

## DEVELOPING A PRODUCT PROTOTYPE THROUGH COOPERATION

Eleonora Lisi, Italy

Generational Renewal

*The “Natali’s” family has produced wine, olive oil and vegetables for decades. Eleonora, representing the third generation, followed the example of her grandparents but decided to use an innovative approach and cooperation. From the grapes, which have been a central family production, the farm has come up with a new product, a unique type of vinegar.*

### Context

Tuscany is a region suited to the production of vinegar. There are few manufacturers of dry wine vinegar and some manufacturers of special vinegars (apple and other fruits) who are using the method of fermentation or submerging. Rediscovering the centuries-old traditional vinegar production methods using an innovative approach, together with RDP support for the cooperation for development of new products, processes and technologies (M124), emerged as a good opportunity to make the family business more competitive at the market.

### Idea

The idea was to develop a product prototype and also its production process for a high quality Tuscan vinegar, which bring out the high quality characteristics of Tuscan wines. The innovative character of the project refers both to the type of products and to the methodology. The partner in the project was the Italian University of Modena, whose role is the design and development of production protocols and process controls, and Reggio Emilia, the highest authority in the field of acetic acid bacteria.

From the production point of view, the innovation relates to the use of specially selected microorganisms for their fermentative characteristics, as well as the fermentation and preservation methods. First, the manufacturing process completely excludes the use of sulphur for stabilization and preservation of the products. This constitutes a very strong innovative aspect, also contributing to the healthiness of the final product.

### Location

Arezzo, Tuscany region

### Programming period

2007-2013

### Measure

M 124 Cooperation for development of new products, processes and technologies in the agriculture and food sector and in the forestry sector

### Funding (EUR)

Total budget 195,711€  
EAFRD 60,814 €  
Private 135,628 €

### Project duration

April 2013 – February 2015

### Project beneficiary

I NATALI S.A.S.

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In addition, the specific acetic acid bacteria are specially selected for their fermentative characteristics, and they are very different from those required in oenology and the industrial acetification process. There are no additives or preservatives of any kind, as conservation techniques are based on a careful use of the same microorganisms used in fermentation.



Following a study by the research team, the acetic fermentation is performed with a surface static method. The D'Orleans method has been completely modernised and optimised. The concentration and the fresh wort boiling processes are critical in the production of sweet and sour vinegars because they provide the concentrated grape must and the concentrated and cooked grape must.

A key aspect that differentiates the "Acetoscana" products from the other existing ones is the high fixed acidity, which is due to the non-volatile organic acids. In order to maintain a high fixed acidity, grapes are harvested early and by hand. The grapes must be healthy, free from microbiological defects, harvested and processed in accordance with the directions set by the project.

*"The excellent quality of the grapes is absolutely essential, from the vineyards of the Chianti area, short bunches of Sangiovese grapes at the right stage of ripeness are hand-picked..."*



## Outcomes

As the outcome of the RDP-supported project, the winery was provided with steel pots to ferment musts/grape and store wine, acetic fermenters (reactors) specially designed to facilitate the process of acidification, a concentrator for frozen concentration of fresh must, wooden containers for aging and a testing laboratory for the monitoring of the grapes and the management of production processes.

The project lasted three years resulting in five products that were selected from the experimental winery 'Natali'. During the course of the project, the complete and replicable production process of the vinegar has been developed. This has ensured the continuity of production in the future.

*"This is a kind of redefinition of the must quality characters, distinct from the classic vinification and targeted to the production of high quality vinegars."*

