

THE VINE AND THE HAZELNUT AS ELEMENTS OF CHARACTERIZATION OF A *TERROIR*

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Abstract

The research examines how two characteristic cultivations of a territory like the vine and the hazelnut shape the identity of a unique *terroir*: Langhe (North West Italy).

The two cultivations are part of important agri-food chains for the analysed territory and its economy, while they also model its landscape.

The vine represents a Universal Value rooted in the landscape modelled by the human work and in the culture of the place; part of this culture is the entire wine chain, which manifests itself through the presence of several settlement and architectural elements related to wine maturing and winemaking techniques. Therefore the wine landscape of Langhe is the result of a “wine tradition” which has been moving and evolving since ancient times, making up the centre of the socio-economic life of the territory.

In this context the crop of hazelnut, which has always been present as a complementary element in the food tradition of the area, is knowing a new interest in recent decades, nurtured by the important confectionary sector developing in the territory and well known at an international level.

The inquiry has been conducted through face-to-face interviews with a selected group of wineries and hazelnut producers.

The research work emphasizes how the choices made by the winemakers and hazelnut producers of the territory are the key element for the preservation and transformation of the landscape, true intangible asset of the *terroir*, and continue to represent the main axis of its economic development. This is achieved by diminishing on the one hand the production of wine quantity in favour of wine quality, while encouraging on the other the conversion of the land less suitable for viticulture to hazelnut crop, which is giving true added value to the territory.

Keywords: *Barbaresco, Barbera, Barolo, Dolcetto, Hazelnut, Landscape, Langhe, Terroir, UNESCO*

1 INTRODUCTION

In the last four decades in many wine productive areas of Piedmont substantial changes took place in agricultural production. In particular, the problems due to *flavescence dorée* and the decrease in demand for wines such as Dolcetto and Barbera led producers to explant many hectares of vineyards. In the explanted areas vineyards are replaced by other agricultural productions : poplar plantations in wetlands, cereals or pasture in slow slope hills, hazelnut in the hilly areas of Langhe, Roero and Monferrato.

Hazelnut production is experiencing a rapid growth thanks to a regional highly developed confectionery industry. Hazelnut cultivation increase had an impact in terms of agricultural landscape and *terroir*

especially in the five areas of the Piedmont candidate as UNESCO World Heritage Site (the hills of Barbaresco, the Langhe del Barolo, Barbera hills, the area of Asti sparkling wine, the hills of Monferrato) in which the main landscape feature has always been the vineyard.

2 MATERIALS AND METHODS

The research was conducted in two steps: the first phase consisted on data collection in the cadastre, in the Census of Agriculture and in the statistical yearbooks of vine and hazelnut production in the major provinces and municipalities of Piedmont.

In the second part a face-to-face interview was administered to wineries that also grow hazelnuts.

The samples consists of 20 companies located in all the five areas nominated by UNESCO, representing 10% of the companies that cultivate both crops. The designed questionnaire is semi-structured with both closed questions to choice and open-ended questions and is organized in four sections.

The first section regards farms productive structure, the second focuses on hazelnuts and grapes production, the third analyzes transformation and commercial destinations of both productions, the fourth one considers the effects that the two crops have on the terroir.

3 RESULTS AND DISCUSSION

The five candidates UNESCO areas are located in three districts (Alessandria, Asti and Cuneo), in the south of Piedmont. The evolution of the areas grown with vine and hazelnut in these provinces is reported in the table below (Table 1). We note that in just 30 years, from 1980 to 2010 hazelnut cultivation increased from 8,252 hectares to the existing 13,591, an increase of 61% of the extensions; while at the same time the extension of the cultivation of the vine is reduced by 65%, from 66,111 ha in 1980 to 43,103 ha in 2010.

This trend has different intensity in the three considered districts: regarding the hazelnut the greatest increase is in the province of Alessandria, where it triples its extension, followed by Asti and Cuneo where production almost duplicates. Vineyard surfaces evolution evidences some differences: the phenomenon of production reduction has less impact in the province of Cuneo, where only approximately 2,000 hectares were lost, Asti lost a third of surfaces and Alessandria halved its productions.

Table 1: evolution of hazelnut and vineyard grown areas (Source: Agricultural Census)

District	Year							
	2010		2000		1990		1980	
	Hazelnut (ha)	Vine (ha)	Hazelnut (ha)	Vine (ha)	Hazelnut (ha)	Vine (ha)	Hazelnut (ha)	Vine (ha)
Alessandria	920.82	12,109.52	429.68	15,115.01	279.50	19,154.57	393.84	24,373.69
Asti	2,597.74	15,254.00	2,107.88	18,171.86	1,789.50	20,683.13	1,842.74	23,839.53
Cuneo	10,073.06	15,739.77	8,277.20	16,448.12	6,805.58	16,784.15	6,015.96	17,898.17
Total amount	13,591.62	43,103.29	10,814.76	49,734.99	8,874.58	56,621.85	8,252.54	66,111.39

In the investigated areas hazelnuts production has historically been a niche product, but the new market trends are pushing many farms to specialize in this crop and a part of the wine sector companies are brought to devote a portion of the cultivated land to the hazelnuts production. The growing specialisation in hazelnuts production in the area explains (table 2) the presence of 611 farms growing each one more than 5 hectares. The average hazelnut surfaces remain small-medium : 445 companies has between 5-10 ha, 165 medium sized (10 – 50 ha.) and only 1 over 50 ha.

The highest concentration of large hazelnut companies is in the province of Cuneo (492 companies) against 55 in Alessandria and 64 in Asti.

Table 2: Farms growing hazelnuts, surface ranges (year2010)

District	Hazelnut surface range			tot
	>5 - 10	>10 - 50	> 50 – 100	
Alessandria	33	22	0	55
Asti	48	16	0	64
Cuneo	364	127	1	492
Total amount	445	165	1	611

The specialisation in hazelnuts production is also demonstrated by the fact that in the analyzed provinces only 274 farmers grow both vine and hazelnuts with a prevalence in Cuneo province with 220 companies (Table 3). Most of these mixed farms are located in UNESCO candidate areas. In these areas the coexistence of the two crops has the greatest impact on the terroir and characterizes the landscape.

Table 3: farmers producing both vine and hazelnut

District	n°
Alessandria	22
Asti	32
Cuneo	220
Total	274

In the municipalities located in the candidate UNESCO areas this trend is quite evident (Table 4), the surfaces with hazelnut are about 1/4 of the vineyard areas (with the exception of Monferrato area) becoming part of the terroir of the vine and its landscape and the number of hazelnut farms counts 44% of the wineries.

Table 4: impact of the vine/hazelnut surfaces in the UNESCO nominated areas – (year 2010)

Area	N° winery	N° hazelnut farm	vine (ha)	hazelnut (ha)
Barbaresco	710	297	2,635.57	789.32
Barolo	893	557	3,765.32	956.62
Barbera	795	296	2,454.25	278.84
Monferrato	160	13	659.17	11.72
Asti spumante	198	49	802	42.15
Total	2,756	1,212	10,316.31	2,078.65

The impacts that the two crops have on the terroir clearly emerge from interviews with producers (Table 5). The respondent sample is representative of the universe of producers of vine/hazelnut in the areas nominated. Considering the size of the sample company for the hazelnuts production 40% have less than 5 ha, 20% cultivate 5-10 ha and 40% has medium extension (10-50 ha) while for wine production acreage ranges from a minimum 2 ha to a maximum of 27.

Table 5: Sample distribution in the surface range (year 2010)

	Surface range (ha)		
	> 5	5 - 10	>10 - 50
Hazelnut	40%	20%	40%
Vineyard	25%	10%	65%

Only 10% of the farm sample is involved in other activities related to agricultural production like farm holidays, direct sales or B&B.

The majority of the sample (60% of farmers) adheres to Protected Geographic Indication “Nocciola Piemonte”. The PGI hazelnuts obtain an average premium price of 40 € per ton. Smaller producers renounce to PGI because the annual cost afforded to maintain the mark is not repayed by the additional revenue.

All grapes producers make Denomination of Origin wines (Arneis, Barolo, Barbaresco, Barbera, Dolcetto, Asti, Nebbiolo, Roero).

Focusing on hazelnuts all respondents declared that this cultivation has always been grown in marginal lands, in fact 30% of hazelnut surfaces date to 60 years ago, while 50% of plantations is 10-15 years old, finally new plants with less than 5 years (not yet in production) represents 20% of surfaces.

Only 20% of new surfaces replaced vineyards, 80% of new plantations hazelnuts didn't replace vine, but farmers used marginal areas of the property or under-utilized areas formerly dedicated to wheat and forests,. This fact is due because the majority of the sample carries out its activities in wine-growing areas with good profitability as Barolo and Barbaresco. The explanations involved others tipe of autoctonous vineyards like Dolcetto and Barbera.

For the 10% of the sample hazelnut is a leading manufacturing production and its sales figures exceed that of the wine.

Although 90 % of the sample considered hazelnut growing as a complement of vine all the farms use dedicated professional equipment for cultivation and collection of hazelnut crops.

The fact that the hazelnut is seen as complementary is confirmed by the data on the percentage of the total business generated which amounted on average to 25% (with values ranging between 10% and 80% of corporate sales) while for the revenues generated by the viticulture figure stood at 55 % (with values between 10 and 90% of sales figures), while all other farms activities sum to 20% .

The increased farmers interest in hazelnut crop, is mainly due to economic return, few maintenance work during the year and different harvest seasons.

The 70% of producers is selling raw hazelnut to wholesalers involved in the processing chain.

The remaining 30% of sample adheres to associative forms of defense and commercialization of hazelnut as “Asprocor”, “Corilanga” who deliver their entire raw production.

Only 10% of the sample processes hazelnut and products hazelnut flour, pastry half processed material , roasted hazelnuts and oil. Respondents argue that there is a strong interest from consumers in hazelnuts and related processed products; in fact there is a high demand that comes from confectionery industry, restaurants of the area and local markets where hazel and wine are the leading typical terroir products.

The last section of the questionnaire indagated the perception of hazelnut impact in terroir and landscape. Farmers were interviewed with open questions.

To the question " What is due the hazelnuts revival cultivation ?", prevalent responses were:

- hazelnut recognized as a quality product and market demand is constantly growing;
- low production costs due to low input requirements and easy maintenance requirements;
- lower investment needs compared to those of a new vineyard;
- interesting profitability in marginal lands;
- Great decrease in the demand of Dolcetto and Barbera wines;

To the question "how the introduction of hazelnut influences the landscape of the territories renowned for its vineyards?", prevalent responses were:

- the presence of hazelnut breaks the monotony of vineyards;
- the coexistence vine/hazelnut features the landscape as in Tuscany area coexist vine and olive trees.
- hazelnut is historically part of the agricultural landscape of the territories, its development qualifies landscape in marginal areas;
- Improve the management of forests;
- Also useful in the maintenance hydrogeological function of the hilly areas.

To the question "What do you think of the UNESCO nomination of your area ?", prevalent responses are:

- Improvement in image and tourism development;
- Concerns arising from the possible new landscape constraints and production that can affect producers;
- Positive spillovers on the economic value of wine and hazelnut production.

4 CONCLUSION

The cultivation of hazelnut in the South of Piedmont has created in the last decades a strong link with wine terroir, becoming the natural complement of vine in the landscape and starting to represent a new concrete work opportunity for farmers . The research shows the main changes that are taking place in this terroir affected by the development of the hazelnut crop:

- Changes in the agricultural landscape; that is passing from being dominated by a vineyard monoculture in a landscape alternating vine/hazelnut;
- Economic impact on wineries management; the production of hazelnuts enables farmers to grow lots of marginal land or to substitute vineyards affected by virosis or grape varieties not appreciated by the market;
- the expansion of hazelnut cultivation is heterogeneous: the phenomenon of coexistence of the two crops is more pronounced in the terroirs of Barolo, Barbaresco and Barbera.