# PRODUCTION OF WINE GRAPES AND CULTURAL TRADITIONS RELATED TO VINE IN ROMANIA

# Irina-Adriana CHIURCIU, Iuliana ZAHARIA, Elena SOARE

University of Agronomic Sciences and Veterinary Medicine of Bucharest, Faculty of Management and Rural Development, 59 Marasti Blvd, District 1, 011464, Bucharest, Romania, Emails: chiurciu.irina@managusamv.ro, zaharia.iulia@managusamv.ro, soare.elena@managusamv.ro

Corresponding author: chiurciu.irina@managusamv.ro

#### Abstract

This paper analyzes the evolution of the areas cultivated with grapes for wine and of the production obtained in Romania, between 2013-2018. Culture with tradition in our country, known since the Bronze Age, vineyards occupy important areas today on the Romanian territory and since ancient times they are also related to beautiful, complex, cultural symbols and customs. Of the total vine area, the vineyards where grapes are grown for wine represented in 2018 over 80%. The available pedo-climatic conditions, as well as the technologies applied, placed Romania on the 5th place in the U.E. in terms of vine area. The data used in this paper were taken from specialized sites and from reference works.

Key words: Romania, traditions related to vine, vineyards, wine grapes

#### INTRODUCTION

The vine is a multiannual culture, specific to the temperate, subtropical and tropical climates, which can be cultivated on five continents, between the parallels of 30° and 50°, both North and South [13].

On the territory occupied today by our country, the wild vine (*Vitis vinifera silvestris*) dates from the year 7000 BC. From this derived part of the varieties that are cultivated now, for example, Fetească Neagră [2].

The development of viticulture in Romania was possible due to the favorable conditions that the vines find in our country, especially in the hilly area [21]. Soil and land exposure are essential elements for vine culture [24], to which are added the climatic factors - precipitations and temperature [19].

The importance of viticulture for the national economy can be summarized as follows: the vines make good use of the sloped, eroded, sandy and poorly solificated sandy lands, unsuitable for other crops; about 85% of the vineyards are on slopes; apart from the fact that it is the raw material for obtaining wines and wine distillates, from grapes are obtained in the food industry: compotes, jams, preserves, raisins, juice, concentrated must etc., and from the seeds is extracted the oil; viticulture

stimulates the development of the machinebuilding industry, the chemical industry (for fertilizers, insect-fungicides, pesticides etc.), the manufacturing industry for plant support systems, transport and local industry [22].

Because of the importance of viticulture for the national economy, we decided for this paper to analyze the evolution of the areas cultivated with grapes for wine and of the production obtained in Romania, between 2013-2018.

Complementary these agricultural/ to economic notes and goal, it has to be stated that during history, on the territory occupied today by our country the agricultural works applied in the vineyards have been interwoven with ancient cultural traditions of worship of the nature and of the sacred. So, in addition to the economic role of the viticulture and *due to* the fact that the economy of a state uses not only a natural, but also a social environment that preserves in memory and practice the ancestral values that permeate it and which are sometimes capitalized even economically (e.g. the core values of the rural tourism, of the agritourism etc.), we broad and enrich the framework of the paper with a national cultural mark related to vine. Long before that the viticulture has developed as an economic sector in the modern meaning and as science up nowadays, peoples have cultural peculiarities (which of course are dynamic – vary, change, even disappear under political, economical and other type of major commands).

The aspects related to the vines selected from Romanian civilization require also preliminary observations on the context that integrates them, respectively the mention of some landmarks in the ancient history of the Romanians which is older than the history of Romania (it was only in 1862 that the Romanians, who stayed for about four centuries under Ottoman protectorate, were allowed to use the term Romania and to choose the flag with nowadays colors): a) the origin widely accepted as Thracian of the Dacian from the Carpathian-Danubian-Pontic area and the first great Dacian state under Burebista in the 1st century BC, from Panonia until over the Dniester; b) the transformation of Dacia into Roman province 106 - 272 CE; c) the Christianization of the Romanians from the apostolic times, see the missionary route of St. Ap. Andrei in the former Scytia Minor, followed by the organization of the church after the Aurelian withdrawal from the north of the Danube, the Christians being no more persecuted by the still pagan authority of Rome. Thus the historical framework allows and validates a trans-disciplinary approach of the vine within the present work, the cultural side being structured on and aiming to highlight two categories of elements: (a) pre-Christian customs preserved in folklore until today, which have survived through rites in parallel with the Christian faith and practice or they were assimilated by Christianity and (b) the Christian axis that symbolically refers to the vine. Both categories of element are part of the identitary mark of the Romanian peasant and of his household especially before the collectivization (1949-1962)previous the globalization in its most recent form (the Romanian peasant is an endangered species under the command, the instruments and the pressure of globalization).

### MATERIALS AND METHODS

This paper, in its economic part, highlights elements related to the production of grapes for

wine at national level. Emphasis was placed on the analysis of areas occupied by vineyards, which include a variety of grapes for wine, at national and macro-regional levels. Also, the areas with vineyards in the private sector and the areas cultivated with grapes for wine, in ecological regime, at European level were studied. Another indicator analyzed in this paper is the production of grapes for wine, which was approached, on the one hand, at the national level, and on the other, at the macroregional level. The paper also presents the quantitative and valoric imports and exports of grapes from Romania, the main partners of our country in this category of goods, as well as the average purchase price of grapes for wine in Romania, in 2018. In order to make a more complex study, more materials from the viticulture field were studied. The statistical data subjected to the analysis were taken from both national and international sites and were graphically represented. The period studied in this paper was 2013-2018.

Complementary to the economic analysis, as previously announced in the introductory part, we also elaborated a brief incursion into the universe of the Romanians' cultural traditions related to vineyards, appealing in this direction to reading, analysis and intellectual processing of several reference sources on two directions: (a) customs and rites related to vine preserved in the Romanian folklore until today and (b) the Christian axis of the Romanians through history, based on the Bible and The Tradition of the Christian Church, mostly Orthodox. Following the latter direction we will appeal to the Gospel which, for a Christian believer, is not primarily a historical work, but one which, although originating at a certain time in the past, is from then until now alive and working as preserving fundamental aspects from the life and the work on earth of Jesus Christ, recognized by Christians as Son of God, with theandric nature (alive and working are considered all the sacred texts of any religion by the followers).

### **RESULTS AND DISCUSSIONS**

We structure this section into two complementary parts, the first one with

economic profile (I), and the second with cultural aspects (II).

(I). According to the data presented in the Communiqué of the European Commission of 2017, Romania registered the largest number of vineyards in the European Union, thus: 855,000 individual areas, respectively 36% of in Romania only 27.7% (and this time the total. The average area of a vineyard was 0.2 ha and represented the lowest value at European level. Unlike other Member States, smallest value at European level) of the total area cultivated with grapes was destined to produce high quality wines. Grapes for wines with protected designation of origin (PDO) represented 64.2%, and grapes for wines with protected geographical indication (PGI) 35.8%. In the Southeast area, most of the vineyards operated, respectively, 41.5% of the total country [10].

In Romania, on 82% of the vineyards were cultivated varieties for wine [24].

The share that viticulture has from the turnover obtained from the vegetable production is 14% [21].



Fig.1.The map of Romania's wine regions Source: [7], [8].

Vine is cultivated, with a few exceptions, throughout the hole country. Romania has 8 wine regions, 37 vineyards and wine centers (Figs. 1 and 2). The most representative wine region is that of the Moldavian Hills, which totals almost 70,000 hectares [7]. The most famous and appreciated vineyards in Romania are the ones from Târnave, Cotnari, Huşi, Panciu, Odobeşti, Dealu Mare, Murfatlar and Recaş. Vrancea County has the largest area cultivated with vines (about 13% of the

country's vine-growing area) and most people involved in this field of activity, about 80,000 [4].



Fig.2. The list of Romania's vineyards Source: [7], [8].

The oldest and best-known vineyard of the country is in Moldova and was mentioned in the chronicles during the reign of Stefan cel Mare/Stephen the Great [2]. Viticulture was one of the sectors that benefited from Romania's accession to the E.U. The funds The funds allocated through the National Support Programs in Romania for the wine sector also contributed to equipping wine farms with modern machinery, to renewing the existing vineyards which were no longer adapted to market requirements. but also to establishment of new vineyards and harvest insurance [1, 15]. Thereby, less favored vine varieties have been replaced with valuable local varieties or international varieties, such as Feteasca Neagra (autochthonous), Cabernet Sauvignon and Sauvignon Blanc - international appreciated varieties [1]. In 2018, the area cultivated with grapes for wine in the EU-28 was 3,014.04 thousand ha, distributed as follows: Spain (923.71 thousand ha); France (745.39 thousand ha) and Italy (629.21 thousand ha). These were the main cultivating states at European Union level. Romania ranked fifth, with 166.46 thousand ha (Fig. 3).

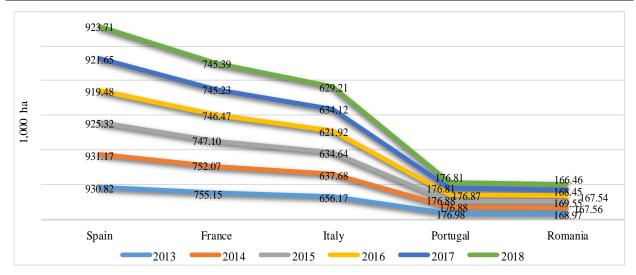


Fig. 3. The area cultivated with grapes for wine in the main cultivating states of the EU-28, between 2013-2018 Source: [11], own interpretation.

At national level, the largest area cultivated with grapes for wine for the analyzed period, was registered in 2015 (169.55 thousand ha), and the smallest in 2018 (166.46 thousand ha). The largest vineyards in the E.U. were registered in 2015 as follows: Spain occupies the first position with the Castilla-La Mancha region (434,000 ha), which represented about 14% of the total area of the Union vineyards; the second position in this ranking was occupied by France with the Languedoc-Roussillon regions (239,000 ha, respectively 7%) and Aquitaine (144,000 ha, respectively 5%) [10].

In 2018, the 166.46 thousand ha that were cultivated with grapes for wine, in Romania, presented the following structure (see Figure 4): 71% represented grapes for other wines (without PDO/PGI), meaning 118.74 thousand ha; 15% - grapes for wines with protected designation of origin (PDO), meaning 24.10 thousand ha; 14% - grapes for wines with protected geographical indication (PGI), meaning 23.63 thousand ha.

The evolution of the areas cultivated with the categories of grapes for wine from Romania is shown in Figure 5.

While the areas cultivated with grapes for other wines (without PDO/PGI) decreased by 6.49%, the areas occupied by the other categories of

wine grapes increased. The highest growth was observed for grapes for wines with protected designation of origin (PDO) -15.48%.

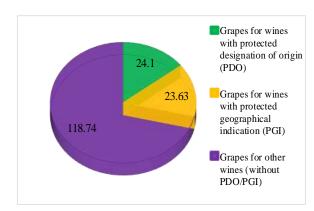


Fig. 4. Surface cultivated with different categories of grapes for wine, in Romania, in 2018 Source: [11], own interpretation.

In 2018, in Romania were cultivated the following noble varieties of grapes for wine: Roșioară, Fetească Neagră, Băbească Neagră, Muscat Ottonel, Cabernet Sauvignon, Sauvignon, Aligote, Riesling italian, Fetească Albă, Merlot and Fetească Regală. Besides these, in culture were encountered mixtures of noble varieties and other varieties, on small surfaces. Figure 6 shows the areas that were cultivated in 2018 with the aforementioned varieties and their share.

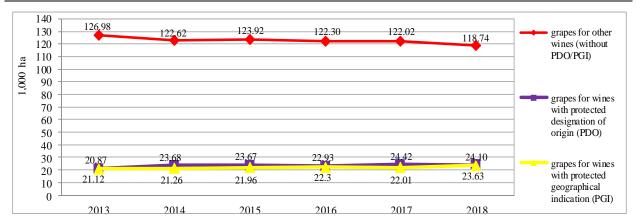


Fig. 5. The dynamics of the areas cultivated with different categories of grapes for wine, in Romania, between 2013-2018

Source: [11], own interpretation.

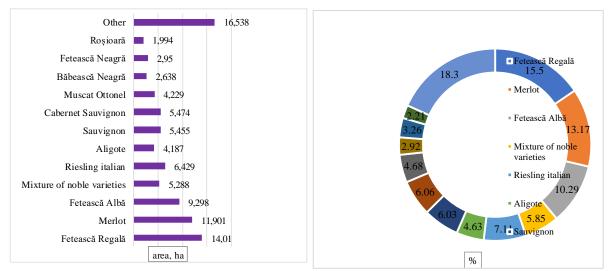


Fig. 6. The main noble varieties of grapes for wine cultivated in 2018, the surface and share (ha, %) Source: [16], own interpretation.

It is noted that, in 2018, the most cultivated noble grape variety for wine was Fetească Regală (Romanian variety with white grapes), which occupied an area of 14.010 ha, followed by Merlot, a French wine variety for red wines (11,901 ha) and Fetească Albă, Romanian variety with white grapes (9,298 ha). The total area occupied with grapes for wine other than the ones mentioned, was 16,538 ha. The new form of tourism, oenotourism, which has also shyly entered our country, may represent a way of supplementing the income of cultivators of noble grape varieties for wine. In the European Union, the most interested in this form of recreation, which appeared in Germany in 1935, are tourists who come mainly from the Netherlands, Germany and Belgium [3]. In the context of the current situation, when focusing on organic farming, and the wine sector lately, there is a tendency to increase the areas cultivated with organic vineyards and the number of producers who opt for green technologies [6].

The main countries cultivating grapes for wine in the E.U. pay particular attention to organic viticulture. This is why they are in the first places also in terms of the surface on which ecological technologies are practiced for the cultivation of grapes for wine are: Spain (113,419 ha); Italy (106,447 ha) and France (94,020 ha) (Fig. 7).

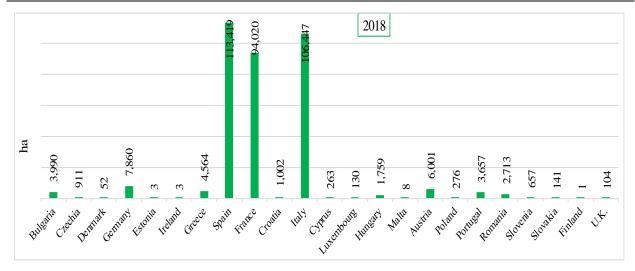


Fig. 7. The surface cultivated with grapes for wine, in ecological regime, in the main cultivating states of the EU-28 in 2018

Source: [11], own interpretation.

In Romania in 2018 there were cultivated 2,713 ha of with grapes for wine, under ecological conditions, which ranked our country 9th in the E.U. The surface occupied by the organic vineyards represented 0.02% of the agricultural area of the country. The distribution of wine areas by Macroregions of development and forms of ownership, in 2018, is shown in Fig. 8.

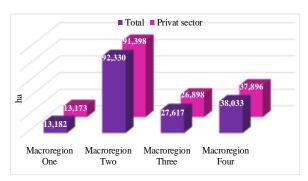


Fig. 8. Surface cultivated with vine for wine by macroregion and ownership Source: [17], own interpretation.

From the analyzed data it is found that, the largest area with vineyards for wine was cultivated in Macroregion Two, of 92,330 ha. In this Macroregion is the wine region Hills of Moldova with 69,134 ha. Of the total vineyard area of Macroregion Two, 91,398 ha are owned by the private sector.

Macroregion One recorded the smallest winegrowing area of 13,182 ha, of which 13,173 ha were owned by the private sector. According to Chiurciu et al., 2018, in Macroregion One the largest areas were cultivated with fruit trees, vegetables and cereals [5].

Regarding the production of wine grapes, in the European Union, in 2018, the following situation was registered: in the first place was Italy (7,485.53 thousand tons), followed by Spain (6,673.48 thousand tons) and France (6,232.74 thousand tons) (Fig. 9).

It is observed a reversal of the places from the top cultivators, so that Italy having a better yield took first place. Romania was in 5th place, with a production of 1,069.17 thousand tons.

With the exception of Spain and Portugal, where production has decreased, in the main wine grape producing countries there have been increases in the harvest, between 2013-2018. For Romania, the growth was of 14.63%, in 2018 compared to 2013.

In the category grapes for other wines (without PDO/PGI), in 2018, the highest harvest was obtained, of 706.02 thousand tons, and the smallest, of 176.15 thousand tons for grapes for wines with protected geographical indication (PGI) (Fig. 10).

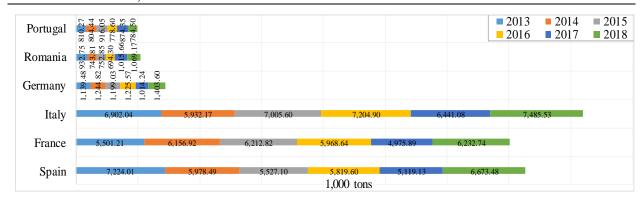


Fig. 9. Wine grapes production in the main cultivating states of the E.U.-28, between 2013-2018 Source: [11], own interpretation.

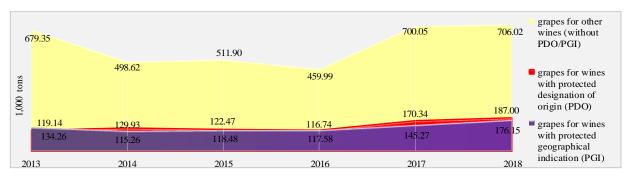


Fig. 10. The dynamics of the production obtained in different categories of grapes for wine, in Romania, between 2013-2018

Source: [11], own interpretation.

Production for wine grape categories obtained in Romanian vineyards varied, registering the lowest value in 2016 in the category of grapes for other wines (without PDO / PGI), of 459.99 thousand tons, for grapes for wines with protected designation of origin (PDO) 116.74 thousand tons in 2016 and 115.26 thousand tons in 2014, for grapes for wines with protected geographical indication (PGI).

There is an increase for the analyzed period, manifested in all three categories of wine grapes. The highest growth was produced by grapes for wines with protected designation of origin (PDO) 56.96%.

Macroregion Two obtained in 2018 the largest wine grape production, at country level. Of the 628,457 tons harvested, 620,978 tons were obtained in the private sector (Fig. 11). Closely related to the rank for the cultivated areas (Fig. 8), the last place regarding the wine grapes production was occupied by Macroregion One - 94,568 tons total, of which 94,548 tons in the private sector.

The average purchase price for wine grapes in Romania varied during the analyzed period, registering the lowest value in 2013, of 1.07

lei/kg, and the highest in 2016 and 2017, of 1.67 lei/kg (Fig. 12).

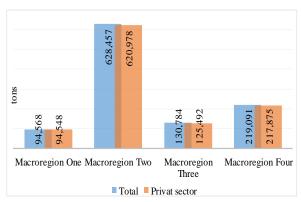


Fig. 11. Production of wine grapes, on Macroregions of development and forms of ownership, in 2018 Source: [17], own interpretation.

In 2018, when the price was 1.44 lei/kg, there was an increase of 34.58%, compared to 2013, when the price was 1.07 lei/kg (Fig. 12). The Euro equivalent of the price of 2018, for 100 kg of grapes (30.88 Euro/100 kg of grapes) placed Romania in the group of countries with low values of this indicator.

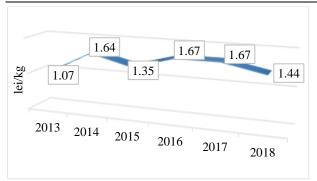


Fig. 12. Average purchase price for wine grapes/country

Source: [16], own interpretation.

At the level of the European Union, in 2018, the highest price for 100 kg of wine grapes was registered in Luxembourg, of 129.50 Euro/100 kg grapes and in the Czech Republic, of 75.74 Euro/100 kg. The lowest price for wine grapes was obtained in Austria, 25.19 Euro/100 kg and Hungary 26.80 Euro/100 kg [11].

Figure 13 shows the dynamics of quantitative (tons) imports and exports of Romania, for the grape category, between 2015-2018. The quantitative imports of grapes increased from 36,881 tons in 2015, to 44,994 tons in 2018, with a maximum of 51,287 tons in 2017 (Fig. 13). The main states from which Romania imported grapes in 2018 were Republic of Moldova - 11,771 tons, Italy - 9,481 tons and Greece - 8,842 tons. Other partner countries were the Netherlands, Turkey, Germany, Iran, Macedonia, Spain, France, Poland and others [14].

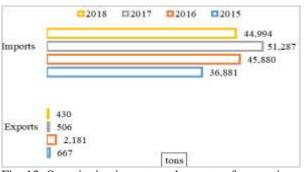


Fig. 13. Quantitative imports and exports of grapes in Romania in the period 2015-2018 Source: [14], own interpretation.

Romania did not export large quantities of grapes, ranging from 667 tons in 2015 to 430 tons in 2018. The biggest quantity was exported in 2016 - 2,181 tons. The states where Romania exported grapes in 2018 were:

Bulgaria - 233 tons, Hungary - 107 tons, Republic of Moldova - 65 tons, Greece - 15 tons, UK - 6 tons, Ireland - 2 tons, Spain and Italy one ton [14].

The value of grapes imports (Thousand US Dollars) increased from 35,724 thousand US Dollars in 2015, to 55,308 thousand US Dollars in 2018 (Fig. 14).

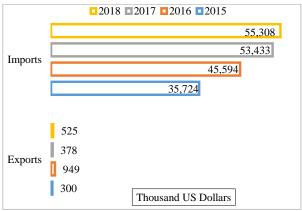


Fig. 14. Value of imports and exports of grapes in Romania in the period 2015-2018

Source: ITC, 2020, own interpretation [14].

The partners of Romania were, in 2018: Republic of Moldova - 10,881 thousand US Dollars, Italy - 10,191 thousand US Dollars, The Netherlands - 8,672 thousand US Dollars and Greece - 8,339 thousand US Dollars. Other countries from which Romania imported grapes were Germany, Turkey, Iran, Spain, Macedonia, India, Czech Republic, France and others [14].

The value exports ranged from 300 thousand US Dollars in 2015, to 525 thousand US Dollars in 2018, with a peak of 949 thousand US Dollars in 2016. In the top of the States with which Romania had trade for the grape category, in 2018, were: Bulgaria – 170 thousand US Dollars, Hungary - 127 thousand US Dollars, Republic of Moldova – 119 thousand US Dollars, Greece - 44 thousand US Dollars, Italy - 31 thousand US Dollars, UK - 14 thousand US Dollars [14].

(II.) Indigenous cultural traditions related to vine: (a) customs and rites related to vine preserved in the Romanian folklore until today and (b) highlights from the Christian axis that symbolically refers to the vine.

(a) The culture of vine and the wine production are estimated by historians to have been basic works in the Carpathian-Danubian-Pontic area

since the Bronze Age. "The first written mention of Dacian viticulture comes from the ancient geographer Strabo, who wrote about the order given by King Burebista for the vineyards to be burn, but also that the Dacians, men and women alike, drink the wine from the horn, without bending it with water" [23].

For millennia, in the peasant household the vine life cycle and its exploitation were marked by celebrations and rites that associate pre-Christian customs to landmarks in the Christian-Orthodox calendar (e.g. "At Sântămărie (Virgin's celebration) the guardines of the vine are hired and the vineyard shall magically protected. Transfiguration, the new fruit is tasted. On the Day of the Cross it starts the ingathering of the grapes" [12], [20] - all being gathered in the Folk Romanian Calendar based on "highprecision cosmic clocks" [12], [20], from which we select and synthetically present customs from the traditional Vine New Year recorded on February the 2nd: Arezanul viilor, Bundăretele and Târcolitul viilor (the first and the second have untranslatable names and the third approximately means getting round the vineyards).

Chronologically, firstly there are preparations for the ceremonial and for this purpose in Muntenia and Oltenia a sacramental culinary product called *Bundărete* (hog's pudding) is prepared, from the pig cut a few days before February starts and it is prepared by default (also) from the *vital* organs of pig.

On the morning of the New Vine Year, the head of the family, "in fully body and soul cleanliness" [12], [20], goes to the vineyard carrying with him Bundăretele and wine; there it will eat from these products and cut ropes from the vine with which he will decorate its harbor after a precise ritual, considered to be a magical, regenerative force, called *Târcolitul viilor*.

Arezanul viilor (ceremonial of Thracian origin) includes, depending on the geographical area, Bundăretele and Târcolitul viilor: the owners of the vineyards (men) go to their own vineyard from which they cut a few ropes with which they adorn themselves (garland on the head, belt and along the body), then unpack a bottle of wine buried in the fall

and with these they go to the common party. Around the fire, together they celebrate a sacrifice: they incinerate the dried cut ropes from the old vine and its product (they throw wine into the fire); then they celebrate playing around the flames, jumping over the fire, and in the evening they return to the village with the lights lit in their hand and they continue celebrating at family level [12], [20].

(b)The Christian references to the vineyard can be placed in the transdisciplinary context of the work at least by calling for a quantitative argument: although at present there are recognized 18 religious cults in Romania, the majority of Romanians declare themselves Christian-Orthodox, about 18.8 million Romanians - respectively 86.6% of the population of Romania (practitioners below 60%) as part of about 7% of Orthodox Christians worldwide [9, 18]. We have two highlights on these aspects.

Firstly, it should be mentioned the Parable of the unworthy workers of the vineyard presented by three of four apostles in the frame of the Gospels. With a wide and subtle register of interpretation, within its core is the problem of the authority, always actual: the noncompliance with God and its consequences. The chronicle renders the workers hired to work the vineyard in the absence of the master, workers who alienate themselves from any moral reaction: they do not recognize the master's ownership right, so they do not send him the appropriate part of the fruit and they mistreat and kill his servants and finally the most precious messenger, his son, wanting the deletion of the owner, the Lord, who is the foundation of the vine and of the boars' profitthe unworthy boars want the benefit of the whole construction, without accepting its foundation, and they substitute for the legitimate authority an authority without foundation in itself (their own), in the service of their own profile and profit become an idol. The parable culminates with a perpetual valid and trans-cultural warning message, noticed by some Romanian annalists: the inability for free cooperation with a benevolent authority triggers the autonomous mechanism of a rectifying authority.

The last mention explains the preservation of the Orthodoxy among Romanians, especially in the rural space, as the peasants kept faith and survived through many harsh times believing the Christian word with symbolic appeal to vine and wine production: I am the true vine, and My Father is the worker. (...) Abide in Me and I in you. As the branch cannot bear fruit of itself, unless it remains in the vine, so do you, if you do not remain in Me.

## **CONCLUSIONS**

Following the analysis of the specific indicators for wine grape production in Romania for the period 2013-2018, the following were found:

- -The smallest area cultivated with vines with grape varieties for wine, was, 166.46 thousand ha (2018);
- -In 2018, our country ranked 5th in the top of the cultivating countries with vineyards related to grape varieties for wine;
- -In 2015, the most significant area cultivated with grapes for wine was registered, 169.55 thousand ha;
- -In 2018, numerous noble grape varieties were cultivated for wine production (Muscat Ottonel; Riesling italian; Fetească Regală etc.). The most significant area occupied with a noble variety of wine grapes for the year 2018, was 14,010 ha (Fetească regală).
- -In 2018, 2,713 ha of vineyards with grapes for wine were grown, in an ecological system. Due to this surface, our country ranked 9th in the top of the vine-growing countries in the ecological regime, at the level of the European Union;
- -At the macro-regional level, in 2018, the largest area with vineyards destined for wine production was 92,330 ha (Macroregion Two). It is necessary to specify that, 91,398 ha are in the private sector;
- -Romania, in 2018, ranked 5th, in the ranking of wine grapes producing countries in the European Union, with a production of 1,069.17 thousand tons;
- -At national level, in 2018, there was a 14.63% increase, compared to 2013, of grape production for wine;

- -The largest production of grapes for wine was obtained in 2018, in Macroregion Two, namely 628,457 tons, of which 620,978 tons were made in the private sector;
- -The highest average purchase price for wine grapes at national level was 1.67 lei / kg (2016 and 2017);
- -In 2018, the average purchase price for wine grapes increased by 34.58%, compared to 2013:
- -In 2018, the equivalent in Euro of the price for 100 kg of grapes was 30.88 Euro, which placed our country in the group of countries that registered low values for this indicator;
- -Imports of grapes increased during the analyzed period, reaching, in 2018, 44,994 tons and 55,308 thousand US Dollars. The countries from which grapes were imported were the Republic of Moldova, Italy, Greece and the Netherlands;
- -Romania exported, in 2018, 430 tons of grapes, worth 525 thousand US Dollars and had as main partners Bulgaria, Hungary and the Republic of Moldova.

In perspective, Romania can become an important player on the European market for wine grapes, if it will increase the qualitative and quantitative level of investments in the wine grapes cultivation and marketing sector. Complementary to the above economic aspects, the cultural traditions of the Romanians relative to the vine are ancient, complex, with pre-Christian origins and many of them were sustained in time by peasants due to their religious belief.

## **REFERENCES**

[1]Antoce, A. O., Calugaru, L. L., 2017, Evolution of grapevine surfaces in Romania after accession to European Union - period 2007-2016. BIO Web of Conferences 9, 03018 (2017), 40<sup>th</sup> World Congress of Vine and Win, https://www.bioconferences.org/articles/bioconf/pdf/2017/02/bioconf-oiv2017\_03018 .pdf, Accessed on 29.02.2020.

[2]BASF Agricultural Solutions România, https://www.agro.basf.ro/ro/concursvinuri/podgorii-alese/istoric, https://www.agro.basf.ro/ro/stiri/fermier-in-romania/vita-de-vie-si-vinul-romanesc-soiuri-podgorii-istoric.html, Accessed on 29.02.2020.
[3]Bibicioiu, S., Creţu, R. C., 2013, Enotourism: a niche tendency within the tourism market. Scientific Papers. Series "Management, Economic Engineering in

Agriculture and rural development", Vol. 13(2), 31-40.

[4]Borcea, Ş., 2017, Unde sunt cele mai cunoscute zone viticole din România și ce vinuri superioare sunt produse în aceste podgorii/Where are the most famous winegrowing areas in Romania and what superior wines are produced in these vineyards. Ziarul Adevărul/Adevărul Newspaper, adevarul.ro/locale/ focsani/unde-cele-maicunoscute-zone-viticole-romania -vinuri-superioare-produse-podgorii1\_59bbb9365ab65

50cb8322361/index.html, Accessed on 19.02.2020.

[5]Chiurciu, I. A., Chereji, A. I., Soare, E., Chereji, I. Jr., 2018, Study on the evolution of agriculture in the North-West Development Region. Annals of the University of Oradea, Fascicle: Ecotoxicology, Animal Husbandry and Food Science and Technology, Vol. XVII/A, 2018, 9-16.

[6]Cretu, R. C., Stefan, P., Matei, D. M., 2017, Organic viticulture - for wine sector diversification opportunity. Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 17(1):133-140.

[7]David, I., 2014, Harta vinului românesc/Map of Romanian wine. Ziarul financiar/Financial Newspaper, https://www.zf.ro/companii/harta-vinului-romanesc-cu-opt-regiuni-viticole-37-de-podgorii-si-180-000-de-hectare-de-vie-romania-se-afla-pe-locul-cinci-ineuropa-13386089, Accessed on 28.02.2020.

[8]European Commission, DG Agriculture and Rural Development, DG Agri, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/wine-areas\_en.pdf, accessed on 11.02.2020.

[9]European Comission Eurydice network, România. Populație: Situația demografică, limbă oficială și religii /Romania. Population: Demographic Situation, Languages and Religions, 22.01.2019, https://eacea.ec.europa.eu/national-policies/eurydice/content/population-demographic-situation-languages-and-religions-64\_ro, Accessed on 15.02.2020.

[10]European Commission, Representation for Romania, 2017, BOP Euroindicators Press Release, https://ec.europa.eu/romania/news/20170404\_romania\_are\_cele\_mai\_multe\_podgorii\_ro, Accessed on 19.02.2020.

[11]Eurostat, https://ec.europa.eu/eurostat, Accessed on 11.02.2020.

[12]Ghinoiu, I., 2013, Sărbători și obiceiuri românești / Romanian Customs and Traditions, Bucharest, Elion, p. 8-10, p. 278-282, https://issuu.com/gandalf077/docs/\_ion\_ghinoiu\_\_s\_rbatori\_\_i\_obiceiuri\_rom\_ne\_ti, Accessed on 9.02.2020.

[13]Grigore, E., Constantin (Oprea), D. M., Bogan, E., Simon, T., Chiurciu, I. A., Soare, E., Ardelian, D. V., 2017, L'Impact des Conditions Climatiques et Bioclimatiques sur l'Efficience de la Culture de la Vigne et les Productions des Raisins dans la Région des Collines des Subcarpates de Vrancea, Roumanie. The 30th IBIMA Conference: 8-9 November 2017, Madrid, Spain, Vol. 2(30): 3283-3294.

[14]ITC, International Trade Centre, http://www.intracen.org/itc/market-info-tools/trade-statistics, Accessed on 11.02.2020.

[15]Lădaru, G. R., Beciu, S., 2015, Trends of wine market in Romania: competitiveness and development opportunities in the context of markets globalization. Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development", Vol. 15(2):189-192.

[16]MADR, Ministry of Agriculture and Rural Development, https://www.madr.ro/horticultura/viticultura-vinificatie.html, Accessed on 21.02.2020.

[17]NIS (National Institute of Statistics), www.insse.ro, Accessed on 12.02.2020.

[18]Pariona, A., 2017, Countries with the Most Orthodox Christians. WorldAtlas, Apr. 25, 2017, worldatlas.com/articles/countries-with-the-most-orthodox-christians.html., Accessed on15.02.2020. [19]Popescu, A., Enache, V., Simion, C., Donici, A., Tabaranu, G., 2009, Grape production forecast based on the evolution of climatic factors. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca. Horticulture, 66(1): 666.

[20]Roman, R.A., 1998, Bucate, vinuri si obiceiuri romanesti /Romanian Dishes, Wines and Customs. Bucharest, Paideia, 1998, p. 9, p. 48-57, https://drive.google.com/file/d/0ByQH1HT8FwsEZGZiZDNhYjgt ZGYxYy00OWFiLWJkNmYtMzU2ODYwYTMzYW NI/viewli, Accessed on 9.02.2020.

[21]Ştefan, P., Mann, S., Fintineru, G., Creţu, R. C., 2017, Study regarding the situation of wine producers in Romania. Scientific Papers. Series Management, Economic Engineering in Agriculture and rural development, Vol. 17(3):391-396.

[22]Ungurian, L., 2018, Importanța viticulturii în economia națională/The importance of viticulture in the national economy, https://horticultura-plante.ro/importanta-viticulturii-in-economia-nationala, Accessed on 28.02.2020.

[23]Vasile, V., 2015, Viticultura, ocupație milenară moștenită de la daci /Viticulture, millennial occupation inherited from the Dacians. România rurală, No 33/ July 2015, p.3, http://madr.ro/docs/dezvoltare-rurala/rndr/RR33.pdf, Accessed on 10.03.2020.

[24] Wine Romania, http://www.wineromania.com/index.jsp?page=viticola, Accessed on 20.02.2020.

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