

SUSTAINABILITY BALANCE SHEET

2023

# SERENA

WINES 1881





# SERENA

WINES 1881



# LETTER TO STAKEHOLDERS

We are proud, as a company and as a family, to introduce the third sustainability balance sheet. We have been working with consistent attention to our territory, partners and clients.

We aim to do business to improve the community and, at the same time, offer a service that reflects our predetermined standards.

Serena Wines is a family-tradition company that founds its roots in 1881. Since that day, we have come a long way, continuously investing to make better oenological production, filling implants and the distribution systems here in Italy and abroad.

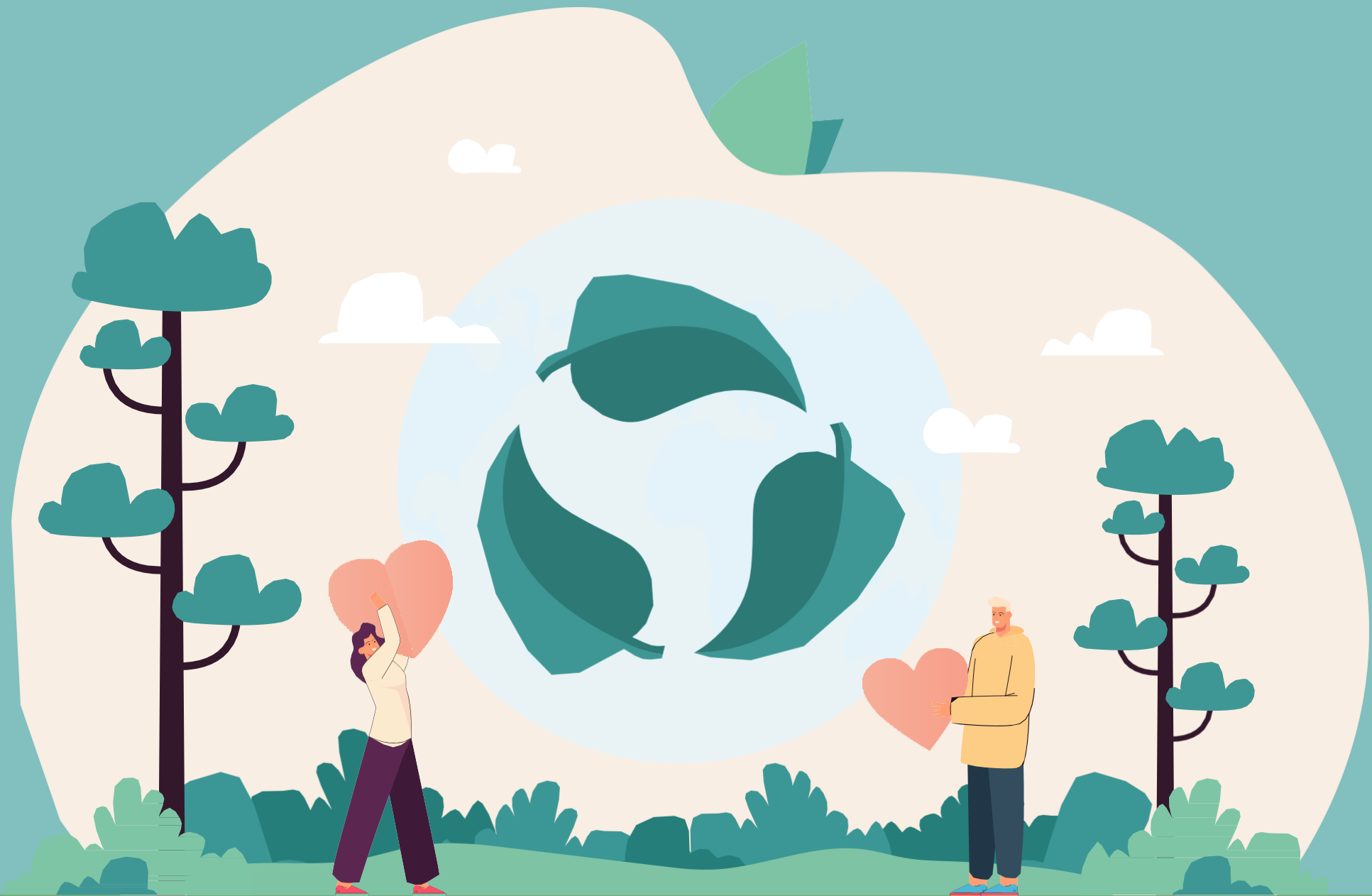
Nowadays the company is growing, and it produces about 25.000.000 0.75 lt bottles and 7.500.000 0.20 lt bottles, realizing a company turnover of 103.000.000€.

Over the years we have always paid great attention to the theme of sustainability trying to safeguard the territory that hosts us, Conegliano, in the heart of the Prosecco area. Indeed, we monitor water consumption, production, waste disposal and employee welfare.

During the years we have launched numerous projects with Universities and center of research, trying to improve our environmental and social impact, through initiatives to support charities and sports.



**Luca Serena**  
CEO



# SUSTAINABILITY

SERENA

WINES 1881

# METHODOLOGY EMPLOYED



Sustainability is to be understood not as a state or an immutable vision, but rather as a continuous process, which recalls the need to combine the three fundamental and inseparable dimensions of development: Environmental, Economic and Social.

The company Serena Wines 1881 has embarked on a path following EQUALITAS-ORGANIZATION standards for business processes from the handling of the wine, until bottling and sale of the finished product.

This standard envisages 3-year cycles with a view to continuous improvement, starting from a study of good production and socio-economic practices, to increasingly specific indicators such as the carbon and water footprint.



GOOD VINEYARD PRACTICES



GOOD SOCIAL AND ECONOMIC PRACTICES



GOOD WINERY AND BOTTLING PRACTICES



## ENVIRONMENTAL INDICATORS

BIODIVERSITY



CARBON FOOTPRINT



WATER FOOTPRINT



MANAGEMENT SYSTEM AND CONTINUOUS IMPROVEMENT





# INTERNAL CHECKS

The company works with professionals to make sure it's always informed with the latest regulations and their continuous updates.

Every year with “Unione Italiana Vini” four internal inspections are conducted, to evaluate that BRCGS and IFS certification standards are applied.

Internal 2023 inspections, carried out by qualified personnel of “*Unione Italiana Vini*”, did not highlight relevant non-conformities. Suggestions for the improvement were promptly taken over and resolved.

The company also carries out an annual internal inspection to verify that the values of the *Equalitas* standard, which it joined in 2022 by certifying with CSQA, is always observed and that a policy of improvement is adopted.

In May this year, surveillance was carried out to verify if all the requirements of the standard were met.

The certification body CSQA carried out the official periodic inspection in June 2023, in order to reconfirm the certification. 4 non-compliances were found, they were promptly taken in charge and resolved.

The company is certified for the third time with the V.4 following the gradual approach suggested by the standard, and programming the evaluation of 2024 footprint indicators.





# SUSTAINABLE DEVELOPMENT GOALS

**1** NO POVERTY

**2** ZERO HUNGER

**3** GOOD HEALTH AND WELL-BEING

**4** QUALITY EDUCATION

**5** GENDER EQUALITY

**6** CLEAN WATER AND SANITATION

**7** AFFORDABLE AND CLEAN ENERGY

**8** DECENT WORK AND ECONOMIC GROWTH

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE

**10** REDUCED INEQUALITIES

**11** SUSTAINABLE CITIES AND COMMUNITIES

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**13** CLIMATE ACTION

**14** LIFE BELOW WATER

**15** LIFE ON LAND

**16** PEACE, JUSTICE AND STRONG INSTITUTIONS

**17** PARTNERSHIPS FOR THE GOALS

**SUSTAINABLE DEVELOPMENT GOALS**

# SUSTAINABLE GOALS











The 2030 Agenda for Sustainable Development, ratified in 2015 by the 193 Member States of the United Nations, includes 17 sustainable development goals to be achieved by 2030. All global civil society, institutions, businesses, nonprofits, each in its own sphere of activity and possibility of action, is called to commit concretely for their implementation.

Serena Wines 1881 has developed a project related to sustainability, setting some goals for sustainable business development. The Serena family is involving the entire company staff, because the participation of all is needed.



# CORPORATE GOALS

## PREVIOUS BALANCE SHEET

2030 AGENDA THEME		COMPANY GOALS	EVIDENCES
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p><b>Company development</b></p>	<ul style="list-style-type: none"> <li>The company surpassed the prefixed limit of 100 millions € of sales, moreover it has closed the year with a raise of the personnel which has exceeded 95 units.</li> </ul>
 <p>3 GOOD HEALTH AND WELL-BEING</p>	 <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	<p><b>Increase of product awareness and corporate brands</b></p>	<ul style="list-style-type: none"> <li>A new brand ambassador has been inserted, and has carried out several training initiatives with our agents and organized several events and promotional activities. The marketing department coordinated and supported these activities communication on social and press channels.</li> </ul>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p><b>Technological development and company digitalization</b></p>	<ul style="list-style-type: none"> <li>The revamping work of the company water purifier has been completed. This investment brought enormous benefits including: liquid sludge removed by tanker, saving chemicals (about 8000 €), the estimated energy savings are of 25000 €.</li> </ul>
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>		
 <p>13 CLIMATE ACTION</p>	 <p>14 LIFE BELOW WATER</p>		

## 2030 AGENDA THEME

## COMPANY GOALS

## EVIDENCES

8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



### Technological development and company digitalization

- We have installed a specific software to monitor the consumption of the production with daily analysis of reports. In addition, a new system for the registration of non-conformities was introduced.

8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



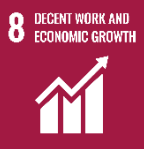

### New goods loading and unloading workflow layout

- A new flow layout for loading and unloading goods has been defined, which has led to an increase in the safety of the road network within the plant and a better organization of the stored material.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



# CORPORATE GOALS 2023

2030 AGENDA THEME	COMPANY GOALS	EVIDENCES
 	<p><b>Increase the customer portfolio and sales volume in Italy and abroad</b></p>	<ul style="list-style-type: none"> <li>• Development of a new brand “L’UVAS” for steel kegs.</li> <li>• Development of a new sparkling white wine “Soè”, differentiating itself from the existing one.</li> <li>• Development of a new non-alcoholic product (0.0 Alcohol Free)</li> </ul>
		
 	<p><b>Improve company’s processes and performances</b></p>	<ul style="list-style-type: none"> <li>• Purchase and implementation of a new version of the management software (JGalileo).</li> <li>• Enhancement of cyber security with the separation of the corporate Internet network.</li> <li>• Enhancement of the company's MES through the development of a KPI dashboard.</li> <li>• Purchase of 2 automated warehouses 'MODULA'.</li> </ul>
		
 	<p><b>Raise the awareness of the brand “Ville d’Arfanta”.</b></p>	<ul style="list-style-type: none"> <li>• Opening of the Arfanta estate also to the public with the possibility of overnight stays.</li> <li>• Organization walking and cycling tours in the 'Prosecco Hills'.</li> <li>• Search for a resource to manage the activities.</li> </ul>
 		

## 2030 AGENDA THEME

## COMPANY GOALS

## EVIDENCES



### Increase quality culture and corporate sustainability

- Increase training per capita.
- Organise training on: health and safety in the workplace, Organisational Model Legislative Decree 231/01 and the environment.
- Organise group activities on Lean Production methods.



### Decrease the environmental impact of the company

- Strengthening of consumption monitoring.
- Holding regular meetings on observed consumption data, development of some corrective actions.
- Energy diagnosis.



### Increase the company digitalization level

- Development of internal audits through portable electronic devices.



### Increase the participation to charity events

- Participation in social/charitable initiatives: Welfare Care, «Our History»







# THE COMPANY

SERENA

WINES 1881



# CORPORATE TARGETS 2023

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**€ 103 ML**  
TURNOVER

**32.500.000**  
PRODUCED  
BOTTLES

**95**  
EMPLOYEES

# FAMILY TRADITION

## THE COMPANY

Serena Wines 1881 is a 5-generation family business with a long tradition in wine production. Located in the heart of the Prosecco region, it produces over 32,000,000 bottles a year with 56% export.

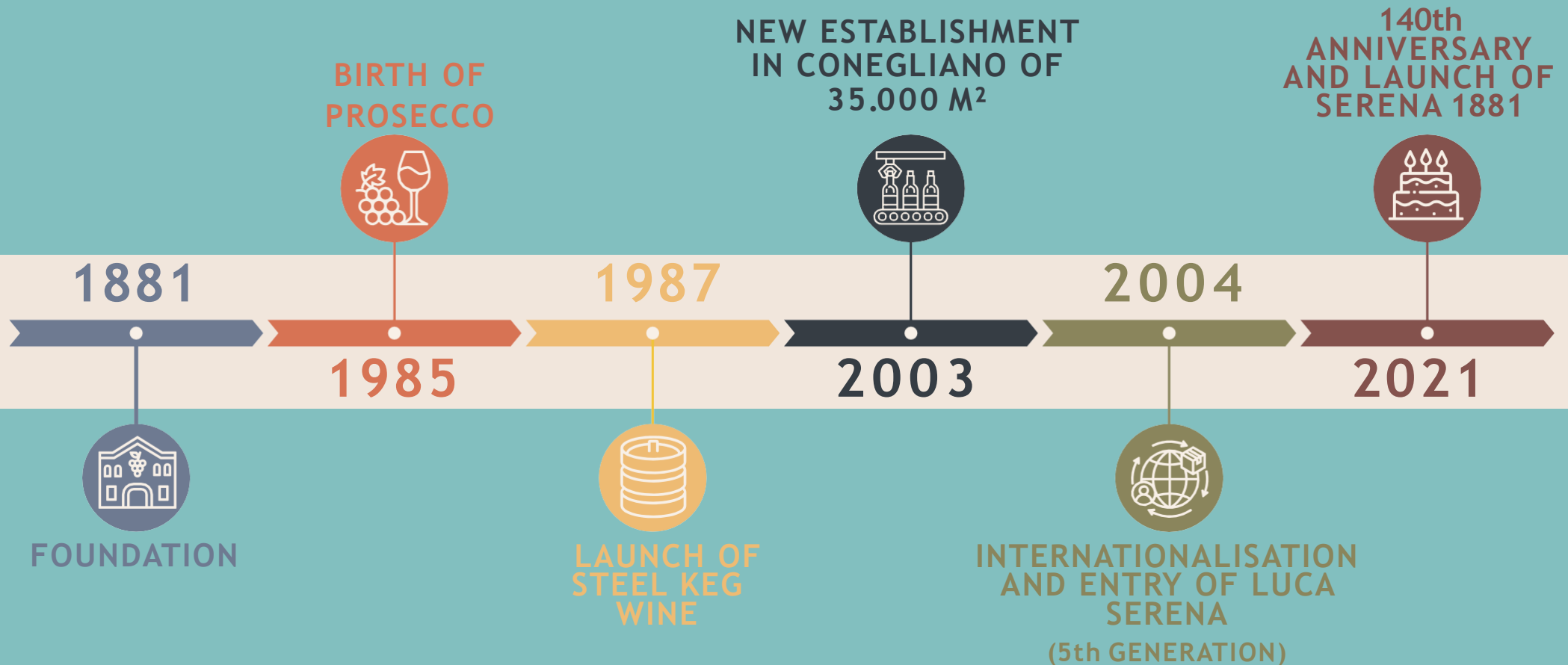
# 140 YEARS

# SERENA

WINES 1881



# STORIA



# VALUES

## FAMILY

A family history that has continued for 140 years, carrying on the tradition and respect for the land and its fruits.

## INNOVATION

We are projected into the future. We use the most modern and capacious autoclaves for the Charmat method and the latest bottling plants.

## TERRITORY

We are located in the heart of the Prosecco territory, where the land is cultivated with full respect.

## SUSTAINABILITY

We have been environmentally aware and respectful for years. We initiate land protection projects with institutes and universities.

## TRASPARENCY

Ethics, loyalty, fairness allow one to fear nothing, because one has nothing to hide.

## INCLUSIVITY

we believe in an inclusive and fair society, which is why we have launched several projects in this direction.



**CHAMPAGNE**

*De Vilmont*

From Rilly la Montagne, a land of great vocation, an elegant and refined wine for those who love the classic method and French bubbles.



**CORTE  
DELLE  
CALLI**

The brand that brings to life the magical atmosphere of being on a gondola: the landscapes, the movement of the oar, the sound of the water. The symbolism of the oar is in fact found on all the labels. The line includes sparkling, semi-sparkling, still white and red wines.



**SERENELLO**

The company's young, casual and lively line. It is perfect on holiday and in moments of leisure. The joviality and liveliness of the sparkling and semi-sparkling wines leave their mark as novelty and freshness.



**VILLE D'ARFANTA**

The expression of a precious, high-quality Prosecco in DOCG and DOC versions. The brand is named after the estate owned by the Serena family in Arfanta of Tarzo.

## OUR BRANDS

# SERENA

WINES 1881



**THE  
DEER**

The hipster and funky line that accompanies the fun of the youngest, focusing on unusual labels and starring the deer Ross, symbol of the brand.

**SERENA**

1881

The line launched on the occasion of the 140th anniversary, dedicated to the choices, independence and values of the territory. A complete brand of sparkling, semi-sparkling, still white and red wines

OTHER BRANDS OF OURS

**COSTAROSS**



**VIGNE VERDI**



**L'UVAS**

The keg wine brand that combines quality, efficiency and practicality.

# IN THE HEART OF PROSECCO



The company is located in Conegliano, right in the centre of the Prosecco DOCG production area.

Prosecco is a DOC and DOCG white wine produced in Veneto and Friuli Venezia Giulia. It became known in the 1990s as Prosecco IGT (Typical Geographical Indication), and in 2009 it got the controlled designation of origin (DOC).

Some historic denominations of this wine have taken on the DOCG label (Prosecco di Conegliano-Valdobbiadene).

Prosecco is today the most exported Italian wine abroad and in 2014 it surpassed Champagne for the first time in the number of bottles sold worldwide.

As of 2019, the Prosecco Hills of Conegliano and Valdobbiadene are included in the UNESCO World Heritage list.



- Area di produzione del  
**CONEGLIANO VALDOBBIADENE**  
 PROSECCO SUPERIORE DOCG  
*Production area in the*  
**CONEGLIANO VALDOBBIADENE**  
 PROSECCO SUPERIORE DOCG
- Area PROSECCO DOC TREVISO  
 PROSECCO DOC TREVISO Area
- Area PROSECCO DOC TRIESTE  
 PROSECCO DOC TRIESTE Area
- Area PROSECCO DOC  
 PROSECCO DOC Area





# PROSECCO HILLS UNESCO HERITAGE SITE

The Prosecco hills of Conegliano and Valdobbiadene were recognised as a UNESCO World Heritage Site in July 2019.

The site encompasses the hilly strip extending from the municipality of Valdobbiadene to Vittorio Veneto. The 20,000-hectare area includes 15 municipalities and is characterised by rugged reliefs and small valleys.

This is the setting for the Prosecco DOCG vineyards, the area of greatest value and where our company has its production site and two estates for agricultural and hospitality use.



VINICOLA

Serena

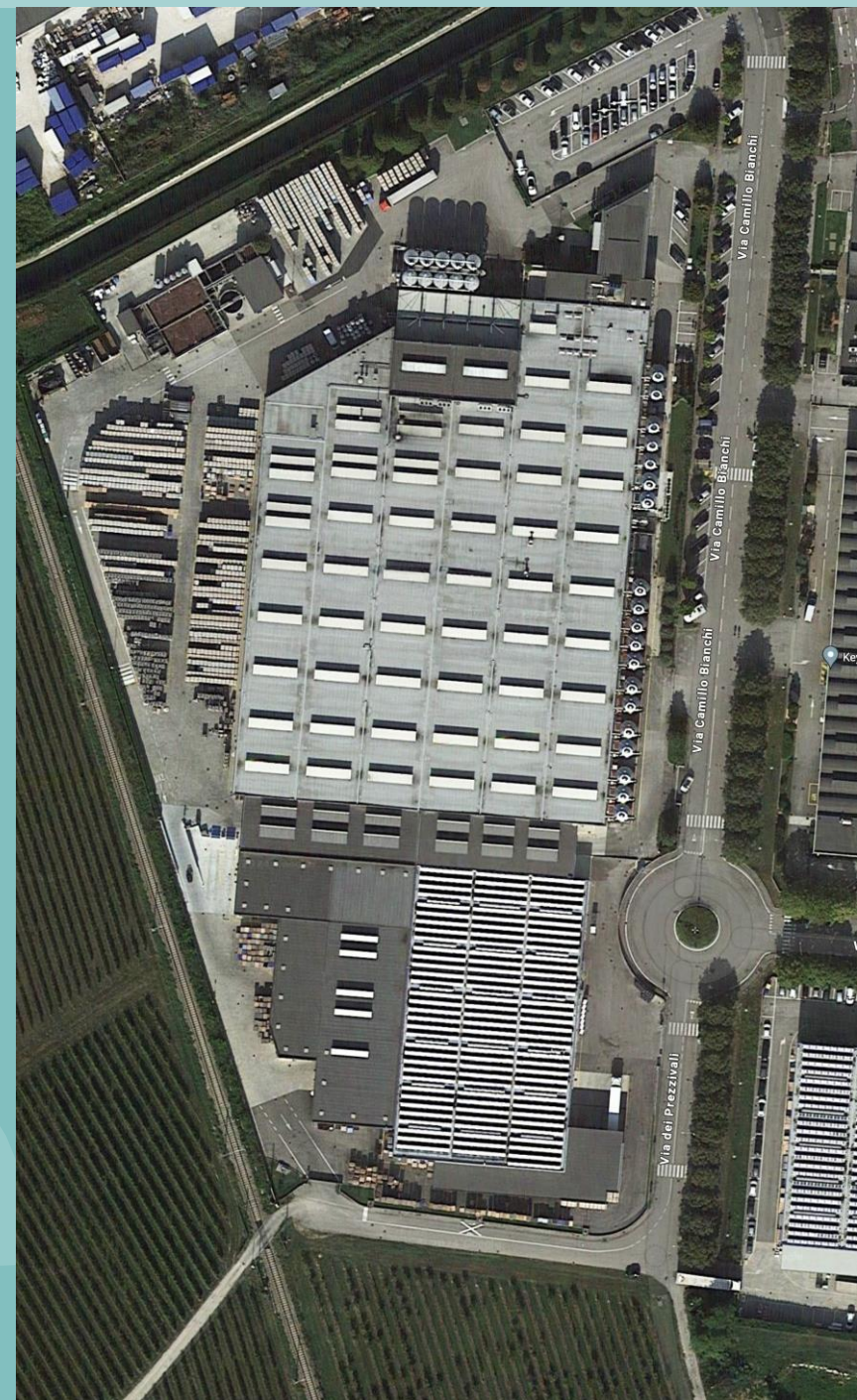


# THE PRODUCTION PLANT

The current factory, built in 2003, covers 38,500 m<sup>2</sup> of land, of which 20,000 m<sup>2</sup> covered. It is located in Via Camillo Bianchi no. 1 in Conegliano, within the “Industrial area of Treviso Prealps” .

It is bounded to the west by the <<Ponte nelle Alpi - Conegliano >> railway; to the north by the canal << Castelletto-Nervesa >>; to the east by << Via Camillo Bianchi >>, which serves as an access point to the company for personnel and vehicles that load and unload goods every day in the external area or in the 8 special loading bays; to the south by << Via dei Prezzivali >>, which allows vehicles to leave and to have a smooth, one-way route that conveys them along the company’s perimeter.

The winery’s wine vats have a capacity of 80,000 hl and are used to store wine in its various stages of processing. The autoclaves alone have a capacity of 40,000 hl.





ECONOMIC  
SUSTAINABILITY

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WINES 1881





# ECONOMIC ACHIEVEMENTS 2023

# SERENA

WINES 1881



**390.000**  
SOLD  
HECTOLITRES OF  
WINE



**3,13%**  
INCREASED  
TURNOVER



**€ 567.000**  
COMPANY  
INVESTMENTS

# ECONOMIC DATA

In 2023, the company saw growth in the foreign market, which brought + 4.92% in volume and + 12.25% in turnover.

The Italian market saw a reduction of about 5.03% in volume and a reduction of 4.54% in turnover. Overall, the company had an increase of 3.13% in the balance sheet.

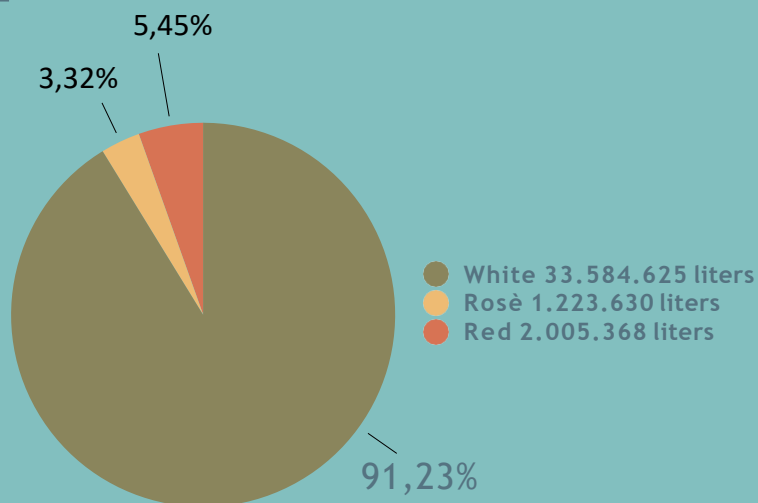
During the year, investments amounted to € 567,416.86, the most significant of which were:

- The upgrading of the nitrogen generator, an investment in environmental sustainability, as it reduces production cycle times and increases product quality. The on-site production of nitrogen eliminates the need for gas transport and storage, reducing emissions and costs associated with logistics.
- Two new 'Modula' automated storage systems for labels. These warehouses maximise the use of vertical space, reducing the need for structural extensions and minimising the occupation of horizontal surfaces, which reduces the environmental impact due to the construction and maintenance of traditional storage spaces. The systems are integrated with management software, optimising inventory and warehouse operations with a view to sustainability, monitoring the use of resources and reducing wastefulness.
- Software, related to the change of management software that will allow a reorganisation of processes in all areas of the company through integrated digital solutions. The automation of processes through management software reduces the need for manual intervention, increasing operational efficiency and reducing the risk of human error. This leads to a more efficient use of resources and a reduction in waste. It provides advanced data analysis tools that support evidence-based decision-making. This will enable more informed and sustainable decision-making based on environmental and social performance metrics. Management software will facilitate transparency and communication with stakeholders, including customers, suppliers and local communities. The ability to share sustainability data will strengthen corporate reputation and promote social responsibility.

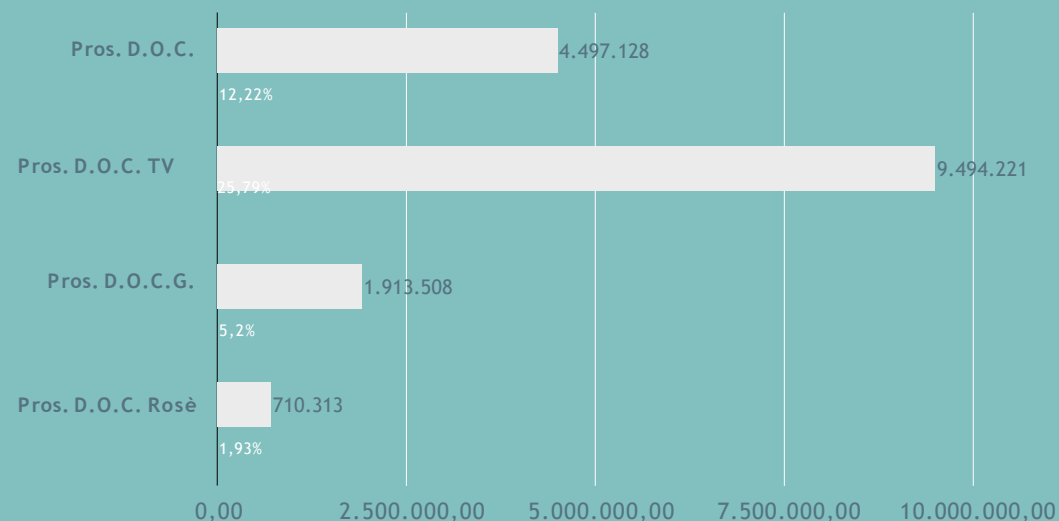
# PURCHASED WINE

In 2023 36 million litres of wine were purchased, divided into different qualities, which we summarise in the macro-categories for convenience: White, Red and Rosé. 45.5% of the wine volume is related to PDO wines (16.7 million litres), 8.8% is related to PGI wines (3.2 million litres). The graph on the left shows the distribution of wine purchased in the macro-categories White, Red and Rosé. On the right there's the graph that shows the profile of the quantities of Prosecco purchased according to the various denominations.

## LITERS OF PURCHASED WINE



## LITERS OF PURCHASED PROSECCO

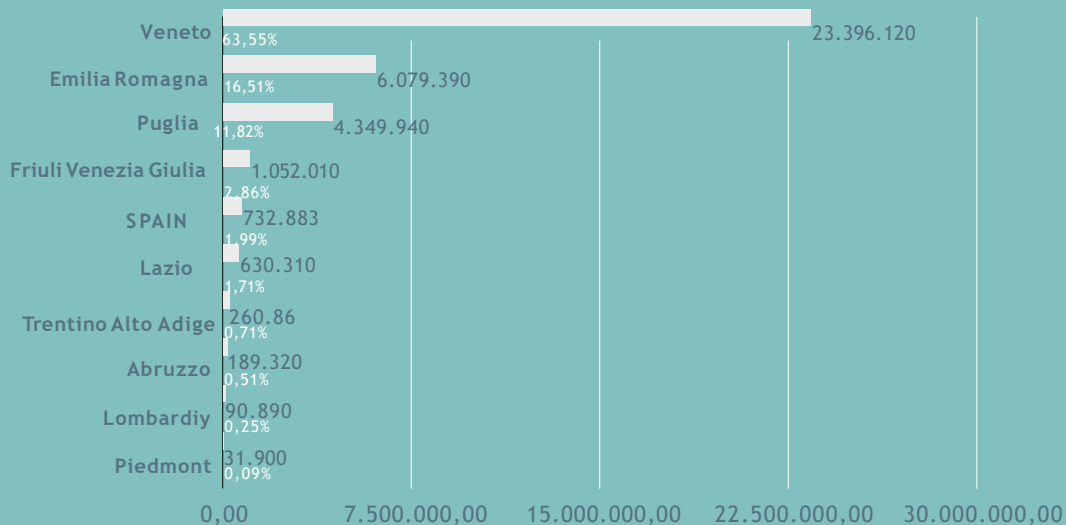


# WINE SUPPLIERS

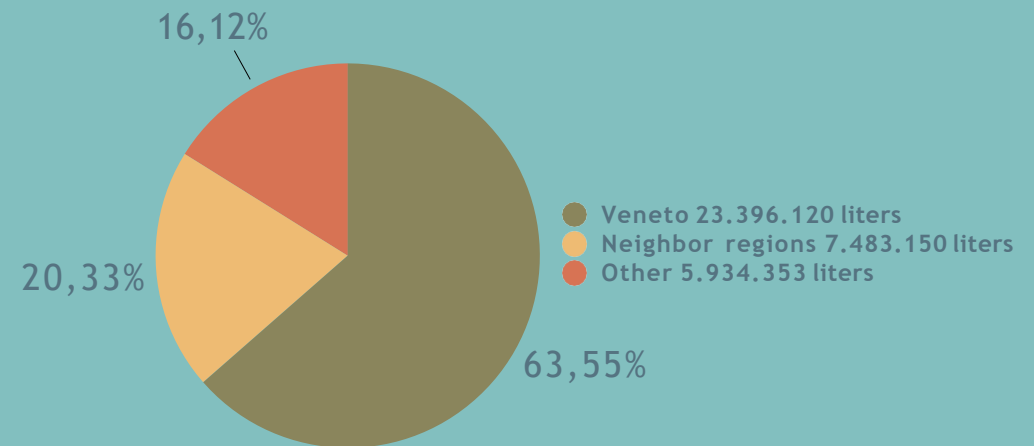
The relationship with our wine suppliers is the result of many years of meticulous work in the selection phase. The Serena family has always dedicated a great passion and expertise to this fundamental activity. Suppliers come almost exclusively from areas bordering our Conegliano plant, in order to favour the characteristics of the wines of the area and to give continuity to the human relationship created over the years with our suppliers in Veneto, Friuli Venezia Giulia, Emilia Romagna,

Lombardy and Trentino. The graph on the left shows the percentage of wine purchased according to the region of origin, while the graph on the right compares the origin of the wine from Veneto and neighboring regions (Emilia Rom., Friuli V.G., Lombardy and Trentino A.A.) with that from distant regions. The company has always wished to maintain its relationship with the territory and its farming community and does so by favoring suppliers in the area.

## LITERS OF WINE IN THE VARIOUS REGIONS



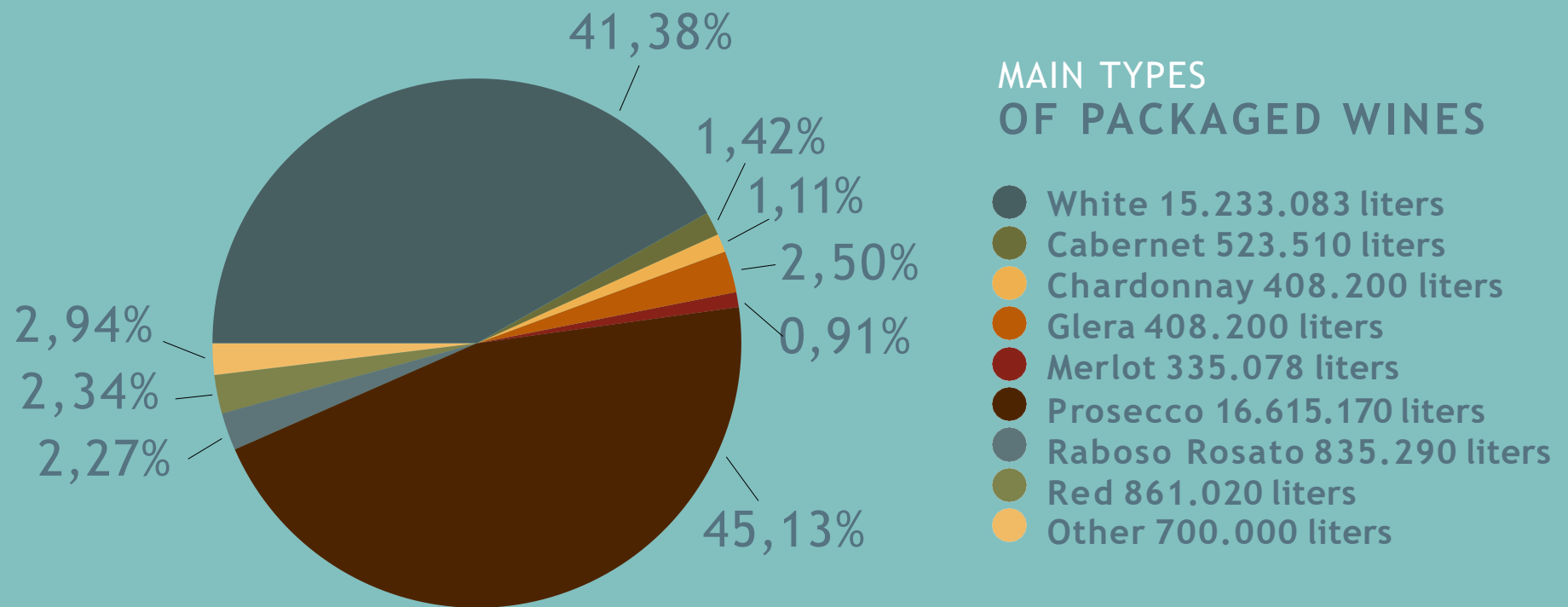
## SUPPLIER'S PROXIMITY OF PURCHASED WINE



# PACKED WINE

Serena Wines 1881 to date holds the national record in the production of stainless steel kegs. With this format it has distinguished itself over the years in Italy and abroad. The great entrepreneurial ability of the Serena family has allowed it to flank this prestigious supremacy with a leading role in the production of bottles, with a particular propensity for sparkling and semi-sparkling wines. The great rise in the Prosecco DOC and DOCG market has been instrumental in fulfilling this great aspiration.

Below are reported some data on the main wines that the company produced in 2023.



# BOTTLES

For its production, Serena Wines relies mainly on three bottle formats:

- Classic 0,75 lt
- Magnum 1,5 lt
- Small 0,2 lt

Through its large production capacity, efficiency and company organization, Serena Wines ranks among the leading producers of Prosecco.



**Format 0,75 lt**  
25.000.000 bottles



**Format 1,5 lt**  
18.000 bottles



**Format 0,2 lt**  
7.500.000 bottles

# KEGS and BAG IN BOX

As the company's first real product brand, the Serena brand is synonymous with innovation: it has been distributing wines in kegs worldwide since 1987.

The kegs are very capacious containers made of steel or a more practical PET.

The Serena kegs are the answer to preserving the quality and characteristics of wine for longer, as they protect it from light and oxidation during transport and maintain its characteristics and temperature during service.

Opting for Serena kegs means making an innovative choice, ONE WAY KEG for example is the first 100% recyclable, durable, practical and manageable PET keg. A true revolution in practicality but with the guaranteed quality of a Serena product.

Besides kegs, the company is also developing its market position in the bag-in-box segment.



**KEGS**  
590.000



**BAG IN BOX**  
24.500

# BULK WINE

Serena Wines 1881 also markets bulk wine transported by truck or small 5, 10 and 15 hectoliter tanks that are easier to transport.

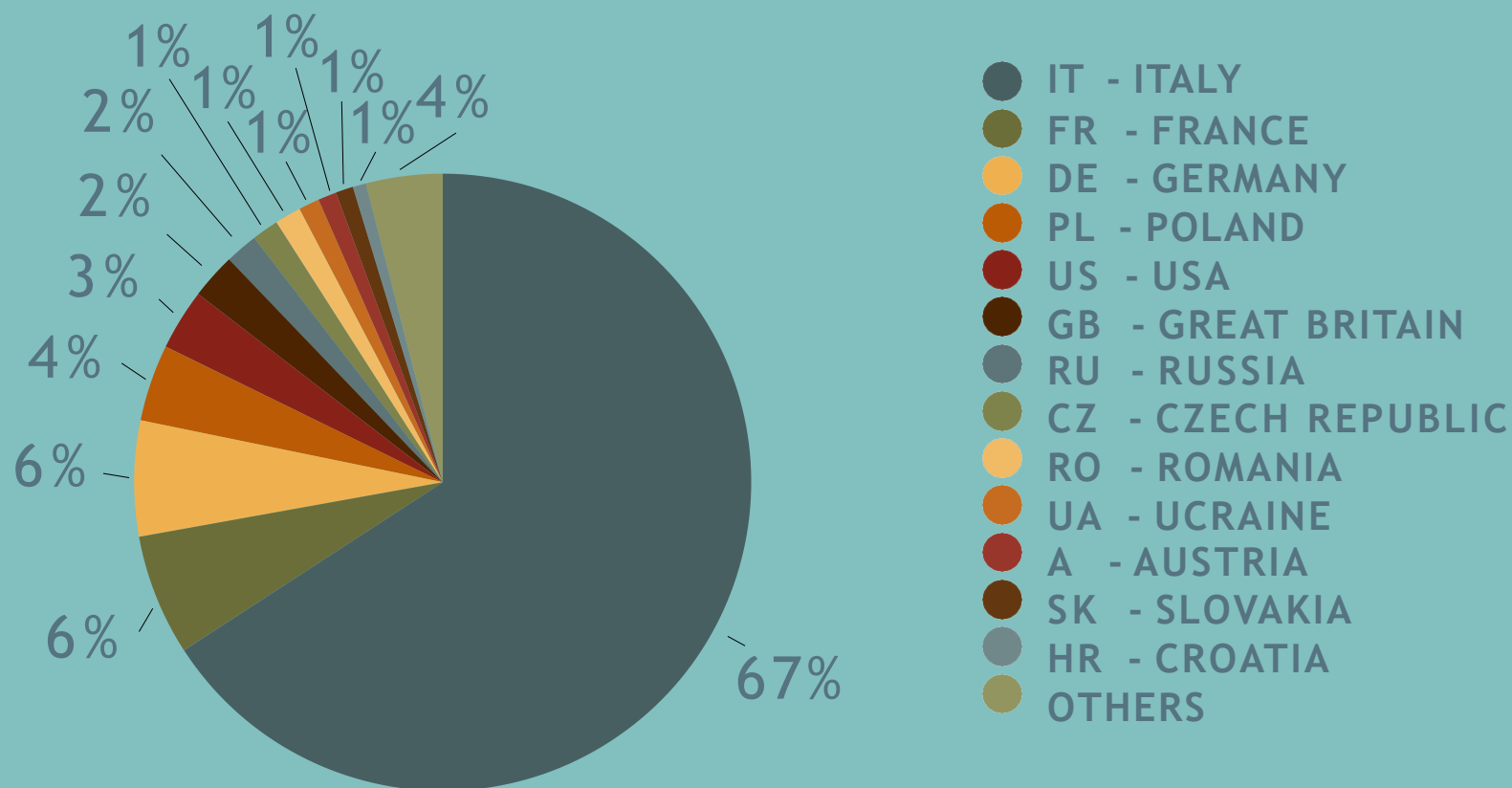
15.740 HL





# SALES

Since the beginning of the 2000s, the company began a physiological and far-sighted process of expanding its sales outside the national borders. However, this new mission has not adversely affected sales in Italy, where it historically stands out in the Ho.Re.Ca. channel. In 2023, 44% of production was destined for domestic consumption and 56% for foreign consumption. The products that crossed national borders in 2023 reached 50 different countries, in the graph we summarise only those where we export a volumetric value of wine greater than 1%.





SUSTAINABLE  
PRODUCTION

SERENA

WINES 1881



# SUSTAINABLE PRODUCTION GOALS 2023

# SERENA

WINES 1881



56

PRODUCT  
CHECKS



103

CERTIFICATION  
HELD BY OUR  
SUPPLIERS



331

INTERNAL  
TRAINING  
HOURS

# QUALITY CONTROLS

Serena Wines 1881 has been *BRCGS*, *IFS Food*, *Organic Wines*, *VeganOk*, *Lavoro Sicuro*, *Sedex* and *Equalitas* certified for many years.

Through the *BRCGS* and *IFS Food certifications*, the company is assessed in the area of food safety. These are internationally recognised standards and the high level we are awarded each year communicates the care, preparation which we treat our products.

Organic certification has become part of the company over the last five years, to meet a public that sees itself in greener ideologies, linked to the reduced use of treatments on plants and animals. Thanks to precise and punctual control over the entire supply chain, the company is able to ensure an organic product free of contamination.

In the same period, the company opted to produce vegan products, adhering to *VeganOk*, in order to meet a public that might otherwise not appreciate our products.

The company, however, in addition to high care for the product, also pays high attention to its employees, primarily

from a safety perspective, having adhered to the guidelines drawn up by *Lavoro Sicuro*, in order to guarantee the control and management of all those work situations that could otherwise become dangerous for workers.

Still on the subject of employees, the company has adhered to *Sedex* certification, which serves to demonstrate its commitment to ethical, social and environmental standards, with responsible contractual and business practices.

In 2022, *Equalitas* also became part of the company's certifications, a specific standard for the wine supply chain, which aims, through the monitoring of environmental, economic and social aspects, to grow the company, those who come into contact with it, and the territory.

Wine is the company's main raw material, arrives from selected suppliers, and after being processed is sent to customers all over the world. In order to always provide a top-quality product, multiple analytical and organoleptic controls are carried out by our team of oenologists, who look after the wine throughout its journey in the company.



The first check step is on the suppliers, who are qualified on the basis of: held certifications, questionnaires and audits carried out at their facilities.

Once we have ensured that the supplier is suitable, his wine is sent to our oenologists for sampling, who, through tastings, assess and decide whether to buy it and how to process it.

When the tankers arrive at the winery, the wine is re-analysed before being taken into the winery, to confirm that it matches the selected sample. The wine will then be rechecked following each subsequent stage of processing, from clarification, to secondary fermentation, through to bottling.

All these stages are constantly reviewed and updated within the meticulous product plans that describe the company's entire production chain.

To produce and bottle a sparkling wine, we perform 15 chemical-physical analyses and 10 organoleptic tests.









# PURCHASED MATERIAL FOR PACKAGING

In 2023 for its production the company purchased respectively:

- 87 million labels,
- 4 million cartons for sale,
- 20 thousand other carton packs,
- 28million wine capsules,
- 550 thousand keg capsules,
- 31,8 million corks,
- 18,6 million wirehoods,
- 34 million bottles average weight of single bottle 522g.



# USE OF MARBLE BASED MATERIAL ON THE PRESTIGE SPARKLING WINE LINE VILLE D'ARFANTA

When evaluating the materials to be used in production, we have started to make sustainability considerations. Wherever possible, we look for materials with a low environmental impact, sourced from certified suppliers and with a focus on sustainability issues. For some years now, we have been converting the materials used in the labels of our most prestigious brand <<Ville d'Arfanta >>, introducing a compound derived from circular economy concepts consisting of marble mining waste and polyethylene.

**SANFAUSTINO LABEL WINE · OIL · COSMETIC**



## MARBLE BASE

È un sintetico che offre un approccio radicalmente diverso ai materiali sostenibili.

### CARATTERISTICHE PRINCIPALI

- ▶ Contiene l'**80% carbonato di calcio** (scarti di estrazione mineraria del marmo) e **polietilene fino al 20%**
- ▶ Per la sua produzione non vengono abbattuti alberi, né sprecata acqua
- ▶ Può anche essere riciclato nelle materie plastiche o bruciato per produrre energia
- ▶ Ha un ottimo punto di bianco, pur senza l'utilizzo di candeggina e sostanze tossiche
- ▶ Marble Base è **più sostenibile delle carte riciclate**. Quest'ultime per la loro produzione richiedono molta acqua, candeggina e altri prodotti chimici, oltre a richiedere tra il 67 e l'82% di energia in più rispetto alla Marble Base.

### IL PROCESSO PRODUTTIVO IN SINTESI



© 2024, fino a marzo 2025



Sedex Member





# ENVIRONMENTAL SUSTAINABILITY

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# ENVIRONMENTAL ACHIEVEMENTS 2023

# SERENA

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**0,83%**

ELECTRICAL  
ENERGY SAVED



**9500 M<sup>2</sup>**

WATER SAVED IN  
THE LAST TWO  
YEARS



**63 t**

WASTE GLASS DUE  
TO  
EXTRAORDINARY  
WEATHER EVENTS

# GOOD WINERY AND BOTTLING PRACTICES

## PRODUCT PLANS

Product plans are important documents because they describe in detail the various steps in the production chain. It starts by drawing up the flow-chart of a product, and for each stage of the diagram it is defined: what is controlled of the wine and what is controlled of the process. We have recently added a special section where we indicate what kind of waste is produced in the stage and how much water is consumed.

FASE					
					
MODALITA' DI CONTROLLO	FREQUENZA	RESPONSABILE	DOC	MO	
SPECIFICHE DI PRODOTTO					
IGIENICO SANITARI					
QUALITA'					
ORGANOLETTICI	Organolettica	Ogni vasca	ENOL		MO88
SPECIFICHE DI CONTROLLO					
PRESSIONE DI ESERCIZIO FILTRO	Strumentale	Continua	OP	Log sistema	MO 02
PORTATA	Strumentale	Continua	OP	Log sistema	MO 02
LIMPIDEZZA	Visiva	1 al giorno	LAB	Log sistema	MO 02
SPECIFICHE DI PROCESSO					
AGGIUNTA/DOSAGGIO ADDITIVI/COADIUVANTI			ENOL		MO 02
<b>RIFIUTI DI PRODUZIONE CONSUMO H<sub>2</sub>O, N<sub>2</sub></b>	<b>UTILIZZO</b>	<b>FREQUENZA</b>	<b>RESPONSABILE</b>	<b>DOC</b>	<b>MO</b>
ACQUA	50 hl	1 volta al giorno	OP	IO 16	
	90 hl	1 volta settimana	OP	IO16	
IMBALLAGGI MISTI (CER 150106)	In base alle necessità, 100g	1 volta settimana	OP		
CARTA (CER 150101)	In base alle necessità, 100g	1 volta settimana	OP		

What is controlled about wine →

What is checked in the process →

Why can be done in the process →

Modalities, frequency, responsibilities and documentation for each control

Monitoring and quantification of waste produced per phase

Monitoring of used water



# MONITORING AND CONSUMPTION

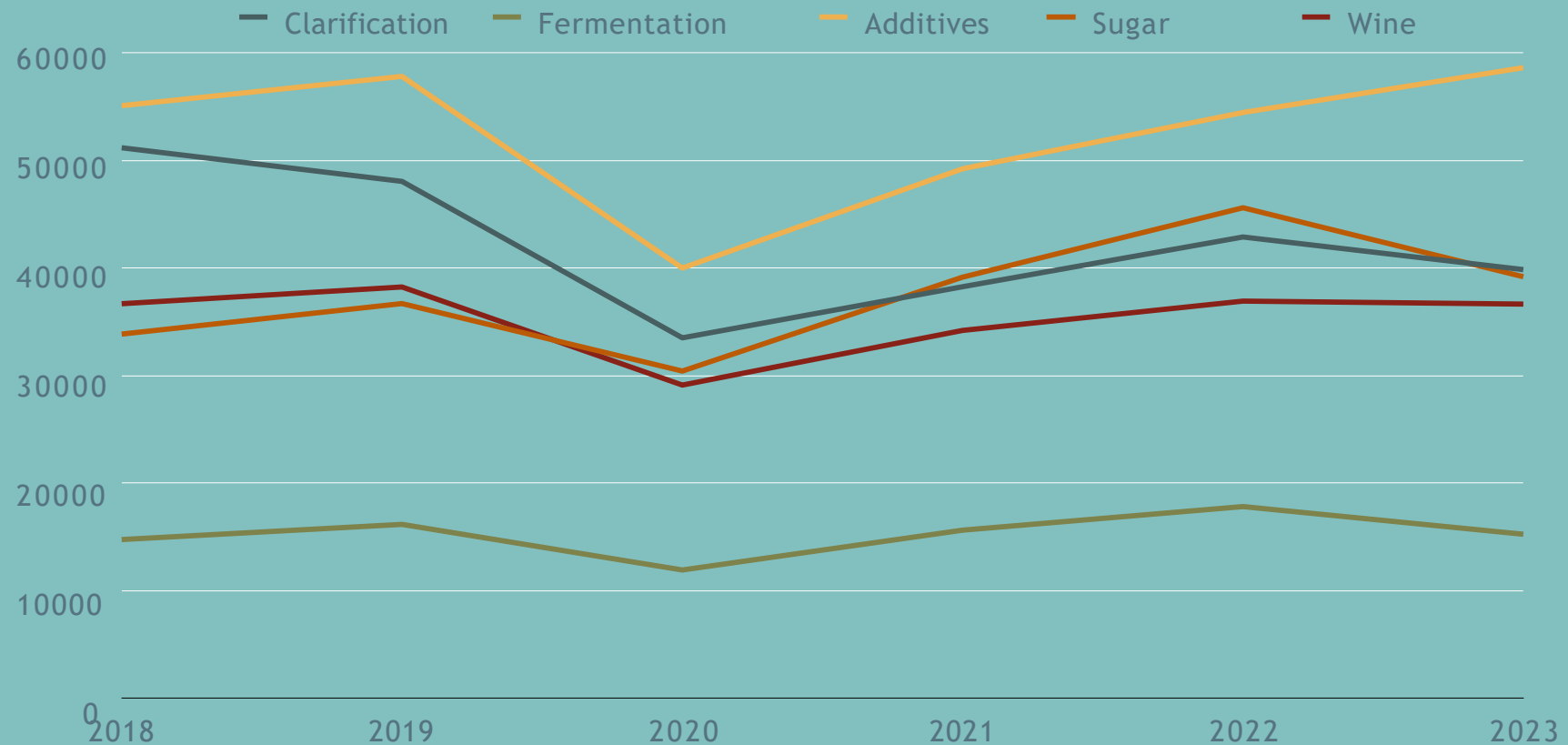
The activity where the company is concentrating a lot of resources is the monitoring of certain quantities, because we are deeply convinced that, being in possession of precise and accurate data is a solid basis for making the right change.

- Wine bought, produced and sold, this data allows the company to understand how it is working and through comparisons with previous years, to understand what the annual trend will be;
- Consumption of oenological products, every day we record the consumption of individual oenological products ensuring their traceability within all bottled products;
- Water consumption, through the reading of bills and a series of meters placed along the company's network, it is possible to assess daily water consumption. The individual readings of the departments are checked every morning, this allows anomalies to be identified early and immediate action to be taken to fix leaks or to analyze the operations that required more water;
- Electricity consumption, interpolating billing data with production data;
- GAS consumption, through the reading of the general meter, the data reported in the bill and the intersection of this data with production trends, allow the company to assess the periods where this element has the greatest economic impact and to make an accurate evaluation regarding its use;
- Monitoring of waste production, data from waste registers and annual MUD. These make it possible to then study methodologies to decrease waste volumes.
- Departure and arrival of raw materials.



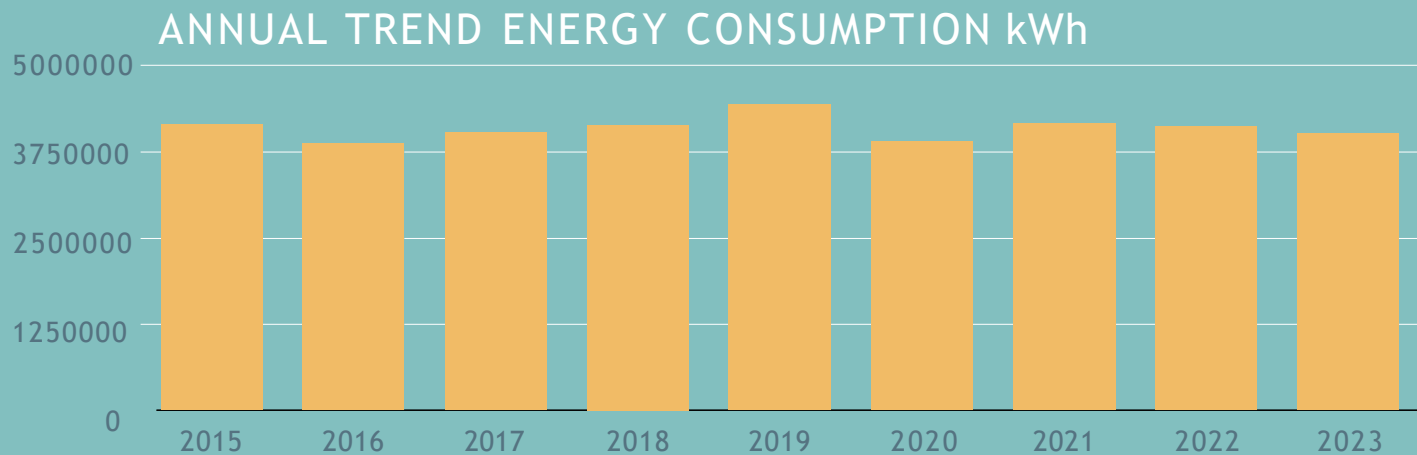
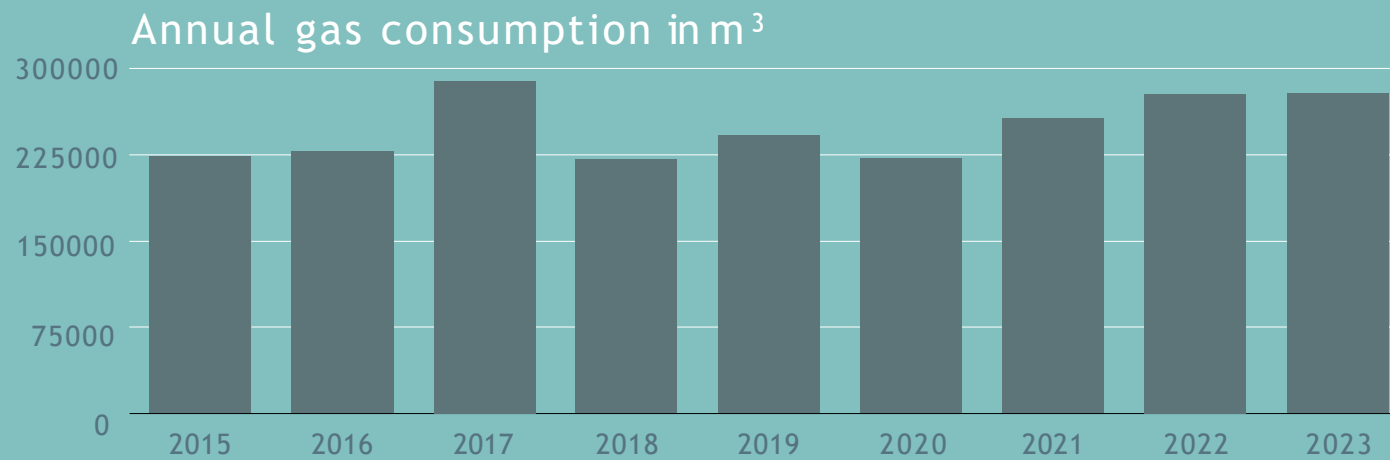
# MONITORING ENOLOGICAL PRODUCTS

The trend over the years in the use of enological products in wines is generally proportional to the volume of wine processed. All our production protocols have been evaluated with a view to reducing these ingredients. In 2023, the content of clarification and fermentation products dropped compared to 2022, while due to a year with adverse weather conditions, we were forced to increase the amount of additives in the wines. This is a very important point of reflection for the future, climate change is putting crops in Italy in crisis. The entire industry, including us, will be called upon to face a very difficult challenge in the coming years.



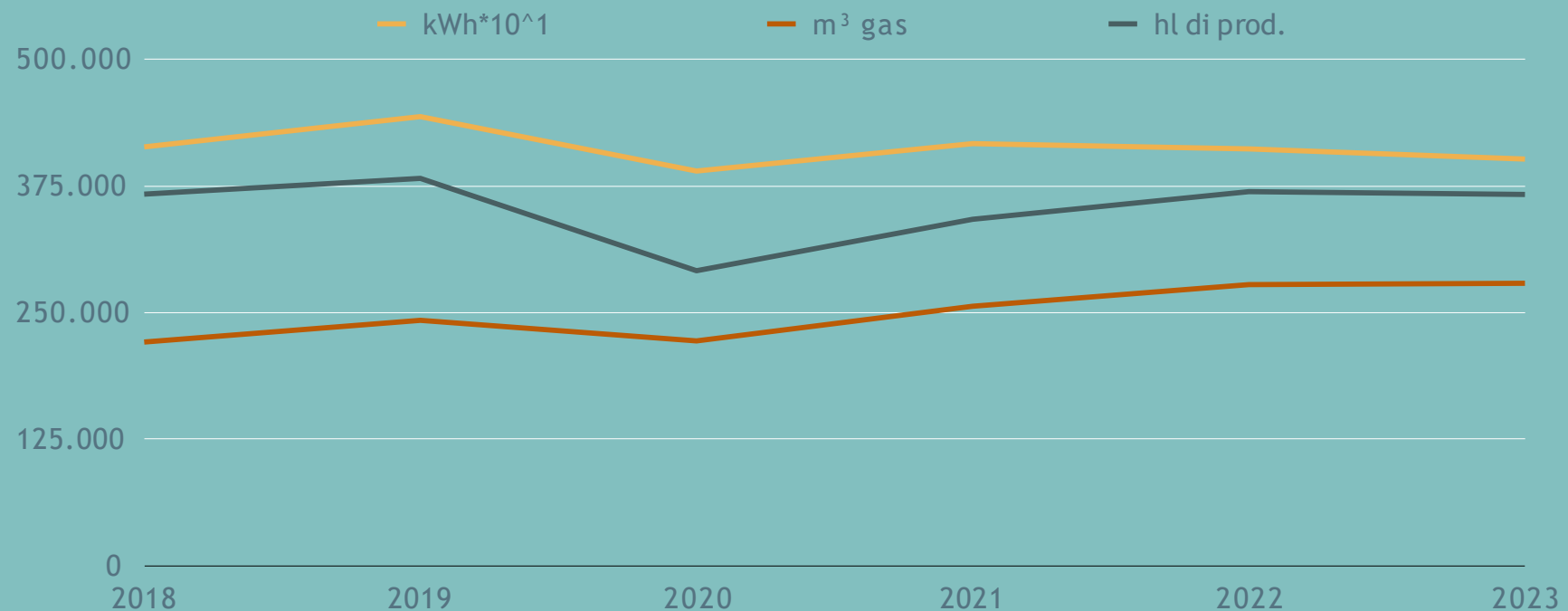
# MONITORING CONSUMPTIONS

We constantly monitor company consumption both directly and in relation to production. Our commitment is to limit the consumptions and make the production process more and more efficient.



# MONITORING CONSUMPTIONS

In 2023, we consumed 278,696 m<sup>3</sup> of gas. From what we are observing, the ratio between consumption and production can vary, in summer it is about 0.60 m<sup>3</sup>/hl, while in the cold months this ratio rises to 1.1 m<sup>3</sup>/hl with peaks of 1.5 m<sup>3</sup>/hl. This trend would seem to be attributable only to the 'office heating' component, this activity is not correlated with the production trend, which is leading us to do some thinking to plan a savings solution. Electricity consumption in 2023 was 4,015,279 kWh (-2% compared to 2022), the ratio of energy consumption to volume of wine produced is 12 kW/hl (-0.83% compared to 2022). If we consider a period starting in 2018, we can say that this ratio is reaching an all-time low, which proves that the good practice actions put in place are effective.



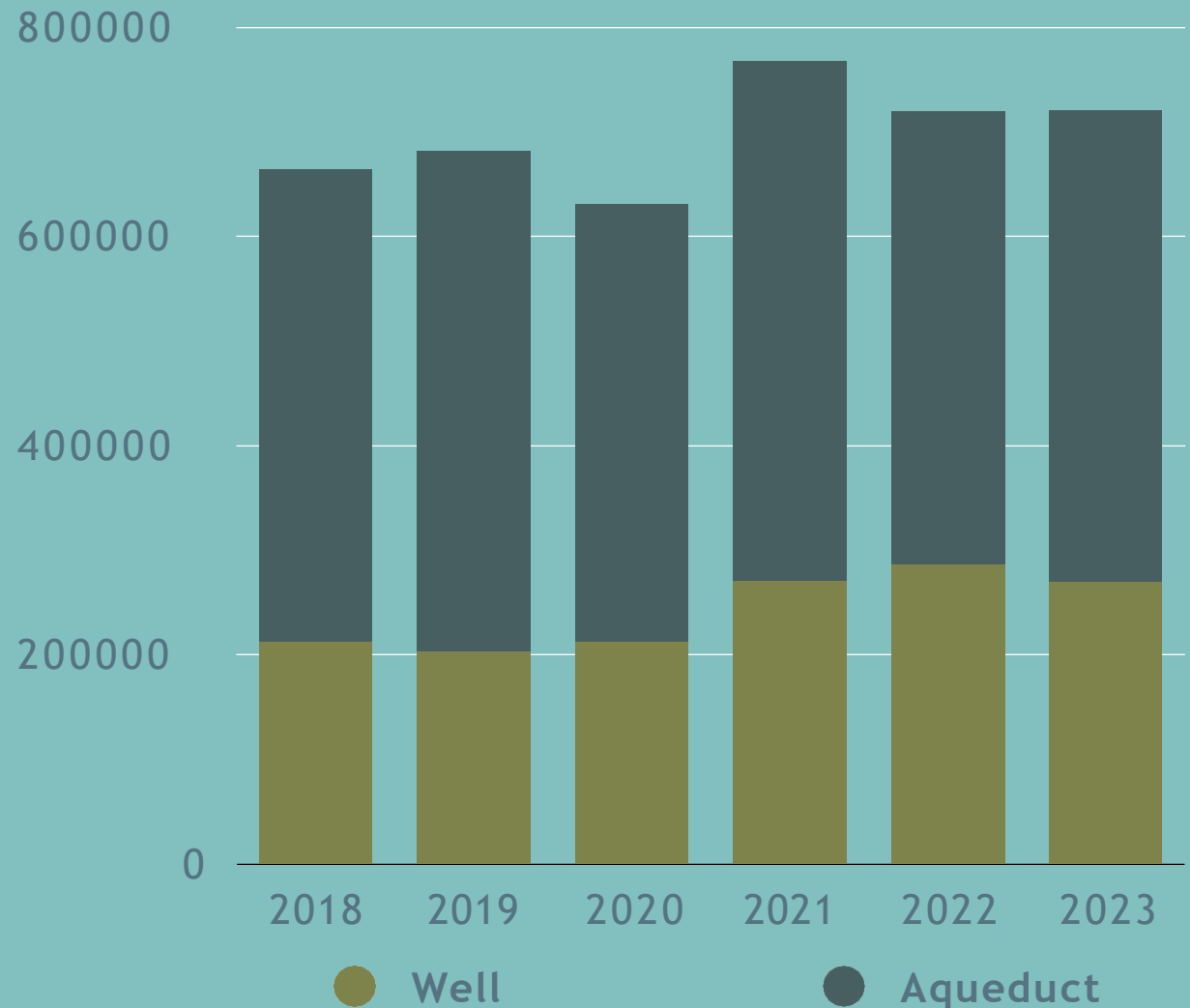


# MONITORING CONSUMPTIONS

The company draws water from two sources (well and aqueduct), and is also equipped with a system of meters that record the flow in each department every 15 min.

The total consumption of 72,132 m<sup>3</sup> of water in 2023, divided into 45,196 m<sup>3</sup> from the well and 26,936 m<sup>3</sup> from the aqueduct. Comparing the ratio of water consumed to wine produced in 2023, it results 0.21 m<sup>3</sup>/hl, a result very similar to 2022. In the first year of certification, we started with a ratio of 0.25 m<sup>3</sup>/hl, which is 16% higher.

m<sup>3</sup> of water  
USED BY THE COMPANY IN 2023







# CERTIFICATION RAFCYCLE

Since 2018 we have joined UPM Raflatac's proprietary circular economy project RafCycle®. We collect self-adhesive label waste at the packaging lines, which is no longer sent to landfill (as mixed packaging) but recycled at UPM Group's paper mills for the production of new label paper.

We found this activity very interesting in terms of reducing the environmental impact of our activity as bottlers, but also from an ethical point of view and improving waste management.



## RafCycle® by UPM Raflatac CERTIFICATION

This is to certify that

SERENA WINES 1881 S.R.L.

recycles label material waste in compliance with  
UPM Raflatac's RafCycle® recycling service since

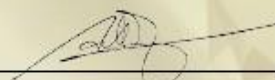
2018

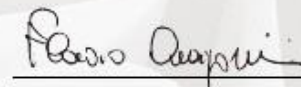
Year

1 January 2023, Helsinki

Date and place of issue

The certification is valid for 12 months from the date of issue.

  
Antti Jääskeläinen  
Executive Vice President  
UPM Raflatac

  
Flavio Aragozzini  
Senior Country Manager, Italy  
UPM Raflatac



# SOCIAL SUSTAINABILITY

SERENA

WINES 1881



# SOCIAL ACHIEVEMENTS 2023

# SERENA

WINES 1881



95

COLLABORATORS  
WITHIN THE  
COMPANY



90%

OPEN ENDED  
EMPLOYMENT  
CONTRACTS



€ 140.400

SPORT  
SPONSORSHIPS

# COMPANY STAFF

Serena Wines 1881 is a family business that believes in valuing its employees through stable contracts, 92% of which are permanent, a 2nd level contract with improved conditions, and dedicated company welfare. In order to enhance human resources and improve the level of employee satisfaction, Serena Wines has instituted a performance bonus for all employees. Gender equality is a major issue, and in fact the workers in the offices are divided into 48% women and 52% men, while in the production department we find all men.

As required by Italian law, the company complies with all social security, welfare and insurance obligations and payments, as well as all other obligations under current legislation. Each person is recruited on the basis of objective parameters, taking into account the person's experience, training and skills in relation to the functions he or she will be performing.

	2023
COMPANY STAFF	95

	2023	%
WOMEN	22	24%
MEN	73	76%

	2023	%
DIRECTORS	2	2%
EMPLOYEES	44	46%
WORKERS	49	52%

	2023	%
OPEN-ENDED CONTRACT	87	92%
FIXED-TERM CONTRACT	5	5%
APPRENTICESHIP	1	1%
PART TIME	2	2%

	2023	%
UNDER 30	13	14%
30-40	24	25%
40-50	24	25%
OVER 50	34	36%

	%
Turnover	131%
Compensation	
Turnover overall	39%

# STAFF TRAINING

Every year we carry out staff training activities, conducted both internally and externally of the company. Through training activities, we also try to develop the culture of quality and sustainability in the company. In 2023, we organised training on the topics of: IT systems to support personnel, concepts of company production management according to << lean >> principles, product hygiene safety, health and safety in the workplace, and legislative and regulatory updates related to wine.

## SUMMARY TABLE OF MAIN TRAINING ACTIVITIES IN 2023

TRAINING TOPIC	COLLABORATORS INVOLVED	HOURS PER CAPITA
Sustainability: good socio-economic, environmental and communication practices	All the personnel	2
Compulsory training for new recruits on aspects of product hygiene, HACCP, Sustainability, Safety	15 newly recruited persons	1
Correct use of sanitisers and oenological products. Allergen management. Cross-contamination risk (Organic Wine)	8 winery operators	0,5
Application of the Quality Management System according to IFS Food and BRCGS standards	All the personnel	1
Updating health and safety at work courses	All the personnel	from 4 to 12
Use of the business management software	40	5

# NEIGHBOURHOOD AND TERRITORY

The company is located in an industrial area between the municipality of Conegliano and Vittorio Veneto, and is bordered mostly by agricultural land cultivated with vineyards, other industrial enterprises and a private nursery school. We carried out a survey, through the delivery of a questionnaire, to assess how Serena Wines 1881 is perceived and to gather important ideas for improvement.

The responses showed that our company has no major impact on its surroundings and that it positively influences the community in which it is located.

Regarding the environmental issue, the company is not considered to have a strong environmental impact. The certification from both a social and environmental point of view was appreciated by the neighborhood.





# A NEW DRINK IN THE PORTFOLIO: 0.0 ALCOHOL FREE

The scenario of the wine market is now consolidated, with Italy as the protagonist, export leader in more than 46 countries worldwide, but in the last two years it has become increasingly urgent to meet new trends. One of the most important challenges is the growing market demand for non-alcoholic beverages, which especially affects 33% of the young population. In the last year, the alcohol-free sector has reported a growth of +16% in volume and +52% in value, data that pushed our company towards a non-alcoholic beverage in 2023.

0.0 is a drink derived from unfermented Muscat grape must and enhanced with natural aromas that make it a delicate drink with floral flavours. It is a 100% alcohol-free product with a sugar content of 91g/l, a particular fact that differentiates it from competitors on the market and gives it an elegant taste balance. The drink can be considered as an all-round meal, but very tasty dishes, sweet and sour, spicy and fruity foods enhance its aromas.

The packaging, like the entire 1881 line, is decorated with the 5 lines representing the generations that have led the company over the years. The neutral white represents the lightness of the drink, while the modern details are a eulogy to the progressive aspect of the product.

# SERENA

1881

Serena 1881's 100% alcohol free expands your consumer base during happy hour!

The Serena 1881 line is enriched with 0.0 Alcohol Free, the drink derived from unfermented must that satisfies the possible need to consume less alcohol.

The most inclusive drink in our top line is 100% alcohol-free, characterised by an elegant taste balance that will satisfy every tasting need during special toast occasions.



# PROGETTI DI RICERCA

In the three-year period 2018-2020, Serena Wines 1881 financed and participated in a research project with the Ca' Foscari University of Venice to develop organic dye photovoltaic cells using waste from the wine chain.

16 | IL CORRIERE VINICOLO N.5  
10 Febbraio 2020

ECONOMIA CIRCOLARE

SINERGIE  
TRA MONDO  
DELLA RICERCA  
E AZIENDE  
PRIVATE



di CLEMENTINA PALESE

*Dopo il brevetto per estrarre dalle fecce i coloranti organici da impiegare per costruire celle fotovoltaiche che convertono l'energia solare in energia elettrica, il passo successivo vede Serena Wines e Università Ca' Foscari impegnate in un progetto biennale con l'obiettivo di prototipare ed eventualmente portare sul mercato questa tecnologia*

## Dalle fecce di vinificazione nascerà energia elettrica

**L**a collaborazione tra enti di ricerca pubblici e aziende private può anche nel settore vitivinicolo creare nuovi scenari più sostenibili dando valore agli scarti e trasformandoli in risorse nell'ottica di una transizione da economia lineare a economia circolare. È proprio questo il caso del progetto CHEERS ("Sviluppo di Celle fotovoltaiche a base di scarti della lavorazione del vino per la produzione di Energia Rinnovabile e Sostenibile") finanziato dalla Commissione europea con il programma Fondo Sociale Europeo, FSE, e gestito localmente dalla Regione Veneto, che ha coinvolto l'Università Ca' Foscari Venezia e la Serena Wines 1881 di Conegliano, tra le prime 5 aziende produttrici di Prosecco e leader nella produzione e com-

mercializzazione di vino in fusto in acciaio nel canale Horeca italiano. La collaborazione è approdata rapidamente al brevetto di un metodo per estrarre dalle fecce dei vini rossi e bianchi i coloranti da impiegare poi per costruire celle fotovoltaiche che convertono l'energia solare in energia elettrica. Visti gli importanti risultati raggiunti in poco tempo, lo scorso autunno Ca' Foscari e Serena Wines 1881 hanno siglato un accordo per sviluppare, nei laboratori di ricerca del Campus Scientifico Calosciuso, celle fotovoltaiche di nuova generazione. Dopo aver acquisito la piena titolarità del brevetto, Serena Wines 1881 ha inoltre sottoscritto un importante progetto di ricerca della durata di 2 anni con l'Università Ca' Foscari Venezia, investendo circa 500 mila euro, con l'obiettivo di prototipare ed

eventualmente portare sul mercato questo tipo di tecnologia.

### Le fasi del progetto

"Con la professorssa Elisa Moretti e il suo team di ricerca - racconta Stefano Meneghetti, responsabile della qualità di Serena Wines 1881 - circa un anno e mezzo fa abbiamo cominciato a lavorare su un'idea per dare nuove destinazioni, mai pensate prima, agli scarti di vinificazione e in particolare alle fecce di vini rossi, ricche di coloranti organici, normalmente destinate al recupero dell'acido tartarico, di conservanti per l'industria alimentare, nutraceutici, cosmesi, cosmetici ecc. Nessuno prima aveva utilizzato questo scarto di lavorazione per realizzare celle fotovoltaiche. Visti i risultati positivi ottenuti

# Sviluppo di Celle fotovoltaiche a base di scarti della lavorazione del vino per la produzione di Energia Rinnovabile e Sostenibile - CHEERS -

Elisa Moretti<sup>1\*</sup>, Manuel Meneghetti<sup>1\*</sup>, Aldo Talon<sup>1</sup>, Emilio Celotti<sup>2</sup>, Enrique Rodriguez Castellón<sup>3</sup>, Stefano Meneghetti<sup>4</sup>

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<sup>2</sup> Dipartimento di Scienze Agrarie, Alimentari e Animali (ZNA), Università degli Studi di Udine, Via delle Scienze 208, 33100 Udine - Italia  
<sup>3</sup> Dipartimento di Chimica Inorganica, Cristallografia e Mineralogia, Università di Málaga, Campus de Teatinos, E-29071 Málaga - Spagna  
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 \* manuel.meneghetti@unive.it

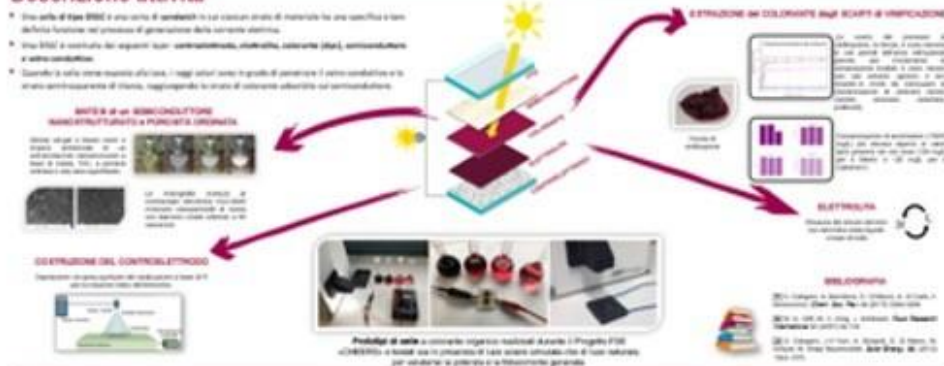
## Abstract

Alle basi del progetto CHEERS si è fatta l'obiettivo di valorizzare il principale prodotto di scarto di una rinomata azienda vitivinicola situata nel cuore del Prosecco DOCG, la Serena Wines 1881, ottenendo i coloranti vegetali presenti nel sottoprodotto della lavorazione del vino, la cosiddetta vinaccia, e impiegando nella costruzione di celle fotovoltaiche DSSC (Dye Sensitized Solar Cells), per produrre energia elettrica rinnovabile e sostenibile.

Questo percorso, nella vinaccia, intende il processo di lavorazione vinificatoria, può essere pensata come una macchina molecolare che lavora nel campo delle nanotecnologie al fine di realizzare l'obiettivo di una transizione da economia lineare a economia circolare.

Infine, per rappresentare una soluzione estremamente eco-friendly e a basso impatto ambientale per la produzione di energia elettrica, trasformando un rifiuto agricolo in una risorsa green.

## Descrizione attività



## Risultati & Impatto

- Risultati estremamente promettenti, pochi già comparabili con i valori tipici riportati nella letteratura scientifica internazionale delle celle DSSC realizzate utilizzando estratti di origine vegetale.
- Deposito brevettuale dell'invenzione in co-brevetto tra l'Ateneo Ca' Foscari e l'azienda Serena Wines 1881 «Procedimento per la realizzazione di celle fotoelettroniche con l'utilizzo di coloranti estratti da residui di vinificazione tra 1000+0000000000» per l'invenzione metodologica operativa ideata per l'estrazione dei coloranti dagli scarti di vinificazione e il suo impiego nelle celle fotovoltaiche (17 Maggio 2019).
- Acquisto del brevetto da parte dell'azienda partner Serena Wines 1881 (16 Maggio 2019).
- Finanziamento biennale (230.000 €) da parte dell'azienda partner al gruppo di ricerca Ca' Foscari per lo sviluppo del brevetto (2019-2020).
- Ampia attività di disseminazione dei risultati ottenuti, con partecipazione a eventi e convegni internazionali (Vintaly 2019, Enoforum 2019) e notevole risonanza a livello mediatico con decine di articoli su quotidiani, riviste cartacee e online del settore scientifico, energetico e vitivinicolo, interviste radiofoniche.



Numero assegni	Area tematica	Tipologia progetto	Totale finanziamento
1	Smart Agrifood	Interregionale/Transnazionale	41.056,83 €



# Sustainable Organic Dyes from Winemaking Lees for Photoelectrochemical Dye-Sensitized Solar Cells

Manuel Meneghetti<sup>1,\*</sup>, Aldo Talon<sup>1</sup>, Elti Cattaruzza<sup>1,2</sup>, Emilio Celotti<sup>2</sup>, Elisabetta Bellantuono<sup>2</sup>, Enrique Rodriguez-Castellón<sup>3</sup>, Stefano Meneghetti<sup>4</sup> and Elisa Moretti<sup>1,\*</sup>

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  - <sup>2</sup> Department of Agricultural, Food, Environmental and Animal Sciences (DHA), University of Udine, Via delle Scienze 208, 33100 Udine, Italy; emilio.celotti@uniud.it (E.C.); elisabetta.bellantuono@uniud.it (E.B.)
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  - <sup>4</sup> Serena Wines 1881 srl, Via Camillo Bianchi 1, 31015 Conegliano (TV), Italy; s.meneghetti@serenawines.it
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Received: 24 February 2020; Accepted: 19 March 2020; Published: 21 March 2020



**Abstract:** During the last two decades, Dye Sensitized Solar Cells (DSSCs) have received a great deal of attention as a promising, low-cost alternative to conventional silicon photovoltaic devices. Natural dye molecules can be used as a sensitizer for their low cost, good light absorbance, easy preparation process, and biodegradability. In this study, dyes were obtained from wine lees, the last by-product of winemaking process, supplied by a venetian winery (Italy). Polyphenols, like tannins and anthocyanins, which were extracted from winemaking lees, were adsorbed on a nanostructured ordered mesoporous titanium dioxide, previously treated at different temperatures (400–600 °C). Both dyes and titania semiconductor samples were studied with different techniques. The tests were carried out on prototypes to evaluate the cell power and the photocurrent generated under simulated solar light irradiation. The obtained solar energy conversion efficiencies are comparable to those that were reported in literature by using organic dyes extracted from vegetables, fruits, and plants. It is significant that these dyes are largely available and cost effective, since recovered from a waste otherwise to be disposed of, opening up a perspective of feasibility for inexpensive and environmentally friendly dye solar cells to generate green electricity and transforming agri-food waste into a resource.

**Keywords:** DSSCs; organic dyes; winemaking lees; titania nanoparticles; circular economy

## 1. Introduction

Global energy consumption is mainly based on non-renewable resources and the increasing energy demand has pushed research on more sustainable and renewable resources [1]. Photovoltaic solar cells are unanimously considered to be very promising for clean energy production, but production costs, material availability, and toxicity sometimes hinder their deployment. An alternative to conventional cells for their much lower environmental impact and production costs are Dye Sensitized Solar Cells (DSSCs), introduced to the world in 1991 by Grätzel and O'Regan [2]. Unlike silicon solar cells, DSSCs charge generation and transport does not happen in a single material, but is split in different layers: a counter-electrode, an electrolyte solution, a sensitizing dye, a nanostructured semiconductor, generally titanium dioxide, and finally, a conductive glass.

One of the most important cells' elements is the dye that is adsorbed on titanium dioxide layer, playing a fundamental role in DSSCs because it is involved in the harvesting and conversion of solar

# WELFARE CARE

With a view to territorial social sustainability, the company decided to support Welfare Care, a Benefit Society that promotes breast cancer prevention in Italy thanks to the support of partners and entrepreneurs sensitive to the issue. On Saturday 25 November from 9.00 a.m. to 6.00 p.m., we were a partner in the “Free Mammography and Ultrasound” event in Piazza Aldo Moro in Conegliano (TV).



## Mammografia ed Ecografia gratuita

OFFICIAL PARTNER

Siamo ufficialmente Partner WelfareCare per l'iniziativa dedicata alla

**prevenzione del tumore al seno!**

**WelfareCare**  
Società Benefit

# CONCERT OUR HISTORY

in collaboration with Enzo Ghinazzi, aka Pupo, and Portogruaro stylist Massimo Vello.

The event, held in the Parco della Pace of Villa Marzotto in Portogruaro on 3 September 2023, was born in the name of solidarity and charity, a fundraiser that was partly destined for the Eastern Veneto Section of the Friuli Venezia Giulia Down's Association and partly for the non-profit organisation of actor Paolo Ruffini, creator and scriptwriter of the film and theatre show UP & DOWN.

Solidarity and social inclusiveness but also the desire to promote a territory and the town of Portogruaro.

Comune di Portogruaro Patrocinio Città di Caorle Comune di San Michele al Tagliamento

Massimo Vello e Pupo  
presentano

## LA NOSTRA STORIA

*Tra Moda / Musica / Emozioni / Spettacolo*

**Domenica 03 settembre**

Ingresso ore 18.00 / Inizio Spettacolo ore 20.00  
Villa Marzotto - Parco della Pace  
Portogruaro (VE)

Serata di Beneficenza a favore di

**UP** IMPRESA SOCIALE

ASSOCIAZIONE DOWN FRIULI VENEZIA GIULIA FVC

**DONIAMO CON UN SORRISO**  
**IBAN IT82W0835636070000000055314**

Le collegamenti

**NOI CI METTIAMO IL CUORE,  
VOI LA CURIOSITÀ DI ESSERCI.**

Man Colagari, Alessandro Bergamaschi, Paolo Ruffini, Pupo, Massimo Vello, and other sponsors.

**MAIN SPONSOR**

# JOINING THE SOLIDARITY TRANSPORT PROJECT

The transportation service was created to accompany people in difficulty to the locations of the services they need: to go to work or school, to deal with bureaucratic paperwork, for medical appointments; or even just to go shopping.

CON.T.E.A. provides its own well-equipped vehicles to accompany people where they need them. In support of Serena Wines 1881, the association has placed the company logo on the side of one of its vehicles.



# SPORT SPONSORSHIPS

For several years we have been supporting sport teams in our area, the main ones being:

- **Imoco Volley**

(7 times Italian Champion, 6 times winner of the Italian Cup, 7 Italian Super Cups, 2 Champions League and 2 World Club Championships)

- **Treviso Basket**

(1 Italian Cup)

- **Hockey Cortina**

(17 championships, 3 Italian Cups e 2 Alps Cups)

We also support numerous other minor sports related to different sports (tennis, golf, etc.)



For any additional information please do not hesitate to contact us.

# SERENA

WINES 1881

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