

**WWTG SUSTAINABILITY PROGRAMS**

Topic	Argentina	Australia	Canada (Ontario)	Chile	New Zealand	South Africa	United States (California)
<b>Site selection</b>	<p><b>Objective:</b> Canopy management in the vineyard, development of the crop, Environmental impact of the establishment and development of the vineyard.</p> <p><b>Methods:</b> Balancing vineyards, vineyard design and conduction system, study of the soil profile, management and corrections, environmental conservation, wildlife habitats</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To improve the property's / regions environmental values</p> <p><b>Methods:</b> Environmental Action Plan established to improve the property's / regions environmental values. Includes identification of environmental issues or values and actions proposed to address the issue or value and monitoring of the action, issues and values.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To help vineyards and wineries select a site that will optimize the quality of their grapes and wine while lowering their impact on the natural environment</p> <p><b>Methods:</b>                      *Research climate and environmental conditions                      *Research Site history                      *Prepare for frost damage risk                      *Soil testing and analysis</p> <p><b>Monitoring:</b>                      The expanded viticulture component to SWO is in development and highlighted in <b>italics</b>. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</p>	<p><b>Objective:</b> Consider the environmental and productive conditions of potential production sites, so that technical management and implemented practices will have the least impact on the environment.</p> <p><b>Methods:</b>                      Review previous evaluations of erosion, leaching, soil profile, and pH; conduct site assessments prior to construction of winery to determine environmental conditions; locate the winery in areas of low environmental impact and away from potential sources of contamination; adopt mitigation measures for facilities already constructed to prevent contamination</p> <p><b>Monitoring:</b>                      Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To consider winegrape quality and environmental concerns in choices for vineyard development or replant decisions.</p> <p><b>Methods:</b>                      Meet any conditions under the NZ Resource Management Act relevant to the region and site.</p> <p><b>Monitoring:</b>                      SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To manage all natural areas, as well as cultivated areas in such a way that all possible negative impacts on the environment are limited to a minimum or eliminated altogether.</p> <p><b>Methods:</b>                      New wineries need to conduct a full environment impact assessment study (EIA) and register all intended water usage with the South African Department of Water Affairs before developing starts. IPW requires that each farm should have an environment management plan which addresses the environmental risks of the farming activities, and which includes conservation of natural areas (where applicable).</p> <p><b>Monitoring:</b>                      Registered professional soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To address both winegrape quality and environmental concerns in vineyard development decisions.</p> <p><b>Methods:</b>                      Crop development (vineyard and trellis design, soil profile/properties, rootstocks, vine and row spacing, etc.); Environmental constraints on vineyard establishment (habitat conservation/creation)</p> <p><b>Monitoring:</b>                      Accredited third-party auditor verifies 20 sustainable viticulture practices.</p>

Variety selection

Argentina	Australia	Canada (Ontario)	Chile	New Zealand	South Africa	United States (California)
<p><b>Objective:</b> Selection of suitable varieties to climate and soil conditions and quality of production</p> <p><b>Methods:</b> Rootstocks selected in consultation with experts, taking into account soil conditions, vigor, disease and pest resistance. Certified planting material should be used.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To select root stocks to optimize quality and minimize use of inputs. Select planting material with known health status</p> <p><b>Methods:</b> Select Rootstocks, scion/cultivar, and clones based on scientific research; purchase planting material that meets the Australian Standard (In development). <b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To select varieties of grapes and other plant material that are viable on the selected sites, resistant to pests, and in-demand for the grape growing market in Ontario</p> <p><b>Methods:</b> *Research into grape varieties and viability in Ontario *Research into the Ontario grape growing market *Literature on grape variety and site suitability from the Grape Growers of Ontario</p> <p><b>Monitoring:</b> The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</p>	<p><b>Objective:</b> To select grape varieties adapted to the sites of production, which have a resistance to pests and diseases and deliver high quality grapes</p> <p><b>Methods:</b> Select plants accredited by SAG with known origin that are free of pests or disease; consider local conditions in selecting appropriate varieties; research prior planting materials</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To select varieties suited to the environment and for quality production.</p> <p><b>Methods:</b> Select high health material rootstocks and scion, preferably meets the NZW grafted grapevine standard</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To only use cultivars that can ensure economically viable crops of quality grapes with minimum intervention (i.e. well-adapted to local conditions).</p> <p><b>Methods:</b> Rootstocks should be selected in consultation with experts, taking into account soil conditions, vigor, disease and pest resistance, scion cultivar, previous rootstock on the soil, etcetera. Certified planting material should be used.</p> <p><b>Monitoring:</b> Registered professional soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To address both wine grape quality and environmental concerns in variety selection decisions.</p> <p><b>Methods:</b> Rootstocks, scion/cultivar, and clone decisions; Vine canopy management.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 20 sustainable viticulture practices.</p>

## Soil condition

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Knowledge and importance of soil, soil conservation and management</p> <p><b>Methods:</b> Management of soil fertility, nutrients, saline soils, wind erosion, water erosion.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To manage land and soil and minimize degradation, erosion and contamination.</p> <p><b>Methods:</b> Soil conservation and crop production practices chosen to minimize soil degradation, erosion and contamination; and to optimize soil organic matter and fertility relevant to the business enterprise.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To become stewards of the land, monitoring and maintaining the health of the soil so that our vineyards can yield high quality grapes for the current and future generations of winemakers</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>*Good pesticide and hazardous material handling procedures</li> <li>*Good drainage practices</li> <li>*Educational newsletter on soil quality</li> <li>*Sample and assess soil fertility and plant nutrition</li> <li>*Nutrient management planning</li> <li>*Implement best soil management practices</li> <li>*Preventing erosion ( cover crops, preventing compaction, reducing runoff, etc)</li> </ul> <p><b>Monitoring:</b> The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</p>	<p><b>Objective:</b> Use soil efficiently and responsibly, making it more productive and biologically fertile while minimizing erosion and reducing degradation</p> <p><b>Methods:</b> Select equipment to minimize compaction or avoid machinery altogether; monitor compaction; establish cover crops; monitor drainage; manage soil temperature; maintain soil moisture; minimize erosion; maintain floors of inter-rows; combat salinization; preserve soil structure; Frequent soil analysis and sampling; nutritional management plan; nitrogen guidelines; practical use of fertilizer; incorporation of organic matter and composting; Establish new vineyards on land with low risk of erosion and low risk of leaching through advanced research</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To monitor soil and plant nutrient status in the vineyard and implement soil management practices to maintain soil health.</p> <p><b>Methods:</b> Soil and plant nutrient status, nutrient management to plant needs, avoid leaching. Prevent soil erosion and compaction, use of cover crops, compost, mulches.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To maintain balanced and sustainable soils on production sites when determining the suitability of the terrain for viticulture.</p> <p><b>Methods:</b> Soil preparation and chemical adjustments or amelioration must be based on profile studies and analyses of representative sub and topsoil samples at an accredited laboratory and on expert recommendations. Soil preparation actions must not lead to secondary problems such as poor drainage, ploughing up of chemically or physically undesirable soil layers, erosion or disturbance of healthy soil microbes.</p> <p><b>Monitoring:</b> Registered professional soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To monitor soil and plant nutrient status in the vineyard and implement soil fertility best practices.</p> <p><b>Methods:</b> Soil and plant nutrient status, soil sampling, increasing fertility and conservation tillage; Preventing soil erosion, use of cover crops, compost.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 14 soil management practices.</p>

Water use efficiency

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Optimizing the efficiency of water use in vineyards and winery</p> <p><b>Methods:</b> Irrigation strategy, monitoring of water quality, irrigation system. Monitoring water consumption in cellar</p> <p><b>Monitoring:</b> Water consumption indicators in vineyard and winery. Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To optimize efficiency in water use in winery and vineyard operations.</p> <p><b>Methods:</b> Develop Water Management program:</p> <ul style="list-style-type: none"> <li>Water harvesting, extraction, storage, use and discharge occur in accordance with licences and permits;</li> <li>Irrigation requirements are determined using soil/growing medium, crop or weathering monitoring methods as applicable; and</li> <li>Water use is measured and reviewed;</li> </ul> <p>Documented strategy for improving water use efficiency in the winery, with routine inspections of water fixtures and annual water use targets.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To promote vineyards and wineries monitoring and measuring water use so they can identify opportunities to become more efficient in water usage and protect the quality of our source water</p> <p><b>Methods:</b> <u>Winery</u> *Planning and monitoring water use *Water conservation in winery operations (bottling, barrels, tank cleaning) *Water conservation through staff behavioral practices *Runoff prevention and stormwater management *Monitoring and improving, where necessary, drinking water quality *Educational material on water use (water and wastewater newsletter)</p> <p><u>Vineyard</u> *Rainfall monitoring *Irrigation practices</p> <p><b>Monitoring:</b> *Tracking sheets and Sustainability Self-Assessment Summary Reports. The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</p>	<p><b>Objective:</b> Conserve water resources – both surface and ground – in all areas of production through efficient irrigation and sustainable management methods</p> <p><b>Methods:</b> Develop program to protect available water resources; combat water leakage in system; conduct biannual biological and chemical analysis of irrigation water; perform annual maintenance of irrigation equipment; implement flow measurement system; avoid excessive water application by evaluating plant and soil needs carefully in advance; Conduct biannual water consumption analyses with recommendations for improvements; assess water use annually to ensure compliance with law; establish system to monitor water flow; prioritize dry cleaning systems; conduct training sessions to educate staff on water use; Establish a water reuse system; implement a cleaning system which conserves water; develop signage promoting water conservation; design winery landscaping to be water efficient; use recycled water to irrigate winery plantings; landscape with plants that demand little water; water in times of low heat to reduce water loss from evaporation; Develop plan to reduce water consumption in offices; involve workers in saving water</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> -Effective use of water through measure and monitor of water use, use irrigation techniques and timing to meet plant needs and quality. Manage vineyard and winery operations for efficacy.</p> <p><b>Methods:</b> <u>Vineyard</u> – Water budgeting; weather data <u>Winery</u> – Irrigation and fertigation design and management, water allowance met, scheduling, maintenance, records of use, amounts. <u>Winery</u> – Winery water allowances met, monitoring and records, systemized checks and maintenance, staff training for conservation and improve discharge water quality. Reuse and recycle encouraged.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits.</p>	<p><b>Objective:</b> To increase water use efficiency and subsequent reduction of water loss.</p> <p><b>Methods:</b> <u>Vineyard</u> – Irrigation scheduling must be done in accordance with the water retention ability of the soil, the physiological stage of the vineyard, the crop factor and climatic conditions. Recognised techniques/equipment should be used to determine water requirement of vines and all applications must be recorded. <u>Winery</u> – To manage winery water usage and the potential financial and environmental impacts effectively and to make provision for improvement, it is important for cellar managers to know how wastewater is generated and what management options are available to minimise impacts and meet legislative requirements.</p> <p><b>Monitoring:</b> Registered professional soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To measure and monitor water use, use irrigation techniques and timing to conserve water, and manage irrigation system and/or winery operations for efficacy.</p> <p><b>Methods:</b> <u>Vineyard</u> – Water strategy and conservation; Water quality testing; Irrigation and fertigation (setup and maintenance, scheduling, amount, etc.). <u>Winery</u> – Winery water planning, monitoring, goals and results (water audit, wells, wastewater ponds, septic systems, storm water, etc.); Water conservation per major operation (barrel washing, tank cleaning, bottling, landscaping, etc.) and improve discharged water quality.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 13 sustainable vineyard water practices and 16 sustainable winery water practices.</p>

Wastewater

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Reduce water waste in farm and winery. Compliance with the regulations for waste effluent. Effluent Reuse</p> <p><b>Methods:</b> Efficient irrigation in vineyards. Effluent treatment in winery.</p> <p><b>Monitoring.</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> Water is managed to minimize its discharge, minimize environmental harm and improve discharged water quality.</p> <p><b>Methods:</b> Water is managed to reduce environmental harm by:</p> <ul style="list-style-type: none"> <li>• assessing risk to cause soil degradation by increasing soil salinity, soil acidity, soil alkalinity or soil acidity;</li> <li>• Water is treated to avoid soil degradation;</li> <li>• Water discharge is treated/managed to minimize environmental harm; and strategies are implemented to prevent contamination and sedimentation of water sources.</li> </ul> <p>Winery water planning, monitoring, goals and results (wastewater ponds, septic systems, storm water, etc.) Groundwater monitoring, management of wastewater disposal sites; irrigation records kept and water, nutrient and salt budgets developed and used when wastewater used for irrigation.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To educate vineyards and wineries about the correct management of wastewater by handling and treating it correctly</p> <p><b>Methods:</b> *Monitoring and planning wastewater reductions *Education on wastewater treatment options *Inspection and maintenance of equipment *Water conservation and recycling programs (eg. Reusing rinse water) Staff education on correct use of septic systems) *Educational material on wastewater treatment (water and wastewater newsletter)</p> <p><b>Monitoring:</b> *Tracking sheets and Sustainability Self-Assessment Summary Reports.</p>	<p><b>Objective:</b> Generate the least amount of wastewater in all operations and protect waterways receiving discharge from contamination.</p> <p><b>Methods:</b> Discharge wastewater of the winery in a law-abiding manner that prevents contamination; conduct assessments to ensure that wastewater treatment system of winery complies with national law; Prohibit discharge of pollutants into water system</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To manage winery operations to minimize impact on the receiving environment through clean production and control and limitation of waste water</p> <p><b>Methods:</b> NZWCOP winery waste management checklist, Winery wastewater allowances, design records, monitoring and amounts, analysis records, systemized checks and maintenance, staff training and procedures for cleaner production and improve discharge water quality. Reuse and recycle encouraged.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits.</p>	<p><b>Objective:</b> To facilitate the development of winery-specific wastewater management plans that comply with environmental legislation and which also meet the requirements of IPW.</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>• Monitoring wastewater quantity. (Water meter / weekly records.)</li> <li>• Monitoring wastewater quality. (Records of monthly analysis by accredited labs / regular sampling before disposal or irrigation.)</li> <li>• Best practice for storing of wastewater. (Containment dam size / soil study to prove suitability of soil and irrigation area size.)</li> <li>• Best practice for disposal of wastewater. (Formal agreement with local authority / General Authorization for Water Affairs.)</li> </ul> <p><b>Monitoring:</b> Registered professional winemakers; soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To manage winery operations to improve discharged water quality and to reduce wastewater.</p> <p><b>Methods:</b> Winery water planning, monitoring, goals and results (wastewater ponds, septic systems, storm water, etc.); Water conservation per major operation (barrel washing, tank cleaning, bottling, landscaping, etc.); Use of a Winery Water Guide (separate educational and self-assessment resource on best management of winery wastewater).</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 16 sustainable winery water practices.</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Bio-diversity</b>	<p><b>Objective:</b> Maintaining ecosystem integrity. Maintain biodiversity at regional level</p> <p><b>Methods:</b> Maintenance and preservation of native flora and fauna. Integration of production processes to the ecosystem</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To manage biodiversity at the vineyard and region.</p> <p><b>Methods:</b> Establish a Biodiversity Management Program to protect areas of biodiversity identified through mapping and manage feral animals, invasive species, pest, environmental weeds and diseases on the property. Strategies and practices are developed with consideration of regional biodiversity priorities.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental.</p>	<p><b>Objective:</b> To understand that the vineyard is a part of the natural ecosystem and take action to protect the life and the natural cycles in that ecosystem.</p> <p><b>Methods:</b> *Maintaining natural native habitat on site (such as buffer strips and wetlands) *Nutrient management planning *Working with local authorities to protect and restore habitat</p> <p><b>Monitoring:</b> The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</p>	<p><b>Objective:</b> Protect natural ecosystems and recover degraded areas, especially those not suitable for grape growing</p> <p><b>Methods:</b> Avoid planting in existing ecosystem areas; maintain continuous plant corridors in areas adjacent to the vineyard which promote biodiversity; reduce drift of agrochemicals and dust; consider conservation or recovery through practices like reforestation; forbid the extraction of endangered species</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To maintain and encourage biodiversity at the vineyard and regional scale</p> <p><b>Methods:</b> Integration of ecosystem process and winegrowing practices, eg interow cover, native plantings/habitat, wetlands, riparian areas, nest sites, etc. Control of introduced species.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits.</p>	<p><b>Objective:</b> To protect and conserve South Africa's unique natural heritage whilst maintaining living, productive landscapes.</p> <p><b>Methods:</b> This is achieved by protecting our soil and water resources and by addressing key impacts on these resources, including:</p> <ul style="list-style-type: none"> <li>Protecting endangered fauna and flora</li> <li>The management of alien invasive plants species. (Identifying invasive species and clearing plans).</li> <li>Fire Management. (Guarding against the too-frequent fires within these systems; firefighting plan; fire breaks; fire intervals; permission to burn, etc.)</li> <li>Halting the ongoing destruction and pollution of wetland and river systems. Threatened ecosystems, especially lowland vegetation types, rivers &amp; wetlands, are protected by law and may not be disturbed, degraded or developed without special permission from the relevant authorities.</li> </ul> <p><b>Monitoring:</b> Registered professional soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To maintain ecosystem integrity and sustain biodiversity at the vineyard and regional scale.</p> <p><b>Methods:</b> Define resource base to be managed; Integration of ecosystem process and winegrowing practices (nest boxes, hedgerows, maintain riparian areas, etc.); Effect of winegrowing practices on environmental quality (sensitive species, habitat conservation, etc.).</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 20 ecosystem management practices.</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Solid waste</b>	<p><b>Objective:</b> Reduce the amount of material generated in the operations of vineyard and winery. Improve the health and safety of people on site and minimize risk contact with the environment. Replace, reduce or eliminate the use of hazardous substances and hazardous waste generation can also reduce the risk of liability.</p> <p><b>Methods:</b> Reduction, reuse, and recycling of solid waste in vineyard and winery. Planning, monitoring, objectives and results, housekeeping, waste containers, storage and disposal of chemicals and hazardous waste, tires, batteries, lubricants, oils, coolants and solvents, paints and paint thinners, aerosols, lamps, fuel storage. Recycling</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To reduce solid waste and minimize the environmental impacts of its production</p> <p><b>Methods:</b> A Waste Management Plan that documents waste types generated by winery activity and methods used for minimizing, reusing, recycling, storing and disposing of wastes in approved off-site disposal facilities. Suppliers provide packaging materials that are recyclable, reusable or returnable Waste that will not be reused or recycled is disposed of in approved off-site facilities. Records of disposal of controlled wastes are kept.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental. National Packaging Covenant; State Environmental Protection Regulation</p>	<p><b>Objective:</b> To help vineyards and wineries manage their solid waste generation by monitoring its production and identifying and implementing opportunities to divert waste from landfill</p> <p><b>Methods:</b> *Monitoring the quantity and composition of solid waste *Developing action plans and targets to reduce solid waste *Encouraging staff involvement and engagement *Identifying best practices in winery waste reduction (pomace, glass, paper, plastic, etc.) *Educational material through a Waste Management newsletter</p> <p><b>Monitoring:</b> * Offered free waste audits to some vineyards and wineries through local educational institutions *Tracking sheets and the Sustainability Self-Assessment Summary Report</p>	<p><b>Objective:</b> Minimize the potential impacts on environmental and human health from solid waste disposal</p> <p><b>Methods:</b> Promote waste reduction, reuse, and recycling in vineyard; evaluate the contracted services transporting and processing vineyard waste; record the tally of waste produced and sources of waste; develop comprehensive waste management plan to reduce procurement of products with harmful environmental impacts; curtail excessive accumulation of waste; train workers to promote safe waste disposal; provide specific recycling containers on-site, including compost; forbid garbage burning on premises; transfer waste only to those legally authorized; Promote organic waste reduction and reuse; Implement plan to properly sort and recycle winery waste; prioritize products using reusable packing; reuse waste byproducts in construction projects; Prioritize products with less environmental impact; Products which could create contamination must be recycled if possible; surplus materials should not be wasted but returned or resold; Responsibly manage waste coming from company offices; create a plan for collecting and recycling waste; promote best practices in post-consumer phase</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> Minimize the potential impacts on the receiving environment from solid waste disposal.</p> <p><b>Methods:</b> Promote waste reduction, reuse, and recycling in vineyard/winery. Monitoring and measures of waste generated and disposal options used and amounts recorded.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits.</p>	<p><b>Objective:</b> To understand the amount and type of solid waste generated per operation (cellar; bottler or farm) and how to avoid, reduce and possibly recycle the solid waste.</p> <p><b>Methods:</b> The inappropriate disposal of winery solid waste can have a significant impact on the environment. However, the treatment and re-use of this material can also have environmental benefits. The management of solid waste is governed by legislation - not only by the IPW guidelines. Guidelines by Van Schoor (2005) for responsible management of solid waste are available from the Winetech website at <a href="http://www.winetech.co.za">www.winetech.co.za</a>. Farmers are incentivized to recycle as much waste as possible.</p> <p><b>Monitoring:</b> Registered professional winemakers; soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To understand the amount of solid waste generated per major operation and how to reduce solid waste.</p> <p><b>Methods:</b> Solid waste reduction planning, monitoring, goals and results (solid waste audit, procurement, packaging, production, etc.); Solid waste generated per major operation (glass, cardboard, pomace, paper, etc.).</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 15 solid waste management practices.</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Energy use</b>	<p><b>Objective:</b> Reduce energy consumption in vineyard and winery,</p> <p><b>Methods:</b> Planning, monitoring, goals and results. Use of clean energy where possible</p> <p><b>Monitoring:</b> Energy consumption indicators in vineyard and winery. Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> Energy efficiency is optimized throughout the production system.</p> <p><b>Methods:</b> Electricity and fuel consumption is reviewed and efficient operating practices for machinery and equipment are identified and implemented.</p> <p>Machinery and equipment servicing and maintenance records are kept and energy efficiency is considered in the selection and design of new machinery and equipment.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To help our vineyards and wineries build and monitor, and implement a plan to reduce energy use and invest in energy saving technologies.</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>*Monitoring energy use and identifying opportunities to reduce</li> <li>*Identifying best practices for energy use in winery operations such as refrigeration, HVAC, lighting, sustainable power,</li> <li>*Promoting behavioural practices to reduce energy use</li> <li>*Identifying government incentive programs to help invest in energy efficiency</li> <li>*Educational newsletter on energy efficiency and renewable energy</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>*A report identifying energy benchmarks for the wine industry</li> <li>*Offered free energy audits to some vineyards and wineries through local educational institutions</li> <li>*Tracking sheets and the Sustainability Self-Assessment Summary Report</li> </ul>	<p><b>Objective:</b> Reduce energy consumption through more efficient practices and improved technologies, and favor the utilization of cleaner energy sources when possible</p> <p><b>Methods:</b></p> <p>Optimize energy and fuel consumption in vineyards; monitor energy usage; set reduction goals; maintain equipment according to manufacturer specifications; prioritize new equipment which saves energy; investigate renewable energy feasibility; Conduct a professionally-run energy efficiency audit every two years with specific measurements and suggested areas for improvement; develop master plan for energy saving with biannual updates; train workers in optimal energy use; conduct feasibility studies for renewable energy; Design or modify structures to take advantage of natural light; prioritize energy-efficient lighting; install sensor system to control lighting when not needed; light only necessary work spaces; Incorporate passive heating and cooling techniques in building design; install temperature control in HVAC systems; avoid unnecessary heating and cooling in underused areas; use automatic temperature controls; develop independent control mechanisms for various heating and cooling needs; Maintain equipment according to manufacturer specifications; prioritize new equipment which saves energy; favor reuse of existing structures; thermally insulate components of winery; Develop plan to reduce energy consumption in offices; involve workers in conserving energy</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To measure and monitor energy use, to demonstrate effective and economic use.</p> <p><b>Methods:</b> Measure and monitoring energy use. BEST tool for individual modeling of efficiency in winery operations/ systems. Industry wide benchmarking.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits.</p>	<p><b>Objective:</b> To measure and monitor energy use, to change where necessary to improve efficiency, reduce carbon footprint and reduce costs.</p> <p><b>Methods:</b> The cellar and farm must keep record of monthly energy usage applicable to winery and farming operations (including transport of grapes to the cellar). To measure continual improvement of energy use efficiency, the following records are regarded as the most important:</p> <ul style="list-style-type: none"> <li>• Electricity usage (kWh)</li> <li>• Diesel usage (Liters)</li> <li>• Petrol usage (Liters)</li> <li>• Liquid Petroleum Gas (LPG) usage (kg)</li> <li>• Any other fuels (e.g. coal, furnace oil, etc.) (Kg or Liters).</li> </ul> <p><b>Monitoring:</b> Registered professional winemakers and environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To measure and monitor energy use, set energy conservation targets, and execute energy saving measures.</p> <p><b>Methods:</b> Energy efficiency planning, monitoring, goals and results (energy audit, measuring and tracking energy used); Energy efficiency and conservation per major operation (refrigeration, tanks and lines, motors, drives and pumps, lighting, etc.); Alternative power and fuels.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 10 energy efficiency practices (vineyards and wineries).</p>



Air quality

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Limit emissions of pollutants, gases or particles emitted during cultivation, harvesting and industrial process</p> <p><b>Methods:</b> Planning, monitoring, goals and results. Implement new practices to reduce powder and gas emissions. Management and training staff to develop care regarding air quality.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> Manage air quality.</p> <p><b>Methods:</b> An Air Quality Management Program is documented, including issues to be addressed and management methods. The Air Quality Management Program is reviewed and updated annually. On-site composting is managed to reduce dust and odour</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental</p>	<p><b>Objective:</b> To educate vineyards and wineries about how their operations impact local and global air quality issues and help vineyards and wineries identify means of reducing their impact.</p> <p><b>Methods:</b>            *Energy efficiency &amp; wastewater planning and monitoring            *Community relations programs            *Appropriate handling and use of pesticides and other hazardous substances            *Selection and maintenance of equipment            *Educational newsletter on air quality</p> <p><b>Monitoring:</b>            * Sustainability Self-Assessment Summary Report</p>	<p><b>Objective:</b> Maintain high levels of air quality and mitigate contamination from activities.</p> <p><b>Methods:</b> Follow norms of Chilean Law 19.300 (General Basis of the Environment), which requires projects to preserve high levels of air quality, or, in the case of significant adverse impacts, to conduct a Study of Environmental Impact.</p> <p>Using less agrochemicals.</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> Maintain high levels of air quality and avoid and mitigate contamination from activities.</p> <p><b>Methods:</b> Meet NZ and regional air quality standards, monitoring, minimize, risk assessment and planning. Maintainance records.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To maintain air quality according to legal standards</p> <p><b>Methods:</b> Prevent dust by not cultivating soil when too dry or windy; do not apply agrochemical sprays when too windy; regular maintenance of all vehicles and machinery to limit air pollution.</p> <p><b>Monitoring:</b> Registered professional winemakers and environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To understand how emissions from the vineyard and/or winery operation impact local, state and global air quality, and to implement conservation practices to reduce emissions.</p> <p><b>Methods:</b> Air quality planning, monitoring, goals and results; Emission sources and opportunities for emission reductions by major operation (vineyard floors, pest management, unpaved surfaces, chemicals, etc.).</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 10 air quality practices (vineyards and wineries).</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Neighboring land use</b>	<p><b>Objective:</b> Develop the vineyard and winery activities so as not to affect the neighbors</p> <p><b>Methods:</b> Planning the relationship with the neighbors. Monitor the impact of transports, noise, dust emission, etc.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To conduct vineyard and/or winery activities to minimize impacts on neighboring land use activities.</p> <p><b>Methods:</b> Site inspections, development of environmental management plan that documents and records possible areas of conflict and mitigation strategies.</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental. Meet Local and State regulations</p>	<p><b>Objective:</b> To promote good relationships with the community by engaging in practices that will not interfere with neighbour's enjoyment of their land</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>*Building a plan to effectively receive and respond to complaints</li> <li>*Good management of winery resources (storm water, irrigation water, fertilizers and other soil amendments, and pesticides)</li> <li>*Best winery practices to reduce nuisance to neighbours (odour, noise, vibration, etc.)</li> <li>*Effective communication with neighbours</li> <li>*Educational newsletters about Community and Neighbour relations</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>* Sustainability Self-Assessment Summary Report <i>The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</i></li> </ul>	<p><b>Objective:</b> Conduct business activities with an awareness of impact on the environment, the community, and public health</p> <p><b>Methods:</b> Comply with current legislation regarding appropriate distance for hazardous waste storage facilities to ensure it is stored safely away from the surrounding area; Conduct site assessments prior to construction of winery to determine environmental conditions; locate the winery and production facilities in areas of low environmental impact; adopt mitigation measures for facilities already constructed to prevent contamination; Diagnose major environmental impacts caused by company; comply with national environmental legislation; create an environmental management system; develop a statement of environmental principles; Assist local administration in implementing community development projects to enhance residents' quality of life; communicate with members of the community and integrate their input when planning activities or new facilities; develop projects which directly benefit the surrounding community</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> Business activities do not impact on neighbours.</p> <p><b>Methods:</b> Comply with NZ standards ( noise, emissions, air quality , waste management), and NZW COP for neighbor relations including monitoring and managing issues .Processes in place to consider neighbor feedback and concerns.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> Minimize impacts of farming and winery activities on neighbours</p> <p><b>Methods:</b> Avoid fertilizer and agrochemical run-off into water sources; avoid spray drift of agrochemicals (do not spray when too windy, plant windbreaks to catch spray drift); service vehicles and machinery regularly to avoid air and noise pollution; manage disposal of winery wastewater and solid waste so as not to cause pollution or bad odors; regulate tourism activities around winery so as not to be a nuisance to neighbours.</p> <p><b>Monitoring:</b> Registered professional winemakers and environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To understand how the vineyard and/or winery may impact neighbors to minimize the impact and to be good neighbors.</p> <p><b>Methods:</b> Neighbor relations planning, monitoring, goals and results; Awareness of neighbor issues (noise, traffic, light, erosion, air quality, etc.) and processes in place to consider neighbor feedback and concerns.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 14 neighbor and community practices (vineyards and wineries).</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Agrochemical use</b>	<p><b>Objective:</b> Minimize the use of agrochemicals. Reducing the environmental impact of agrochemicals. Compliance with regulations for the use of agrochemicals. Compliance with commercial standards on pesticides residues.</p> <p><b>Methods:</b> Planning, monitoring, goals and results Integrated Pest Management: Pest monitoring. Disposal of pesticides containers</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To minimize the application of agrochemicals</p> <p><b>Methods:</b> Select pest and disease control strategies that minimize risk to the environment through pest and disease monitoring, preventative pest and disease control programs. Purchase chemicals from Agsafe accredited suppliers Train workers who store, apply or handle chemicals; Use chemicals according APVMA and label use; Establish mixing areas and disposal plan Record all chemical, fertiliser and soil applications</p> <p><b>Monitoring:</b> Accredited third-party auditor through Freshcare™ Environmental. Meet Local and State regulations</p>	<p><b>Objective:</b> Use an integrated approach, by chemical, cultural and biological means, to manage pests on landscaping areas. <i>The vineyard component will expand this section to include the management of pests throughout the vineyard property.</i></p> <p><b>Methods:</b> *Pesticide handling and storage *Use of pesticides safely *Disposal of pesticides and their containers *Scouting and monitoring pest damage *Integrated pest management practices *Pesticide resistance prevention</p> <p><b>Monitoring:</b> * Sustainability Self-Assessment Summary Report * <i>The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</i></p>	<p><b>Objective:</b> Minimize the application of agrochemicals in order to reduce their negative impacts on environment</p> <p><b>Methods:</b> Prioritize biological and cultural resources for weed management over agrochemicals; Limit use of agrochemicals for pest control; Promote alternative approaches to disease management besides agrochemicals; Apply pesticides with a trained professional; conduct environmental assessments prior to application; develop management plan for agrochemicals; prevent the use of banned products; develop management plan for used containers; Design and manage chemical storage facilities to reduce accidents and negative environmental impacts; safely store and monitor agrochemicals and toxic substances according to industry standards; keep fertilizer stored separately</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> Pest management practices are in place with priority to natural, cultural and biological control methods, with the aim of minimizing agrochemical use.</p> <p><b>Methods:</b> Pests (invertebrates, diseases, weeds, vertebrates) are identified and monitored Integrated management strategies used. Agrichemicals if used are justified, selected for least harm to human and environment and beneficial species. Records, rates, timing, targeted. Safe storage, and application. No off target. Staff training.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To apply all feasible management practices and control measures to control pests and diseases, and to eliminate chemical control as far as possible or to apply it more judiciously.</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>All pests (insects, nematodes and mites) are to be monitored</li> <li>Use biological control or other alternatives to full cover chemical sprays where possible.</li> <li>Diseases are still mostly controlled preventatively, but use forecasting models to spray only after infection periods where possible.</li> <li>Weed management – Mechanical cultivation harmful to soil structure should be avoided; establish cover crops to reduce the use of herbicides.</li> <li>Select registered products with the lowest impact on the environment according to coding by the AgChem Environmental Work Group.</li> <li>Adhere to all legal requirements for safe storage, handling and application of agrochemicals.</li> </ul> <p>Guidelines for the control of individual pests and diseases are discussed separately. Monitoring according to guideline specifications and alternative pest control practices (trunk barriers, natural enemies, etcetera.) are evaluated, as well as the spray record.</p> <p><b>Monitoring:</b> Registered professional viticulturists; soil &amp; environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To manage pests by combining biological, cultural and chemical tools in a way that minimizes economic, health, and environmental risks.</p> <p><b>Methods:</b> Insect and mite monitoring/ management; Disease monitoring/ management; Weed monitoring/ management; Vertebrate monitoring/ management; Pesticide application/safety</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 38 integrated pest management practices.</p>

Human resource management

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Ensure safe working conditions for staff. enabling its development</p> <p><b>Methods:</b> Strategies for personal selection, capacitation, development. Human relations strategy.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>		<p><b>Objective:</b> <i>To ensure that workers at all wineries and vineyards provide a safe work environment for their employees</i></p> <p><b>Methods:</b>            * Proper handling and disposal of all hazardous materials            * <i>Follow all Health and Safety laws in Ontario</i>            * <i>Prevent heat stroke and other weather related health issues in vineyard worker</i></p> <p><b>Monitoring:</b>            *Sustainability Self-Assessment Summary Report            * <i>The expanded viticulture component to SWO is in development and highlighted in italics. These issues are currently addressed in the Viticulture Addendum to the Canada-Ontario Environmental Farm Plan.</i></p>	<p><b>Objective:</b> To incorporate human resources as an important part of sustainability, and to give employees opportunities to participate in management decisions and provide them with health, safe conditions in which to work</p> <p><b>Methods:</b> Ensure all elements of new standards are accessible to all vineyard staff; implement a training program for workers regarding sustainable vineyard practices, required before beginning work; Train worker in energy saving measures through daily tasks; Utilize natural light whenever feasible to improve worker comfort and productivity in winery; Regulate heating and cooling for more comfortable work environment; Provide staff with safety information for toxic products; reduce employee exposure to contaminants; equip facility with proper safety materials; develop emergency response system; Prohibit forced labor and child labor; Train staff in ethical principles of company; Provide environmental education to staff to empower them to be better caretakers; Promote non-discrimination among staff; develop a special program to hire those with disabilities; provide special working conditions for expectant mothers; eliminate wage gaps between men and women; punish and prevent sexual harassment; Create mechanisms to incorporate suggestions from employees in order to involve them in the improvement of the company; Formalize statement permitting organized labor groups; forbid discrimination against those in labor groups; create communication channels between company management and labor representatives; Follow hours stipulated in work contracts; pay overtime labor according to labor legislation; create additional benefits when applicable; Facilitate education and training for employees; conduct assessments of occupational competency and address gaps through targeted training; develop a system to recognize outstanding employee performance; establish a procedure for internal employee mobility; Ensure a safe, contamination-free workplace; establish a risk prevention program with a trained professional; develop standard procedures to follow in the case of accidents; involve workers in discussions of occupational safety and work conditions; Conduct annual work environment surveys; encourage healthy lifestyles for employees; establish drug treatment program; ensure all workers have some form of public or private health coverage; Offer voluntary severance programs; provide support for those recently laid off; consider additional retirement benefits; create a policy to limit lay-offs whenever possible</p> <p><b>Monitoring:</b>            Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> To provide a healthy, safe and effective work environment.</p> <p><b>Methods:</b>            Meet NZ Employment and Health and Safety regulations;            Staff training including safety records and monitoring.</p> <p><b>Monitoring:</b>            SWNZ annual certification and independent third party audits</p>	<p>Currently managed by WIETA (Wine Industry Ethical Trade Association) and verified by third-party auditors. To be incorporated under the IPW Scheme.</p>	<p><b>Objective:</b> To improve understanding of human resource practices as they relate to sustainability and to promote a healthy, safe and effective workforce.</p> <p><b>Methods:</b>            Human resource planning, monitoring, goals and results; Employee training and safety; Employee incentives and rewards</p> <p><b>Monitoring:</b>            Accredited third-party auditor verifies 16 human resources practices (vineyards and wineries).</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Social and cultural values</b>	<p><b>Objective:</b> The company members become aware about their social and environmental responsibility.</p> <p><b>Methods:</b> Development of company culture. Education of employees, their families and community about social and environmental issues.</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>		<p><b>Objective:</b> To educate and engage vineyards and wineries, management and their staff about sustainability so sustainability is integrated into company culture</p> <p><b>Methods:</b>            *Engaging employees in sustainability initiatives            *Assigning responsibility to staff            *Building support from winery ownership</p> <p><b>Monitoring:</b>            * Sustainability Self-Assessment Summary Report</p>	<p><b>Objective:</b> Conduct business activities with an awareness of impact on the environment, the community, and public health</p> <p><b>Methods:</b>            Develop environmental education activities targeted for the community to empower them to be caretakers of the environment; Maintain communication with community and local authorities; initiate or assist projects which improve the quality of life for the community inhabitants; reduce negative impacts on community; facilitate participation of employees in contributing to community projects; support work of local educational institutions; develop ethical code and disseminate to all those involved in the company's operations; prohibit the use of forced or child labor at company or by suppliers; institute protocol for reporting dishonest actions; prohibit discrimination according to sex, race, age, religion or disability; punish sexual harassment; accommodate those with disabilities and expectant mothers; involve workers in the overall management plan of company; prioritize education and advancement of workforce; create a safe work environment and promote worker well-being; continually monitor the implementation of the practices and take corrective measures when needed</p> <p><b>Monitoring:</b>            Certification System of Wines of Chile through independent certification agencies.</p>		<p>Currently managed by WIETA (Wine Industry Ethical Trade Association) and verified by third-party auditors. To be incorporated under the IPW Scheme.</p>	<p><b>Objective:</b> To understand how the vineyard and/or winery may impact neighbors and the community to minimize the impact and to be good neighbors; and to improve understanding of employee best practices as they relate to sustainability and to promote a healthy, safe and effective workforce.</p> <p><b>Methods:</b>            Neighbor relations planning, monitoring, goals and results; Awareness of neighbor issues (noise, traffic, light, erosion, air quality, etc.) and processes in place to consider neighbor feedback and concerns; Human resource planning, monitoring, goals and results; Employee training and safety; Employee incentives and rewards.</p> <p><b>Monitoring:</b>            Accredited third-party auditor verifies 14 neighbor and community best practices and 16 human resources best practices (vineyards and wineries).</p>

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<b>Ethics</b>	<p><b>Objective</b> Develop ethical principles within the company. Ethical relations with employees, suppliers and community</p> <p><b>Methods:</b> Social responsibility system</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>		<p><b>Objective:</b> To help vineyards and wineries build a plan to address the environment, social and economic aspects of sustainability</p> <p><b>Methods:</b> Provide the resources and educate vineyards and wineries so they can make informed decisions in their winemaking process</p> <p><b>Monitoring:</b> *Sustainability Self-Assessment Summary Report</p>	<p><b>Objective:</b> Develop and implement ethical principles within the company that guide all decisions, humanize the company and motivate all its employees to become socially and environmentally responsible.</p> <p><b>Methods:</b> Conduct ethical business with all associated with enterprise; create a publically accessible code of ethics to establish company principles; disseminate code to entire staff; comply with laws regarding corruption; prohibit collusion or predatory practices; follow international labor standards; Train and educate staff regarding ethical principles, and reach out to new hires; develop group to promote ethical principles within company; Ensure suppliers comply with ethical principles, especially labor legislation; Institute procedures to govern interactions with suppliers in ethical manner; Select suppliers through objective process; Assist suppliers in developing a more efficient management model; attempt to include local suppliers; Ensure all subcontractors comply with labor legislation for their own employees and provide quality working conditions; Require respectful and law-abiding interaction between employees and government agencies; develop protocol for reporting dishonest actions by government officials; Develop communication policy that aligns with company ethical principles; promote responsible consumption of wine in advertising; use only honest marketing techniques; engage in fair advertising campaigns; Prohibit unethical sales practices such as deception or bribery; inform all members of the sales team of company's ethical policies; customer privacy must be respected in regards to personal information</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>		<p>Currently managed by WIETA (Wine Industry Ethical Trade Association) and verified by third-party auditors. To be incorporated under the IPW Scheme.</p>	<p><b>Objective:</b> To create a sustainable vision and mission for the vineyard and/or winery that includes balancing the 3E's of sustainability (environment, economics and social equity) in all decision-making.</p> <p><b>Methods:</b> Balance environmental, economic and social considerations in decision-making for all 227 sustainability practices covered in the program.</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies adoption of best management practices (vineyards and wineries).</p>

## Suppliers

	Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
	<p><b>Objective:</b> encourage suppliers with sustainable practices.</p> <p><b>Methods:</b> Suppliers development. Agreements with suppliers. Environmental criteria in contacts</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> To ensure suppliers are also committed to reducing the impact on the environment.</p> <p><b>Methods:</b> Purchase chemicals from Agsafe accredited suppliers. Work collaboratively with suppliers to reduce the environmental footprint of packaging material Establish environmental requirements in supplier contracts.</p> <p><b>Monitoring:</b> WFA/WISA Code of Practice</p>	<p><b>Objective:</b> To discuss the environmental and human health impacts of purchased products and services with suppliers and consider these issues when making purchasing decisions.</p> <p><b>Methods:</b> *Discuss products with suppliers and contractors *Discuss packaging with suppliers</p> <p><b>Monitoring:</b> *Sustainability Self-Assessment Summary Report</p>	<p><b>Objective:</b> Involve suppliers in the task of achieving sustainability in their activities, while conducting ethical and transparent business transactions with suppliers.</p> <p><b>Methods:</b> Develop a strategy to procure products with minimal disposable packaging in wineries, and share waste-reduction strategy with suppliers; Disseminate internal ethical principles to all suppliers; require suppliers to meet labor laws and uphold labor contract terms; document all transactions to provide transparency; Select suppliers through objective process; Assist suppliers in developing a more efficient management model; attempt to include local suppliers; Apply an environmental criteria when selecting supplies or services for vineyards</p> <p><b>Monitoring:</b> Certification System of Wines of Chile through independent certification agencies.</p>	<p><b>Objective:</b> Members use and encourage suppliers with sustainable credibility and goals.</p> <p><b>Methods;;</b> Suppliers meet the NZW Environment standards and employment standards and preferred sustainable accreditations.</p> <p><b>Monitoring:</b> SWNZ annual certification and independent third party audits</p>	<p><b>Objective:</b> To minimize environmental impacts related to activities, products and services of external service providers</p> <p><b>Methods:</b> Producers are encouraged to conduct an environmental risk assessment as integral part of its environmental management plan to ensure responsible selection of service providers. For example, waste removal organizations must be in possession of valid permits from the relevant authorities for removal, transport and disposal</p> <p><b>Monitoring:</b> Registered professional winemakers and environmental scientists accredited by the Wine and Spirit Board as third-party auditors, verify and certify sustainable viticulture and viticulture practices according to IPW Guidelines.</p>	<p><b>Objective:</b> To improve or develop a purchasing policy that includes consideration of environmental and human health impacts of products in purchasing decisions and to work with suppliers to reduce the impact of their products on the environment.</p> <p><b>Methods:</b> Environmentally preferred planning, monitoring, goals and results; Purchasing impacts by operation (paper, packaging, cleaning, plant equipment, glass, corks, etc.).</p> <p><b>Monitoring:</b> Accredited third-party auditor verifies 14 environmentally preferred purchasing practices (vineyards and wineries).</p>

Community

Argentina	Australia	Canada	Chile	New Zealand	South Africa	United States
<p><b>Objective:</b> Understanding of the social role of company in the relation with the community.</p> <p><b>Methods:</b> Maintain contact with neighbors. Collaborate in actions that result in their benefit (education, health care, infrastructure needs)</p> <p><b>Monitoring:</b> Sustainability Self-Assessment Protocol. The item can be linked to any management system standard of sustainability</p>	<p><b>Objective:</b> Increase awareness of up-to-date medical advice in relation to alcohol consumption and pregnancy; promote awareness of responsible consumption generally.</p> <p><b>Method:</b> Provision of graphic for use on the back label of all bottles produced by Australian winemakers with website reference that links to general 'responsible drinking' information.</p> <p><b>Monitoring:</b> Electronic registration for use of graphic.</p>	<p><b>Objective:</b> To promote good relationships with the community by engaging in practices that will not interfere with neighbour's enjoyment of their land</p> <p><b>Methods:</b></p> <ul style="list-style-type: none"> <li>*Building a plan to effectively receive and respond to complaints</li> <li>*Best winery practices to reduce nuisance to neighbours (odour, noise, vibration, etc.)</li> <li>*Effective communication with neighbours</li> <li>*Involvement in local community projects and planning (such as local Conservation Authorities)</li> <li>*Educational newsletters about Community and Neighbour relations</li> </ul> <p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>* Sustainability Self-Assessment Summary Report</li> </ul>	<p><b>Objective:</b> Contribute to the development of the community and reduce negative impacts</p> <p><b>Methods:</b></p> <p>Diagnose major environmental impacts caused by company; comply with national environmental legislation; create an environmental management system; develop a statement of environmental principles; Develop environmental education activities targeted for the community to empower them to be caretakers of the environment; Maintain communication with community and local authorities; initiate or assist projects which improve the quality of life for the community inhabitants; facilitate participation of employees in contributing to community projects; support work of local educational institutions; donate items no longer needed to local groups</p> <p><b>Monitoring:</b></p> <p>Certification System of Wines of Chile through independent certification agencies.</p>		<p>As per neighbouring land use.</p>	<p><b>Objective:</b> To understand how the vineyard and/or winery may impact the broader community to minimize any potential impacts and to contribute positively to the community.</p> <p><b>Methods:</b></p> <p>Community relations planning, monitoring, goals and results; Awareness of community issues (education, health care, water quality and quantity, noise, erosion, etc.).</p> <p><b>Monitoring:</b></p> <p>Accredited third-party auditor verifies 14 neighbor and community best practices (vineyards and wineries).</p>



## **ARGENTINA**

**Bodegas de Argentina Sustainability Self-Assessment Protocol** (Protocolo de Autoevaluación de Sustentabilidad Vitivinícola de Bodegas De Argentina) is a voluntary self-assessment tool in process of development. First draft was analyzed by academic and governmental institutions and a second draft is now in process. It refers to Viticulture, Soil management, Irrigation management, Plant health management, Wine quality, Ecosystem management and conservation, Efficient use of energy, Conservation and water quality in winery, Materials management, Reduction and solid waste handling, Environmentally preferable purchasing, human resources, Neighbors and community, and Air quality. This manual is not linked to any external certification system. However, the manual can be easily linked to any management system standard of sustainability, such as ISO 14000 family or sustainability reports as Global Reporting Initiative.

## **AUSTRALIA**

Entwine Australia is a voluntary national environmental assurance scheme available to all Australian wine companies and grape growers. Entwine Australia was developed by the Winemakers' Federation of Australia (WFA) with support initially from the Federal Government. The WFA currently recognizes two environmental certification schemes for use when applying for Entwine Australia membership: [Freshcare Environmental \(Viticulture and or Winery\)](#) and ISO 14001. Entwine Australia measures the contribution wine grape growers and winemakers make towards the environmental targets set by regional natural resource management bodies, provides for continuous improvement and undertakes environmental reporting. Entwine Australia is currently being expanded to incorporate broader CSR objectives.

## **CANADA**

### **Sustainable Winemaking Ontario**

## **CHILE**

**Sustainability Code of the Chilean Wine Industry** is a system for wine companies which must implement sustainable practices throughout the entire process of wine production, earning the label "Certified Sustainable Wine of Chile." Sustainable practices are identified in three areas, represented by the separate chapters of the Code: Green (Vineyard) – focusing on the management of plant growth, pests, diseases, and entire ecosystems; Red (Winery) – focusing on the management of water, energy, and waste in facilities; Orange (Social) – focusing on human resource management, company ethics, interaction with neighboring communities, and relationships with suppliers and consumers. Wineries use checklists and standard guides to comply with the many parameters in each area. To obtain certification, all critical requirements must be met, in addition to a minimum total score. The certification process is done by independent Certification Agencies. Since January 1st 2013, the Chilean Code is operating with all its chapters: green, red and orange.

## **NEW ZEALAND**

**Sustainable Winegrowing New Zealand** is developed and managed by New Zealand Winegrowers. SWNZ is a vineyard and winemaking framework and accreditation process based on best practice policies for protecting the environment whilst remaining economically sustainable. SWNZ was established in 1995, at which time it was focused on vineyard management, in 2002 this was extended to winery management policies. In the vineyard, SWNZ covers such aspects as soil management, nutrient management, control of pests and diseases, water and energy efficiency, waste management, staff training and biodiversity. In the winery, SWNZ focuses on winery waste management and water and energy efficiency, waste management, staff training. Over 90% of New Zealand vineyards and wineries are enrolled in the programme. The industry goal is for 100% of our wine to be produced under SWNZ or other accredited sustainable, organic or biodynamic programmes by 2012. New Zealand has a comprehensive regulatory environment requiring all members to comply with a wide range environmental and human health laws. The include: Employment Law, Health and Food Safety, Animal Welfare Act, Resource Management Act, Transport Act and a specific Wine Act. At the regional regulatory level council requirements are supported by NZ Winegrowers industry standards including COP wind machines, WSMP (health and safety), winery waste management, fertiliser COP, NZ Agrichemical standards. While many of these regulatory levers are not specifically included or referred to in SWNZ guidelines, members are required to meet all regulatory requirements as a baseline to their compliance to SWNZ, and these compliance to regulatory requirements is audited as part of SWNZ audits.

## **SOUTH AFRICA**

**The Scheme for the Integrated Production of Wine**, referred to as IPW, was legislated in Regulation R1413 of 6 November 1998 under the Liquor Products Act, 1989 (Act 60 of 1989). Membership of IPW is voluntary, but members are legally obliged to comply with the scheme's requirements. IPW aims to protect the environment and natural resources and to ensure the sustainable profitability of grape and wine production. Certification of IPW compliance falls under the jurisdiction of the Wine and Spirit Board (WSB). Guidelines for farms (15) and cellar (13) for the implementation of IPW are based on research and accepted sound viticultural and cellar practices.

## **UNITED STATES**

**Certified California Sustainable Winegrowing (CCSW-Certified)** is a certification program based on a sustainable winegrowing self-assessment workbook that contains 227 practices in 14 chapters including: Viticulture, Soil Management, Vineyard Water Management, Pest Management, Wine Quality, Ecosystem Management, Energy Efficiency, Winery Water Conservation and Water Quality, Material Handling, Solid Waste Reduction and Management, Environmentally Preferred Purchasing, Human Resources, Neighbors and Community, and Air Quality. Certification requires third party verification of accuracy of scores on the 227 best practices self-assessment, that a winery and/or vineyard meets all 58 pre-requisites and has developed action plans to improve sustainability practices, and the demonstration of continuous improvement.