

THE TABLE GRAPES AND WINE SECTOR OF THE REPUBLIC OF MOLDOVA - ACHIEVEMENTS AND PERSPECTIVES

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Abstract

The wine sector in Moldova is strategic for the national economy. The activity of the sector is coordinated by ministry, also by the district agricultural directorates at the regional level. The wine-growing sector is divided into 4 regions with PGI: 'Codru', 'Ștefan Vodă', 'Valul lui Traian' 'Divin'. According to the data of the NBS, the area of vineyards is continuously decreasing, in 2021 it reached 117500 ha. By category of enterprises, it is distributed - 21.62% agricultural enterprises, 38.21% farmer farms and 40.17% family farms. The total area of vineyards with wine varieties is 99600 ha or 88.77%, but with table grapes varieties constitute 17900 ha. The average harvest was 4.54 t/ha for all types of farms. The total production of grapes in farms of all categories in 2021 was - 490700 tons, the largest total harvest in the last 5 years being recorded in 2018 with 730200 tons. Analyzing the OIV data for the period 2017-2021, we mention that in the 2018 we produced the highest volume of wine - 1900000 hl, and the lowest volume was in 2020 - 920000 hl.

Key words: Republic of Moldova, table grapes, viticulture, varieties, wine.

INTRODUCTION

The wine sector in Moldova is strategic for the national economy, fact stated in various scientific works (Cociorva, 2022; Cociorva, 2023; Cociorva et al., 2022; Nicolaescu et al., 2022). The activity of the sector is coordinated by ministry, also by the district agricultural directorates at the regional level. The wine-growing sector is divided into 4 regions with PGI: 'Codru', 'Ștefan Vodă', 'Valul lui Traian' 'Divin' (Mogîldea et al., 2021).

The development of the agri-food sector, including the grape and wine sector, is influenced by a series of factors of a different nature - technological, ecological, political, legislative etc. (Godoroja et al., 2021; Midari et al., 2021; Nicolaescu et al., 2022; Nicolaescu et al., 2023; Voinesco et al., 2023).

A particular importance in the development of the wine sector belongs to the grape varieties assortment. In Moldova, local and introduced varieties are approved, which are included in the Catalog of plant varieties (Dosca et al., 2023; Mațcu et al., 2023; Procopenco et al., 2023; Voinesco et al., 2023).

The purpose of the research reflected in this article consists in:

- studying the current state and prospects for the development of viticulture (varieties, technology, vineyards areas, yield, quality etc.);
- studying the current state and prospects for winemaking development (product range, sales market, sales incomes etc.).

MATERIALS AND METHODS

For the study of the current situation in the wine sector, the following databases and information were used:

- National Bureau of Statistics (NBS) of the Republic of Moldova;
 - Ministry of Agriculture and Food Industry of the Republic of Moldova;
 - National Office of Vine and Wine (NOVW);
 - FAO - Faostat;
 - UN - Comtrade;
 - OIV;
 - Official documents and special literature etc.
- MS Office Excel (2019) was used for the mathematical processing of the data.

RESULTS AND DISCUSSIONS

The wine-growing sector is divided into 4 regions with PGI: 'Codru', 'Ștefan Vodă', 'Valul lui Traian' 'Divin' (Figure 1).

The wine-growing regions are specialized in the production of different types of wines, depending on the tradition, the pedoclimatic conditions and the skill of the winemakers.

The production of grapes and wines is coordinated by the Ministry of Agriculture and Food Industry of the Republic of Moldova, the National Office of Vine and Wine, and the quality is monitored by the National Agency for Food Safety.



Figure 1. The wine-growing regions of Moldova

Source: <https://ecopresa.md/wp-content/uploads/2019/07/harta-zone-vinicole-Moldova.jpg> processed by authors

During the years 2000-2022, the minimum vineyards area was 114.12 thousand hectares in 2020, and the maximum vineyards area was 149.69 thousand hectares in 2001 (Figure 2, Table 1).

In the 2022, the vineyards area constituted 130 thousand hectares, or by approx. 7.3 thousand hectares more than in the 2021.

In the year 2022, from the world vineyards areas (6729.2 thousand hectares), the vineyards

areas of the Republic of Moldova constitute approx. 1.82%, and from the Europe vineyards areas (3432.12 thousand hectares), the vineyards areas of the Republic of Moldova constitute approx. 3.56%.

The development trend of the vineyard areas is decreasing, according to the trend line (Figure 2).

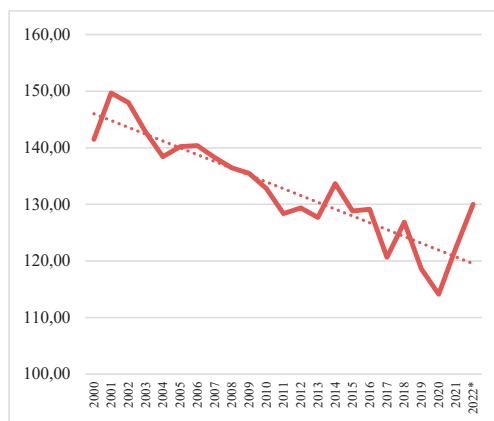


Figure 2. The vineyards area (thousand hectares) and trendline in the Republic of Moldova during the 2000-2022 years

Source: NBS & FAOSTAT, processed by authors

Table 1. Vineyards areas, yield and grape production in the Republic of Moldova during the 2000-2022 years

Year	Vineyards areas		Yield		Grape production	
	1000 ha	% compared to the previous year	t/ha	% compared to the previous year	1000 t	% compared to the previous year
2000	141.49	100.00	4.97	100.00	703.79	100.00
2001	149.69	105.80	3.37	67.81	505.01	71.76
2002	148.00	98.87	4.33	128.49	641.16	126.96
2003	142.80	96.49	4.74	109.47	677.20	105.62
2004	138.44	96.95	4.95	104.43	685.57	101.24
2005	140.21	101.28	3.70	74.75	518.53	75.63
2006	140.39	100.13	3.32	89.73	466.06	89.88
2007	138.27	98.49	4.32	130.12	597.96	128.30
2008	136.47	98.70	4.66	107.87	635.51	106.28
2009	135.50	99.29	5.06	108.58	685.10	107.80
2010	132.81	98.01	3.63	71.74	481.62	70.30
2011	128.35	96.64	4.63	127.55	594.84	123.51
2012	129.35	100.78	3.91	84.45	505.92	85.05
2013	127.68	98.71	4.80	122.76	612.70	121.11
2014	133.67	104.69	4.44	92.50	593.88	96.93
2015	128.83	96.38	4.65	104.73	598.66	100.80
2016	129.13	100.23	4.77	102.58	615.74	102.85
2017	120.66	93.44	5.59	117.19	675.06	109.63
2018	126.87	105.15	5.76	103.04	730.17	108.16
2019	118.59	93.47	5.55	96.35	658.73	90.22
2020	114.12	96.23	4.05	72.97	462.05	70.14
2021	122.28	107.15	4.39	108.40	536.83	116.18
2022	130.00	106.31	5.50	125.28	715.00	133.19

Source: NBS & FAOSTAT & OIV, processed by authors

During the years 2000-2022, the minimum grapes' production was 462.05 thousand tonnes in 2020, and the maximum grapes' production was 730.17 thousand tonnes in 2018 (Figure 3, Table 1).

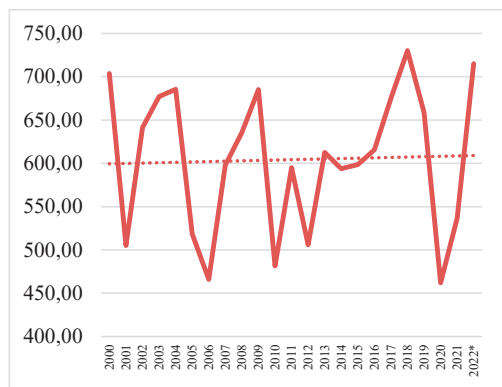


Figure 3. The grapes production (thousand tons) and trendline in the Republic of Moldova during the 2000-2022 years

Source: NBS & FAOSTAT, processed by authors

In 2022, grapes' production was 715 thousand tons, or approx. 178.17 thousand tons more than in 2021.

In the world grapes' production (73524.2 thousand tons), the grapes' production of the Republic of Moldova is approx. 0.73%, and from the Europe grapes' production (26926.34 thousand tons), the grapes' production of Moldova has approx. 1.99%.

The development trend of grape production is at the level of 600 thousand tons with a slight increase, according to the trend line.

In the period 2000-2022, the minimum grapes yield was 3.32 t/ha in 2006, and the maximum grapes yield was 5.76 t/ha in 2018 (Figure 4, Table 1).

In 2022, the grapes yield was 5.5 t/ha, or by approx. 1.1 t/ha more than in 2021.

The average grapes yield in the world was 10.93 t/ha in 2021, the average grapes yield in the Europe was 7.85 t/ha, and in Moldova - 4.39 t/ha.

During the years 2000-2022, the minimum wine production was 840 thousand hectolitres in 2010, and the maximum wine production was 3215 thousand hectolitres in 2003 (Figure 5, Table 2).

In 2022, wine production was 1324 thousand hectolitres, or by approx. 106 thousand hectolitres less than in 2021.

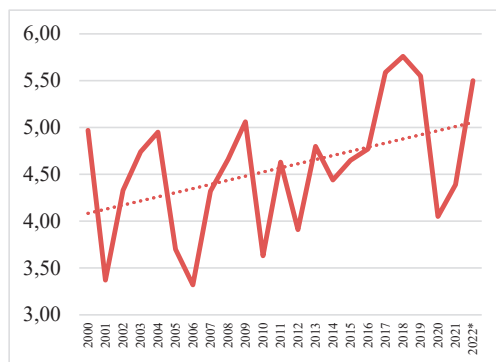


Figure 4. The grapes yield (tons/hectares) and trendline in the Republic of Moldova during the 2000-2022 years

Source: NBS & FAOSTAT, processed by authors

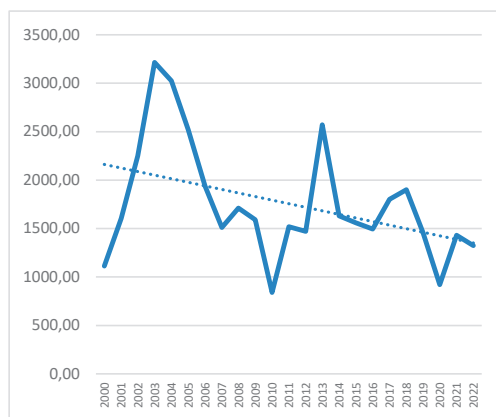


Figure 5. The wine production (thousand hectolitres) and trendline in the Republic of Moldova during the 2000-2022 years

Source: NBS & OIV, processed by authors

Table 2. Production and export of wine in the Republic of Moldova during the 2000-2022 years

Year	Production of wine				Export of wine	
	1000 t	% compared to the previous year	1000 hl	% compared to the previous year	1000 hl	% compared to the previous year
2000	111.20	100.00	1112.0	100.00	992.0	100.00
2001	160.40	144.24	1604.0	144.24	1368.0	137.90
2002	154.20	96.13	2251.0	140.34	1537.0	112.35
2003	197.90	128.34	3215.0	142.83	2022.0	131.55
2004	340.20	171.91	3026.0	94.12	2280.0	112.76
2005	373.40	109.76	2520.0	83.28	2425.0	106.36
2006	193.81	51.90	1938.0	76.90	1460.0	60.21
2007	128.49	66.30	1510.0	77.92	660.0	45.21

Year	Production of wine				Export of wine	
	1000 t	% compared to the previous year	1000 hl	% compared to the previous year	1000 hl	% compared to the previous year
2008	159.70	124.29	1710.0	113.25	899.0	136.21
2009	130.00	81.40	1590.0	92.98	957.0	106.45
2010	132.56	101.97	840.0	52.83	1260.0	131.66
2011	131.86	99.47	1520.0	180.95	1198.0	95.08
2012	147.54	111.89	1470.0	96.71	1220.0	101.84
2013	158.96	107.74	2570.0	174.83	1234.0	101.15
2014	149.85	94.27	1630.0	63.42	1171.0	94.89
2015	139.51	93.10	1560.0	95.71	1220.0	104.18
2016	141.46	101.40	1495.0	95.83	1328.0	108.85
2017	171.43	121.19	1801.0	120.47	1405.0	105.80
2018	178.49	104.12	1900.0	105.50	1399.0	99.57
2019	182.70	102.36	1460.0	76.84	1567.0	112.01
2020	178.70	97.81	920.0	63.01	1330.0	84.88
2021	-	-	1430.0	155.43	1207.0	90.75
2022	-	-	1324.0	92.59	1041.0	86.25

" - " no data

Source: NBS & FAOSTAT & OIV, processed by authors

The development trend of wine production is decreasing, according to the trend line (Figure 5).

During the years 2000-2022, the minimum exported wine production was 660 thousand hectolitres in 2007, and the maximum exported wine production was 2425 thousand hectolitres in 2005 (Figure 6, Table 2).

In 2022, exported wine production was 1041 thousand hectolitres, or by approx. 166 thousand hectolitres less than in 2021.

The development trend of wine production export is decreasing, according to the trend line.

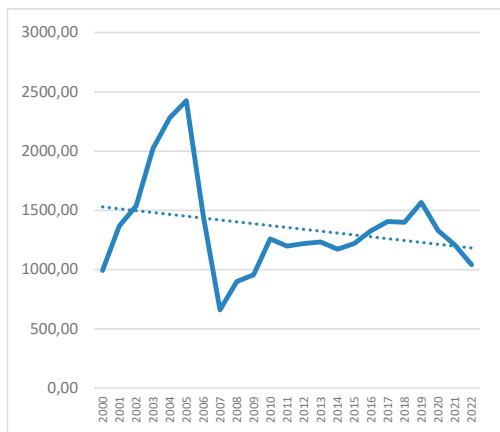


Figure 6. The export of wine (thousand hectolitres) and trendline in the Republic of Moldova during the 2000-2022 years

Source: NBS & OIV, processed by authors

Table 3. Trade balance, export vs import (1000 USD) of grapes and wine production in the Republic of Moldova during the 2000-2021 years

Year	Grapes			Wine		
	Import Value	Export Value	Trade balance	Import Value	Export Value	Trade balance
2000	0.00	1.61	1.60	0.92	87.95	87.04
2001	0.01	1.55	1.54	1.69	124.37	122.68
2002	0.12	1.59	1.47	7.64	136.64	129.00
2003	0.16	3.41	3.25	5.81	180.88	175.06
2004	0.21	2.46	2.25	5.53	215.85	210.33
2005	1.71	2.45	0.75	9.71	245.00	235.29
2006	0.17	3.37	3.20	13.08	136.98	123.90
2007	0.37	12.02	11.65	2.06	83.61	81.55
2008	0.37	7.52	7.15	1.28	133.68	132.40
2009	1.44	13.57	12.13	0.93	128.19	127.26
2010	1.66	12.98	11.32	3.16	137.86	134.70
2011	5.03	17.55	12.52	2.44	131.62	129.19
2012	2.20	14.50	12.29	1.39	142.13	140.74
2013	3.28	17.02	13.74	1.94	149.57	147.63
2014	1.71	20.12	18.42	1.55	111.60	110.05
2015	1.47	16.78	15.31	1.58	97.28	95.70
2016	0.82	20.40	19.59	1.76	107.54	105.77
2017	0.36	38.63	38.27	1.62	127.67	126.05
2018	0.49	25.12	24.63	2.89	137.91	135.02
2019	0.43	29.66	29.23	2.62	139.59	136.97
2020	0.56	26.87	26.31	2.99	134.38	131.38
2021	1.03	36.08	35.05	6.04	141.24	135.20

Source: NBS & FAOSTAT, processed by authors

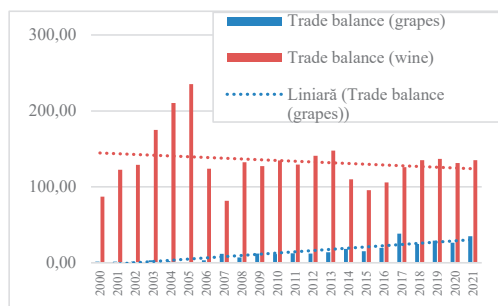


Figure 7. Trade balance, export vs import (1000 USD) of grapes and wine production, and trendline in the Republic of Moldova during the 2000-2021 years

Source: NBS & OIV, processed by authors

Analyzing the data with reference to international trade of grapes and wine, we note that a negative trend of the trade balance for wine production is observed, and a positive trend of the trade balance for grapes production (Figure 7, Table 3).

For the further development of the grape and winemaking sector, the Government and Ministry focus is on the local selection of vine varieties.

Among the varieties for table grapes, we mention the following local varieties: Moldova, Codreanca et al.; introductory varieties: Cardinal, Lora, Arkadia, etc.

Among the varieties for wine, the focus is on the following local varieties: Feteasca neagra, Feteasca alba, Feteasca regala, Rara neagra etc.; the introductory varieties: Cabernet Sauvignon, Merlot, Malbec, Pinot noir, Pinot grey, Chardonnay, Sauvignon etc.

CONCLUSIONS

The development trend of the vineyard areas is decreasing, according to the trend line.

The development trend of grape production is at the level of 600 thousand tonnes with a slight increase, according to the trend line.

The development trend of wine production is decreasing, according to the trend line.

The development trend of wine production export is decreasing, according to the trend line. For the further development of the grape and winemaking sector, the Government and Ministry focus is on the local selection of vine varieties.

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