CERTIFIED 1234567 SUSTAINABLE AUSTRIA

TRANSPARENCY PAPER

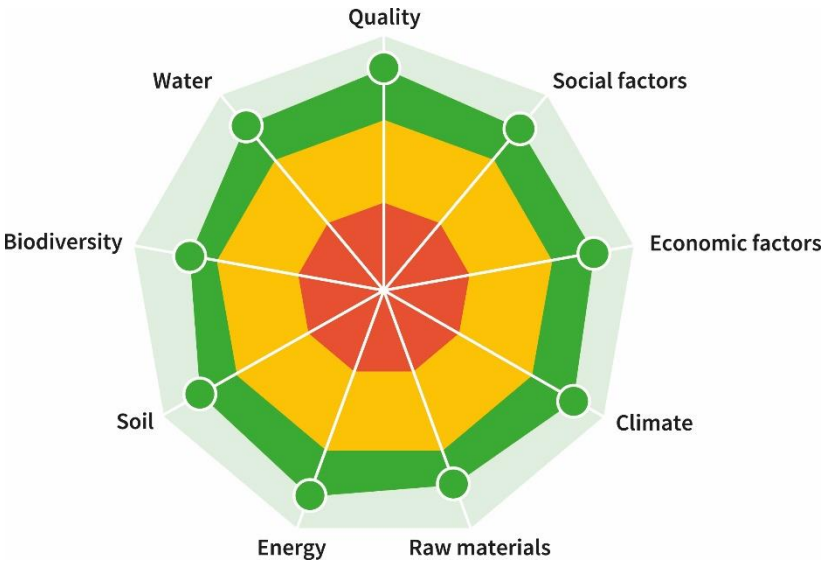
Assessment of measures in different areas of sustainability

Last updated: June 2022

CONTENTS

SUSTAINABLE AUSTRIA

The Sustainable Austria seal from the Austrian Winegrowers' Association has been a pioneering project internationally since its introduction in 2015. This seal gives grape growers and wine producers the opportunity to have their sustainable operating practices officially recognised. Assessment by an independent auditing company forms the foundation of the seal's awarding process. The company assesses and rates all sustainability measures involved in the production of a single vintage. From the grapes in the vineyard through to the bottles of wine on the market, all sustainability measures are assessed in relation to ecological, economic and social factors. In total, the sustainability assessment covers around 360 measures across 9 different areas: quality, social factors, economic factors, climate, raw materials, energy, soil, biodiversity and water. The assessment's results are shown on a radar chart, which reveals a company's current status in terms of sustainability, as well as opportunities for improvement.



The Sustainable Austria seal is unique insofar as it focuses not only on the effects of the defined measures, but also on their complex interaction. Each measurable is assessed with regard to the knock-on effect it has on all the others. A business is only allowed to use the Sustainable Austria seal on its labels if it has met the high standards specified in the assessments. The Sustainable Austria seal is based on scientific assessments performed by sustainability experts. The ultimate aim is for wine production to be more environmentally friendly, more efficient in its use of natural resources and more responsible in terms of eco-social factors.

This transparency paper on the assessment of measures aims to give an overview of how the individual measures are evaluated in the nine areas of certification. It should be noted that for reasons of system security, this transparency paper does not list specific figures. Instead, six rating categories (excellent, very good, good, negative, very negative, extremely negative) have been established, which are then allocated to the different measures. In addition to this list, those interested in the certification process can click through the online tool anonymously at https://tool.nachhaltigaustria.at/. Answers to frequently asked questions can be found in the FAQ section on the www.sustainableaustria.com. You are always welcome to contact us directly at info@nachhaltigaustria.at

BIODIVERSITY

The preservation and promotion of the diversity of local species, as well as measures to recultivate biodiversity sites and tend to vines using biodiversity-friendly techniques are all key practices.

'EXCELLENT' RATING:

- Planting and preservation of biodiversity priority areas
- 500 m² of drystone walling per hectare of vineyard
- Cork closure
- Commissioning of a biodiversity report
- Biennial interim fallow period before new planting

'VERY GOOD' RATING:

- Fungus-resistant grape varieties (= PIWI)
- Appropriate terrace construction in steep vineyards
- No use of insecticides
- Biennial and perennial cover crops

'GOOD' RATING:

- Wooden posts and stakes
- Autumn/winter cover crops
- Spring/summer cover crops
- Host plants (cover crops) for beneficial organisms
- Proof of proficiency
- Appropriate construction of stone walls on steep slopes
- Establishment and maintenance of additional measures to promote biodiversity
- Management of leftover plant protection products
- Plant protection as per the *Rebschutzdienst* vine protection service and/or the *Bioweinbau aktuell* guidelines
- Sowing of suitable under-vine cover crops
- Large-scale hail protection measures
- Certified, carefully selected and suitable plant material from the wine-growing region

‘NEGATIVE’ RATING:

- Mobile sprayer with axial blower for low-loss spraying
- Use of mineral nitrogen fertilisers
- Chemical removal of shoots from the stem of the vine
- Metal and plastic posts and stakes
- Bird defence measures, e.g. bird scarers
- Hail protection using several small-scale measures (hail nets)
- Chemical grape thinning

‘VERY NEGATIVE’ RATING:

- High number of tractor trips through the vineyard
- Fertilisation without soil analysis
- Mobile sprayers with radial or tangential blower
- Mobile sprayers with axial blower
- No cover crops
- No waste water management
- Organic and insecticide-free plant protection against animal pathogens
- Plant protection against fungal pathogens
- Biodiesel
- Exposed soil and no intentional admixture for cover crops

‘EXTREMELY NEGATIVE’ RATING:

- Use of herbicides
- Large-scale sprayers
- Non-organic plant protection against animal pathogens

SOIL

Soil fertility refers to all of the mineralogical, physical, chemical and biological soil properties and processes that promote plant growth. The key focus here is on healthy, fertile, optimally-nourished and well-aerated soil that is protected from erosion and contamination by heavy metals, and is sustainably nourished and worked.

‘EXCELLENT’ RATING:

- Construction of stone walls in steep vineyards
- Appropriate construction of banking in steep vineyards
- Biannual and perennial cover crops (permanent cover crops)
- Refilling of glass bottles
- Compost: over 4,000 kg of dry matter per hectare
- Stable manure: over 10,000 kg per hectare

‘VERY GOOD’ RATING:

- Appropriate measures in steep vineyards
- Appropriate fertilisation in line with Good Laboratory Practice (GLP) requirements
- Soil (plant) analyses meeting the Austrian ÖNORM standard
- Suitable rootstocks
- Organic commercial fertiliser over 1,000 kg per hectare

‘GOOD’ RATING:

- Spring/summer green manuring
- Autumn/winter green manuring
- Host plants (cover crops) for beneficial organisms
- Composting of production waste and subsequent spreading
- Sowing of suitable under-vine cover crops
- Straw, bark mulch > 5,000 kg per hectare
- > 500 m² of drystone walling per hectare
- Biodiversity priority areas over 10% of the grape production area
- Varieties for extensive cultivation (PIWI = fungus-resistant grape varieties)
- Compliant management of leftover plant protection products
- Spreading of compostable waste in the vineyards
- Use of lightweight glass
- Appropriate irrigation
- Trickle irrigation
- Organic commercial fertiliser up to 1,000 kg per hectare
- Recycling techniques: tunnel, collector or reflector procedures
- Spraying uses sensor technology

‘NEGATIVE’ RATING:

- North-facing hillside and/or low-lying site
- Peripheral vineyard
- Furrows (deep tillage) for planting new vines
- Use of mineral nitrogen fertilisers
- Use of conventional fuel (diesel)
- Use of large-scale sprayers
- Chemical removal of shoots from the stem of the vine
- Machine harvest
- Gas
- District heating based on conventional energy sources
- New glass
- Cans
- No waste water management
- Metal and plastic posts
- Metal and plastic stakes
- Overhead irrigation system
- Use of biodiesel
- Mobile sprayers with radial or tangential blower
- Mobile sprayers with axial blower
- Plant protection against fungal pathogens
- Biomass as an energy source
- Conventional electricity
- Crates
- Cardboard packaging containing less than 50% recycled material
- Stainless steel kegs
- Other small containers (clay)
- Use of fining agents

‘VERY NEGATIVE’ RATING:

- Fertilisation without soil analysis
- No erosion measures in steep vineyards
- Oil and diesel as an energy source
- Use of coke and coal as energy sources
- Organic and insecticide-free plant protection against animal pathogens
- Unsuitable choice of rootstock

‘EXTREMELY NEGATIVE’ RATING:

- Non-organic plant protection against animal pathogens
- High number of tractor trips through the vineyard
- No cover crops
- Use of herbicides

ENERGY

A resource-efficient and renewable use of energy is prioritised for sustainable cultivation.

‘EXCELLENT’ RATING:

- Refilling of glass bottles
- Regular expert advice on the efficient use of resources
- Buildings certified energy class A, A+ or A++
- Energy self-sufficient
- Passive energy use
- Cogeneration of power/heat
- Use of control units for energy optimisation
- Biannual and perennial cover crops (permanent cover crops)

‘VERY GOOD’ RATING:

- Heating/cooling with a heat exchanger using cogeneration
- Proportion of lightweight glass as a percentage of total new glass
- Earth cellar
- Soil (plant) analyses

‘GOOD’ RATING:

- Selection of (recommended and established) varieties for extensive cultivation (PIWI = fungus-resistant grape varieties)
- Autumn/winter cover crops

- Suitable rootstocks
- DAC varieties from the wine-growing region
- Additional appropriate construction of stone walls on slopes
- Appropriate terrace construction with banking on slopes
- Lees filtration using renewable filter aids, or no aids at all
- Regular updating of machinery/operating manuals, and maintenance and servicing of machinery and equipment
- Appropriate irrigation based on recorded observations or measurements
- Compost: over 4,000 kg of dry matter per hectare
- Mobile sprayer with low-loss spraying
- Furrows (deep tillage) for planting new vines
- Wooden stakes
- Wooden posts
- Recommended grape variety
- Spring/summer cover crops
- Other appropriate erosion measures in steep vineyards
- Appropriate drainage (where necessary)
- Cork closure
- Energy-saving lighting (LEDs, etc.)
- 300–500 m² of drystone walling per hectare
- Biodiversity priority areas
- Cultivation on a plateau and/or plain

'NEGATIVE' RATING:

- Use of biodiesel
- Use of large-scale sprayers
- Plant protection against fungal pathogens
- Large-scale hail protection measures (cloud seeders, cannons, etc.)
- District heating based on renewable energy sources and biomass
- District heating based on conventional energy sources
- Cardboard packaging containing less than 50% recycled material
- Other small containers (clay)
- Metal posts
- Metal stakes
- Fertilisation without soil analysis and/or overfertilisation
- Use of mineral nitrogen fertilisers
- Concrete posts
- Mobile sprayers with axial blower

- Use of renewable energies (photovoltaics, solar heat, ambient heat, wind and water power) – energy mix
- Biomass (from the local region)
- Gas
- Crates
- Stainless steel kegs
- High-pressure cleaner (steam and/or hot water) or hot water
- Bottle cleaning using semi-professional equipment
- Hot filling with heat recovery
- Tartaric stabilisation using electrodialysis
- Unsuitable rootstocks
- Temperature-controlled mash in red wine production
- Prolonged heating of the mash in red wine production (2–3 hours at 55–60°C)
- Plastic posts
- Plastic stakes
- Hillside and peripheral vineyard
- Thermal under-vine soil treatment
- Use of herbicides
- Mobile sprayers with radial or tangential blower
- Recycling technology: tunnel, collector or reflector procedures
- Backpack spraying
- Organic commercial fertiliser up to 1,000 kg per hectare
- Thermal removal of shoots from the stem of the vine
- Chemical grape thinning
- Machine harvest
- Conventional electricity from the grid
- Green electricity from the grid
- Tetra Pak/soft packaging
- PET/rigid plastic packaging
- Bag-in-Box
- Glass closure
- CIP (cleaning in place)
- Chemical cleaning with cold water rinsing
- Bottle cleaning
- Cold filling
- No compliant transfer of compostable waste to recycling companies
- Cooling of the mash (static or mobile)
- Reverse osmosis
- Addition of sucrose
- Cooling using heat transfer media

- Cross-flow filtration
- Separation/centrifugation
- Lees filtration using non-renewable filter aids
- Plant protection against animal pathogens
- Organic commercial fertiliser over 1,000 kg per hectare
- Overhead irrigation system
- Average irrigation volumes per hectare
- Mechanical pre-pruning of vines
- Enrichment with grape must concentrate
- Vine density > 3500/hectare
- Cardboard packaging with at least 50% recycled material

‘VERY NEGATIVE’ RATING:

- Freeze concentration used as enrichment procedure
- Overhead irrigation
- Oil and diesel as an energy source in the wine cellar
- Use of coke and coal as energy sources in the wine cellar
- Buildings certified energy class B or C
- Hot filling without heat recovery
- Tartaric stabilisation using artificial cooling
- Rapid, high-temperature heating of the mash (in red wine production)

‘EXTREMELY NEGATIVE’ RATING:

- High number of tractor trips through the vineyard
- Buildings certified energy class D to G
- New glass with a high glass weight
- Can filling
- Heavy use of conventional fuel (diesel)
- Vacuum evaporator used for enrichment
- Temperature-controlled bottle storage
- Temperature-controlled wine storage

CLIMATE

The goals of the European Green Deal are pursued by raising awareness and demonstrating strategies to reduce greenhouse gases.

'EXCELLENT' RATING:

- Refilled glass bottles
- Energy self-sufficient
- District heating based on renewable energy sources and biomass
- Biomass (from the local region) as an energy source
- Use of renewable energies (photovoltaics, solar heat, ambient heat, wind and water power) – energy mix

'VERY GOOD' RATING:

- Proportion of lightweight glass as a percentage of total new glass
- Regular expert advice on the efficient use of resources
- Earth cellar
- Buildings certified energy class A, A+ or A++
- Cogeneration of power/heat
- Use of control units for energy optimisation
- Green electricity from the grid
- Use of biodiesel
- Passive energy use
- Biannual and perennial cover crops (permanent cover crops)
- Autumn/winter cover crops
- Drystone walling
- Biodiversity priority areas over 10% of the grape production area

'GOOD' RATING:

- Interim fallow period with cover crops before planting (at least 2 years, at least 50% legumes)
- Vine density > 3500/hectare
- Host plants (cover crops) for beneficial organisms
- Other appropriate erosion measures in steep vineyards
- Heating/cooling with a heat exchanger using cogeneration

- Energy-saving lighting (LEDs, etc.)
- District heating based on conventional energy sources
- Organic commercial fertiliser > 1000 kg per hectare
- Compost: over 4,000 kg of dry matter per hectare
- Soil (plant) analyses meeting the Austrian ÖNORM standard
- Spring/summer cover crops
- Biodiversity priority areas 5–10%
- Mobile sprayer with low-loss spraying
- Sowing of suitable under-vine cover crops
- No stakes to support the vines
- Plant protection in line with guidelines of the *Rebschutzdienst* vine protection service and/or *Bioweinbau aktuell*
- Waste water neutralisation
- Compliant transfer of compostable waste to recycling companies
- Wooden posts
- Appropriate irrigation based on recorded observations or measurements
- Foliage height over 100 cm
- Comprehensive waste water treatment
- Sedimentation tanks
- Straw, bark mulch > 5,000 kg per hectare
- Spreading of under-vine ground cover
- Use of water-saving measures through intensive cover crop management (e.g. partial turning, covering, etc.)
- Compilation of a biodiversity report
- Recycling technology: tunnel, collector or reflector procedures
- Sensor technology (e.g. measurement, control and regulation of plant protection product quantities)
- Use of drift reduction nozzles
- Area for PIWI (fungus-resistant grape varieties)
- Certified plant material

'NEGATIVE' RATING:

- Fertilisation without soil analysis and/or overfertilisation
- Can filling
- Freeze concentration used as enrichment procedure
- Removal of vines carried out incorrectly
- Fertilisation compliant with guidelines for correct fertilisation practice in viticulture
- No cover crops
- Overhead irrigation system

- PET/rigid plastic packaging
- Chlorinated cleaners
- Hot filling without heat recovery
- Cooling of the mash (static or mobile)
- Lees filtration using non-renewable filter aids
- Tartaric stabilisation using artificial cooling
- Appropriate terrace construction with banking on slopes
- Appropriate construction of stone walls on slopes
- Exposed soil and no intentional admixture for cover crops
- Rapid, high-temperature heating of the mash (in red wine production)
- Metal posts
- Conventional electricity from the grid
- Labels – use of problematic materials
- Tetra Pak/soft packaging
- Furrows (deep tillage)
- Appropriate fertilisation in line with Good Laboratory Practice (GLP) requirements
- Average irrigation volumes per hectare during the growing season
- Hillside
- Removal of vines carried out correctly
- Subsoiling (no plough)
- No fertilisation without soil analysis and/or underfertilisation
- Overhead irrigation
- Soil with a high clay content (>40%)
- Mobile sprayers with axial blower
- Backpack spraying
- Plant protection against fungal pathogens
- Hail protection using several small-scale measures (hail nets)
- Stable manure: over 10,000 kg per hectare
- Trickle irrigation
- Thermal removal of shoots from the stem of the vine
- Excessive pruning and defoliation
- Chemical grape thinning
- Cardboard packaging containing less than 50% recycled material
- Plastic stoppers
- Screw tops
- Crown top
- Chemical cleaning with cold water rinsing
- Bottle cleaning using semi-professional equipment
- No waste water management
- No compliant transfer of compostable waste to recycling companies

- Addition of carbonic acid snow
- Control of fermentation temperature
- Cross-flow filtration
- Separation/centrifugation
- Lees filtration using renewable filter aids, or no aids at all
- Appropriate terrace construction on slopes
- No measures on slopes
- Appropriate construction of stone walls on slopes
- Unsuitable rootstocks
- Temperature control of the mash in red wine production
- Prolonged heating of the mash in red wine production (2–3 hours at 55–60°C)
- Plastic posts
- Metal stakes

'VERY NEGATIVE' RATING:

- Use of oil, diesel, coke and coal for wine production
- Use of mineral nitrogen fertilisers
- Shallow tillage (rotary harrow, rotary cultivator, spader)
- Large-scale hail protection measures
- Chemical removal of shoots from the stem of the vine
- Use of herbicides
- Deep tillage (mulch soil loosener, mulch cutter, cultivator)
- Use of large-scale sprayers
- Use of gas for wine production
- Buildings certified energy class D to G
- Vacuum evaporator used for enrichment
- Temperature-controlled bottle storage
- Temperature-controlled wine storage
- No erosion measures on slopes with a gradient of >25%

'EXTREMELY NEGATIVE' RATING:

- Use of new glass
- Number of tractor trips per hectare per year
- Use of conventional fuel (diesel)

MATERIAL

The resource-efficient use of materials, which are ultimately returned to a circular/recycling economy, plays a key role.

'EXCELLENT' RATING:

- Energy self-sufficient
- Refilled 1-litre glass bottles
- Earth cellar
- Buildings certified energy class A, A+ or A++
- Green electricity from the grid
- Use of renewable energies (photovoltaics, solar heat, ambient heat, wind and water power) – energy mix

'VERY GOOD' RATING:

- Soil (plant) analyses meeting the Austrian ÖNORM standard
- Use of control units for energy optimisation
- Cogeneration of power/heat
- Biannual and perennial cover crops (permanent cover crops)
- Host plants (cover crops) for beneficial organisms
- Regular expert advice on the efficient use of resources
- Compost: over 4,000 kg of dry matter per hectare

'GOOD' RATING:

- No stakes
- Spring/summer green manuring
- Autumn/winter green manuring
- Interim fallow period with cover crops before planting (at least 2 years, at least 50% legumes)
- Plant protection in line with guidelines of the *Rebschutzdienst* vine protection service and/or *Bioweinbau aktuell*
- Appropriate erosion measures in steep vineyards
- Compliant transfer of compostable waste to recycling companies
- Spreading of compostable waste in vineyards
- Passive energy use
- District heating based on renewable energy sources and biomass

- Straw, bark mulch > 5,000 kg per hectare
- > 500 m² of drystone walling per hectare
- Biodiversity priority areas
- Compilation of a biodiversity report
- Use of drift reduction nozzles
- Sensor equipment (e.g. measurement, control and regulation of plant protection product quantities)
- Recycling technology: tunnel, collector or reflector procedures
- Certification of the spraying equipment
- Area for PIWI (fungus-resistant grape varieties)
- Autumn/winter cover crops
- Proportion of lightweight glass as a percentage of total new glass
- Compliant management of glass
- Biomass (from the local region)
- Heating/cooling with a heat exchanger using cogeneration
- Composting of production waste and subsequent spreading
- Energy-saving lighting (LEDs, etc.)
- Use of water-saving measures through intensive cover crop management (e.g. partial turning, covering, etc.)
- Organic commercial fertiliser > 1000 kg per hectare
- Stable manure: over 10,000 kg per hectare
- Straw, bark mulch > 5,000 kg per hectare
- Certified plant material

'NEGATIVE' RATING:

- Conventional electricity from the grid
- Mobile sprayer with low-loss spraying
- Removal of vines carried out incorrectly (no fallow growing season)
- Trickle irrigation
- Soil with a high clay content (>40%)
- Mobile sprayers with radial or tangential blower
- Mobile sprayers with axial blower
- Organic plant protection against fungal pathogens
- Hail protection using several small-scale measures (hail nets)
- Cardboard packaging containing less than 50% recycled material
- Bag-in-Box
- No compliant transfer of compostable waste to recycling companies
- Freeze concentration used as enrichment procedure
- Temperature-controlled bottle storage

- Temperature-controlled wine storage
- Lees filtration using non-renewable filter aids
- Other small containers (clay)
- Chemical removal of shoots from the stem of the vine
- Peripheral vineyard
- Removal (and disposal) of vines carried out correctly, including one fallow growing season
- Fertilisation compliant with guidelines for correct fertilisation practice in viticulture
- Use of mineral nitrogen fertilisers
- Backpack spraying
- Crates
- Cardboard packaging with at least 50% recycled material
- Chlorinated cleaners
- No waste water management
- Compliant management of hazardous waste
- No measures on slopes with a gradient of 10–25%
- Plant protection against animal pathogens
- Unsuitable rootstocks
- Wire frame height over 100 cm
- Concrete posts
- Plastic posts
- Plastic stakes

'VERY NEGATIVE' RATING:

- Tetra Pak/soft packaging
- Overhead irrigation
- Use of large-scale sprayers
- Large-scale hail protection measures
- Fertilisation without soil analysis and/or overfertilisation
- District heating based on conventional energy sources
- Buildings certified energy class D to G
- Vacuum evaporator used for enrichment
- Use of herbicides
- Use of conventional fuel (diesel)
- Plant protection against fungal pathogens
- Appropriate fertilisation in line with Good Laboratory Practice (GLP) requirements
- Labels – use of problematic materials
- Use of new glass
- PET/rigid plastic packaging

- Stainless steel kegs
- Terrace construction with banking on slopes
- Construction of stone walls on slopes
- Growth regulators
- Metal posts
- Metal stakes

'EXTREMELY NEGATIVE' RATING:

- High number of tractor trips through the vineyard
- Use of biodiesel
- Oil, diesel, gas
- Coal, coke
- Can filling

ECONOMIC FACTORS

An important sustainability factor is a qualitatively assessed operational analysis based on key indicators. This analysis should consider the risks linked to and the promotion of regional activities, including those in association with other businesses/wineries.

'EXCELLENT' RATING:

- Execution of a company analysis (key indicators, analysis of previous years and development of future strategies)

'VERY GOOD' RATING:

- Compilation of a risk analysis
- Contribution to the national economy: government grants taking into account expenditure in the public interest
- Promotion of regionality: purchase of machinery and equipment locally, as well as service
  contracts

‘GOOD’ RATING:

- Winery managed traditionally
- Provision of regular cellar door sales
- Contribution to regional development and security
- Sustainability activities integrated into the operating concept and mission statement
- Wine in moderation
- Sustainable Austria seal
- Sustainable sales activities appropriate to the business
- Use and provision of shared machinery between wineries
- Verified inspection of the grapes and the wine
- Auditing company named on the company website

QUALITY

A sustainably produced wine places higher than average demands on quality.

‘EXCELLENT’ RATING:

- No use of insecticides
- Plant protection against fungal pathogens, low number of sprays
- Interim fallow period with cover crops before planting (at least 2 years, at least 50% legumes)
- Records showing adherence to food safety guidelines, e.g. HACCP
- No enrichment
- Cooling of the mash (static or mobile)
- Manual cluster thinning
- Soil analysis (topsoil and subsoil)
- Certified plant material
- Regular updating of machinery/operating manuals, and maintenance and servicing of machinery and equipment
- Selection of (recommended and established) varieties for extensive cultivation (PIWI = fungus-resistant grape varieties)
- Use of biotechnological measures (mating disruption, etc.)
- Use of new glass

- Energy self-sufficient
- Grape thinning by hand
- Pruning by hand
- Compost: over 4,000 kg of dry matter per hectare
- Stable manure: over 10,000 kg per hectare
- Protection from game browsing (mechanical)
- Sensor technology (e.g. measurement, control and regulation of plant protection product
  quantities)
- Recycling technology: tunnel, collector or reflector procedures
- Watering of young plants/topping up
- Fertilisation compliant with guidelines for correct fertilisation practice in viticulture
- Producer's own plant material (grafting allowed) with appraisal system
- South, south-west and south-east-facing hillside

'VERY GOOD' RATING:

- Suitable rootstocks
- DAC varieties from the wine-growing region
- Construction of stone walls on slopes with a gradient of >40%
- Terrace construction with banking on slopes with a gradient of >40%
- Buildings certified energy class A, A+ or A++
- Foliage height over 100 cm
- Trickle irrigation
- Autumn/winter green manuring
- Cross-flow filtration
- Cold filling with professional equipment
- Non-chlorinated cleaner
- Regular expert advice on the efficient use of resources
- Fractionated harvest
- Appropriate irrigation based on recorded observations or measurements
- One application of herbicide up to max. 50 cm
- Spreading of under-vine ground cover
- Straw, bark mulch > 5,000 kg per hectare
- Appropriate fertilisation in line with Good Laboratory Practice (GLP) requirements
- Wasp traps, combat through cultivation methods
- Use of bird protection nets
- Use of drift reduction nozzles
- Clearing of grape zone by weeding
- Rooting depth >1 m

- Spreading of under-vine ground cover
- Planting by hand (spades)
- Furrows (deep tillage) before planting new vines
- Appropriate drainage (where necessary)
- Complaints management (customer complaints records)
- Bottling log kept in accordance with pre-packaging regulations and batch records
- Keeping of a traditional cellar book (transport documents, harvest records, etc.)
- Temperature-controlled wine storage
- Temperature-controlled bottle storage
- Lees filtration using renewable filter aids, or no aids at all
- Sheet, candle and/or membrane filtration
- Fermentation temperature control records
- CIP (cleaning in place)
- Screw tops
- Glass closure
- Cork closure
- Use of control units for energy optimisation
- Use of renewable energies
- Trickle irrigation
- Organic commercial fertiliser > 1000 kg per hectare
- Bird defence measures, e.g. bird scarers
- Average number of tractor trips per hectare per year
- Overhead irrigation
- Straw, bark mulch > 5,000 kg per hectare
- Plant material from own winegrowing region
- Plateau and/or plain

'GOOD' RATING:

- Stem height under 100 cm
- Temperature control of the mash in red wine production
- Plant protection in line with guidelines of the *Rebschutzdienst* vine protection service and/or *Bioweinbau aktuell*
- Tartaric stabilisation using artificial cooling
- No use of allergenic, protein-based wine fining agents
- Lees filtration using non-renewable filter aids
- Flotation
- Automatically controlled fermentation temperature
- Addition of rectified grape must concentrate
- Addition of sucrose

- Reverse osmosis
- Vacuum evaporator
- Addition of carbonic acid snow
- Compliant management of hazardous waste
- New glass or professional bottle cleaning
- Chemical cleaning with cold water rinsing
- High-pressure cleaner (steam and/or hot water) or hot water
- Stainless steel kegs
- Proportion of lightweight glass
- Cardboard packaging with at least 50% recycled material
- Cogeneration of power/heat
- Hand harvest
- Mechanical and manual removal of shoots from the stem of the vine
- Average irrigation volumes per hectare during the growing season
- Shallow tillage (rotary harrow, tilling, spade plough) in the tracks between vines
- Shallow under-vine tillage (rotary harrow, under-vine areas)
- Soil (plant) analyses meeting the Austrian ÖNORM standard
- Spring/summer cover crops
- Autumn/winter cover crops
- Protection against game browsing (repellent)
- Hail protection using several small-scale measures (hail nets)
- Plant protection against fungal pathogens, average number of sprays
- Area for PIWI (fungus-resistant grape varieties)
- Mobile sprayer with low-loss spraying
- Certification of the spraying equipment
- Clearing of grape zone through moderate defoliation
- Tipping (trimming of long shoots in summer) at the correct time
- Soil with a high sand and gravel content (>80%) in areas of high precipitation
- Shallow tillage (rotary harrow, rotary cultivator, spader)
- Shallow under-vine tillage (rotary harrow, under-vine areas)
- Planting with a water lance
- Appropriate mechanical planting
- Organic commercial fertiliser over 1,000 kg per hectare
- Subsoiling (no plough)
- Removal (and disposal) of vines carried out correctly, including one fallow growing season

- Non-certified but carefully selected plant material
- Compliant management of glass
- Compliant management of non-recyclable waste
- Proof of proficiency
- Compliant management of other waste

- Compliant management of packaging
- Waste water neutralisation
- Sedimentation tanks
- Comprehensive waste water treatment
- Refilled glass bottles
- Energy-saving lighting (LEDs, etc.)
- Earth cellar
- Biomass (from the local region)
- Use of water-saving measures through intensive cover crop management (e.g. partial turning, covering, etc.)
- Deep tillage (mulch soil loosener, mulch cutter, cultivator)
- Soil cultivation to disturb vegetation (mulching, mowing, rolling)
- Sowing of suitable under-vine cover crops

'NEGATIVE' RATING:

- North-facing hillside and/or low-lying site
- Land with no soil cultivation
- Thermal under-vine soil treatment
- No canopy management
- Use of large-scale sprayers
- Chemical removal of shoots from the stem of the vine
- Thermal under-vine soil treatment
- Use of oil and diesel as energy sources in wine production
- Buildings certified energy class D to G
- No packaging
- Cleaning exclusively using cold water
- Hot filling without heat recovery
- Cold filling with basic equipment
- Concrete posts
- Cooling using external irrigation or fresh water
- Growth regulators
- Exposed soil and no intentional admixture for cover crops
- Prolonged heating of the mash
- Wooden posts
- Mechanical/physical grape thinning
- Use of coke and coal as energy sources for wine production
- No waste water management
- Diatomaceous earth filtration
- No wooden staves, wood chips or wood powder

- Rapid, high-temperature heating of the mash (in red wine production)
- Stem height over 100 cm
- Vine density > 3500/hectare
- Wooden stakes

'VERY NEGATIVE' RATING:

- Use of allergenic, protein-based wine fining agents in quantities that need to be declared
- Unsuitable rootstocks
- Peripheral vineyard
- Use of herbicides
- Soil with a high sand and gravel content (>80%) in areas of low precipitation
- Soil with a high clay content (>40%) in areas of high precipitation
- Plant protection against fungal pathogens, high number of sprays
- Fertilisation without soil analysis and/or overfertilisation
- No fertilisation without soil analysis and/or underfertilisation
- No winter pruning (minimal)
- Thermal removal of shoots from the stem of the vine
- Excessive pruning and defoliation
- No suitable grape thinning procedure
- Chemical grape thinning
- Can filling
- Other small containers (clay)
- No cooling of the mash
- No temperature-controlled bottle storage
- No erosion measures on slopes with a gradient of >25%
- Plant protection against animal pathogens, high number of sprays
- Plastic posts
- Plastic stoppers

'EXTREMELY NEGATIVE' RATING:

- Bottle cleaning using semi-professional equipment
- No control of fermentation temperature
- No must clarification in white wine production
- Plant material of other origin (non-certified, not local, no careful selection, no appraisal system)
- Wine storage outdoors
- Tetra Pak/soft packaging

- Chlorinated cleaners
- Removal of vines carried out incorrectly (no fallow growing season)
- No cover crops
- PET/rigid plastic packaging
- Bag-n-Box
- Hot filling with basic equipment
- Cellar techniques employed to remove heavy metals
- Use of sorbic acid, dimethyl dicarbonate (DMDC) and/or lysozyme
- Tartaric stabilisation using electrodialysis
- No stakes

SOCIAL FACTORS

Alongside compliance with statutory employment regulations, social considerations also include the promotion of further training and qualifications, fair and ethical purchasing, and occupational health and safety in the workplace.

'EXCELLENT' RATING:

- Registration of all persons performing paid work
- Observance of collectively agreed minimum wage and payment of standard bonus payments
- Keeping of working time records and compliance with maximum working time limits as defined by law
- Compliance with statutory employee protection regulations
- Preference for companies with established ecological and social certification standards when purchasing services
- Purchasing of ethical services from equally fair and sustainable third parties
- Promotion of continued professional training and development for management employees

'VERY GOOD' RATING:

- Protection of vulnerable employees
- Protection of employees when storing and handling cleaning products

- Training and/or protection of employees when storing and handling plant protection products
- Adequate noise protection
- Installation of prevention and warning systems for CO^2 formation in the fermentation cellar
- Evaluation of hazards in the workplace with the assistance of experts
- Continuous training and development of the manager

'GOOD' RATING:

- Maintenance of machinery and other tools, ensuring safety instructions are updated and available
- Sufficient safety standard and maintenance of electrical equipment
- Protection from falls and hazards when moving around the site
- Verifiable training for employees in the workplace
- Establishment of an in-house pension system, in addition to statutory pension insurance or a statutory employee pension fund
- Payment in excess of the collectively agreed minimum wage
- Employment of people aged over 55
- Employment of long-term unemployed people
- Employment of people with disabilities
- Organisation of regular employee meetings
- Professionally qualified manager
- Procurement of goods and services that have been created or produced with the help of employing people with disabilities and/or the long-term unemployed
- Designation of a representative as a point of contact and spokesperson for employees
- No unjustified wage gaps between employees
- Correct payment of overtime and/or supplements for extra work

'NEGATIVE' RATING:

- No establishment of a works council despite requirement set out in industrial constitution law

WATER

The global warming caused by climate change, which brings alternating periods of drought and torrential rain, presents particular challenges for maintaining regional and agricultural supplies. Using resources sparingly and avoiding pollution are two key priorities.

'EXCELLENT' RATING:

- Interim fallow period with cover crops before planting (at least 2 years, at least 50% legumes)
- Establishment of a special washing area for equipment used for plant protection products
- Construction of stone walls on slopes
- Biannual and perennial cover crops (permanent cover crops)

'VERY GOOD' RATING:

- Organic commercial fertiliser over 1,000 kg per hectare
- Straw, bark mulch > 5,000 kg per hectare
- Compost: over 4,000 kg of dry matter per hectare
- Stable manure: over 10,000 kg per hectare
- Other appropriate erosion measures in steep vineyards
- Terrace construction with banking on slopes
- Average irrigation volumes per hectare
- Irrigation based on recorded observations or measurements
- Suitable rootstocks
- Spring/summer green manuring
- Autumn/winter green manuring
- Composting of production waste and subsequent spreading
- Direct spreading of compostable waste in vineyards
- Compliant management of hazardous waste
- Comprehensive waste water treatment
- Refilling of glass bottles
- Regular expert advice on the efficient use of resources
- Energy self-sufficient
- Spreading of under-vine ground cover
- Recycling technology: tunnel, collector or reflector procedures

‘GOOD’ RATING:

- Rainwater for plant protection measures
- Host plants (cover crops) for beneficial organisms
- Removal of solids from waste water
- Proportion of lightweight glass as a percentage of total new glass
- Use of renewable energies
- Soil cultivation to disturb vegetation (mulching, mowing, rolling)
- Appropriate fertilisation in line with Good Laboratory Practice (GLP) requirements
- Use of biodiesel
- Soil with a high clay content (>40%)
- Rooting depth >1 m
- Trickle irrigation
- Watering of young plants/topping up
- Planting with a water lance
- Soil analysis (topsoil and subsoil)
- Subsoiling (no plough)
- Furrows (deep tillage) for replanting a vineyard
- North-facing hillside and/or low-lying site
- No warming of the mash in red wine production (traditional method)
- Selection of (recommended and established) varieties for extensive cultivation (PIWI = fungus-resistant grape varieties)
- No DAC variety, but recommended grape variety (Qualitätswein) for the wine-growing region
- DAC varieties from the wine-growing region
- Compliant management of leftover plant protection products
- Use of biotechnological measures (mating disruption, etc.)
- Appropriate drainage (where necessary)
- Compliant transfer of compostable waste to recycling companies
- Sedimentation tanks
- Cleaning exclusively using cold water
- Other small containers (clay)
- Stainless steel kegs
- Cans
- New glass in kg glass weight
- No packaging
- Thermal removal of shoots from the stem of the vine
- Mechanical and manual removal of shoots from the stem of the vine
- Use of water-saving measures through intensive cover crop management (e.g. partial turning, covering, etc.)
- Deep tillage (mulch soil loosener, mulch cutter, cultivator)
- > 100 m² of drystone walling per hectare
- Systems for and preservation of biodiversity priority areas

- Area for PIWI (fungus-resistant grape varieties)
- Use of drift reduction nozzles
- Mobile sprayer with low-loss spraying
- Sensor equipment (e.g. measurement, control and regulation of plant protection product quantities)
- Certification of the spraying equipment
- Clearing of grape zone through moderate defoliation
- Clearing of grape zone by weeding
- Tipping (trimming of long shoots in summer) at the correct time
- Deep tillage (mulch soil loosener, mulch cutter, cultivator)
- Appropriate mechanical planting
- Removal (and disposal) of vines carried out correctly, including one fallow growing season

'NEGATIVE' RATING:

- Overhead irrigation
- Soil with a high sand and gravel content in dry areas
- Plant protection against fungal pathogens
- Chemical removal of shoots from the stem of the vine
- Cardboard packaging containing less than 50% recycled material
- Tetra Pak/soft packaging
- Chlorinated cleaners
- Bottle cleaning using semi-professional equipment
- Vacuum evaporator
- Cooling using external irrigation or fresh water
- South, south-west and south-east-facing hillside
- Peripheral vineyard
- Plant material of other origin (non-certified, not local, no careful selection, no appraisal system)
- Removal of vines carried out incorrectly (no fallow growing season)
- No fertilisation without soil analysis and/or underfertilisation
- Shallow under-vine tillage (rotary harrow, under-vine areas)
- Thermal under-vine soil treatment
- Shallow tillage (rotary harrow, rotary cultivator, spader)
- Use of conventional fuel (diesel)
- No canopy management
- Mobile sprayers with radial or tangential blower
- Mobile sprayers with axial blower
- Backpack spraying
- Large-scale hail protection measures (cloud seeders, cannons, etc.)
- No winter pruning (minimal)

- Chemical grape thinning
- Machine harvest
- Oil, diesel, coke and coal
- District heating based on conventional energy sources
- Crates
- Cardboard packaging with at least 50% recycled material
- Bag-in-Box
- Chemical cleaning with cold water rinsing
- New glass or professional bottle cleaning
- No proper transfer of compostable waste to recycling companies
- Addition of sucrose
- Addition of grape must concentrate
- Cellar techniques employed to remove heavy metals
- Use of sorbic acid, dimethyl dicarbonate (DMDC) and/or lysozyme
- Use of fining agents to correct errors
- Diatomaceous earth filtration
- Sheet, candle and/or membrane filtration
- Lees filtration using filter aids
- Use of allergenic, protein-based wine fining agents in quantities that need to be declared
- Tartaric stabilisation using metatartaric acid, gum arabic, carboxymethyl cellulose or mannoproteins
- Plant protection against animal pathogens
- Wooden posts
- Wooden stakes

'VERY NEGATIVE' RATING:

- Exposed soil and no intentional admixture for cover crops
- Use of herbicides
- Labels – use of problematic materials
- No erosion measures on slopes
- Use of mineral nitrogen fertilisers
- Use of large-scale sprayers
- No waste water management
- Unsuitable rootstocks

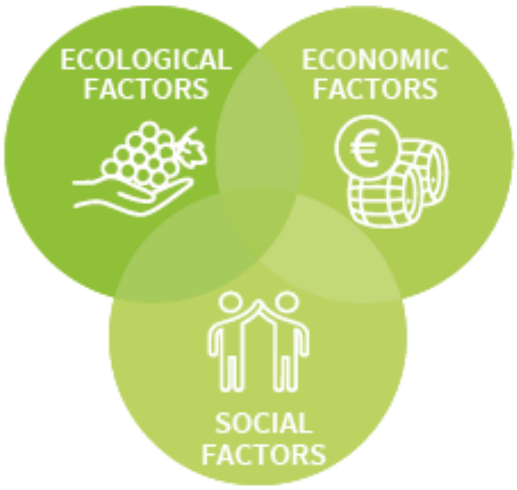
'EXTREMELY NEGATIVE' RATING:

- No cover crops
- Fertilisation without soil analysis and/or overfertilisation

SUSTAINABLE AUSTRIA CERTIFICATION

As part of a scientific project spanning multiple years, the Austrian Winegrowers' Association (Weinbauverband Österreich) has developed an online tool for analysing how sustainably the domestic wine industry is operating. Only winegrowers who meet specified standards with regard to ecological, economic and social factors are permitted to label their grapes and wines with the 'Sustainable Austria' seal.

The producer is automatically approved for certification when the strict requirements have been fulfilled. At least seven of the nine sustainability criteria must be rated green and a maximum of two are still currently allowed to be rated yellow. This creates an impetus for producers to be certified but also an obligation to implement ongoing sustainability improvements in the business in order to continue to fulfil the requirements in subsequent years. The background to this is that the criteria are made continually more stringent and each year – the worst-rated producer(s) with a green rating are moved to a yellow rating, and the yellow rating is accordingly adjusted, too.



SUSTAINABLE AUSTRIA
Enjoying wine responsibly

Austrian Winegrowers' Association
Schauflergasse 6
1015 Vienna, Austria
Tel. +43 1 53441 8554
info@nachhaltigaustria.at
www.nachhaltigaustria.at

Content: Austrian Winegrowers' Association, Schauflergasse 6, 1015 Vienna, Austria
Concept and graphic design: WERTGEBEN.at – Advertising Agency for Agriculture