

## USA.LI: Integrated Supply Chain Project

Italian wineries cooperate to develop new climate-resilient production systems in Tuscany.

### EAFRD-funded projects

**Location:** Tuscany, Italy

**Programming period:** 2014-2020

**Priority:** P1 - Knowledge transfer and innovation

P3 - Food chain and risk management

P4 - Ecosystems management

**Focus Area:** Innovation and cooperation

Agri-food chain integration & quality

Biodiversity restoration, preservation & enhancement

**Measures:** M01 - Knowledge transfer & information actions

M04 - Investments in physical assets

M16 - Cooperation

**Funding:** Total budget 4 022 834 (EUR)

RDP support 1 718 122 (EUR)

Private/own 2 304 712 (EUR)

**Timeframe:** 22/08/2018 - 22/08/2023

**Project promoter:** Azienda Agricola Tenuta di Coltibuono s.a.r.l. (unipersonal as Lead Partner)

**Email:** [rsp@coltibuono.com](mailto:rsp@coltibuono.com)

### Summary

Small and medium-sized wineries in Tuscany used CAP funds to support climate adaptation measures aimed at protecting the fermentation process. Project partners cooperated to support winery profitability and sustainability by integrating investment measures, fostering innovation, and addressing climate challenges. CAP funding was used for innovations in the use of indigenous yeast strains. Yeast plays a critical role in the winemaking process, significantly influencing both the taste and quality of the final product.



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Project costs also included equipment upgrades (tractors, sprayers, grape sorters, and fertiliser spreaders) to enhance green management strategies, renewable energy installations, development of a new sustainable bag-in-box wine product, knowledge transfer events promoting best practices across the sector, acquisition of sustainable winemaking vats (amphorae, barrels), bottling lines, labelling machines, heat pump air conditioning systems, branding, e-commerce setup, and compliance with regulatory requirements. Outcomes allowed smaller wineries to access new markets.

### Project results

- The project involved 19 farms and promoted wines that reflect their unique terroir.
- Indigenous yeasts provided an added value, differentiating the wines in the market. This research on yeasts can lead to the creation of DOCG-certified yeasts.
- The project fostered collaboration between larger, internationally established wineries and smaller farms, creating a support system that allowed these small producers to enhance their production, innovate, and maintain a competitive edge.
- Project costs covered machinery and equipment for green management.





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- Recyclable and separable bag-in-box solutions have been implemented, ensuring environmental sustainability.
- Healthier consumption habits were encouraged via smaller servings of wine, aligning with national dietary guidelines.
- Overall, the project strengthened the competitiveness of small producers by allowing them to share knowledge, reduce costs, and access new markets. It also positioned the region as a leader in sustainable winemaking, with potential long-term benefits including new job opportunities and enhanced biodiversity preservation.

## Key lessons and recommendations

- More interest in organic conversions was a synergy from peer learning among participants.
- Collaboration allows for sharing of resources, knowledge, and expertise, increasing the chances of project success.
- Coordinating partner motivation and maintaining project momentum is key.
- Set specific, measurable, achievable, relevant, and time-bound (SMART) objectives.
- Consumers are increasingly concerned about the environmental impact of products.
- Market research informs product developments that meet real commercial demand.

- Effective communication engages various stakeholders and the public.
- Transparency and sharing of results can enhance trust and interest in the project.

## Context

The USALI Integrated Supply Chain Project was developed to address several key challenges facing wine producers in Tuscany. While the region is well known for its premium wines, smaller producers (particularly those from lesser-known areas or lesser-recognised denominations) can benefit from development opportunities resulting in better competitiveness.

Options exist to enable and enhance winery resilience through more innovation, improved sustainability, and coherent climate coping strategies. These options and opportunities include integrating the knowledge of larger enterprises with research institutions to create innovations, such as using indigenous yeast strains tailored to local climates to improve wine fermentation and quality.

Yeast plays a critical role in the winemaking process, significantly influencing both the taste and quality of the final product. Different yeast strains, whether wild or cultivated, contribute unique metabolic pathways that affect wine fermentation dynamics. These variations can enhance aromatic and taste profiles. The choice of yeast also impacts sugar conversion efficiency and by-product formation, which can lead to differences in acidity and alcohol levels. Consequently, winemakers must carefully select yeast strains to align with their desired flavour profiles and overall wine style. Ultimately, the interplay between yeast quality and type determines the sensory attributes of wine.

## Objectives

Project goals sought to support both the economic and environmental sustainability needs of the sector, promoting the concept of “glocal” (global strategies with local solutions). Implementing glocal project actions in a cooperation partnership of wineries would foster collaboration between larger, internationally established wineries and smaller farms, creating a support system that allowed these small producers to enhance their production, innovate, and maintain a competitive edge. Specific aims were to:

- Promote wines with unique characteristics tied to local tradition.
- Enhance local identity and product uniqueness by integrating traditional practices with innovation.

- Preserve biodiversity by using indigenous yeasts instead of genetically modified strains.
- Improve the competitiveness of smaller producers by fostering cooperation and collective projects.
- Support environmental sustainability by reducing energy use and encouraging organic or sustainable farming practices.
- Facilitate knowledge sharing between large enterprises, small producers, and research institutions.
- Develop a transferable economic model that supports small wine producers.

## Activities

The overall project involved 19 farms, and was driven by a shared philosophy of promoting local terroir, enhancing product quality, and adopting sustainable agricultural practices. This involved enabling larger and internationally recognised companies to support smaller wineries with fewer resources. Several types of CAP funding were used:

- **Measure 16.2 Support for pilot and cooperation projects (USALI PLUS):** In response to fermentation issues affected by climate change, the project collaborated with the University of Siena to select and characterise indigenous yeast strains. These yeasts adapted better to the local climate, preventing fermentation stoppages caused by overly sugary musts. This innovation preserved the unique genetic identity of local wines, limiting the use of foreign yeasts in fermentation. Research phases included spontaneous fermentations, yeast selection, and public dissemination of findings (EUR 137 490).
- **Measure 1.2 Support for demonstration activities and information actions:** Three public seminars were organised (EUR 42 124) to disseminate project outcomes. The presentations shared insights on indigenous yeast selection, network formation, and the practical applications of genomic yeast research to improve regional wine quality.
- **Measure 4.1 Support for investments in agricultural holdings:** Participating farms received EUR 985 132 of investment grants for modern equipment (tractors, sprayers, grape sorters, and fertiliser spreaders) that improved vineyard management. Most farms employed organic or integrated farming techniques, and the grants allowed them to enhance their green management strategies.

- **Measure 4.2.1 Investment in the processing, marketing and/or development of agricultural products:** A EUR 2 605 111 investment supported winery improvements, including the acquisition of sustainable winemaking vats (amphorae, barrels), bottling lines, labelling machines, and heat pump air conditioning systems. These measures improved operational efficiency and environmental performance.
- **Measure 4.1.5 Encouraging the use of renewable energy on farms:** Photovoltaic systems were installed across the farms, reducing energy consumption and supporting renewable energy use, with an expenditure of EUR 203 080.
- **Measure 16.3 Cooperation between small operators to organise joint work processes and share tools and resources:** The Rete Verde Toscana business network was established as a legal entity, with EUR 49 894 to promote a sustainable bag-in-box wine product. This included branding, e-commerce setup, and compliance with regulatory requirements. The network allowed smaller wineries to access new markets while maintaining product quality and sustainability standards.

## Main results

- The project involved 19 farms and promoted local terroir, enhancing product quality, and adopting sustainable agricultural practices.
- Economically, the project enabled its wineries to promote wines that reflect their unique terroir. The use of indigenous yeasts provided an added value, differentiating the wines in the market. This research on yeasts can lead to the creation of “DOCG-certified yeasts,” which could be patented in collaboration with wine protection consortia. Such designations can enhance the region’s wine identity and economic sustainability.
- The project fostered collaboration between larger, internationally established wineries and smaller farms, creating a support system that allowed these small producers to enhance their production, innovate, and maintain a competitive edge.
- Project costs covered the purchase of more innovative or technologically advanced machinery as well as the expansion of the equipment fleet to support green management. This is crucial for those already operating under organic methods, as well as for encouraging the transition towards more sustainable farming.

- The network's sustainable packaging innovations are ongoing. Recyclable and separable bag-in-box solutions have been implemented, ensuring environmental sustainability. Fully compostable packaging for liquid foods was not yet commercially available.
- The project promoted healthier consumption habits by encouraging smaller servings of wine, aligning with national dietary guidelines.
- Overall, the project strengthened the competitiveness of small producers by allowing them to share knowledge, reduce costs, and access new markets. It also positioned the region as a leader in sustainable winemaking, with potential long-term benefits including new job opportunities and enhanced biodiversity preservation.

## Key lessons and recommendations

- Traditional organic companies have generated curiosity and interest, triggering a conversion process among participants.
- Collaboration allows for sharing of resources, knowledge, and expertise, increasing the chances of project success. A coordinating entity should be identified from the outset. Their roles can include maintaining partner motivation and project momentum.
- Set specific, measurable, achievable, relevant, and time-bound (SMART) objectives clearly from the outset to keep the project focused and to evaluate progress over time.
- Eco-friendly materials and low-impact processes attract consumers who are increasingly concerned about the environmental impact of products.
- Market research identifies evidence on current trends and consumer preferences which can inform product developments that meet real demand, thereby increasing the chances of commercial success.
- Effective communication is essential to inform and engage the various stakeholders and the public. Transparency and sharing of results can enhance trust and interest in the project.

## Quote

*"I am extremely satisfied with the results achieved thanks to this project funded by European funds, and I am firmly convinced that the selection and use of indigenous yeasts represents one of the paths to take to enhance the uniqueness of our wines and promote sustainable development in our wine sector".*

Roberto Stucchi Prinetti,  
for the Lead Partner Tenuta di Coltibuono

*"I am convinced that this network entity represents a model to follow for the future of our sector, promoting collaboration between different realities and encouraging the adoption of more sustainable practices. I am grateful for the support received and for the opportunity to be part of such a significant project, which combines innovation, quality and sustainability".*

Luciano Pagni,  
President of Rete Verde Toscana

## Additional information:

Website:

<https://pif-usali.com/il-progetto/>



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