

Studies concerning the development of viticulture on Arad, Timis and Caras-Severin areas

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Abstract The aim of the study was the monitoring of viticulture areas development and grapes production, produced in the wine-growing of Arad, Timis and Caras-Severin territory in 2008-2012, these areas being recognized for viticultural potential and vine growing tradition. Data interpretation took into account the context of socio-economic circumstances and current wine policy. European funding accessed through restructuring/reconversion programs implemented in Romanian viticulture, contributed to the recovery of the wine sector in this side area of the country.

Key words

wine, vineyards, area, production

Romanian viticulture recovery to be internationally competitive is one of the priorities of Ministry of Agriculture and Rural Development (M.A.R.D). Following the accession of Romania to the European Union has increased the number of investors in viticulture, which contribute to vineyards retooling. By changing the Romanian legislation so as to provide more facilities for farmers, Romanian viticulture has achieved profitability (Brad et al. 2009).

Western Romania is an important viticulture area of our country through tradition and long experience in viticulture, through areas cultivated with vines, and due to the fact that offers favourable or very favourable natural conditions for this crop, which allows obtaining high quality wines (Sala F., Dobrei A., 2009).

Material and Methods

The aspects monitored in this paper concerns the viticultural area of Arad, Timis and Caras-Severin Counties. Research relates to the development of vineyards, depending on their type and the evolution of production within these counties among 2008 - 2012. The study is based on data recorded by grape wine-growing institutions subordinated to the MARD and on the statistics issued by the National Institute of Statistics of Romania (Dobrei et al., 2007).

In Arad County the main vineyard is Minis-Maderat, which encompasses Minis, Paulis, Barateca, Ghioroc, Cuvin, Radna and respectively Covasanti, Siria, Maderat, Masca, Pancota, Mocrea, Ineu localities.

In the wine-growing Minis area, are mainly cultivate red wine varieties of high quality (Cabernet Sauvignon, Pinot Noir, Cadarca, Merlot and Burgund), followed by white wine varieties of high quality (Riesling italian, Fetească regală, Muscat Ottonel).

In the wine-growing area Maderat, are cultivated mainly white wine varieties for current consumption

(Mustoasă de Măderat, Fetească regală), red wines for current consumption (Burgund mare, Oporto și Sangiovese) and on small areas white wines varieties for high quality wines (Riesling italian, Muscat Ottonel). There are also areas cultivated with table grape varieties with early and middle maturation (Chasselas dore, Chasselas rose and Muscat de Hamburg).

In Timis County, there are well-known Recas, Buzias-Silagiu and Teremia vineyards.

Recas vineyards include the following winelands: Recaș, Izvin, Herneacova, Bencecul de Sus, Bencecul de Jos, Iosifălău, Ghizela and Giarmata. Eco-climate allows the cultivation of some varieties for high quality wines (resulted from red varieties: Cabernet Sauvignon, Pinot noir, Merlot, Burgund) and white varieties: (Riesling Italian, Fetească regală and Muscat Ottonel) while from the table grape varieties the most cultivated are Chasselas dore, Muscat de Hamburg and Muscat de Adda.

Buzias-Silagiu vineyards covered the area of Buzias, Silagiu and Bacova localities. In the vineyards are growing varieties for white and flavoured wines of high quality (mainly Riesling italian, Sauvignon and Muscat Ottonel), but also red wines varieties of high quality such as: Cabernet Sauvignon, Pinot noir, Merlot, Oporto and Burgund. On small areas are cultivated table grapes varieties with a medium maturation.

Teremia winelands covered the Teremia Mare and Teremia Mica villages, and is well-known for producing white wines for current consumption from local varieties: Creață, Majarcă albă, Fetească regală and Muscat Ottonel.

The wine-growing regions from Caras-severin County are Tirol and Moldova Noua.

Tirol vineyards include areas belonging to Caras –Severin County (Doclin, Berzovia, Fizes) and areas belonging to the Timis County (Jamu mare). Here

are grown mainly red wine varieties for high quality wines: Cabernet Sauvignon, Pinot noir, Merlot and Burgund mare, and in the same time white wine varieties for high quality wines: Riesling italian, Fetească regală and Muscat Ottonel. The most cultivated table grape varieties are Chasslas dore, Chasslas rose, Muscat de Hamburg and Muscat de Adda.

Moldova Noua winelands consists from Moldova Nouă, Moldova Veche, Belobreșca, Măcești, Pojejena, Radimna, Socol, Câmpia, Zlatița localities, and is focused on growing varieties for high quality wine, both white (Riesling italian, Traminer) and red (Pinot noir, Cadarcă).

Results obtained

In the vineyards from the West of Romania are grown mainly noble varieties, and besides there are areas with first generation hybrids (Hosu et al., 2011), which are lower each year, due to the restructuring/reconversion programs implemented in

viticulture with the contribution of European Union. In Arad County there are still small hybrid vineyards in the Northern Minis-Maderat wine-growing area (Ineu, Șilindia, Luguzău), and in Timis County only in the backyard vineyards.

The National Program Support for restructuring/reconversion in viticulture conducted during 2009-2013 has absorbed according to MARD all EU funds made available for this sector by the European Commission. Due to the success of this program it was decided to continue the National Programme for Romania Support in the wine-growing sector from 2014 to 2018.

In the Western Region until 2012, Arad County has absorbed most of European funds that were invested in 1253 hectares of new vines, then follows Timis County with 820 ha of which about 500 ha only in SC Recaș Prod SRL. In Caras-Severin County, absorption of European funds for vineyards conversion, experiencing difficulties due to the uncertain legal situation of land and vineyards (Mirela Gabriela Heizer, 2013).

Table 1

The situation of vineyard areas (ha)
(Source: National Institute of Statistics)

Vineyard type	County	Property	Year				
			2008	2009	2010	2011	2012
Vineyard and nurseries areas	West region	Total	8649	8573	8181	8400	8625
		Private sector	8192	8021	7554	7787	8012
	Arad	Total	3577	3577	3538	3746	3738
		Private sector	3135	3147	3033	3255	3247
	Caraș-Severin	Total	771	768	772	772	772
		Private sector	771	658	662	662	662
	Timiș	Total	4301	4228	3871	3882	4115
		Private sector	4286	4216	3859	3870	4103
Fruitful vineyard areas	West Region	Total	4204	5391	5278	4161	4610
		Private sector	4117	5285	5117	4126	4606
	Arad	Total	1203	1491	2185	1509	1465
		Private sector	1116	1385	2024	1509	1465
	Caraș-Severin	Total	240	532	519	639	941
		Private sector	240	532	519	604	941
	Timiș	Total	2761	3368	2574	2013	2204
		Private sector	2761	3368	2574	2013	2200

Fruitful grafted vineyard areas	West Region	Total	3910	5113	4167	3840	4398
		Private sector	3823	5007	4167	3805	4394
	Arad	Total	1128	1416	1282	1396	1460
		Private sector	1041	1310	1282	1396	1460
	Caraş-Severin	Total	32	329	311	431	734
		Private sector	32	329	311	396	734
	Timiș	Total	2750	3368	2574	2013	2204
		Private sector	2750	3368	2574	2013	2200
Fruitful hybrid vineyards areas	West Region	Total	294	278	1111	321	212
		Private sector	294	278	950	321	212
	Arad	Total	75	75	903	113	5
		Private sector	75	75	742	113	5
	Caraş-Severin	Total	208	203	208	208	207
		Private sector	208	203	208	208	207
	Timiș	Total	11	-	-	-	-
		Private sector	11	-	-	-	-

Vineyard and nurseries areas in the Western Romania, has remained constant during 2008-2012, being little more than 8600 ha. In Arad and Caraş-Severin Counties fruitful vineyards areas increased and it might even be said that in Caraş-Severin evolution was

spectacular from 240 ha to 941 ha. In Timis fruitful vineyard area is decreasing, but varied much over the analyzed years due to grubbing of old vineyards and establishment new ones.

Table 2

The situation of fruitful vineyard areas (ha) by type of production
(Source: National Institute of Statistics)

Vineyard type	County	Private sector	Year				
			2008	2009	2010	2011	2012
Fruitful vineyards area cultivated with table grapes	West Region	Total	507	534	447	355	366
		Private sector	505	534	447	320	366
	Arad	Total	145	128	148	155	178
		Private sector	143	128	148	155	178
	Caraş-Severin	Total	7	24	24	56	51
		Private sector	7	24	24	21	51

	Timiș	Total	355	382	275	144	137
		Private sector	355	382	275	144	137
Fruitful vineyards Area cultivated with wine grapes	West Region	Total	3705	4863	4831	3806	4244
		Private sector	3619	4757	4670	3806	4240
	Arad	Total	1066	1363	2037	1354	1287
		Private sector	980	1257	1876	1354	1287
	Caraș- Severin	Total	233	508	495	583	890
		Private sector	233	508	495	583	890
	Timiș	Total	2406	2992	2299	1869	2067
		Private sector	2406	2992	2299	1869	2063

Fruitful vineyards area cultivated with table grapes has registered a slight increase in Arad and Caras-Severin Counties, but fell by more than half in Timis County, from 355 ha to 137 ha. Fruitful

vineyards area cultivated with wine grapes has increased all over the study area, only in Timis County is noted a decrease.

Table 3

Total production of grapes (tons)
(Source: National Institute of Statistics)

Vineyard type	County	Property	Year					
			2008	2009	2010	2011	2012	
Fruitful vineyard	West Region	Total	20118	30062	22352	20566	22378	
		Private sector	19683	29574	21221	20461	22376	
		Individual farms	14584	17372	12223	16218	13363	
	Arad	Total	5826	8375	7496	7072	5710	
		Private sector	5391	7887	6365	7072	5710	
		Individual farms	4427	4949	4629	6190	5081	
	Caraș- Severin	Total	805	1462	1202	2401	4436	
		Private sector	805	1462	1202	2296	4436	
		Individual farms	771	662	1202	2296	1895	
	Timiș	Total	13487	20225	13654	11093	12232	
		Private sector	13487	20225	13654	11093	12230	
		Individual farms	9386	11761	6392	7732	6387	
			Total	19058	29134	18875	19060	21652

Grafted fruitful vineyards	West region	Private sector	18623	28646	18875	18955	21650
		Individual farms	13524	16444	11388	15014	12642
	Arad	Total	5463	8009	4601	6374	5699
		Private sector	5028	7521	4601	6374	5699
		Individual farms	4064	4583	4376	5794	5073
	Caraş-Severin	Total	139	900	620	1593	3721
		Private sector	139	900	620	1488	3721
		Individual farms	105	100	620	1488	1182
	Timiș	Total	13456	20225	13654	11093	12232
		Private sector	13456	20225	13654	11093	12230
		Individual farms	9355	11761	6392	7732	6387
	Hybrid fruitful vineyards	West Region	Total	1060	928	3477	1506
Private sector			1060	928	2346	1506	726
Individual farms			1060	928	835	1204	721
Arad		Total	363	366	2895	698	11
		Private sector	363	366	1764	698	11
		Individual farms	363	366	253	396	8
Caraş-Severin		Total	666	562	582	808	715
		Private sector	666	562	582	808	715
		Individual farms	666	562	582	808	713
Timiș		Total	31	-	-	-	-
		Private sector	31	-	-	-	-
		Individual farms	31	-	-	-	-

Table 4

Grape production (tonnes) by type of production
(Source: National Institute of Statistics)

Vineyard type	County	Property	Year				
			2008	2009	2010	2011	2012
Fruitful Vineyards cultivated with table grapes	West Region	Total	3969	3649	1096	1704	1826
		Private sector	3959	3649	1096	1599	1826
		Individual farms	3582	3463	753	1487	1576
	Arad	Total	783	633	367	795	768
		Private sector	773	633	367	795	768
		Individual farms	523	545	340	712	766

	Caraş-Severin	Total	39	73	62	165	194
		Private sector	39	73	62	60	194
		Individual farms	39	73	62	60	70
	Timiş	Total	3147	2943	667	744	864
		Private sector	3147	2943	667	744	864
		Individual farms	3020	2845	351	715	740
Fruitful vineyards cultivated with wine grapes	West Region	Total	16190	26421	21256	18862	20552
		Private sector	15760	25933	20125	18862	20550
		Individual farms	11002	13909	11470	14731	11787
	Arad	Total	5084	7742	7129	6277	4942
		Private sector	4654	7254	5998	6277	4942
		Individual farms	3904	4404	4289	5478	4315
	Caraş-Severin	Total	766	1389	1140	2236	4242
		Private sector	766	1389	1140	2236	4242
		Individual farms	732	589	1140	2236	1825
	Timiş	Total	10340	17290	12987	10349	11368
		Private sector	10340	17290	12987	10349	11366
		Individual farms	6366	8916	6041	7017	5647

Table 5

Average yield of grapes per hectare (kg / ha)
(Source: National Institute of Statistics)

Vineyard type	County	Property	Year				
			2008	2009	2010	2011	2012
Fruitful vineyards	West Region	Total	4785	5576	4235	4943	4854
		Private sector	4781	5596	4147	4959	4858
		Individual farms	4364	5280	3794	4679	4038
	Arad	Total	4843	5617	3431	4687	3898
		Private sector	4831	5695	3145	4687	3898
		Individual farms	4715	5385	3588	4711	4058
	Caraş-Severin	Total	3354	2748	2316	3757	4714
		Private sector	3354	2748	2316	3801	4714
		Individual farms	3367	2853	2316	3801	3738

	Timiș	Total	4885	6005	5305	5511	5550
		Private sector	4885	6005	5305	5511	5559
		Individual farms	4317	5498	4524	4995	4121
Grafted fruitful vineyards	West Region	Total	4874	5698	4530	4964	4923
		Private sector	4871	5721	4530	4982	4927
		Individual farms	4437	5459	3883	4721	4079
	Arad	Total	4843	5656	3589	4566	3903
		Private sector	4830	5741	3589	4566	3903
		Individual farms	4704	5430	3620	4688	4065
	Caraș-Severin	Total	4344	2736	1994	3696	5069
		Private sector	4344	2736	1994	3758	5069
		Individual farms	5000	3448	1994	3758	3927
	Timiș	Total	4893	6005	5305	5511	5550
		Private sector	4893	6005	5305	5511	5559
		Individual farms	4325	5498	4524	4995	4121
Hybrid fruitful vineyards	West Region	Total	3605	3338	3130	4692	3425
		Private sector	3605	3338	2469	4692	3425
		Individual farms	3605	3338	2889	4210	3433
	Arad	Total	4840	4880	3206	6177	2200
		Private sector	4840	4880	2377	6177	2200
		Individual farms	4840	4880	3123	5077	2000
	Caraș-Severin	Total	3202	2768	2798	3885	3454
		Private sector	3202	2768	2798	3885	3454
		Individual farms	3202	2768	2798	3885	3461
	Timiș	Total	2818	-	-	-	-
		Private sector	2818	-	-	-	-
		Individual farms	2818	-	-	-	-

Timis County is the first concerning productivity, followed by Arad and Caras-Severin Counties.

The most important wine producers in Arad are: SC Wine Princess SRL Păuliș, SC VINO Veritas Rusco SRL Barațca, SC Elite Wine SRL Mâsca, SC Diverse VB SRL Miniș, SC Genagricola România SRL Pâncota, etc.

In Timis County, the main wine producers are: SC Cramele Recaș SA Recaș, SC Provitis SRL Recaș, SC Crama Radu SRL Recaș, SC Vigna SRL

Petrovaselo, SC Enotria SRL Izvin, SC Obsesia SRL Buziaș, SC Oros Intermed SRL, SC Domain du Chevallier Baylard SRL, Jitotim Prod SRL Variaș, etc.

Among wine producers in the county of Caras-Severin, it can be mention SC Valea Eden SRL Tirol and SC Senator Prodimpex SRL Foșani.

Wines produced in the vineyards of those counties can carry one of the denominations of origin (DOC): Minis, Recaș or Banat with names as: Dealurile Tirolului, Moldova Nouă and Silagiu or can have one of the geographical indications (IG): Viile Timișului, Viile

Caraşului, Dealurile Zarandului. (www.onvpv.ro).

Conclusions

The program of restructuring/reconversion, implemented in Romanian viticulture, has had great success in Arad and Timis Counties absorbing all European funds available, unlike Caras - Severin where these funds have been less accessed due to legal disputes regarding land property and vineyards.

Through this program was upgraded valuable vineyard plantations were replaced less productive varieties quantitatively and qualitatively, with some competitive market ones, and were reallocated some hilly area land for vines, because it lends itself better than field crops.

Indigenous varieties (Fetească regală, Fetească albă, Creaţă, Mustoasă de Măderat, Fetească neagră and Cadarcă) have proven to be valuable varieties either turned into wine or in various mixture with other varieties, so it is considered necessary to maintain all indigenous varieties in assortment of these vineyards, as are competitive on the world wine market.

References

1. Brad I., Peţ E., Iancu T., Toader C.-S., 2009, The analysis of areas and productions obtained in the wine

field of Timis County, Scientific Papers, vol. 52, Agronomie Series, University of Agricultural Sciences and Veterinary Sciences Iasi, 213-216.

2. Dobrei A., Sala F., Savescu I., Kocis E., Mustea M., 2007, Researches regarding viticultural exploitations size, production directions and varieties assortment cultivated in Romania's west region, International scientific meeting: „Multifunctional agriculture and rural development” (II), December 6-7th, NoviSad.

3. Heizer Mirela Gabriela, 2013, Personal considerations on the implementation of the vineyard register in Romania (Consideraţii personale asupra implementării Registrului Plantaţiilor Viticole în România), 2013, www.vonheizer.ro

4. Hosu A.D., Cimpoiu C., Pop N., Miclaus V., Bolboacă S.D., Jäntschi L., 2011, The analysis of different factors affecting the red wines antioxidant content, Notulae Botanicae Horti Agrobotanici Cluj-Napoca, Vol 39, No 1., p. 159-164.

5. Sala F., Dobrei A., Alina Ghiţă, Cristea T., Boc R., 2009, Viticultural systems in western Romania in the concept of the sustainable development, Agrar-es Videfejlesztési Szemle a Szegedi tudományterem mezogazdasági kar tudományos folyóirat, Vol.4 (1), Hodmezovasarhely, 2009, ISSN 1788-5345.

www.onvpv.ro

www.insse.ro

www.madr.ro