vines as narrow as possible.
- Ensure weed management practices give priority to natural and cultural methods (vine cultivation and mowing) to minimise herbicide use. (See Chemicals section below.)

WATER STANDARDS

Water is of critical importance to the industry for irrigation, frost protection and winery operations. Sustainable water management includes preserving water quality and using water economically and efficiently, while avoiding any negative environmental effects.

- Water taken from aquifers or surface bodies for use in irrigation, frost fighting or processing must be obtained using water rights granted under the conditions set out in the Resource Management Act.
- Apply irrigation water using methods that benefit plant needs and encourage growth. Match water application devices to local plant and soil conditions.
- Apply the minimum amount of water to vines to ensure balanced growth, reduce wastage and avoid leaching.
- Monitor irrigation system performance, and measure and record water used.
- Ensure water used for frost protection application is targeted, and only used for imminent or prevailing frost.
- Monitor and measure water use in the winery and enact procedures to limit use.
- Ensure winery water system is designed to meet desired needs. (For wastewater, see By-products section below.)
- Ensure vineyard irrigation system is designed to meet the characteristics of the vineyard, its future needs, and is optimised for water delivery and usage.
- Recycle or reuse winery water where possible, and limit water wastage.

AIR STANDARDS

Sustainable Winegrowing NZ members are required to play their part in maintaining the quality of our air. This involves measuring and reducing harmful emissions, and minimising noise and light.

- Comply with the Resource Management Act, national and local regulations and codes of practice for air quality, smoke emissions, noise, odours and wind erosion.
- Ensure spray equipment is calibrated, use targeted spot sprays, and ensure applications are timed to minimise spray drift.
- Ensure all staff involved in the application of sprays fulfil the regulatory requirement of having a current Growsafe Certificate.
- Implement a soil management plan, including identification and management of soil erosion risks and wind-blown soil.
- Adopt best practice methods to avoid causing unreasonable levels of noise and lighting, and ensure compliance with national and local regulations and industry codes of practice.
- Select and maintain refrigeration systems using certified engineers to minimise environmental impact and reduce the potential for release of harmful gases.
- Record any spills, leaks or recharges of refrigerants.

ENERGY STANDARDS

Vineyards and wineries are encouraged to adopt efficient management practices to reduce energy use. As well as being benefical to the environment, energy-saving initiatives can significantly reduce operating costs.

- Monitor and measure energy use.
- Record energy use, and initiate plans or actions to improve energy efficiency such as: optimum design and selection of buildings and equipment; efficient use of lighting, heating, refrigeration and insulation; and optimal processing methods.
- Reuse energy where possible.

CHEMICALS STANDARDS

Sustainable Winegrowing NZ aims for quality production of grapes and wine while ensuring methods employed have the lowest impact possible on the environment and human health.

Integrated plant protection involves controlling pests, diseases and weeds using the most natural, cultural and biological methods possible, with minimal use of the least harmful agrichemicals (pesticides, insecticides and herbicides).

- Members should understand and observe all regulations, Sustainable Winegrowing NZ requirements and protocols governing agrichemical use.
- Use approved agrichemicals only when justified, based on monitoring programmes or recognised standard practice.
- If using agrichemicals, have a drift management strategy, including using properly calibrated spray equipment.
- Make sure all staff involved have Growsafe training and certification and are aware of the safe, responsible and efficient practices and applications when handling agrichemicals, and that protective clothing and safety equipment are used.
- Store chemical products safely.
- Develop and maintain management plans to identify and monitor diseases, pests, and weeds and determine an action plan for the vineyard and winery.
- Maximise the time between last spray and harvest to minimise risk of residues.
- Ensure management strategies are designed to avoid pests developing resistance to the agrichemicals used.
- Follow relevant food safety regulations in the winery.
- In the winery, focus on minimisation, selection and safety of chemicals.

BY-PRODUCTS STANDARDS

The Sustainable Winegrowing NZ programme focuses on initiatives that promote the minimisation, reuse and recycling of by-products wherever possible, and the responsible disposal of waste.

- Make sure the collection, storage and disposal of by-products does not have any environmental impact.
- Comply with the NZ Winegrowers Management of Winery Waste Code of Practice.
- Initiate written procedures and train staff in the management and handling of by-products and waste.
- Members should be aware of various government, regional and industry initiatives for responsible waste management practices.
- Employ positive by-product and waste management initiatives including reusing and recycling packaging products and other waste where possible.

- Implement a waste recovery, reduction and recycling programme, and train staff in by-product management.
- Reduce the risk of spills of by-products, chemicals and petrochemicals.
- Prepare emergency and spills procedures.
- Train staff in emergency and spills procedures.

WASTEWATER

- Establish and monitor clean production and sound environmental practices for wastewater management and disposal.
- Comply with regulations, the NZ Winegrowers Code of Practice and local authority by-laws.
- Design and manage wastewater treatment systems to minimise any environmental impacts.
- Manage on-site wastewater systems (e.g. irrigation onto land) to minimise impacts on land and surrounds (e.g. monitoring soil conditions).
- Minimise cleaning additives to reduce environmental effects.
- Minimise water used in cleaning operations.
- Minimise water to reduce wastewater, recycle or reuse winery water where possible and limit water wastage.

PEOPLE STANDARDS

Sustainable Winegrowing NZ aims to protect the wellbeing of all those employed in New Zealand's wine industry by: encouraging training and education; promoting development of safe and happy workplaces; ethical and socially responsible employment and business practices; and positive contributions to local communities.

- Members must observe all New Zealand employment and immigration laws.
- Ensure contract workers meet the required standards of the vineyard or winery, and can provide evidence showing they comply with New Zealand immigration and employment laws, resource management obligations, council plans and codes of practice where relevant.
- Provide staff with training and education to encourage sustainable thinking and behaviour, beyond legal requirements. This helps to reduce costs and wastage, while increasing efficiency and positive environmental outcomes.
- Complete certified training courses.
- Have a thorough knowledge of the aims and principles of Sustainable Winegrowing NZ and a good understanding of the effects that grape and wine production can have on the environment, human health and safety.

BUSINESS STANDARDS

Sustainable Winegrowing NZ promotes the adoption of sustainable business models and good financial management through increasing operational efficiency and reducing costs. This allows ongoing reinvestment in people, businesses and the community.

- Members must comply with all laws and regulations governing: employment and labour relations, the environment, animal welfare and food safety.
- Comply with relevant Sustainable Winegrowing NZ codes of practice.
- Demonstrate compliance with the requirements of the Resource Management Act and regional, district or unitary plans as applicable.
- Keep appropriate records and documentation for audit purposes and to assist with: monitoring progress, decision making, ensuring staff are trained and informed, identifying and managing risks, demonstrating safe and effective practices, and minimising or addressing any issues.

Central to our sustainability policy is a commitment to keep improving, as new research is undertaken and new technologies are developed. The New Zealand wine industry is actively involved in both of these areas, with an ongoing leadership role in research and development projects. Looking to the future, we will continue to protect the places that make our exceptional wines.

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