

THE ECO-FRIENDLY UNDERGROUND WINERY TO ENHANCE THE RESOURCES OF THE TERRITORY

Respect for tradition and land and the care for environmental sustainability have inspired the members of the social [Cantina Mori Colli Zugna](#) in building the largest underground wine estate in Europe. The new underground winery, that has been designed and built between 2008 and 2012, ensures energy-saving, has a low environmental impact and provides a set of services necessary to the winemakers associated.

In the *Cantina Mori Colli Zugna* 680 active members work on seven hundred hectares of vine cultivated land. [Already in 1957, small wine producers](#) of Vallagarina Valley (Trentino Alto Adige Region, Italy) associated in a wine producing cooperative, to create the set of business services that would allow to not have to depend on grape prices offered by commercial intermediaries. Initially started with only a few partners, small production and few financial resources, the winery has grown thanks to the strong cooperative spirit of winemakers members.

The territory has greatly benefited from this cooperative system created, where everyone is given the opportunity, regardless the company size, to cultivate even small plots of land in marginal areas. The Social winery thus contributes to the development and maintenance of the territory, greatly preventing land abandonment and migration of peasants towards towns.

The success of the cooperative management of the *Cantina Mori Colli Zugna* is demonstrated by the fact that currently it collects, processes and markets about 90% of the wine production in the area. The new cellar allows to store more than 100.000 hectolitres of wine.

The continuous research for the quality of produced wines and the impact of wine production over the territory has encouraged the cooperative to realize the futuristic project of the new ecological installation, an environmentally and energy sustainable system.

The new underground winery has in fact the following highly interesting features.

- Out of its 100.000 sq. meters of land of the premises only 1.500 are over the ground while the rest is underground at an average deep of 15 metres. Almost all of the winery roof has been made with "green roofing". To cover the top of the building, the winery decided to use over 6,000 vines and a cover of grass. This green roof contributes to energy savings by increasing the



thermal insulation of the building below. Unlike other wineries created underground with soil excavations, the *Mori Colli Zugna* eco-winery fully respects the original gradient of the hill environment, thus *restoring* the winery to the countryside.

- The innovative winery built underground ensures a high energy sustainability. The subsoil characterized by low conduction and high thermal capacity, is able to maintain constant throughout the year a temperature between 10 and 15 degrees Celsius approximately, ideal for conservation, maturation and aging of the wine, by reducing consumptions of air conditioning systems.
- The natural warmth of the land that insulates the eco-winery also helps to reduce the energy requirements for the conditioning of offices and the production of hot water. A set of photovoltaic panels has also been installed to contribute to the energy production necessary for offices, tasting rooms, wine bar and other spaces. Hot and cold water are ensured free of charge from twelve geothermal probes that heat and cool the office and laboratory areas all year round. The rest of the necessary energy is produced by a low-temperature boiler that works by natural circulation of heat, without the aid of pumps.
- The winery has a complex system for the rational use of water, which has allowed a reduction in consumption of 70%. A special drinking water treatment plant is in operation, which reduces the amount of water taken from the mains water supply.
- The structure of the building enables a *fall down wine making cycle*, more respectful of the wine and energy efficient because it eliminates the use of pumps and harnesses the natural gravity. Starting from ground level, the productive zones are distributed in cascade following the underground shape of the building. In the higher part are harvested the grapes conferred by the shareholders producers, while the lowest level is the place for processing and storing the must.

The innovative building of the *Cantina Mori Colli Zugna* has been built by its members combining the most ancient production know how of winemaking with cutting-edge technologies. Over the last few years, the winery has also launched a programme entitled *Quality Project*, aimed at developing wines with specific characteristics and properties in order to be qualified with the territorial brand *Trentino Superiore DOC*.

To know more

[Cantina Mori Colli Zugna website](#)

[Photogallery](#)

[Cantina Mori Colli Zugna in Facebook](#)

