

ACTUAL TRENDS OF WINE SECTOR
IN THE WORLD AND EU

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The paper presents the results of the research on the analysis of the current trends of the wine sector in the EU and worldwide, in particular, the evolution of the vine areas, production of grapes with an emphasis on the period of 2000-2015. The study is based on the analysis of statistical data and reports of international organizations. The results show that the global area cultivated with vines has diminished due to the decrease of vine areas in Europe; China has confirmed its position as the country with the second largest vine area; grape production at the world level has met a positive trend, despite the reduction of vineyard areas.

Keywords: wine sector, grape production, vine, wine sector reform.

În lucrarea dată sunt prezentate rezultatele cercetării cu privire la analiza tendințelor actuale ale sectorului vitivinicol în UE și la nivel mondial, îndeosebi, a evoluției suprafețelor de viță-de-vie, producției de struguri cu accent pe perioada anilor 2000-2015. Studiul se bazează pe analiza datelor statistice și a rapoartelor organizațiilor internaționale. Rezultatele obținute demonstrează că suprafața globală cultivată cu viță-de-vie s-a redus din cauza scăderii suprafețelor de viță-de-vie din Europa; China și-a confirmat poziția ca fiind țara cu a doua cea mai mare suprafață de viță-de-vie; Producția de struguri, la nivel mondial a înregistrat o tendință pozitivă, în pofida reducerii suprafețelor cu viță-de-vie.

Cuvinte-cheie: sectorul viticol, producția de struguri, viță-de-vie, reforma sectorului vitivinicol.

В статье представлены результаты исследования текущих тенденций сектора виноградарства в ЕС и во всем мире, в частности, развития виноградных зон, производство винограда с акцентом на период 2000-2015 гг. Исследование основано на анализе статистических данных и отчетов международных организаций. Результаты показывают, что глобальная площадь, засаженная виноградником, уменьшилась из-за сокращения виноградных угодий в Европе; Китай подтвердил свою позицию как страна со второй по величине площадью виноградных лоз; производство винограда во всем мире показало положительную тенденцию, несмотря на сокращение площадей виноградников.

Ключевые слова: сектор виноградарства, производство винограда, реформа винодельческого сектора.

JEL Classification: Q10, Q13, Q15, Q17.

UDC: 339.13:663.25+338.439.4:634.8](4)

Introduction. The wine sector is evolving in an increasingly competitive international scenario, characterized by the invasion of new producing countries with innovative strategies in the field of production and trade (Campbell and Guibert, 2006). Viticulture has an important place in the agricultural and national economy. The wine sector represents a vital economic activity, especially in terms of employment and export earnings. It also studies biological features, vines relations with environmental factors, technologies for the production of planting material, establishment and maintenance of vineyards, which allow for optimal production of the appropriate quality in terms of economic efficiency. The value of production per one hectare of vine is equivalent to about 10-15 hectares of cereal crops.

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Analyzing the scientific literature on the development of the wine sector, we note that this topic is very actual and widely studied. The analysis of the current trends of the wine sector in the EU and worldwide, in particular, the evolution of vineyards and grape production have been found in the work of foreign authors, such as: Anderson K.; Regnerova O. and Hes A. (2016); Montaigne E., Coelho A. (2006); Campbell G. and Guibert N. (2006); Pantu Bogdan (2017); Dascalu I., Manescu C. and Mateoc-Sirb N. (2017) as well as in the works of the national authors: Boris G. (2015); Silvestru M., Fistic M. (2012); Sestacovscaia A. (2012); Platon N (2007).

The study is based on the analysis of legislative acts (European Parliament and Council Regulations (EU)); statistical databases (European statistics) and reports of the concerned international organizations (International Organization of Vineyard and Wine (OIV)); Food and Agriculture Organization of the United Nations (FAO); National Agricultural Statistics Service (NASS)); scientific papers on the studied problem of domestic and foreign researchers; articles of wine-vineyard experts; as well as information from different sites.

According to the Statistical Report on World Vitiviniculture International organisation of Vineyard and Wine [1], the vine is a plant cultivated on all five continents because of its ecological plasticity. The overall trend of areas planted with vines over the last twenty years has been down by 10%. Today, viticulture covers about 7.5 million hectares in over 50 countries, including Europe, the continent accounting for nearly 40% of the world's grapes production [1].

The global area cultivated with vines has a slight downward trend. Since 2003, the area of vines has been steadily declining until 2011, and then slightly increased (figure 1). In 2015 the area of vineyards accounted for 7511 thousand ha.

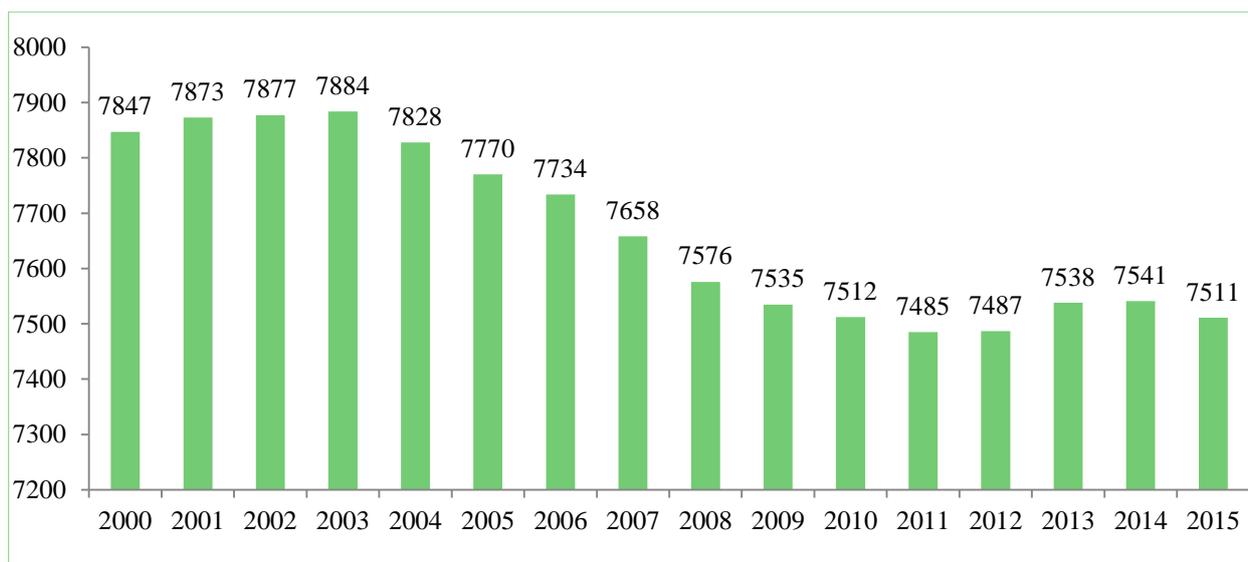


Figure 1. Evolution of world vineyard areas over the period 2000-2015, thousands ha

Source: Developed by author according to OIV data <http://www.oiv.int/public/medias/4710/oiv-noteconjmars2016-en.pdf>.

Compared to 2014, the world-wide area planted with vines decreased by 7 thousand ha or by 0.1%. This decrease was due to the significant decreases in the area of vines in Spain (0.1%), France (0.6%) and Italy (1.2%). However, an increase of about 31 thousand hectares of vines was recorded in China (in 2015 its total area constituted 830 thousand hectares), this country being the main engine for the growth of world vineyard area. Turkey, after registering a recovery of the vine areas in 2013, in 2015 it decreased by 1% compared to 2014. In Brazil, the area of vineyard decreased by 4.000 ha in 2015, while on the American continent in the main countries there was no significant variation in the area of vineyards, table 1 [2].

We can mention that during the years 2000-2015 the world vine area decreased by about 313 thousand ha (especially in the EU), while the vineyards of China and Australia are expanding (against the constant situation in the US and South Africa). An increase in vines has been recorded in those countries without a particular history of wine production. The area of the vineyards would have been larger if the EU Wine Surrender Program did not exist in 2009.

Table 1

Global areas of vineyards in 2011-2015, thousands ha

Country	2011	2012	2013	2014	2015	Ratio 2015/2011, %
Spain	1032	1017	1021	1022	1021	-1.1
China	633	709	760	799	830	1.1
France	796	792	793	791	786	-1.3
Italy	720	713	705	690	682	-5.3
Turkey	508	497	504	502	497	-2.2
USA	413	412	422	419	419	1.5
Argentina	219	222	224	226	225	2.7
Iran	239	240	227	221	223	-6.7
Portugal	206	206	208	211	217	5.3
Chile	191	192	192	192	211	10.5
Romania	170	162	157	154	192	13
Australia	133	135	133	132	149	12
Moldova	140	141	137	140	136	-2.9
South Africa	102	102	102	102	130	27.5
India	119	120	119	120	120	1
Brazil	90	91	90	89	85	-5.6
New Zealand	37	38	38	38	39	5.4

Source: Developed by author according to OIV data, Statistical report on world viticulture.

Of the world's vine surface, about 50% of the area is concentrated in 5 countries, namely Spain 14%, France 10%, Italy 9%, Turkey 7% and China 11% (figure 2). The wine sector in Europe is in the heart of social and economic life in rural regions across the continent [1].

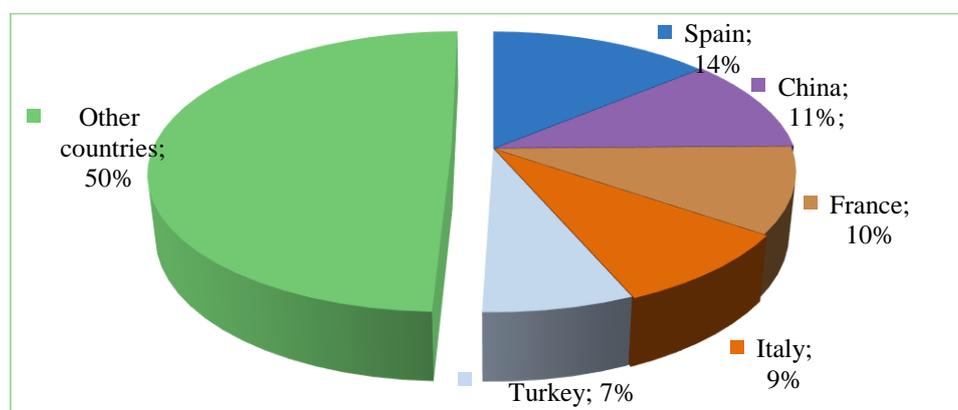


Figure 2. Structure of world vine areas, 2015, in %

Source: <http://www.oiv.int/public/medias/5029/world-viticulture-situation-2016.pdf>.

The Last Reform of the Common Market Organization for Wine was introduced in 2008. It established new legislation to ensure the definitive limitation of rights to plant vines. The main justification for this decision was based on the negative impact of previous legislation on production costs and on the competitiveness of European viticulture and on world wine producers (Montaigne and Coelho, 2006). In the view of European Commissioner Dacian Cioloș, "this analysis has shown that rights for planting grapes lead to an increase in production costs and constitute a barrier to rationalizing agricultural holdings, thereby reducing competitiveness".

In the last ten years (2005-2015), Europe's vineyards areas recorded a 13.8% reduction, reaching according to the latest statistics to 3362 thousand ha in 2015 (figure 3). Starting with the EU Program (2011/2012 harvest) on regulating the wine production potential in the EU, EU vineyards areas declined significantly. At the same time, the implementation of the new system for managing the wine production potential, including the possibility of annual growth of new plantations, is limited to 1% of the areas planted

with vines, planned for each Member State, and Member States should be able to decide on to provide for smaller areas at national or regional level, including at the level of eligible areas for protected designations of origin and protected geographical indications, based on objective and non-discriminatory grounds, while ensuring that the imposed limitations are more than 0% and are not excessively stringent in relation to the objectives pursued [3].



Figure 3. Evolution of the EU vineyard area, 2005-2015, thousands ha

Source: Developed by author according to OIV Expert data.

Compared to 2014, the EU vine areas have been reduced by 26 thousand ha. The largest areas planted with vines in 2015 were recorded in Spain, France, Italy and Portugal (table 2). According to OIV statistical data (2015), Spain is the world's largest wine-growing country with an area of 1021 thousand hectares. Annual wine production exceeds 37 million hectoliters, which ranks third in the top of wine producing countries after Italy and France. But France remains the world's largest wine producer, with 47.5 million hectoliters (2015), being the country with the largest wine sales abroad.

Table 2

Distribution of the vine area in the EU, thousands of ha

	2005	2010	2015	2015/2005 %
Spain	1180	1082	1021	-13,5
France	894	818	786	-12,1
Italy	842	795	682	-19
Portugal	248	244	217	-12,5
Romania	217	204	192	-11,6
Greece	113	112	107	-5,3
Germany	102	102	102	-
Hungary	83	68	56	-32,5
Bulgaria	95	81	64	-32,6
Austria	52	47	44	-15,4
Total	3900	3654	3362	-13,8

Source: OIV State of the viticulture world market.

Between 2005 and 2015, we notice that the largest vine-growing countries have experienced surface reductions: Spain declined by 13.5%, France and Italy, having a negative trend, declined by 13.5% and 19% respectively, and the Portuguese vineyards decreased by 12.5%. The largest reductions in wine-growing areas were registered in Hungary – 32.5% and Bulgaria – 32.6%. Romania's wine-growing area also declined by 11.6% in this period (figure 4). Romania ranks fifth in Europe by the vine area and is on the sixth place in wine production. In this ranking, Romania is followed by Greece with 107 thousand hectares of vine and Germany (102 thousand hectares), while the other states hold much smaller areas. Because of the unfavorable climate, 10 EU countries do not cultivate vines [4].

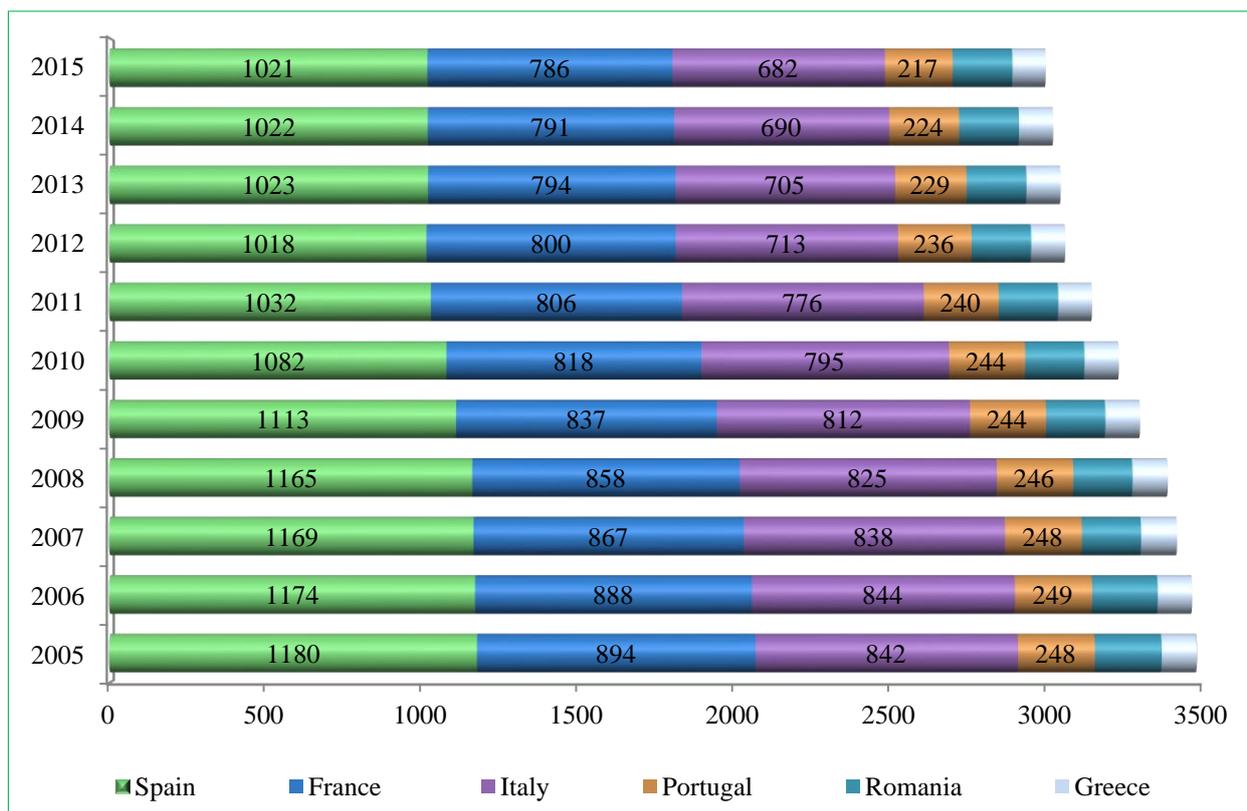


Figure 4. Evolution of vineyards in the top of 5 EU countries in the years 2005-2015, thousands ha
 Source: Developed by author according to OIV Expert data, www.oiv.int.

The worldwide grape production over the past 15 years has shown a positive trend, despite the decline in Europe's vineyards area (figure 5).



Figure 5. Evolution of world grape production in the period 2000-2015, million tons
 Source: OIV report, http://www.gie.uchile.cl/pdf/GIE_legislacion/Estadisticas%20OIV.2012.pdf.

Compared to 2000, world grape production increased by 17%, accounting for 755 million tons in 2015. This increase in grape production can be explained by increasing yields as well as the improving wine-making techniques. But the record in harvest was recorded in 2013 when about 76.8 million tons of grapes were harvested.

Of the world grape production, about 40% is produced in Europe, 31% in Asia and 20% in America [1]. Almost half of the grape production is used for wine production, 36% of the grapes are consumed fresh and 8% take the shape of dried grapes, while the rest is for the production of fruit juice and musts.

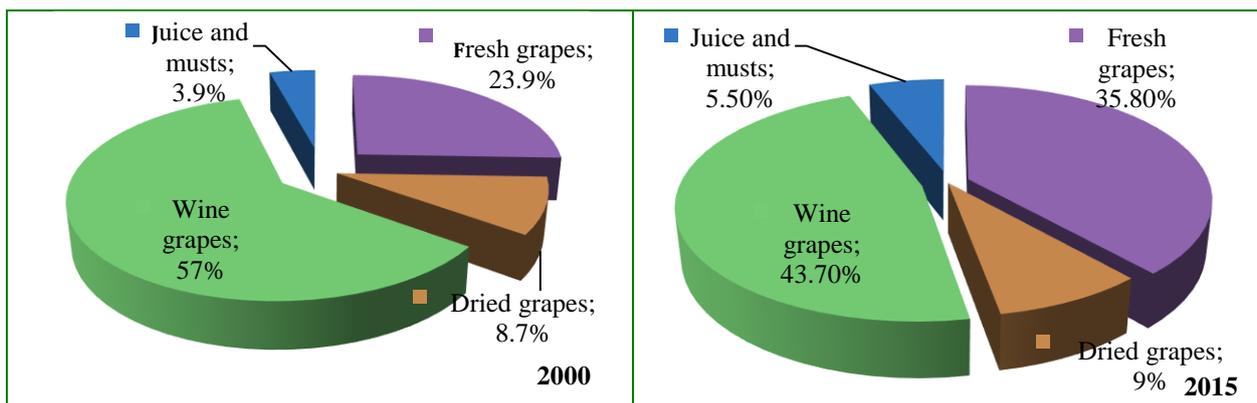


Figure 6. The share of total world grape production per product type

Source: OIV Statistical Report on World Vitiviniculture.

In the world practice there has been a tradition of producing and using grapes. The main vine plantations (75%) and grape producers (80%) are in: Italy, Spain, France, Turkey, United States of America, China, Argentina, Portugal, Romania and Yugoslavia.

The best indicators of vineyard productivity are found in the USA, Italy and Argentina. But according to the quality of the grapes used for processing, Spain and Portugal are the number one, according to wine varieties – France, according to the number of table grapes varieties – Italy, according to the number of varieties of raisins – Turkey [10].

Over the past 15 years, we have seen a 12% increase in table grape consumption. This is due to the increase of areas of table grapes and raisins varieties in Greece, Italy, the United States, Turkey, Iran and other countries (figure 6). During the analyzed period, the European share of world grape production has dramatically reduced. If in 2000 about 52.3% of all grapes in the world came from Europe, then in 2014, this share accounted for only 39%. European grape production in 2000 was about 34.3 million tons and in 2014 it amounted only 29 million tons, decreasing by 5.3 million tons or by 15.5%. At the same time, those which registered increases were: Asia: from 13.2 million tons grapes to 24.1 million tons, more by 10.9 million tons (82.5%) and America from 12.8 million tons grapes to 15.2 million tons, more by 2.8 million tons (figure 7).

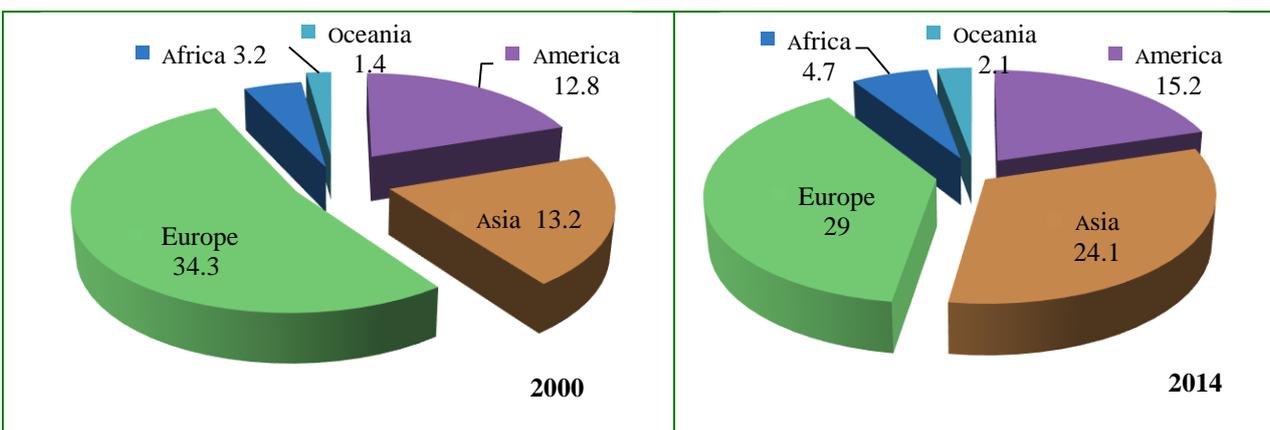


Figure 7. Continental evolution of the grape harvest in the period 2000-2015, million tons

Source: OIV Statistical Report on World Vitiviniculture.

According to the Report: State of the viticulture world market, China, in 2015, became one of the largest grape producers in the world with 12.6 million tons, followed by Italy, with an annual grape production of 8.3 million tons. France and the United States are not far behind, annual outputs being of 6.3 million tons and 7.2 million tons, respectively. Spain produces an average of 6 million tons per year. Turkey produces 3.8 million tons annually. Argentina, Iran and Chile have an annual production of over 2 million tons, and South Africa produces a volume of 2 million tons, table 3 [2].

Table 3

Grape production by country in 2011-2015, millions of tons

	2011	2012	2013	2014	2015
China	9.2	10.6	11.6	12.3	12.6
Italy	7.1	6.9	8	6.9	8.2
USA	6.5	6,8	7.8	7.1	7
France	6.6	5.4	5.5	6.1	6.3
Spain	5.7	5.3	7.4	6.1	6
Turkey	4.3	4.2	4	4.2	3.6
Chile	3	2.8	2.9	2.8	3.1
India	1.2	2.2	2.5	2.6	2.6
Argentina	3	2.4	2.9	2.7	2.4
Iran	2.1	2.2	2	2.2	2.1
South Africa	1.7	1.8	2	2	2
Australia	1.6	1.7	1.8	1.7	1.7
Egypt	1.3	1.4	1.4	1.6	1.6
Brazil	1.5	1.5	1.4	1.5	1.5
Germany	1.3	1.2	1.1	1.2	1.2
Total in the world	69.2	69.5	76.8	75.1	75.7

Source: http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_production_-_crops.

Romania. Relative to the appearance and the vine culture on the territory of Romania, historians appreciate that this concern dates back more than 2500 years, respectively from the Thracian times. This aspect is supported by the great historian Nicolae Iorga, who, based on his experience and expertise, affirm that: „The vine cultivation is also traditional in wine-loving Thracians”. We note that in time, the viticulture is developing as a traditional basic activity. At first as rudimentary and after the development of this concern, it was necessary to improve and create technical means that have competed for the production of large oriented products and the quality of the products both in their natural state and of those processed.

„The varieties of wine are placed in the ecological system corresponding to the delimited wine-growing zone, where quality wines with a registered designation of quality and quality steps (DOOC), top quality wines with a proven origin (DOC), superior wines (SW) and current consumption wines (table, region). The varieties in wine production have different destinations: for winemaking, for fresh consumption and for raisins. Grape varieties are made up of a variety of varieties, in a summer-to-autumn sequence, to ensure fresh consumption for as long as possible. The location of varieties on land depends on the technological and economic value of new plantations” [12].

Table 4

Main varieties of vines cultivated in Romania

Vine cultivated for white wines	Vine varieties grown for red wines	Vine cultivated for raisins
1. Galbenă de Odobesti	Babeasca neagra	Perlette
2. Aligote	Cadarca	Armenia
3. Fetească alba	Cabernet Sauvignon	Kas Mas
4. Grasă de Cotnari	Merlot	Sultanina
5. Pinot gris	Feteasca neagra	
6. Riesling italian	Pinot noir	
7. Chardonnay		
8. Saugvnion		
9. Muscat Ottonel		
10. Tamaioasa		

Source: <https://conspecte.com/Viticultura-si-vinificatie/viticultura.html>

Over time, viticulture has undergone various transformations due to climatic, technical, ecogeographic, ownership, geoclimatic factors and, today, viticulture is a science. The existence of viticultural research centers demonstrates scientific concerns in the wine sector. In relation to ownership, more than 90% of the land is privatized and, as a result, we are talking about a competitive environment where competition to obtain

products at the highest quality is very high. Moreover, traditional Romanian products are comparable to products made by the 15 countries in the top international wine segment (table 5).

Table 5

Wine production (excluding juice and musts)¹

Unit: mhl	2013	2014	2005	2016 Provisional	2017 forecast	2017/2016 Valiation in volume	2017/2016 Valiation in %	ranking
Italy	54,0	44,2	50,0	50,9	39,3	-11,6	-23	1
France	42,1	46,5	47,0	45,2	36,7	-8,5	-19	2
Spain	45,3	39,5	37,7	39,3	33,5	-5,8	-15	3
USA ²	24,2	23,1	21,7	23,6	23,3	-0,3	-1	4
Australia	12,3	11,9	11,9	13,1	13,9	0,8	6	5
Argentina	15,0	15,2	13,4	9,4	11,8	2,4	25	6
China*	11,8	11,6	11,5	11,4	11,4	0,0	0	7
South America	11,0	11,5	11,2	10,5	10,8	0,3	2	8
Chile	12,8	9,9	12,9	10,1	9,5	-0,7	-6	9
Germany	8,4	9,2	8,9	9,0	8,1	-0,9	-10	10
Portugal	6,2	6,2	7,0	6,0	6,6	0,6	10	11
Russia*	5,3	4,9	5,6	5,6	5,6	0,0	0	12
Romania	5,1	3,7	3,6	3,3	5,3	2,1	64	13
Brazil	2,7	2,6	2,7	1,3	3,4	2,1	169	14
Hungary	2,6	2,4	2,8	2,8	2,9	0,1	3	15
New Zealand	2,5	3,2	2,3	3,1	2,9	-0,3	-9	16
Greece	3,3	2,8	2,5	2,6	2,5	-0,1	-5	17
Serbia*	2,3	2,3	2,3	2,3	2,3	0,0	0	18
Austria	2,4	2,0	2,3	2,0	2,4	0,4	23	19
Moldova	2,6	1,6	1,6	1,5	1,8	0,3	20	20
Bulgaria	1,7	0,7	1,3	1,2	1,2	0,0	-2	21
Gheorgia *	1,0	1,1	1,3	1,1	1,1	0,0	0	22
OIV World Total³	290,1	269,5	274,7	268,8	246,7	-22,1	-8	

1 – countries for which internation has been provided with a wine production of more than 1 mln; 2 – OIV estimate based on UOSA info; 3 – OIV mid-range estimate. Range for evaluation of 2017 world production from 243,3 mhl to 250,1 mhl; *Ration for the year 2016-2017 figures not yet available.

Source: <http://bani.md/topul-celor-mari-producatori-de-vin-din-lume-ce-loc-ocupa-r-moldova-in-2017---99607.html>

According to the European viticulture statistics, we can say that Romania exists on the wine market at European level, being on the 5th place on the surface (183 000 ha) after Spain, France, Italy and Portugal (Spain: 941,000 hectares, France: 802,000 hectares, Italy: 610,000 hectares, Portugal: 198,000 hectares, Romania: 183,000 hectares) [13] and 20th place in wine consumption (24,26 l/year/capita). The cultivation of wine on the territory of the present Romania did not cease at any moment. On the contrary, winegrowers and vineyard owners have invested so much time and resources in this occupation that they have come to be known even beyond the borders of the country” [14].

Today, in Romania we discuss 8 major wine regions:

- a. The region Crișana and Maramureș;
- b. The region Podisul Transilvania;
- c. The region Oltenia and Muntenia;
- d. The region Banat;
- e. The region Terasele Dunării;
- f. The region Dobrogea;
- g. The sandy region in the south of the country;
- h. Region of Moldova.

The fierce competition on the wine market involves connecting it to the new, technology and science for get new varieties and applying new, better performing crop techniques, which are quality oriented.

Ukraine. Wine production on the territory of modern Ukraine emerged in the 11th century in the northern part of the country (around Kiev and Cernigov), where the monks began to produce wine, and in

the 4th century BC e. on the Black Sea coast. Historically, wine regions of modern Ukraine have been part of different states, inhabited by different peoples and, today, they are suddenly different according to climatic conditions. During Soviet times, Ukraine, with a total area of 2500 km², was the largest wine supplier in the USSR. Since 1986, about 800 km² of vineyards have been destroyed. Since 2000, wine production and export have increased.

Currently, Ukraine can not boast a strong wine country status, dictating fashion in the field. Over the past 26 years (1990-2017), grape wine production in Ukraine has declined 5.6 times – to 1.2 million hectoliters. After the tensions in the Crimean region, about half of the vineyards remained in Crimean territory. In 2017, Ukraine imported 12 million liters of wine in the amount of \$ 23.4 million, while exports declined by 50%. In 2017, wine production in Ukraine increased by almost 1.5% compared to the previous year, but the production of sparkling wines decreased by 24%. The main reason is to reduce the demand on the market, even during holidays. Today, domestic producers are actively working in three segments. *The first* – the processing of grapes in wine and materials for export to neighboring countries. *The second* is the bottling of imported wines (from Chile and Moldova) for further implementation in Ukraine. *The third segment* is focused on the local market and includes the production of mostly cheap wines of different quality. And just less than half percent are the so-called elite wines that are priced at high prices. However, the buyers segment, able to buy these wines, prefers strong drinks and imported wines.

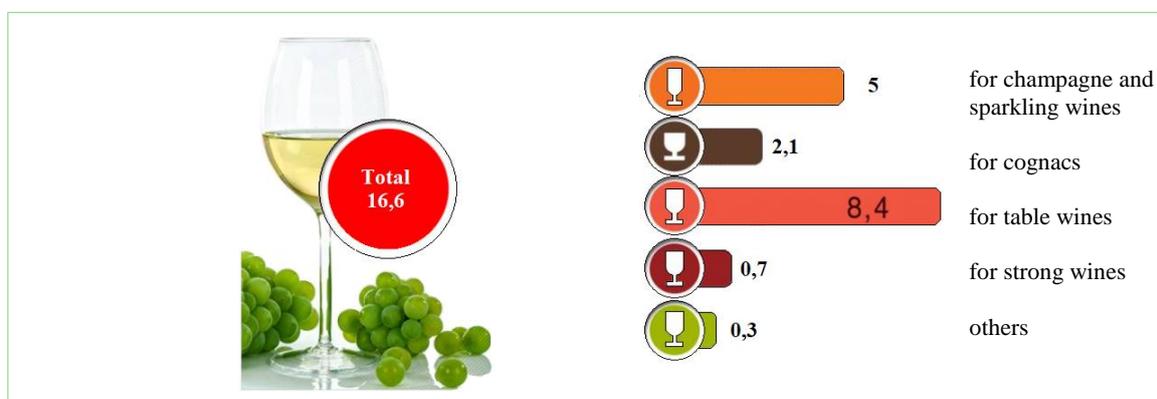


Figure 8. Wine production, 2016, million decals

Source: Elaborated by the author.

Firstly, in Ukraine, there are more sweet and semi-sweet wines, oriented by the market in the eastern country. We mention that dry wine is the most appreciated in the world because it is made from selected grapes and without additives. Currently, the semi-sweet wine is given preference in the domestic market, although we can find options for the dry wines.

Secondly, the history of Ukrainian winemaking is too short. For example, in France, wine has been produced since the IVth century, as wine production has become so famous over time. The Austrians have faced this task for 30 years, and the Italians needed 70 years. So, a new "right" era of production is just beginning. Wine production is still at the stage of experimentation: Ukrainians are still looking for varieties for Ukrainian soils, which will develop better, how to work with them and how to combine world production technologies with Ukrainian realities. It takes time to prepare the vineyards.

In order for Ukraine to become a successful winemaking country, it must, according to the authors, focus and take the lead of European leaders in the production of quality grape wines. Ukraine's natural conditions make it possible to acquire the status of a large wine state.

The main countries from the EU producing the largest amount of grapes intended for wine use are: Italy (29.4%), France (26.3%) and Spain (23.6%), accounting for 79.3% of total production in 2015. These were followed by Germany (5.1%), Portugal (3.9%), Romania (3.2%), Greece (2.3%), Hungary (2%) and Austria (1.3%). In 2015 wine grape production increased by about 3.5% compared to 2014 and remained 3.4% above the average level of 5 years [7].

As a conclusion, we can mention that the world vine area (regardless of the final destination of grapes and vineyards that are not yet in production) has increased to 7.5 million hectares, with an increase of 313 thousand hectares (with 4%) compared to 2000. The vineyards of the EU continued a slight downward trend with 14% (-538 thousand ha between 2000 and 2015). Spain remains the leader in the cultivated area, with

over one million hectares (1021 million ha) in front of China (0.83 thousand ha) and France (0.78 thousand ha). China has confirmed its position as the country with the second largest vine area.

Global grape production increased by 17% compared to 2000, despite the decline in the area under vines. The largest producer in 2015 was China, with 12.6 million tons, (17% of world grapes production), followed by Italy (8.2 million tons), the United States (7.0 million tons) and France (6.3 million tons), although the European share of world grape production has fallen dramatically from 52.3% in 2000 to 39% in 2014.

Therefore, Italy (29.4%), France (26.3%) and Spain (23.6%) accounted for 79.3% of total grape production for wine use in 2015 from EU. Italy confirmed once again its world wine status. These countries are at the forefront not only in the quantity of wine but also in quality. The characteristic feature of Italy, as a wine country, is the variety of grape. Italy is the only state in the world that has a lot of local grape varieties. Each region carries in its glass not only its grape variety, but also the culture and history of its region.

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