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REPORT

BY

INSTITUTE OF VITICULTURE AND ENOLOGY, PLEVEN

WP3

"THE WINE ID OF THE REGIONAL AREA"

Deliverable 3.2.3.: Exploring competitiveness of selected varieties

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Deliverable 3.2.3.: Exploring Competitiveness of Selected Varieties [1]

Abstract:

In connection with the implementation of activity 3.2.3. **Exploring competitiveness of selected varieties** under the DIONYSOS project, four samples of dry wines were selected for analysis and tasting. The analyzed wines were produced in different wine cellars in Haskovo district. The wines were from local grapevine varieties, widespread and typical for the region, grown in vineyards, in the municipality of Harmanli, Haskovo district. Haskovo district falls within the area of the cross-border area of research on the Bulgarian side under the DIONYSOS project. Chemical and organoleptic analysis of the samples was performed at the Institute of Viticulture and Enology (IVE) - Pleven. Their chemical composition and characteristics were determined. The results of the organoleptic analysis were processed using the MC Excel program and presented in Spider diagrams. The studied wines were typical for the grapevine varieties from which they were produced and confirm the thesis that they have a high potential for local wine production. The recommendation that can be made to local producers is to continue to develop and increase the production of wines from local varieties. In this way, in addition to preserving the traditions and culture associated with them, they will help to preserve biological species and diversity. By offering wines produced from local varieties, not only wine tourism, but tourism in general will have its own image and culture. The unique characteristics of these wines together with the traditions, customs and local cuisine will attract more wine lovers and tourists.

According to the goals and work in the previous stages of the project, three wines from local grapevine varieties were selected - ***Tamyanka***, ***Pamid*** and ***Mavrud*** and one sample of ***Rubin*** variety obtained by intraspecific hybridization (cross between Syrah and Nebiolo)::

- ***Tamyanka dry White wine, vintage '2020*;**
- ***Pamid, dry Rose wine, vintage'2020*;**
- ***Rubin, Organic, dry Red wine, vintage '2020* ;**

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Този документ е създаден в рамките на проект „Разработване на идентичност на добива, почвите и местностите"/ДИОНИСОС, Договор за субсидиране B2.6c.04/01.11.2017 който се осъществява с финансовата подкрепа на подкрепа на Програма за трансгранично сътрудничество ИНТЕРРЕГ V-A Гърция-България 2014-2020, съфинансирана от Европейския фонд за регионално развитие и от националните фондове на страните Гърция и България. Отговорността за съдържанието на документа се носи от Институт по лозарство и винарство-Плевен и при никакви обстоятелства не може да се счита, че този документ отразява официалното становище на Европейския съюз и Управляващия орган.

- Mavrud, dry Red wine, vintage '2019.

The vineyards where these varieties were grown were located on the slopes of South Sakar mountain and around the Maritsa River. These were quality wines with *Protected Geographical Indication* (PGI) "THRACIAN VALLEY".

In IVE - Pleven a chemical and organoleptic analysis of the samples was performed to determine their chemical composition and organoleptic characteristics (Figure 1 - 5)..

The results of the analysis of the chemical composition of wines are presented in Table 1. There were no deviations from values of the indicators for wines of the respective type and variety. The samples had a high alcohol content and contain little residual sugars. The amount of sugar-free extract was typical for the respective variety and harvest. The determined higher values of titratable acids were confirmed by results of the organoleptic analysis, in which wines were characterized as fresh.

Figure 1. Preparation for chemical analysis of the selected wines

With regard to the phenolic complex, the content of total phenolic compounds (TPC), a non-flavonoid phenolic compounds (NPC) and flavonoid phenolic compounds (FPC) was determined in the tested samples. Their concentration increased in the following order: Tamyanka <Pamid Rose <Rubin <Mavrud. The same sequence and trend was preserved for anthocyanins, rosé wine and red wines. The established values of the phenolic complex and anthocyanins were typical and characteristic for the respective variety and vintage wine.

Figure 2. Laboratory analysis of the wines

Indicators of intensity and hue characterized the color of the wines. The white dry wine *Tamyanka, vintage '2020*" had a pale yellow color with pronounced greenish notes. The color of *Pamid, dry Rose wine, vintage'2020* had a sparkling, vibrant color with a hint of raspberry. The sample *Rubin, Organic, dry Red wine, vintage '2020* had a rich, vibrant, ruby-red color. While in the sample *Mavrud, dry Red wine, vintage '2019* , the tile-red shades clearly stand out, which shows the development of color with aging. These characteristics were also confirmed by the values of intensity and tint of the color of both samples.

Table 1. Chemical composition of the studied wines from Haskovo region, under DIONYSOS project

Показатели Indicators / Вино Wine	Реколта Vintage	Плътност Density	Алкохол об. % Alcohol vol. %	Захар г/л Sugar g/l	Общ екстракт г/л Total extract g/l	Беззахарен екстракт г/л Sugar free extract g/l	Титруеми киселини г/л Titratable acids g/l	Летливи киселини г/л Volatile acids g/l	pH	ОФС г/л г.к. TPC g/l g.a.	НФС мг/л каф. еквив. NPCmg/ caffeic equivalent	ФФС мг/л катех. еквив. FPCmg/l catechin equivalent .	Антоциани мг/л Anthocyanins mg/l	Интензитет I абс. ед. Intensity I abs. un.	Нюанс T Tint T [abs. unit]
Тамянка Tamianka	2020	0,9911	13,00	2,15	19,70	17,55	5,93	0,48	3,11	0,56	129,29	160,24	-	0,10	-
Памид Розе Pamid Rose	2020	0,9925	12,00	1,74	20,40	18,66	6,53	0,36	3,03	0,93	164,93	496,44	90,06	5,30	0,52
Рубин Rubin	2020	0,9925	14,06	2,97	26,20	23,23	5,48	0,54	3,45	2,53	350,87	4116,98	339,46	12,73	0,77
Мавруд Mavrud	2019	0,9948	12,06	2,29	24,50	22,21	6,30	0,72	3,27	1,66	330,45	2091,71	182,48	9,25	0,81

Organoleptic analysis of the selected wine samples (figure 3) was made in order to determine their tasting characteristics, according to the adopted methodology and protocol for wine evaluation under the DIONYSOS project. To estimate the intensity of each considered indicator, a scale from 1 to 10 (weak 1-medium 5-high 10) was used.

Figure 3. Organoleptic analysis of the selected wines

Results of the organoleptic analysis were processed using the MC Excel program and presented in Spider diagrams.

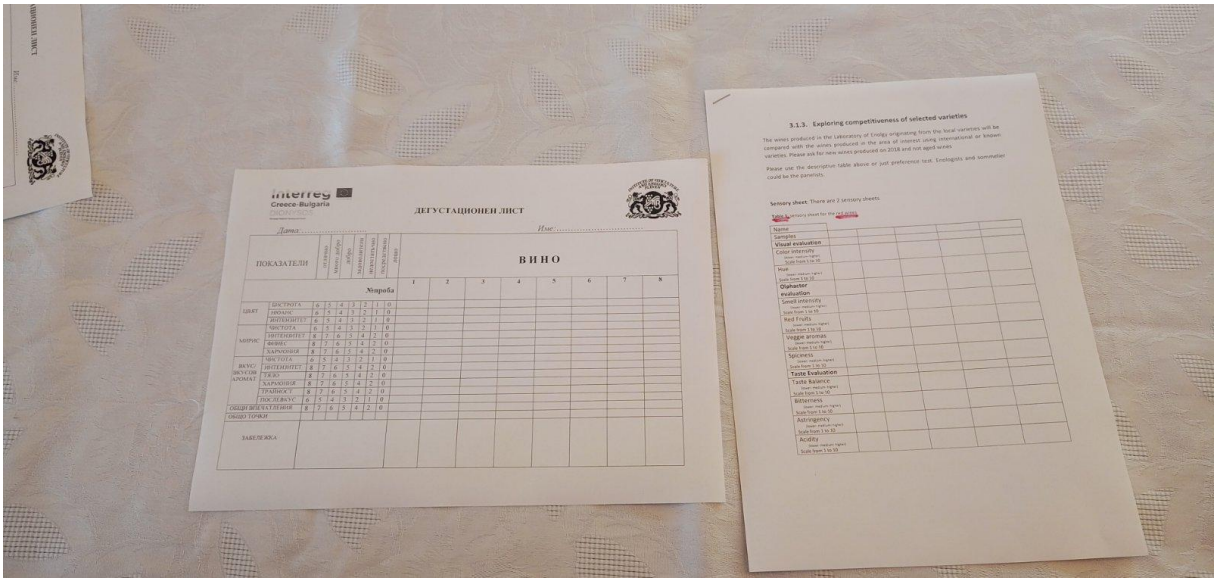

Figure 4. Tasting sheets

Figure 5. Work of the tasting commission of IVE-Pleven

Results of a tasting evaluations:

Sample 1: *Tamyanka, white dry wine, vintage '2020* - local variety

In recent years, several wineries in the region have returned the fame of the Tamyanka variety. One of the biggest local successes at national and international wine fairs is related to this variety. The southern slopes of Sakar mountain, mild winters and hot and dry summers are ideal for growing and good condition of the variety.

Figure 6. Tamyanka '2020

The sample of Tamyanka wine was characterized by good clarity, pale yellow color with pronounced greenish notes. The average visual evaluation of the Tamyanka sample was high (8.3). In the evaluation of *aroma intensity* (5.2) the values were around the average - intensity (5.3) and flowery/fruity aroma (4.8).The aroma of Tamyanka was dominated by the typical variety, with fine musk and floral notes. Average score was very good (6.8). The wine had a balanced and harmonious taste, in terms of body and freshness, evaluated respectively for the *balance of taste* (6.4), *harmony* (6.3), *acidity* (7.7) (Fig.7). The aftertaste was stable and harmonious. Overall tasting evaluation was very good and showed that the variety Tamyanka, grown in the region of Haskovo district produced wines with very good organoleptic characteristics.

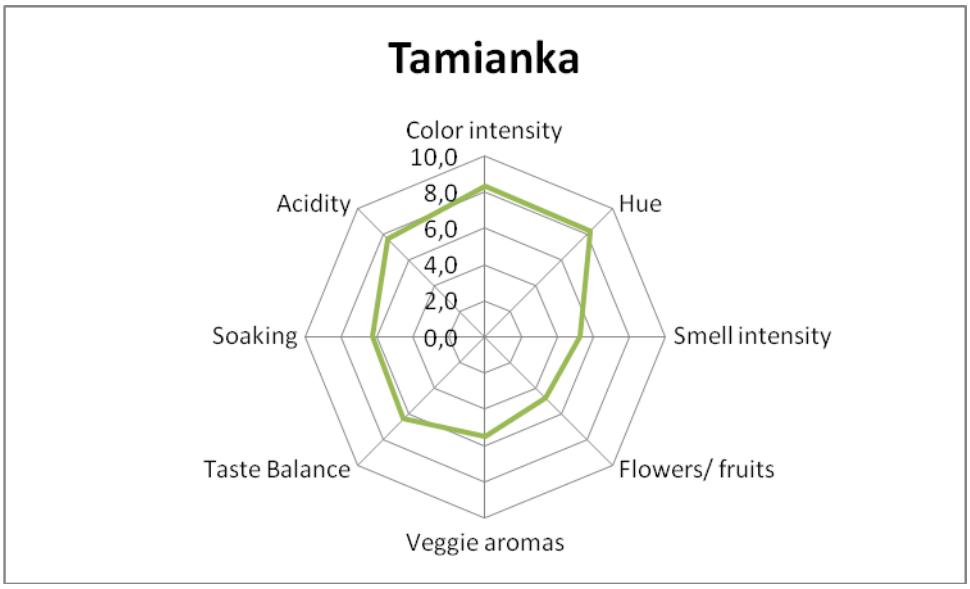

Figure 7. Tasting characteristics of white dry wine Tamyanka, vintage'2020

Tamyanka wines are recommended for summer due to their light body, light muscat aroma, with shades of red rose and lime. Tamyanka wine is suitable for serving with fresh salads, cheese, and other dairy delicacies. Also, it can be well combined with vegetarian and fish dishes, sushi. The freshness and aromas of rose and lime are the perfect correspondence to accompany light desserts with cream, coconut and vanilla.

Sample *2: Rose Pamid wine, 2020*

The Pamid variety is an old local red variety from which light, dry red wines are produced, suitable for consumption as young. Due to these qualities, more and more winemakers are boldly experimenting with the variety and producing rosé wines.

Sample *Rose of Pamid '2020* (fig. 8*)*, had the following organoleptic characteristics: color intensity of the wine had sparkling, vibrant color with a hint of raspberry. The average *visual evaluation* was high (8.6). In *evaluation of aroma* (6,3) the individual components showed different intensity and character. *The intensity (7.9)* and the *hue of red fruits (8.0)* were highly valued. The aroma of the wine was typical variety, with slight fruity notes of fresh red fruits (strawberries, raspberries). *Veggie aromas* (4.8) and *spiciness* (4.3) were perceptible.

Figure 8. ***Rose of Pamid '2020***

Taste evaluation (5.0) had a good rating. The body was balanced (6.9), with taste *bitterness* (1.6) and low taste *astringency* (2.1), but with very good and balanced *acidity* (7.3) (figure 9). The aftertaste left impressions of light and elegant wine.

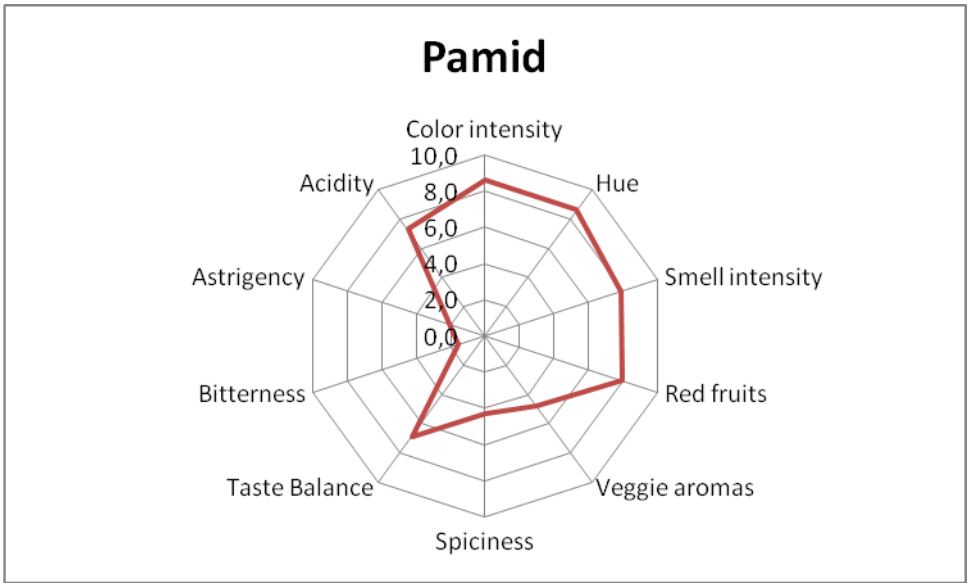

Figure 9. Tasting characteristics of Pamid rosé dry wine, vintage 2020

Pamid rosé wines can be combined with salads with fish and meat. Rosettes are great for salmon or tuna, risotto with vegetables, and even with ducks and lamb. They are also in perfect combination with local dairy products such as cheese, qatiq and krokmach.

Sample 3: *Rubin Organic, Vintage 2020*

The Rubin (Ruby) variety is an intraspecific hybrid grapevine variety created at the *Institute of Viticulture and Enology, Pleven* in the 1970's, by crossing *Sira* and *Nebiolo*. In recent years, there has been increased interest in it. Producers not only from Haskovo district, but also from other parts of Bulgaria, pay attention to its good technological qualities and refer it to the promising varieties for the development of organic viticulture.

Figure 10. *Rubin Organic, Vintage'2020*

At the Rubin Organic sample tasting, Vintage 2020 was characterized by a high *visual evaluation* (8.1). The color of the wine was rich, vibrant, ruby red.

Color intensity (8.1), tint (8.2) and *olphactor evaluation* (6.5) were typical this variety. At *aroma intensity* (8,3) aromas of red ripe fruits were clearly present. The taste was soft, pleasant, balanced with a hint of *red fruits* (8.1). Slightly, could be felt *veggie aromas* (5.3). Overall average rating for *taste evaluation* was (6.6). A full, harmonious taste of fruit and soft tannins was felt. Taste balance (6,8) was characterized by a harmonious body. Bitterness (5.5) was very well balanced, astrigency (8.7) was high enough, and acidity (5.7) was well balanced (Figure 13). None of these characteristics stand out or were missing, which made the body full, balanced and with a long final aftertaste.

The final assessment - the wine was multi-layered, with excellent color and organoleptic characteristics. It was characterized as typical young wine with potential for aging and development.

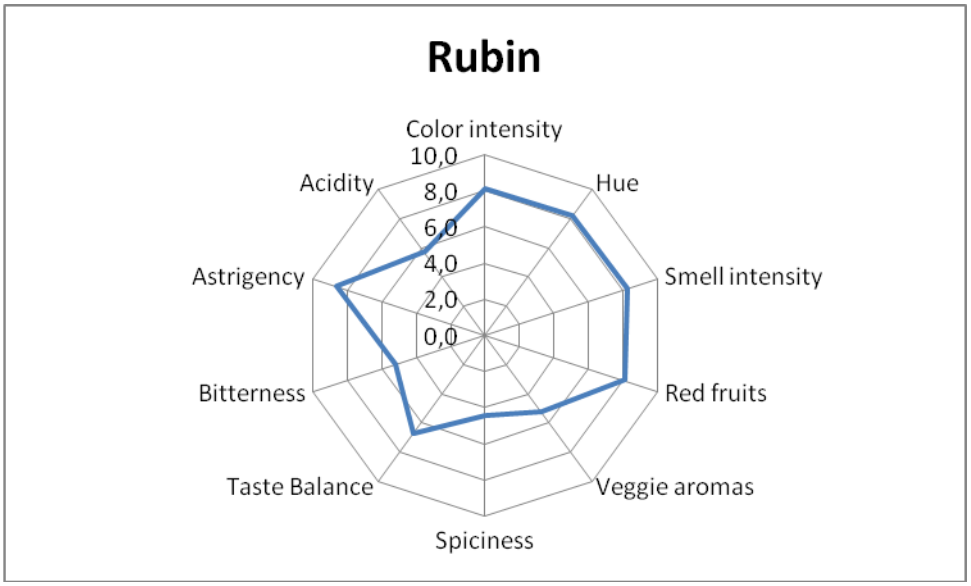

Figure 11. Tasting characteristics of red dry wine Rubin Organic, vintage'2020

Wines of variety Rubin can be combined with salads that have heavier sauces. It can be served with red appetizers, salami and sausages. The wine is suitable to serve with main dishes, poultry, pork and beef.

Sample 4: *Mavrud, dry Red wine, vintage '2019*

Mavrud is an emblematic local variety, typical for growing in certain regions of Southern Bulgaria. It is widespread mainly in the Thracian lowland - in the region of Plovdiv and less in the region. Haskovo. Wines of this variety have the potential for aging and the best wines of them show their character, taste and potential after the second, even after the third year of vinification.

Figure 12. *Mavrud, dry Red wine, vintage '2019*

The color of the wine clearly stands out tile-red shades, which shows the development of aging.

The *taste* (5.8) showed an average density value (5.6), with a balanced bitterness (5.0) pleasant tartness (6.8) and moderate acidity (6.8) (Fig. 13). Pleasant tannins were felt with an elegant finish of ripe red fruits.

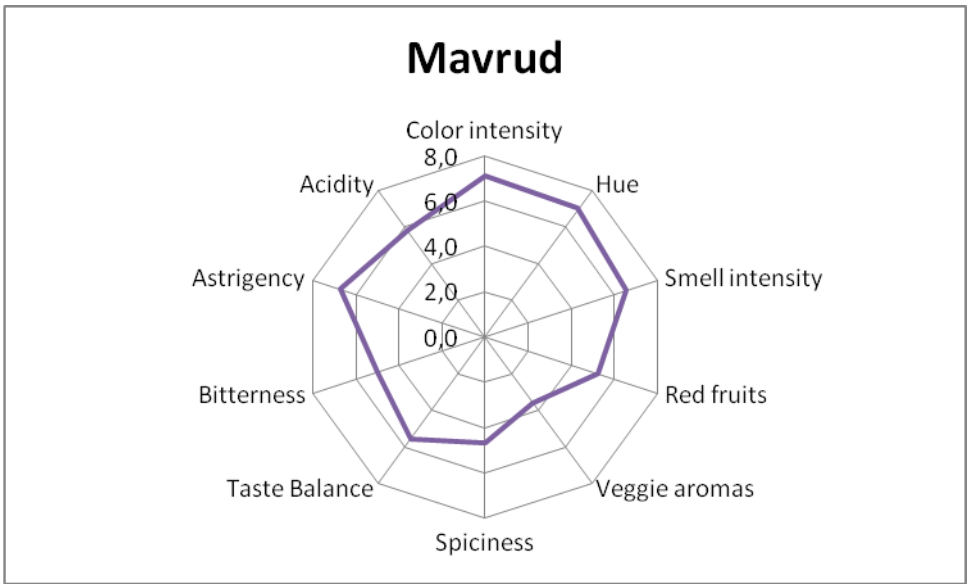

Figure 13. Tasting characteristics of red dry wine Mavrud, vintage'2019

Mavrud wines can be combined with salads with meat and sauces. Young and still light wines can be combined with fish dishes. Banitsa (Bulgarian dish) is another dish that is very suitable. Mavrud can be served with lamb with a garnish of potatoes and vegetables.

Conclusions and recommendations:

The selected and tasted wines have very good organoleptic characteristics. The samples were typical for the varieties from which they were produced and confirmed their high potential for local wine production identified with the regional viticulture and wine production.

The recommendation that could be made for the wines from these and other local varieties is to develop and increase their production, as they have very good characteristics and are competitive with internationally known varieties. Moreover, local winegrowers and winemakers have deep traditions and specific production associated with them. The preservation of these varieties will not only help to preserve biological species, but will also help to preserve the traditions and customs for future generations.

In addition, for local tourism and all related areas, there will be a better image of the destination and synergies will be created. Wines produced from local varieties should become leaders in the destination, because they have their own unique wine image and cultural imprint. In this way they will be able to attract more tourists and wine lovers who will find a different unique, warm, fresh and southern taste, will be immersed and feel the authenticity of the region.

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