

## THE ANALYSIS OF AREAS AND PRODUCTIONS OBTAINED IN THE WINE FIELD OF TIMIS COUNTY

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*The last decade of the 20th century found the Romanian agriculture, as otherwise the whole economy in a profound process of transition to market economy principles. The law 18/1991 was a regulation attempt in legal terms of the evolution of agrarian structures in Romania. In the viticulture and wine making the things seem worse than in any other branch of agricultural production. Also in viticulture the private sector has an important share. But new properties are too broken, have small sizes and the current owners do not have even the inventory needed for the agricultural technologies in viticulture and do not have any specific professional knowledge that this industry, much more technical than other branches of agricultural production, requires from the managers of exploitations. In Romania, a little better situation was recorded in the big wine companies which arose amid vineyard patrimony of the former state agricultural enterprises. These companies were merged in the growing areas of large plantations inside vineyards or vines centers established, recognized, dominated by a natural environment that provides very favorable wine production.*

**Key words:** agricultural potential, viticulture, hybrid vine, final economic indicator

The agricultural potential that Timis county has is remarkable, because of large agricultural areas and of high quality soil. Although at present time it is under-valuated, in the future it is predicted to become one of the most attractive economic cooperation offers of Timis County for foreign investors. One of the oldest and most important agricultural activities in the county, having the favorable climatic conditions is growing cereals and technical plants, and in most villages of the plain and the hills of the county the viticulture is successfully practiced. Places like Recaș, Buziaș and Giarmata are big names in the country and abroad in terms of wine production. Banat vineyard comprises several vine centers: Recaș, Buziaș, Tirol, Teremia and Moldova Noua. Obviously one of the most important vine centers is Recaș where the red vine is predominant production.. Recaș red wines have earned a reputation unrivaled by the wine vineyards from the other parts of the country, except the Dealul Mare vineyard.

## MATERIALS AND METHODS

The purpose of this study is the scientific foundation and development of solutions, methods to achieve the greatest profit per unit area, where production takes place under normal conditions, meaning efficient production technologies and without climate accidents, the improvement of life quality and the sustainable rural development in Romania. The directions on which this study has been conducted aimed at a dynamic presentation of Timis County wine industry in order to know the reality faced by this sector to increase the quality of each of the four basic factors that influence the values of agricultural products: labor, fixed assets, land exploitation, biological factor.

## RESULTS AND DISCUSSIONS

Timis County has the largest agricultural area in the country, with 686,470 hectares where 530,781 hectares represent arable area. Timis county, with Arad, Caras-Severin and Hunedoara is part of Western Development Region 5. Among the counties of this region two of them make up a large agricultural percentage by the vegetable components, namely, Timis and Arad and the other two by the breeding and exploitation of animals, Hunedoara and Caras-Severin. In *table 1* we present the total land fund of Timis County, the main categories of agricultural use and categories of land for other uses: forestry, construction etc.

Table 1

The land fund of Timis county

Denomination	2002	2003	2004	2005	2006	2007
Total area	869665	869665	869665	869665	869665	869665
Agricultural area	702168	702066	701640	701225	700477	699470
Arable area	532858	533124	532869	532506	531593	530781
Pasture	126152	125875	125720	125626	125684	125504
Hayfields	29503	29503	29499	29498	29497	29482
Vineyards and vine nurseries	4314	4313	4310	4354	4457	4457
Orchards	9341	9251	9242	9241	9246	9246
Forests	109126	109061	109058	109057	109057	109059
Waters and swamps	15711	15719	15777	15777	15775	15774
Other areas	42660	42819	43190	43606	44356	45362

Source: *Statistic summary of Timis county 2008*

Analyzing the data shown in table 1 we can notice that Timis county has a total area of 869,665 ha, with a relatively stable structure in the 6 years of analysis. For simplicity we shall consider only the last year of the dynamic range, 2007, when the total area of the private sector was 686,470 hectares, meaning 78.93%. The county's total land area was 699,470 ha, where the private sector had 98.14%.

The structure of the land by usage categories is specific for the counties which have large areas of lowland areas. Thus, for the county overall we register the following situation:

- Arable area 530781 ha, meaning 75,88%;
- Pastures 125.504 ha, meaning 17,94%;

- Hayfields 29.482 ha, representing 4,21%;
- Vineyards 4.457 ha, representing 0,63%;
- Orchards 9.246 ha, meaning 1,31%.

The structural analysis shows that even by usage categories the land fund is owned by the private sector in proportions close to 99%. The most important usage category for Timis county is the arable area. The importance of this category of use is not derived from its use intensiveness level, but rather the fact that in this field we obtain the vast majority of primary products resulting, after processing, most of our food supplies. In terms of level of agricultural production intensiveness, the 1<sup>st</sup> and 2<sup>nd</sup> places are occupied by vineyards and orchards. The intensiveness level of these categories of use, namely agricultural branches, is given, on one hand, by the high level of expenditure per unit land area, and on the other hand by high levels of production in terms of value. In a rational exploitation, classified within the technology limits of modern farms, the profitability of this usage can reach 150% and even 200%. This means, however, to obtain the appropriate products not only from quantitative but also qualitative point of view. This last characteristic creates, in the field of fruit production, the possibility of valuation in exportation of a production loss, meaning better prices and higher profits. For the vine production the quality of wine grapes is an important parameter. The quality of the obtained wine depends on the quality of wine grapes. And as the industry specialists say, the quality of wine is the main parameter taken into account when they are sold on the European or global wine market. We should make a clarification here: the current conditions the parameters that an agricultural product or foodstuff, just as any other product regardless of the economic branch in which it is produced, to get out on the European market and beyond, are the quality and the price. Each of these two parameters is strictly dependent on planned production technologies and if they are applied in the on the field. Besides the technological aspects appears an influencing factor: the climatic conditions where the production takes place.

#### **The management and the exploitation of the vine sector in Timis county**

According to the official information published in the statistical summary of the Timis County, we mention the following sizes of:

- Vine production: 4.457 ha, meaning 0,51% of the land fund;
- Orchards: 9.246 ha, representing 1,06% of the land fund;
- Vegetable production: 9.762 ha, representing 1,12% of the land fund.

Usually vineyards and orchards are located in hill areas, either in the suburban areas of the large cities and towns where agricultural production is focused on vegetable production to ensure the fresh vegetables consumption of the population from the large cities, or in the high favorability plane areas with vegetable cultures ensuring the needs of the processing industries and the exportation needs. Timis county represents in some areas very favorable conditions for vines. The most intense areas of vines are grown in the hill area between Timisoara and Lugoj. The hills of this region have a south positioning, enjoy and adequate thermal and rainy treatment, enjoy a long blaze and have soils with a high content in limestone, something which is favorable for wine grapes quality and

consequently of the obtained wine. The largest vineyard area is Recas city. The most recognized wine region in Western Region 5, in terms of reputation and brand is the vineyard Receaș. But, whatever its rightful title, it should be noted that the vineyard center Receaș, as named in the treaties of viticulture, produces notably high quality white wines, recognized by domestic and foreign consumers. Receaș is famous for the highest quality white wines like Riesling, Fetească regala and Sauvignon Blanc and the red varieties like Cabernet Sauvignon, Cadarca, Pinot Noir, Merlot, etc. In addition to Receaș wine center, in the Timis county there large areas of vines in Buziaș, Teremia Mare, Tirol and Moldova Noua, the last two from Caras Severin County. But they have lower weights. We can say that the image concerning the vineyards of Timis County is given by Recas.

In *table 2* we present the vineyard areas from Timis county in the period 2000 – 2007, for each type of vine and vine production.

Table 2

**Vineyard areas, Timis county, ha**

Year	Total vines in bearing		Indigenous and grafted vines		Hybrid vines	
	total	asoc+ PH	total	asoc+ PH	total	asoc+ PH
2000	2463	1252	2180	969	283	283
2001	2747	1671	No information	No information	No information	No information
2002	2668	1911	2131	1374	537	537
2003	2795	1926	2433	1566	362	360
2004	3736	3712	3672	3648	64	64
2005	2659	1934	2262	1537	397	397
2007	2181	2181	2170	2170	11	11

Source: *The statistic summary of Timis county 2008*

The total area of vines in bearing in the period under review increased from 2463 ha in 2000 to 3736 in 2004, and in 2007 declined to 2181 ha. Note that after 1990 the vineyard area has decreased as a first step in an accelerated pace. This rate was determined by the age of plantations which have been cleared without planting others in place, and that large areas became the property of individuals who did not have adequate technical knowledge contributing to the degradation of plantations and their removal from culture. In 2007 from the total area of vineyards of 2181 ha, 2181 ha were the property of associations or of the population. One issue must be mentioned here: the entire area with hybrid vine is present in associations and households, the rest of it is in the trading companies, managed by managers specialized in viticulture and wine production. So the conclusion is that most of the Timis County area is occupied with grafted vines, meaning that the population from Banat is not satisfied by the quality of production of hybrid vines. Moreover we need to specify that the provisions of the European Union provide that 85% of hybrid vineyards to be grubbed up, they produce a wine unfit for human consumption as a result of toxic products which it contains. Moreover, it was established by agreement between Romania and the European Union that the area which will have to lift and the compensation that local wine producer will receive.

From this point of view, Timis county adopts such policy because, compared to 2002, the area of indigenous vine decreased considerably. The final economic indicator is the total production of grapes, on which depends, in fact, the production of wine. But the total production of grapes is an aggregate indicator involving the cultivated area and average yield/ha. Therefore further we give a brief analysis of the viticulture industry average production (*table 3*).

Table 3

**The average grape production in Timis county, in kg/ha**

Year	Total grapes in bearing		Indigenous and grafted vines		Hybrid vines	
	total	asoc+PH	total	asoc+ PH	total	asoc+ PH
2000	4482	4855	4426	4838	4912	4912
2001	4379	4454	No information	No information	No information	No information
2002	5062	3902	5382	3945	3791	3791
2003	6533	5341	6776	5439	4901	4917
2004	4825	4852	7516	7516	4779	4806
2005	5863	7013	6892	3476	No information	No information
2007	7530	7530	7554	7554	2909	2909

Source: the statistic summary of Timis county 2008

The overall average yield of grapes / ha in Timis county for 2007 can be considered as an average, being registered to the national average, can be considered only as being a modest production. The overall average grape production in Timis county, in 2000, was 4482 kilograms per hectare, a very modest one increasing in 2007 to 7530 kg / ha. Note that in Romania the normal production of wine grapes is at the 7.000-8.000 kg / ha, to in the countries known as vine producers like Italy, France, Spain, Portugal, Germany, the average grape yields often exceed 10.000-12.000 kg / ha.

Table 4

**The total production of grapes in Timis county, tones**

Year	Total grapes in bearing		Indigenous and grafted vines		Hybrid vines	
	total	asoc+GP	total	asoc+GP	total	asoc+GP
2000	11038	6078	9648	4688	1390	1390
2001	12030	7443	No information	No information	No information	No information
2002	13506	7457	11470	5421	2036	2036
2003	18259	10288	16485	8518	1774	1770
2004	18028	18012	17547	17531	481	481
2005	15590	13599	15590	5343	No information	No information
2007	16424	16424	16392	16392	32	32

Source: the statistic summary of Timis county 2008

In the period 2000 – 2007, the grape production of Timis County increased from 11,038 tonnes to 16,424 tonnes, the annual growth rate during the studied period, being 731kg/ha. The total production of grafted and indigenous grapes has increased from 9648 tons in 2000 to 16,392 tonnes in 2007, the difference in the total production is 6644 tons and the annual growth rate is 1107 kg / ha. For the hybrid vines the situation got worse, meaning a reduction in total production. The decrease occurred up to the stage where the lack of statistics was imposed so that the total reported production in 2004 was only 481 tonnes (the total for associations and households), and in 2005 there are no statistics and in 2007 the total production was 32 tones.

## CONCLUSIONS

If we take into account that the earth is only one form of capital and that management is by excellence a product of the human being, then we can say that in agriculture, capital and labor are the two major production resources. In the context of the increase of economic efficiency of production costs in agriculture, the size of the factors determining the production volume is not as important as the efficiency of their usage. A very important climate factor which can be found in Timis county is that in the plain and low hills, the springs are earlier than the rest of the country, and this is due to the penetration of warm air flows from the south-west. The agricultural branches of the wine production, fruit and vegetables production are the most intensive farming industries, meaning that these are the branches where the greatest profit is obtained per unit area, if the production takes place under normal conditions, with efficient production technologies and without climate accidents. The productive potential of the soils from low and very high plains of the two counties rivals with the soils from the Romanian Plain. However we can not say that yields have been according to the soil fertility.

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