

*Donnafugata is becoming more and more sustainable.
The carbon footprint certifies the reduction of CO2 emissions.*

Good agricultural practices, biodiversity, clean energy and carbon footprint testify the Sicilian wine estate's commitment to an impressive balance between quality and sustainability, from the vineyard to the winery.

A **deep love of its land** has always been at the core of Donnafugata. A desire to produce wines capable of representing Sicily in the world, preserving natural resources and enhancing biodiversity. "From the vine to the bottle, **there is no quality without sustainability**". This is the company philosophy.

CARBON FOOTPRINT

In order to increase the sustainability of its production choices, in 2011 Donnafugata calculated the **Carbon Footprint** of its wines for the first time. Together with DNV-GL, one of the most important certification bodies, Donnafugata quantified CO₂ emissions along the entire production cycle, from the vineyard to the bottling.

Recent calculations have proven that **CO2 emissions have been decreased by 10% in comparison to 2011** due to some winery's choices as:

- the commercialization of **lighter weight glass bottles** with screw cap, for some wines destined for the markets of North America, Australia, England and India; a packaging choice that aims at saving on emissions from glass production and transportation of the bottles.
- the replacement of technical corks with **Select BIO synthetic corks** with zero carbon footprint, 100% recyclable and made from renewable material derived from sugar cane.

Also in 2016, the technical management of energy consumption was entrusted to an **energy manager** who, using appropriate monitoring equipment, allowed to have a complete picture of the winery's consumption and to evaluate in an increasingly better way all the actions to be taken to improve energy efficiency and reduce consumption.

Following the first certification in 2014, the choice of displaying the **Carbon Footprint Accounting on every bottle** with a special sticker was also important. A commitment towards the consumer. **Transparent communication** favored by the use of the QR code which can be read by smartphones that leads to a page on the winery's website that reports the main results of the Carbon Footprint calculation, expressed per 0.75 l bottle and segmented by product category.



Good practices in the vineyard

Donnafugata has adopted an **integrated production system** in the vineyard that ensures eco-sustainable management of the agricultural activities (*Good Agricultural Practices*, GAP). The company doesn't use herbicides and chemical fertilizers and has minimized the use of pesticides thanks to integrated control techniques, such as the monitoring of climate parameters (rainfall, temperature, humidity, etc.) and the control of insects (moths) present in the vineyard, through the use of pheromone traps.

Donnafugata is also pursuing sustainability with the use of green manure, organic fertilization, emergency irrigation and cluster thinning, thus **rationalizing the use of natural resources** such as soil, water, air and

energy. The good practices that Donnafugata has adopted in the vineyard are an indispensable instrument for the production of healthy and perfectly ripen grapes, minimizing impact on the environment.

Biodiversity and the enhancement of autochthonous varieties

The desire to produce wines whose quality increase over time, finds an important ally in **biodiversity**. Indeed, the way that different varieties and biotypes interact with the individual *terroirs* produces unique wines with a strong identity. Precisely for this reason, Donnafugata created **two experimental vineyards** focused on the development of autochthonous varieties.

At **Contessa Entellina**, Donnafugata (in collaboration with Regione Sicilia) planted an experimental field with **19 different autochthonous varieties**, making a total of 30 biotypes. They are vine varieties that are widespread throughout Sicily (including Nero d'Avola, Catarratto and Ansonica) and also **varieties** that are **relics from the past** (Alzano, Nocera, Vitrarolo and others), almost completely extinct. The initiative involves a group of wineries located in different parts of Sicily and aims to identify and select the vine varieties that can give the best oenological results for each territory, through the use of small batch fermentation.

On **Pantelleria**, **33 biotypes of Zibibbo** from different areas of the Mediterranean (Spain, France, Greece and southern Italy) have been planted under the supervision of Professor **Attilio Scienza**. Planted in March 2010, the 2,117 vines (about 64 plants of each biotype) cover 0.6 hectares (1 acre) of land in the Barone district, in the south of the island, at an altitude of about 400 meters (1,300 ft) above sea level. The study involves both fresh grapes and dried grapes, as well as wines produced from small batch fermentation. It aims to identify which Zibibbo clones express the best viticultural and oenological potential within the context of the island of Pantelleria.

Century-old vineyard

In 1999, Donnafugata breathed new life into a century-old vineyard in the Khamma district on **Pantelleria**. Planted with Zibibbo, it contained several ungrafted plants that had survived phylloxera and were over 100 years old. Unique vines, healthier and with a longer life span than grafted plants, capable of resisting well to drought, limestone and salinity, with a vegetation-production balance that produces exceptional grapes. These specimens, which are of great historical importance for Sicilian viticulture, as demonstrated by **Professor Mario Fregoni** of the *Università Cattolica* in Piacenza (Italy), have made Ben Ryé Passito di Pantelleria even more complex and elegant.

THE ALBERELLO PANTESCO

The vine is cultivated in hollows. The training system makes the plant grow horizontally, almost creeping along the ground, allowing it to withstand the wind on the island. The **alberello pantesco (bush-trained vine)**, has been listed as a **UNESCO world heritage** as a "highly sustainable and creative agricultural practice".



THE ART OF THE DRY STONE WALLS

After the alberello pantesco, the art of dry stone walls in 2018 became part of the Intangible Heritage of Humanity protected by UNESCO. Indeed, Donnafugata has restored several kilometers and carries out an accurate maintenance of about 40 km of these walls, contributing significantly to preventing pollution of the soil and protecting the landscape.

Set amongst the company's vineyards at Khamma, is the striking **Giardino Pantesco**, which Donnafugata restored and donated to **FAI**, Fondo Ambiente Italiano (the Italian National Trust) in 2008. It is a typical form of rural architecture with high dry-stone walls. The circular plan, size and lava stone create the ideal microclimate for cultivating and protecting from the wind and drought an age-old orange tree, a precious source of vitamins. Symbolic of the knowledge possessed by the island's farmers, the garden is an agronomic system that is self-sufficient with regard to water

Energy saving and clean energy

On the path to sustainability, Donnafugata has focused above all on **reducing its energy consumption**. At the Contessa Entellina estate, a **night-time harvest** has been introduced for the Chardonnay grapes. Exploiting the difference in temperature between day and night reduces the amount of energy needed to cool the grapes before crushing by 70%.

Another important contribution to sustainability is achieved by the **production of clean energy** from renewable sources with photovoltaic systems installed at Contessa Entellina (68 Kw) and Marsala (50 Kw), that allow us to reduce our CO₂ emissions per year.

Therefore, there are many paths of sustainability that lead to Donnafugata: a winery that never ceases to pursue increasingly advanced goals.

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