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Review article

Development, Status and Perspectives of Vine-growing and Wine-making in Bulgaria[1]

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Abstract

Grapes and wine production on the Balkan Peninsula dated back to the ancient times due to the favorable natural conditions for vine-growing. Despite its small territory, with its geographic location Bulgaria has an extremely varied relief and climate. On the basis of the diverse terroir the country was divided into 5 wine-growing regions where along with the common, globally known vine varieties, some local ones, characteristic and typical of each region, are also grown.

Over the past two decades, the development of the wine sector in the country and the legislation had been in line with the requirements and arrangements with the European Union. From 2002 to 2010 there was a significant decline in the cultivated area of vineyards and the wine export. Full control has been introduced on the planting of wine grape varieties. During the years following the accession of Bulgaria to the EU, there has been a gradual expansion of the cultivated areas with wine and table grape varieties, although the process of setting up new plantations is extremely slow. The preservation and expansion of the vineyards of traditional Bulgarian varieties has been encouraged. Wine varieties dominate in the structure of vineyards and occupy 95% of the vineyards and the table grapes – about 5%. The red wine varieties are predominant, as they are about 58% of the area of the vineyards and white wine varieties are 42%. During the last decade, the interest in bio and organic produce has grown strongly and the areas for organic grape production are constantly growing. Over the past 100 years, viticulture and wine-making development in Bulgaria had marked times of rise and times of severe crises however it had always preserved its place as a subsector determining the structure of Bulgarian agriculture, being of great importance for the country's economy.

Keywords: Viticulture, Wine-making, Grape varieties, Wine.

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INTRODUCTION

Grapes and wine production on the Balkan Peninsula dated back to the ancient times due to the favorable geographic, soil and weather conditions for vine-growing. The traditions in wine-making of the ancient Thracians that had inhabited the territory of modern Bulgaria have been a historical fact. Wine used to be part of their daily routine and pagan rituals. That had been proved by the numerous pitchers, rhytons and amphorae used for storing and serving wine found during excavation works.

In the Middle Ages (XII-XIV century) viticulture and wine-making had gained broad development in the Bulgarian lands. Wine was perceptibly present in the family traditions, people's daily lives and as part of Christian rituals. Grapes and wine production took an important share in the economic life of the country.

Over the past 100 years, viticulture and wine-making development in Bulgaria had marked times of rise and times of severe crises however it had always preserved its place as a subsector determining the structure of Bulgarian agriculture, being of great importance for the country's economy.

At the end of the 19th and early 20th century there was a rapid upsurge of vine-growing and wine-making. The first cooperatives and scientific units were founded, that started the viticulture and enology development on scientific basis.

After the Second World War, in the period of socialism, in Bulgaria there were years of planned economic system, centralized viticulture and wine production, state monopoly and expansion of the sector. The most intense period in the development of the branch was from the 1960s to the 1980s, when the cultivated area of vineyards expanded and exceeded 200 000 ha. Bulgaria took one of the first places in the world in the production and export of vine propagation material, and in 1965 the country ranked first globally in export of table grapes. Varieties such as Cabernet Sauvignon, Merlot, Chardonnay, Sauvignon Blanc, Muscat Ottonel, Traminer were widely planted. The Georgian variety Rkatsiteli became also widespread. The plantations were high-stemmed, wide-ranging, suitable for mechanized cultivation of the vineyards, which, however, proves to be inappropriate and detrimental to the local, typical Bulgarian varieties Mavrud, Shiroka Melnishka Loza, Gamza, Pamid, Dimyat, Misket Cherven. In the 1980s, vineyards occupied 4% of the arable land and 44% of the perennials. Wine varieties took 87% of the vineyards area and the table grapes – 13%. The share of the red vine varieties was 51.8% and the white ones – 48.2% of all cultivated wine varieties. The wine industry was expanding its markets; the country was in the top ten of Europe per vineyard area and wine export. Bulgarian wine was gaining popularity in countries such as the United Kingdom, Germany and Japan. During this period, the varieties of the vineyards were built on the basis of the zoning of the viticulture and the needs of the wine industry in the country (Katerov et al., 1990; Abrasheva et al., 2008).

Despite its small territory, with its geographic location Bulgaria has an extremely varied relief and climate (Figure 1). The small area of the country is distinguished for its various climatic zones – temperate continental, transitional continental and Mediterranean continental. They define the warm and prolonged summer, comparatively not very cold winters and the optimal amount of precipitation, which are a prerequisite for the very good fertility of the vine and the sugar accumulation in grapes. The mountains are the natural border determining the differences in the climate of Northern and Southern Bulgaria. The continental climatic influence is more pronounced in the northern part of the country. In Southern Bulgaria the climate is of a transitional Mediterranean nature. The Black Sea also influences, changes and forms the specific milder climate of the region in the eastern part. There is also a diversity of soils. On the territory of the country there are cinnamon and gray forest, humus-carbonate, leached chernozems, alluvial-meadow and sandy soils (Abrasheva et al., 2008).

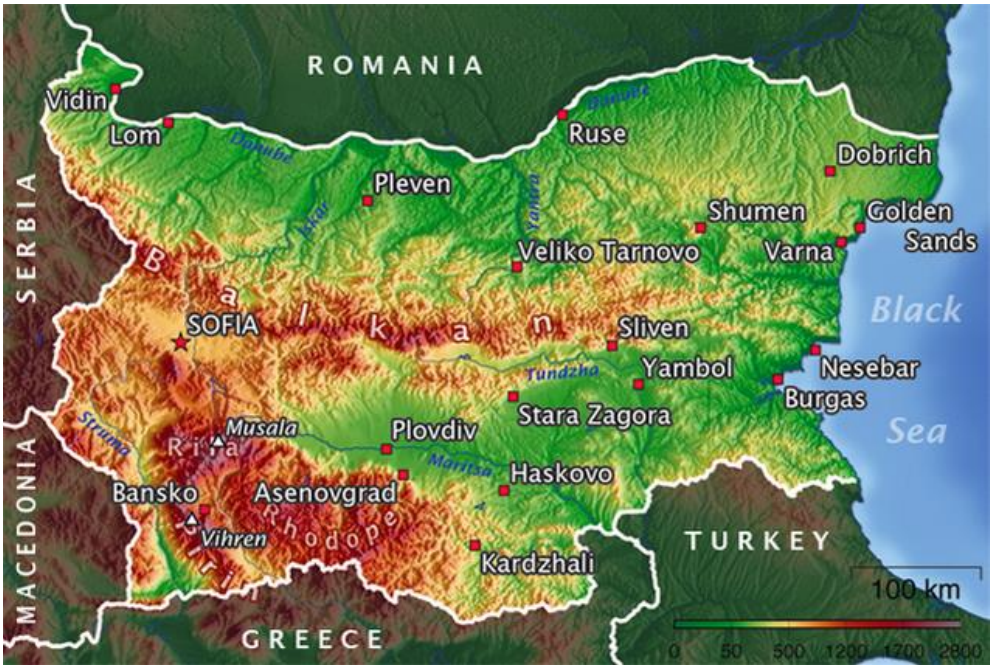


Figure 1. Geographic location and relief of Bulgaria

On the basis of the diverse terroir in Bulgaria already in the 1960s the sector was divided into 5 wine-growing regions (Figure 2). These are the Northern Region (the Danube Plain), the sub-Balkan Region (the Rose Valley), the Eastern Region (the Black Sea), the Southern Region (the Thracian Lowland) and the Southwestern Region (the Struma Valley). In these regions, along with the common, globally known vine varieties, some local ones, characteristic and typical of each region, are also grown (Yankov, 1992; Abrasheva et al., 2008).

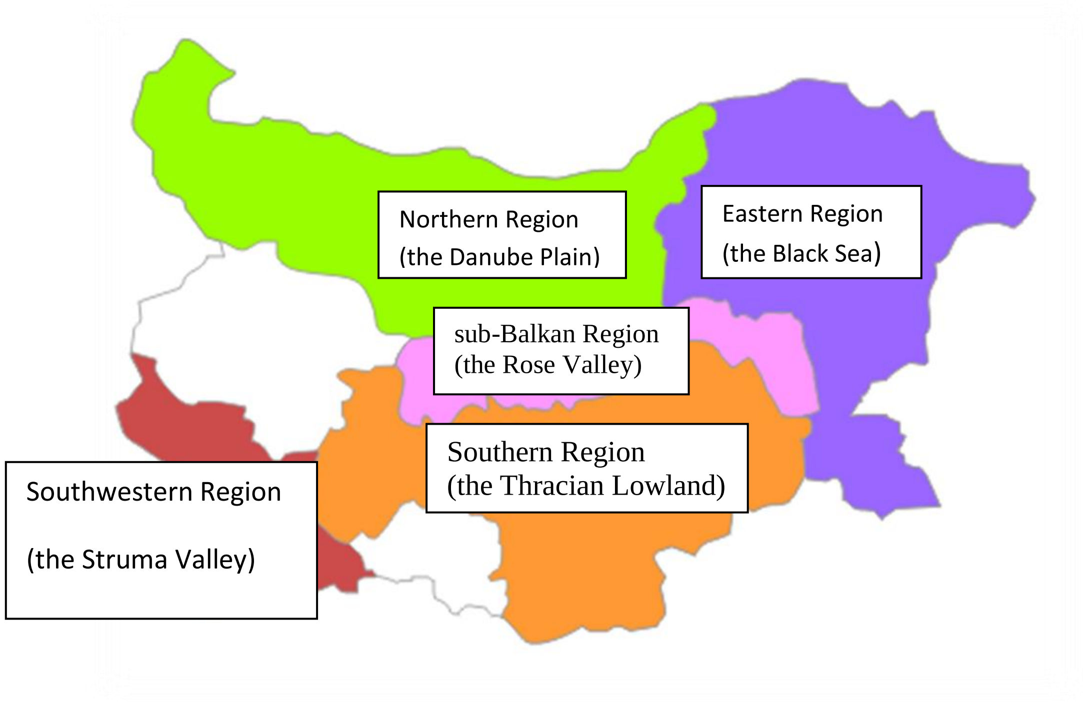


Figure 2. Wine-growing regions in Bulgaria

Northern wine-growing region – it covers the area of the Danube Plain, between the Balkan Range and the Danube River. The climate is continental, with high summer temperatures, droughts and cold winters. Mainly the following varieties are grown in the region:

Table grapes – Bolgar, Super Ran Bolgar, Brestovitsa, Pleven, Misket Plevenski, Misket Hamburgski

Wine varieties – Chardonnay, Sauvignon Blanc, Muscat Ottonel, Riesling Italian, Misket Vrachanski, Cabernet Sauvignon, Merlot, Gamza, Pamid

The specific varieties for the region are Misket Vrachanski and Gamza.

Sub-Balkan wine-growing region – it covers the fields and the valleys between the Balkan Range and the Sredna Gora Mountains. The climate is transient continental. The following varieties are grown:

Table grapes – Bolgar, Super Ran Bolgar, Brestovitsa

Wine varieties – Chardonnay, Muscat Ottonel, Rkatsiteli, Misket Cherven, Cabernet Sauvignon, Merlot

Specific for the region is Misket Cherven variety.

Eastern wine-growing region – it covers the territory around the Black Sea in the north and south of the country. The climate is influenced by the sea, with mild winters, cool summer and higher air humidity. Mainly white vine varieties are grown:

Table grapes – Bolgar, Super Ran Bolgar, Pleven

Wine varieties – Chardonnay, Sauvignon Blanc, Muscat Ottonel, Riesling Italian, Dimyat, Aligote, Ugni blanc.

Specific for the region is Dimyat variety.

Southern wine-growing region – it covers the Thracian Lowland between the Sredna Gora and the Rhodopes mountains. The climate is transitional continental, with Mediterranean influence. The region is specialized in red wine varieties cultivation. They are mainly:

Table grapes – Bolgar, Super Ran Bolgar, Brestovitsa

Wine varieties – Chardonnay, Muscat Ottonel, Riesling Italian, Cabernet Sauvignon, Merlot, Mavrud, Pamid, Rubin

Specific for the region is Mavrud.

Southwestern region – it comprises the valleys of the Struma and Mesta Rivers. The climate is transitional Mediterranean, with a warm winter and a long warm autumn. The varieties suitable for growing in the region are:

Table grapes – Bolgar, Super Ran Bolgar, Brestovitsa, Misket Hamburgski

Wine varieties – Cabernet Sauvignon, Cabernet Franc, Merlot, Shiroka Melnishka Loza, Ranna Melnishka Loza.

Specific for the region are Shiroka Melnishka Loza and Ranna Melnishka Loza varieties.

Over the last 10-15 years, other zoning schemes based on different principles have been introduced. Thus, in the pre-accession period for the EU, only two areas for producing regional wines (the Danube Plain and the Thracian Lowland) have been identified in Bulgaria since 2005 (State Gazette, 67/16.08.2005).

Following the political and economic changes in Bulgaria in 1989, the grapes and wine sector in the country proved to be one of the most affected. After 1991, a land reform took place, bringing agricultural land back to the former owners or their heirs, moving from a centralized planned to a market economy. At the end of the 20^{th} and the beginning of the 21^{st} century, in the context of the global economic crisis and the reforms in agriculture, the Bulgarian viticulture suffered heavy losses – a significant reduction of the total area of the vineyards, a severe deterioration of the agritechnical and sanitary status of the plantations, aggravation of the age and varietal structure. The number of cultivated varieties dropped down, mainly at the expense of the local wine and table grapes. As a result of the changes in the country and the problems of the world wine sector due to overproduction and strong competition from the New World countries, Bulgaria began losing its well-established wine markets, significantly reducing wine production and export (http://www.divino.bg/encyclopedia).

Viticulture and Enology in Bulgaria Nowadays

Over the past two decades, the development of the wine sector in the country and the legislation had been in line with the requirements and arrangements with the European Union. The emerging perspectives in the reconstruction and development of the Bulgarian viticulture, secured by favorable soil and climatic conditions and local traditions, are decisive for its importance for the country's economy.

From 2002 to 2010 there was a significant decline in the cultivated area of vineyards – over 50%. The trend of wine export had been the same. In Bulgaria there had been a constant decline in the production of table grapes, as in the period 2002-2005 there was no actually export of table grapes from Bulgaria (Tormanova, 2013; Dimitrova, 2015).

After 2005 the situation in the Bulgarian viticulture and in the wine industry started to change gradually. With the pre-accession agricultural funds (State Fund “Agriculture”) and programmes such as SAPARD and PHARE of the EU, many Bulgarian entrepreneurs and foreign investors have been able to implement their projects for modern wineries and vineyards. That gradually changed the pattern of the whole wine industry and just for several years small, medium and large, contemporary and modernly equipped wineries with their own vineyards appeared in all wine-growing regions. The pattern of the Bulgarian wine industry for the last decade has changed radically (http://www.divino.bg/encyclopedia).

As a result of the process of harmonization of the national legislation with the requirements of the European regulations, since 2002 in Bulgaria full control has been introduced on the planting of wine grape varieties. The preservation and expansion of the vineyards of traditional Bulgarian varieties has been encouraged.

In 2005, the National Strategy for the Development of Vine and Wine Production in the Republic of Bulgaria for the period 2005-2025 was adopted, which envisaged the establishment of a modern structure of the sector; ensuring control of the wine-growing potential; lending and subsidizing the creation of new vineyards and wineries; improvement of the variety structure and the health status of the plantations; confirming the authentic image of Bulgarian wine on the national and international markets by producing quality wines from typical local varieties (National Strategy for the Development of Vine and Wine Production in the Republic of Bulgaria for the period 2005-2025, 2004).

The most important issue for the current and the future development of the sector is the issue of the new vineyards. The control over the production potential related to the problem of wine over-production in the Old Continent countries included a ban on the establishment of new plantations by 2010, extended until 2014, with a temporary limitation of replanting rights; a program for vineyards’ restructuring and conversion. For the time being, however, Bulgaria is in a good position compared to the other EU Member States, as the declared quota of the country before the accession was 80 000 ha and the actual plantations are about 60 000 ha. That provides the opportunity for planting new vineyards, eradication of old ones and replanting, which is in line with the established National Reserve of planting rights in accordance with the requirements and norms of the Common Agricultural Policy in the EU (http://www.dfz.bg/bg/selskostopanski-pazarni-mehanizmi/vino/).

By the end of 2018, the 4-year National Program for Support of the Wine Sector in Bulgaria will be in force, with about EUR 33 million per year being intended for financing the sector. The creation of new wine vineyards takes place in accordance with the national quota and the purchase of rights from the National Planting Reserve. For table grapes growing the subsidies amount to 507 EUR/ha, with a minimum area of 0.5 ha. Subsidies for the production of table grapes under the scheme for coupled fruit support for 2017 were in the amount of 582.43 EUR/ha for the first 30 ha and 388.29 EUR/ha for areas over 30 ha. Subsidies in the sector are mainly granted under the measure “Restructuring and Conversion of Wine Vineyards”, related to improving the agro-technical condition of the plantations, changing their location, changing the variety composition. In this case, the amount of funding depends on the activity as it is up to 75% of the necessary funds. The remaining 25% is provided by equity. For the year 2018, 86 projects under this measure were approved by the State Fund Agriculture, with a total funding of almost EUR 16 million (http://www.dfz.bg/bg/selskostopanski-pazarni-mehanizmi/vino/).

Varietal Structure of Vineyards in Bulgaria

Vineyard holdings in Bulgaria by 2017 are 147 883 and the wineries are 263. Of these, the individual holdings are 99.7% of the total and cooperatives and commercial companies are 0.3%. Wine varieties dominate in the structure of vineyards and occupy 95% of the vineyards and the table grapes – about 5% (Totlyakov, 2017). The red wine varieties are predominant, as they are about 58% of the area of the vineyards in Bulgaria, and white wine varieties are 42% (Figure 3).

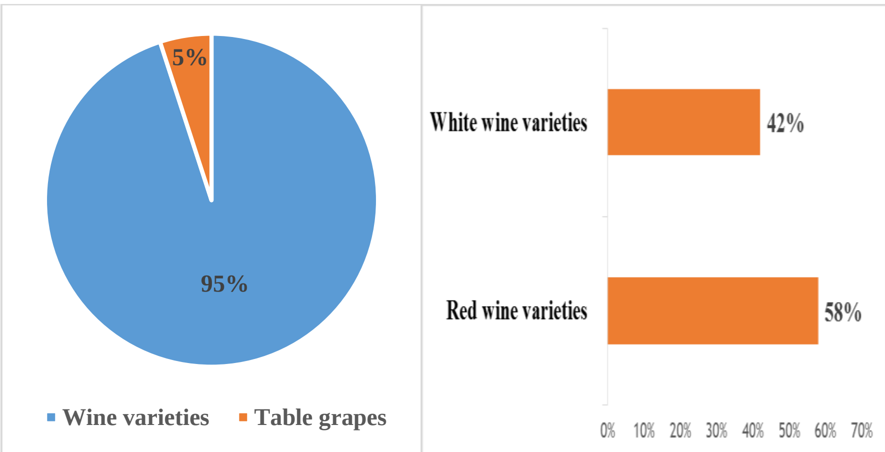


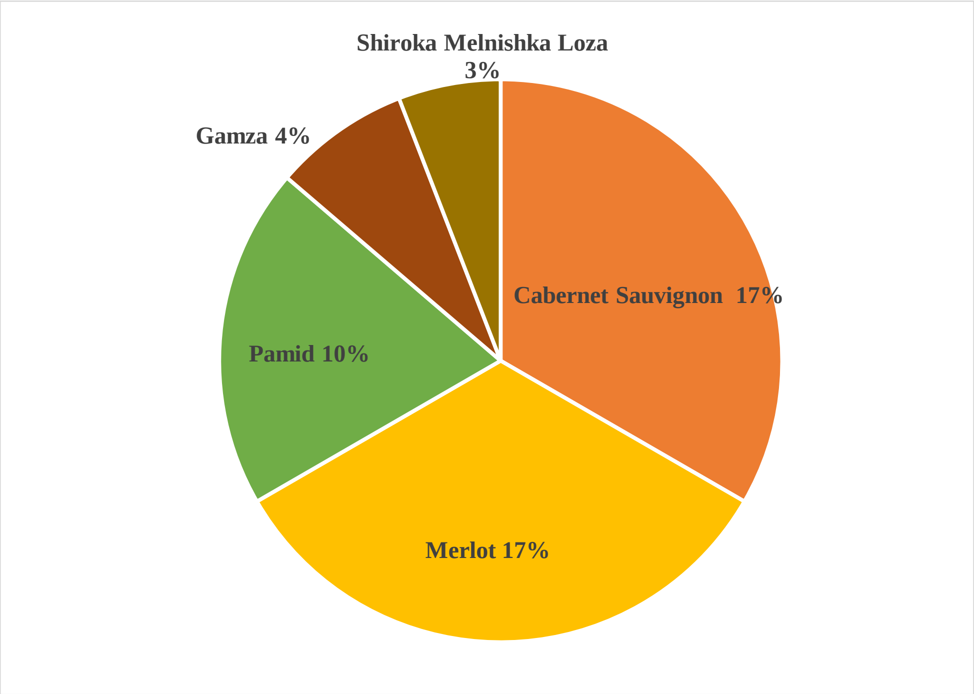
Figure 3. Structure of vineyards in Bulgaria by 2017

From the red varieties the highest share belongs to Cabernet Sauvignon and Merlot – 17% each, Pamid – 10% Gamza – 4%, Shiroka Melnishka Loza – 3%, etc. including the increasingly popular Syrah, Cabernet Franc, Pinot Noir, Sangiovese, Malbec. The highest share from the white varieties is for Muscat Ottonel – 18% Chardonnay – 14% Rkatsiteli – 10%, Misket Cherven – 7%, Dimyat – 5%, Sauvignon Blanc, Aligote, Riesling, Traminer – 1% and others like Vionie, Pinot Gris, Marcelan (Figure 4). For the period 2001-2015, on the average, 90% of the grapes were made into wine and other products and about 10% was intended for consumption. The production of red and rosé wines predominates, but in recent years the share of the white wines has also increased (Totlyakov, 2017). The export of Bulgarian wines is going up – about 65 million liters are exported annually. The main countries – partners in the export of the Bulgarian wine are Poland, Russia, Germany, the United Kingdom, China, Japan, Scandinavian countries, the USA, Canada.

During the years following the accession of Bulgaria to the EU, there has been a gradual expansion of the cultivated areas with wine and table grape varieties, although the process of setting up new plantations is extremely slow. The relative share of the vineyards increased – from 37.3% in 2005 to 53.1% in 2010. The average yields of table grapes went up by 45.8% on the average for the period 2007-2012 compare to 2001-2006. For wine, the rise was 24.2% (Dimitrova et al., 2013).

Still, the low production prices of wine and table grapes and the rising growing costs determine the instability of the entrepreneurial income in the sector and the low investment activity. In the past three years, the area of newly planted vineyards is on the average about 500 ha (Dimitrova et al., 2017). The investment activity is most pronounced in the Southeast and South Central Region, where the size of the areas with non-occurring vineyards with wine varieties are 541 ha and 418 ha respectively (Dimitrova and Dimitrov, 2017).

Significant regional differences in the sector development in Bulgaria also stand out. Wine and table grapes production is concentrated mainly in Southern Bulgaria. The share of grapes in the total plant-growing output was the highest in the South Central Region (3.4%), followed by Southwest (3.0%) and Southeast (2.9%) regions. In the South Central Region the area of the fruit-bearing plantations is 12 306 ha, representing 33.7% of the total area in the country. The importance of viticulture in the general agricultural output in Northern Bulgaria is extremely small. The reason is the expanding growing of cereal crops in the area. There is a tendency of diminishing the importance of the local and increasing the significance of the foreign varieties in the varietal composition of wine varieties. For the period 2013-2015, wine production at national level declined by 19.8% compared to the period 2004-2006. However, the amount of wine produced in the Southeast region increased significantly, which for the same period provided 57% of the total produced wine. The development of tourism in this part of the country is irrelevant (Dimitrova and Dimitrov, 2017).



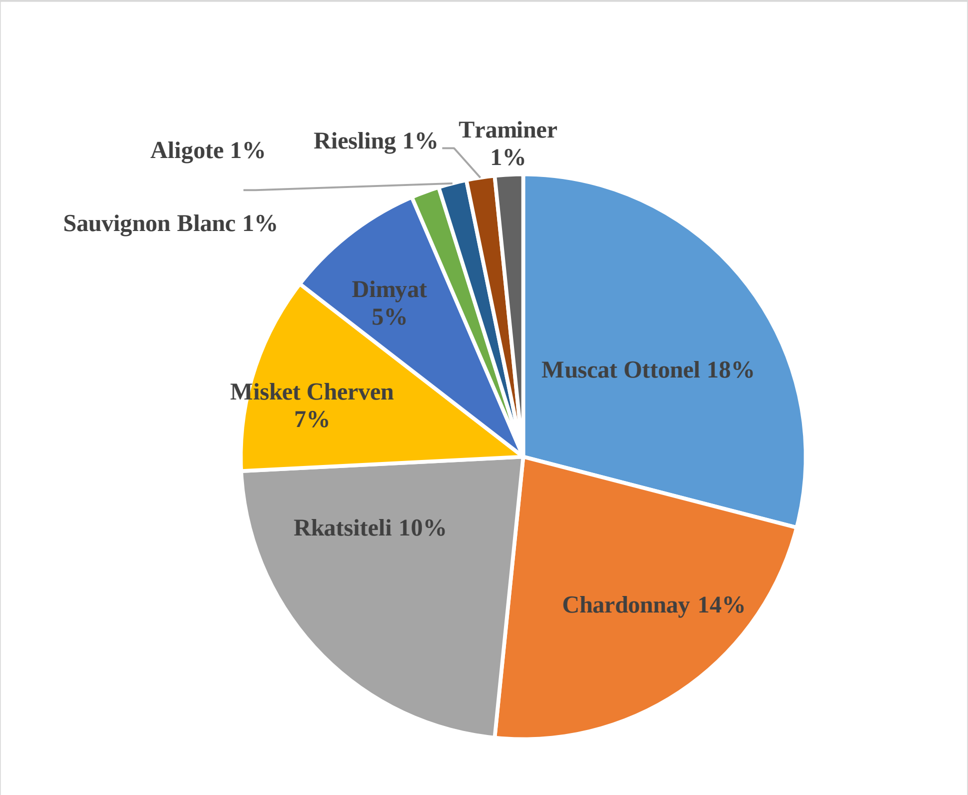


Figure 4. Varietal structure of vineyards in Bulgaria by 2017

During the last decade, the interest in bio and organic produce has grown strongly in Bulgaria, and the areas for organic grape production are constantly growing. The annual amount of subsidies for conversion to organic viticulture (a 3-year transitional period) is 736 EUR/ha, and afterwards the annual payment for organic output is 557 EUR/ha (http://agro-journal.com/myarka-11-biologichno-zemedelie-start-prez-mart-2017-g/). In 2017 the certified vineyards for organic production of grapes were 4 199 ha, of which 2 965 ha were in the transitional period and 1 234 ha have already passed that period. The produced organic grape was 6 388 t, which exceeds the production level by 86.3% in 2013 (Dimitrova et al., 2017). The consumers' demand for organic wines has been increasing. Currently, their quantity is about 2% of the total output of wine in Bulgaria. At present, 11 wineries in the country are producers of certified organic wines.

According to data of the Ministry of Agriculture, Food and Forestry in 2017, the vineyards in the agricultural holdings were 51 272 ha, of which 34 111 ha were cultivated. In the Southeastern Region 51% of the output was produced, while in the South Central Region – 25%. Red wine varieties had kept their dominant role in the structure of vineyards. About 3% of the areas in the holdings were young, non-fruit-bearing vines. The total area of vineyards in Bulgaria in 2017 were 63 952 ha. 1000 ha of new wine vineyards were created. The processed grapes were 165 818 t. The total quantity of commercially made wine was 1 079 897 hl. The produced wines with a protected designation of origin (PDO) were 7 411 hl, the wines with protected geographical indication (PGI) - 375 224 hl and other wines - 697 262 hl (Bulletin Agrostatistics, 2018).

Finally the significance and the structuring role of the wine sector in Bulgaria for the overall development of agriculture in the country can be highlighted. This is conditioned by the favorable natural conditions and traditions of the population for wine growing and wine production. Despite the great potential and prospects, the industry today faces a number of challenges influenced by both global and economic changes in the country. There are a number of issues related to the production of high-quality production, concurrent competition and the provision of new markets. In this respect, the preservation and exploitation of the potential of local varieties of vine and the production of wines with unique characteristics will provide new improved opportunities, market niches and competitive positions of Bulgarian producers.

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