

STUDIES REGARDING SOME GRAPE VARIETIES AND WINES FROM HISTORICAL MOLDOVA

STUDII PRIVIND UNELE SOIURI DE VIȚĂ DE VIE ȘI VINURI DIN MOLDOVA ISTORICĂ

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Abstract. *Grape cultivation and wine production have held significant historical importance in the region of historical Moldova, as a central pillar of the local economy and culture. The region has become renowned for its indigenous grape varieties, Moldovan wine symbolizing the identity and hospitality of the Moldovan people, often influencing local traditions and festivities. Taking into account the eco-pedological characteristics of the Romanian Moldovan Hills Region and the Republic of Moldova, a research has been conducted into the cultivated grape varieties, the types of wines produced, as well as the existing wineries, in order to highlight technological and sensory data specific to these countries. The current study focuses on wines made from the grape varieties Fetească albă, Fetească regală, Fetească neagră, and Băbească neagră (Rară neagră), forming the basis for extensive research into the complex sensory profiles and the identification of specific aromatic descriptors for the wines produced from these four ampelographic representatives of Romania and the Republic of Moldova.*

Keywords: Historical Moldova, Fetească albă, Fetească regală, Fetească neagră and Băbească neagră.

Rezumat. *Vița de vie și producția de vin au avut o importanță istorică semnificativă în Moldova istorică, un pilon central al economiei și culturii locale. Regiunea a devenit cunoscută pentru soiurile sale autohtone, iar vinul moldovenesc a reprezentat un simbol al identității și ospitalității moldovenești, influențând adesea tradițiile și festivitățile locului. Cercetrile au fost efectuate luând în calcul caracteristicile eco-pedologice din regiunea română a Dealurilor Moldovei și Republica Moldova, soiurile cultivate, tipurile de vinuri obținute, dar și cramele existente pentru a pune în evidența date de ordin tehnologic și senzorial, specifice acestor țări. Studiul actual ia în calcul vinurile obținute din soiurile Fetească albă, Fetească regală, Fetească neagră și Băbească neagră, fiind baza unei cercetări de largă extindere asupra paletei senzoriale complexe și a identificării unor descriptori aromatici specifici pentru licoarea batică obținute din cei patru reprezentanți ampelografici ai României și Republicii Moldova.*

Cuvinte cheie: Moldova istorică, Fetească albă, Fetească regală, Fetească neagră și Băbească neagră.

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INTRODUCTION

Studies on grape varieties and wines from historical Moldova represent a fascinating journey into the rich and diverse viticultural heritage of this region. Moldova, with its long-standing winemaking tradition, benefits from a favorable climate and conducive soil conditions that have created ideal circumstances for grape cultivation and the production of remarkable wines.

In a historical context, Moldova has been recognized as an exceptional wine region since the medieval period, when native grape varieties were cultivated and meticulously vinified. Studies on traditional grape varieties in Moldova highlight the richness of genetic diversity in these plants, contributing to the preservation and promotion of autochthonous varieties specific to this region.

Throughout the centuries, historical Moldova has witnessed innovative viticultural practices and the development of a winemaking craft passed down from generation to generation. These studies deepen the understanding of traditional wine production techniques and innovations over time, emphasizing the essential role that the wine industry has played in the cultural and economic identity of the region.

Today, research continues to explore new grape varieties adapted to climate change, modern winemaking technologies, and the impact of socio-economic factors on the wine industry in Moldova. Current studies not only analyze the historical legacy of Moldovan viticulture but also contribute to the development of a sustainable wine industry rooted in tradition yet open to innovation (Cotea *et al.*, 2000).

Historical Moldova refers to the historical region that includes both the territory of present-day Republic of Moldova (also known as Bessarabia) and the Moldova region in Romania. This region has a long viticultural tradition and has been recognized for the quality of wines produced there (Wine of Moldova).

Bessarabia is known for its extensive vineyards and diverse wine production. The most fertile areas for viticulture are located in the southern part of the country, near the cities of Cahul and Comrat. A variety of grape varieties, including native ones, are cultivated, and quality wines, both red and white, are produced. In the Republic of Moldova, four regions with Protected Geographical Indication (PGI) for wine products are designated: Codru, Ștefan Vodă, Valul lui Traian, and Divin. Each region is led by an association of PGI wine producers. All four PGIs are protected both in the Republic of Moldova and within the European Union (Oșlobeanu *et al.*, 1991).

The viticultural region of Dealurile Moldovei, located in the eastern part of Romania, is renowned for its picturesque landscape and high-quality wines. This region benefits from favorable natural conditions for viticulture, making the wines produced here appreciated both nationally and internationally.

MATERIAL AND METHOD

The study of autochthon grape varieties, including Fetească neagră, Băbească neagră (Rară neagră), Fetească albă, and Fetească regală, involves a detailed approach to understand the distinct characteristics of these varieties and to unveil their viticultural potential. The research methods and materials used significantly contribute to the assessment of the unique qualities of these native grape varieties (Oprea, 1973)

Scientific research relies on collecting wine samples obtained from native grape varieties: Fetească neagră (fig. 1), Băbească neagră (Rară neagră) (fig. 2), Fetească albă (fig. 3), and Fetească regală (fig. 4), sourced from various wineries in Romania and the Republic of Moldova (fig. 5 and fig. 6). According to the figure, approximately 34 wineries from the two regions were analyzed, encompassing different types of wines from productions spanning different years, specifically from 2014 to 2021.



Fig. 1 Fetească neagră



Fig. 2 Băbească neagră



Fig. 3 Fetească albă



Fig. 4 Fetească regală

CRAMĂ / VIN	FETEASCĂ ALBĂ	FETEASCĂ REGALĂ	FETEASCĂ NEAGRĂ	RARĂ NEAGRĂ
5 COLINE			X	
CRAMA GIRBOIU	X	X	X	
CRAMA ȘARA ODOBEȘTI		X	X	
DOMENIILE PANCIU	X	X	X	X
PANDORA COTEȘTI			X	
CRAMA COTNARI	X			
CRAMA GRAMMA	X	X		
CRAMA STRUNGA	X		X	
CRAMA UNU	X	X	X	
CRAMA ZILBERTEIN	X	X		
DOMENIILE STANESCU	X		X	
SENATOR WINE	X	X	X	X
CASA DE VINURI COTNARI	X		X	
DOMENIILE BOHOTIN	X		X	
CRAMA DEALU BUJORULUI	X	X	X	X
CRAMA HERMEZIU	X	X	X	
CRAMA TATA ȘI FIUL	X		X	X
DOMENIILE AVEREȘTI	X	X	X	
MOȘIA DOMNEASCĂ		X	X	
VINCON ROMANIA	X	X	X	

Fig. 5 Wineries from Romania

CRAMĂ / VIN	FETEASCĂ ALBĂ	FETEASCĂ REGALĂ	FETEASCĂ NEAGRĂ	RARĂ NEAGRĂ
ASCONI	X		X	X
ATU	X			
CASTEL MIMI			X	X
CHATEAU VARTELY		X	X	X
CRICOVA	X	X	X	X
DOMENIILE PRIPA			X	
ET CETERA			X	
GOGU WINERY	X	X		
POIANA	X			
CHATEAU PURCARI			X	X
VINARIA DEN VALE			X	
AURELIUS		X	X	
BOSAVEN			X	X
VINUM		X	X	X

Fig. 6 Wineries from Republic of Moldova

Fetească neagră, known for its intense color and complex aroma, delivers wines with a robust structure and well-defined tannins. Notes of black fruits, such as blackberries harmoniously blend with subtle hints of vanilla and spices. Fetească neagră wines have aging potential and open up over time, revealing additional layers of complexity. Ancient grape variety, it is considered a Dacian variety, maybe a selection from *Vitis silvestris*. It is known and cultivated since ancient times in the old vineyards of Moldova, where it used to produce, alongside local black varieties, the famous Uricani wine.

Băbească neagră stands out with its expressive wines, highlighting aromas of berries such as blackberries and currants. Soft tannins and balanced acidity make these wines approachable even in their youth, while notes of vanilla and chocolate add depth and elegance. In the Republic of Moldova, some studies suggest the variety is cultivated on its own roots, suggesting resistance to phylloxera. The obtained yield is high, averaging 14-16 t/ha; at higher yields, some berries remain insufficiently matured and unevenly colored. The resulting wine is a dry and straightforward wine, presenting a not very intense but lively and bright red color, with higher acidity giving it freshness.

Fetească albă captivates with fresh and light wines, characterized by delicate aromas of white flowers and fresh fruits. Notes of peach and apple contribute to the aromatic profile, while the well-balanced acidity enhances the overall balance. The variety Fetească albă is known in our country long before the phylloxera invasion. There are no precise data on the origin of this variety. Some authors suggest that Fetească albă was brought from Transylvania, Germany, or Bohemia through the involvement of settlers, which cannot be historically proven. This variety is mentioned since the founding of the renowned vineyards of Moldova, as described by Dimitrie Cantemir, being included as a fundamental variety in the composition of the assortment for fine wines at various nationally renowned wineries.

Fetească regală provides wines with fresh aromas of citrus, green apples, and lime flowers, with a revitalizing acidity. It is presumed to be a natural hybrid between Grasă de Cotnari and Fetească albă. It accumulates sugars between 188-215 g/L on average and has a small range of overripeness, reaching a maximum of 220-235 g/L, with higher acidity in this case (5.7-6.2 ‰). Grape yields vary from 11 t/ha in Blaj to 27 t/ha in Odobești, with an average of 15-20 t/ha (Țârdea *et al.*, 1995).

Overall, the wines from the viticultural region of Dealurile Moldovei reflect attention to detail in the production process, respecting local traditions, and leveraging the specific terroir of the region. These captivating wines showcase the diversity and beauty of Romanian viticulture, contributing to the region's outstanding reputation in the world of fine wines (Dettweiler Erika, 1991).

RESULTS AND DISCUSSIONS

Romania holds a share of 2.6% of the total global vineyard area, totaling 187,934 hectares according to data provided by the OIV. This positions Romania as the tenth-largest wine-producing country globally, close to nations such as Portugal and Chile but considerably distant from industry leaders Spain, France, and Italy, each with over 700,000 hectares. This perspective emphasizes the extent of Romania's contribution to global wine production and its relative position compared to other notable wine-producing nations. It is evident that the Romanian wine industry has the potential to evolve and strengthen its position internationally (OIV).

The wine production has experienced dynamic changes over the past two decades, displaying significant fluctuations as per data provided by the OIV (fig. 7). In recent years, in 2022, the wine production recorded a total of 3,788,000 hectoliters, reflecting a decrease of approximately 15% compared to the previous year, representing only 1.5% of the global wine production (fig. 8). These figures highlight significant shifts in the wine industry, underscoring the influences of climatic and economic variables on global wine production. It is important to note that this dynamic can impact the global wine market and consumers.

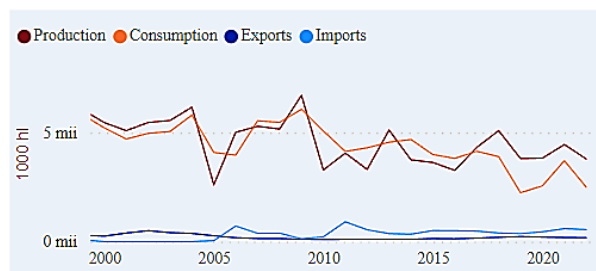







Fig. 7 The evolution of wine production and consumption in the period 2000-2020 (Romania)

1000 hl 	Value	%Var*	%/World
Production	3 788 	-14,9%	1,5%
Consumption	2 498 	-32,7%	1,1%
Exports	180 	-5,3%	0,2%
Imports	555 	-7,0%	


	14th Producer	29th Exporter
	17th Consumer	29th Importer

Fig. 8 Wine production in 2022 (Romania)

According to the data from the Ministry of Agriculture and Rural Development (fig. 9), the total wine production, starting from the year 2013 until 2020, has experienced considerable fluctuations. During this timeframe, significant variations in the total volume of wine produced in Romania have been recorded, reflecting diverse influences such as climatic conditions, agricultural practices, and economic developments.

For instance, the year 2013 marked a notable wine production (5113.13 hL), while in the subsequent years between 2014 and 2017, there were descending adjustments. From 2018 (5088.10 hL), the wine production experienced a significant increase, reaching high figures in 2019 (3808.30 hL). These fluctuations

highlight the sensitivity of the wine industry to variable factors and underscore the need for producers to adapt to environmental and economic changes.

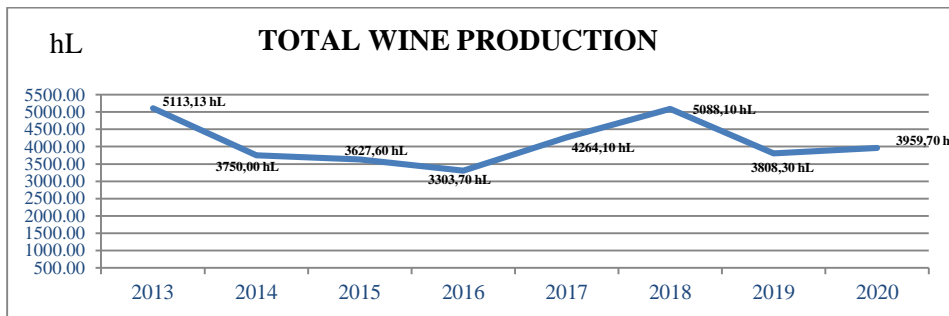


Fig. 9 Evolution of wine production in Romania

The main noble grape varieties cultivated for wine production in 2020 included Fetească albă, Fetească neagră, Fetească regală, Băbească neagră, and others. These varieties were carefully selected and developed to highlight the distinctive characteristics of the terroir and produce high-quality wines.

The percentage distribution of these varieties in 2020 (fig. 10), namely 32.47%, reflects the choices and preferences of producers, as well as the requirements of the wine market. These noble and indigenous varieties, known for their contribution to the complexity and diversity of wines, significantly contributed to the identity and quality of the wine industry in that year. Each variety brings its own aromatic notes, taste profiles, and aging potential, contributing to the richness and authenticity of the wine range in the region.

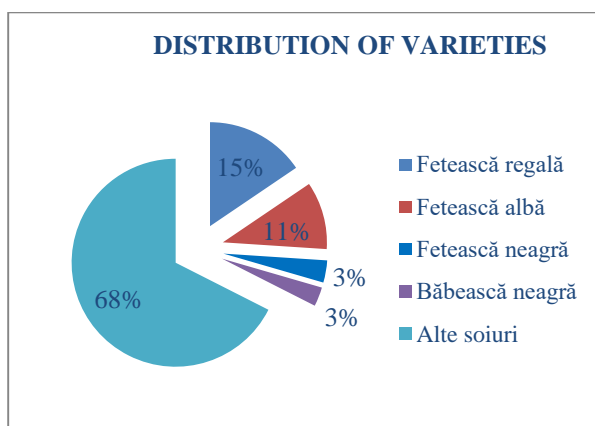


Fig. 10 The percentage distribution of varieties in 2020

CONCLUSIONS

Romania holds a significant share in global vineyard area, ranking as the tenth-largest wine-producing country. However, the industry has experienced notable fluctuations in production over the past two decades, especially in recent years, with a 15% decrease in wine production in 2022 compared to the previous year. These variations underscore the sensitivity of the Romanian wine industry to climatic and economic factors. While Romania has the potential to strengthen its position internationally, it is crucial for producers to adapt to environmental and economic changes to ensure sustained growth and enhance Romania's contribution to the global wine market.

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