INFLUENCE OF THE DIFFERENTIATED CLIMATIC CONDITIONS ON COMPOSITION OF WINES OBTAINED IN THE DEALU BUJORULUI VINEYARD

INFLUENTA CONDITIILOR CLIMATICE DIFERENŢIATE ASUPRA COMPOZIŢIEI VINURILOR OBŢINUTE ÎN PODGORIA DEALU BUJORULUI

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Abstract. *The climatic conditions influence the characteristics of the grape and wine composition. Plus sufficient rainfall above average and monthly distribution in 2013 have increased the potential specific grain variety and obtaining alcoholic wine than in May 2012 (severe drought) when grapes are left underdeveloped by blocking photosynthesis (high temperature, foliar burn) with negative repercussions on the accumulation of sugars without affecting color compounds. Wines of 2012 compared to the year 2013 are less alcoholic but with high bet on anthocyanins, polyphenols extract unreduced and staining intensity. In terms of organoleptic wine of the year 012 are higher than those in 2013 by extractivity, orietal flavors and brightly colored.*
Key words: *grapes, wine, acidity, anthocyanins, polyphenols*

Rezumat. *Condiţiile climatice îsi pun amprenta asupra caracteristicilor de compoziţie a strugurilor şi vinurilor. Precipitaţiile suficiente cu plus peste medie şi repartiţie lunară din anul 2013 au dus la creşterea boabelor specific potentialului de soi şi la obţinerea de vinuri mai alcoolice decât în anul 2012(extrem de secetos) când boabele de struguri au rămas nedezvoltate prin blocarea fotosintezei(temperaturi ridicate, arderea aparatului foliar) cu repercursiuni negative asupra acumulărilor de zaharuri fără să afecteze compuşii de culoare. Vinurile din 2012 comparativ cu cele din anul 2013 sunt mai puţin alcoolice dar cu conţinut ridicat în antociani, polifenoli totali, extract nereducător şi intensitate colorantă. Sub aspect organoleptic vinurile obtinute din anul 2012 sunt superioare celor din 2013 prin extractivitate, aromă specifică de soi şi intensitate colorantă.*
Cuvinte cheie: *Cuvinte cheie: struguri, must, aciditate ,antociani, polifenoli*

INTRODUCTION

The research conducted over the years have shown that goods quality wines are given by the diversity of natural conditions and intake also reflecting technological factor that contribute to their achievement (Postolache et al., 1994).

Top features of the composition of the wines were published starting 1992 (Ciubucă and Postolache, 1992) until now (Postolache et al., 2013). Research focused knowledge physico-chemical composition wines by analyzes of record, also was

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pursued after 2000 green technology for the production of grapes for red wines, and features the compositional 2003 (Postolache et al., 2003).

MATERIAL AND METHOD

The aim was to bet on the quality of wines according to climatic conditions in major vineyard white and red varieties Dealu Bujorului: Fetească albă, Fetească regală, Aligoté, Băbească gri, Riesling italian, Sauvignon, Burgund mare Băbească neagră, Fetească neagră, Merlot, Cabernet Sauvignon and Muscat Ottonel.

This paper presents data on rainfall and annual temperatures and during the ripening of the grapes and wine composition characteristics: alcohol, total acidity, volatile acidity, extract, intensely colored, glass, content in anthocyanins and polyphenols, vanillin reaction with , tannins and polyphenols report flavan / tannin (V / La).

RESULTS AND DISCUSSIONS

Annual wine climate is shown in Table 1. Rainfall in 2013 was very high, ranging from 637 mm to 448 mm above the annual average specific to our area and 454 mm during the growing season. The distribution of rainfall during this period was balanced every month except September when he fell a very large amount of rainfall 174.5 mm. In 2012 (dry year) recorded 412 mm of rainfall over 448 mm multiannual average and 203.5 mm during the vegetation of which 102.2 in May.

In terms of heat this period shows the average maximum July temperature of 34.3 0 C (2012) 2013 high heat and touched in August of 29.3 0C. Maximum temperatures very close to the maximum of 2013 S reported and in May, June and August, the equilibrated year. The average temperature during the ripening of grapes decreases in July from 20.7°C.... 28ºC September. Climate during ripening of grapes in 2013 (Tab. 1) was quite favorable for the growth of grains with uniformly in rainfall for July and August, except in September when he fell very high amount of precipitation, namely 174 5 mm.

The compositional characteristics of the wines are played in Figures 1 -5. Alcoholic wines since 2012 recorded values lower than those in 2013 due to drought 2012. in installed (Fig. 1) Total acidity values considered typical varieties except red varieties (Burgund, Fetească neagră 2012 and Merlot 2013) where malolactic fermentation was not carried out.

White wines produced in 2012 are very extracting, ranging between hard unreduced 20.50 g / l Feteasca albă and Riesling italian 41.60 g / l and red varieties Băbească neagră 24.10 g / l and 26.90 g / l Merlot. Unreduced extract content wines in 2013 is lower white varieties ranging between 18.50 g / l in Fetească albă 35, 60 Riesling italian variety and the red varieties recorded higher values of 24.90 g / l Babeasca neagră variety, Cabernet Sauvignon 36.9 g / l and Burgund 37.20 g / l. (Fig. 2)

Table 1

The comparative climate characterization(2012-2013) in center viticultural of Dealu Bujorului

Luna	T average (°C)		T minimum average (°C)		T maximum average (°C)		Precipitations (mm)	
	2012	2013	2012	2013	2012	2013	2012	2013
January	-1.3	-0.9	-4.7	-4.3	2.2	2.3	32.7	39.0
February	-7	2.9	-11.9	0.3	-2.9	5.6	21.1	36.4
March	6.0	4.9	0.5	0.6	10.8	8.7	6.1	36.1
April	14.9	14.1	7.7	8.2	20.8	19.3	14.6	27.3
May	19.7	20.5	13.4	12.9	25.1	25.9	102.2	83.2
June	24.3	22.6	17.0	17.1	30.3	27.5	11.9	58.8
July	28.1	23.3	19.9	16.6	34.3	28.3	27.1	38.9
August	26.1	24.1	18.3	16.6	32.4	29.3	23.1	71.1
September	20.7	16.9	12.5	11.6	27.5	21.4	24.6	174.5
October	14.6	12.2	8.8	7.5	20.3	16.4	42.0	40.9
November	8.2	9.5	5.0	6.1	11.1	13.0	4.3	26.1
December	-1.7	1.8	-5.2	-1.5	1.4	5.1	102.3	4.1

All wines in 2012 join in dry wines category, except that the Riesling italian variety witch is an sweet wine category (according to the applied technology), and the majority of wines are dry 2013 except Fetească albă Aligoté, Băbească gri that feeds on sweet wine category and variety Riesling italian category bet on sweet wines. After the color tint of young wines from 2013 shows a blue pigmentation -violacee slower than the 2012 wines.

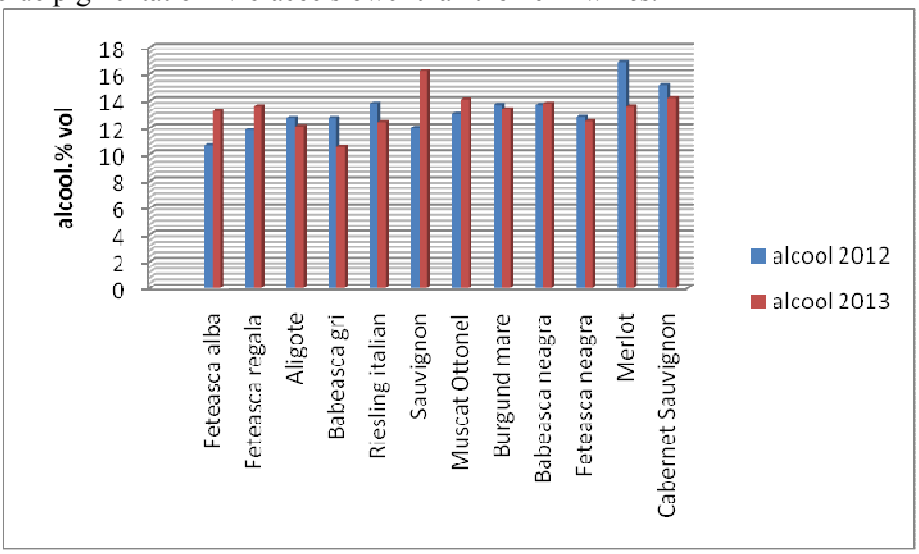

Fig. 1 - The potential alcoholic of wines, % vol.

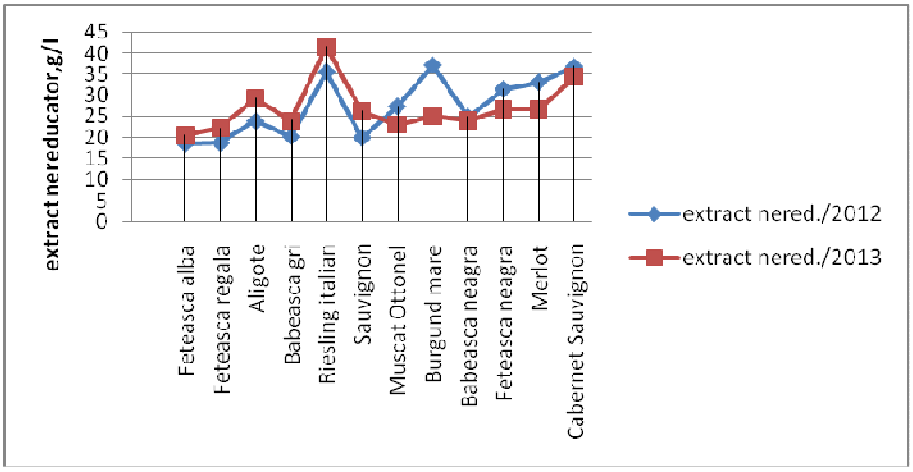

Fig. 2 - The content in wine extract unreduced, g/l

After the quantities of compounds color , the wines produced in 2012 recorded high values compared to those in 2013 (Fig. 3 and 4), although in 2012 was a very dry year when grapes remained small by blocking photosynthesis which resulted in negative accumulations bet on sugars without affecting color compounds

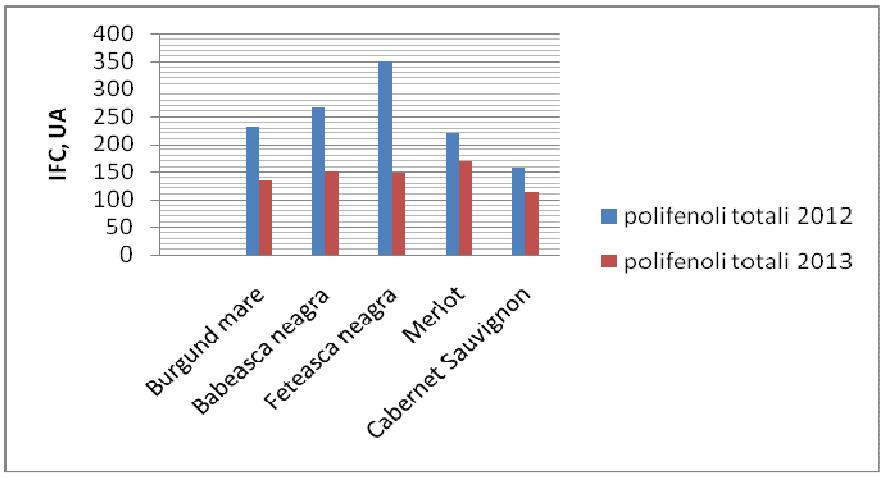

Fig. 3 - Index Folin Ciocalteu(IFC,UA)

Tannins in the wine are phenolic component witch conferring astringent taste characteristics. Tannins in the wine are likely condensed catechins, anthocyanins very close, hence the name of tannins proanthocyanidins. Tannin is an important factor for the preservation of wine, acting as an antiseptic, with fatty alcohol. Participate in the formation and stability of wine color, flavor and aroma of wine printing phenolic oenotanin witch is specific of red wines; contribute to

the formation of wine extract. The tannin content of wines was higher in 2013 with values between hard 2.10 g / l in Muscat Ottonel and 5.10 g / l Cabernet Sauvignon and wines in 2012 the amount of tannin was 0,41g / l Muscat Ottonel and 2.88 g / l Cabernet Sauvignon. (fig. 5).

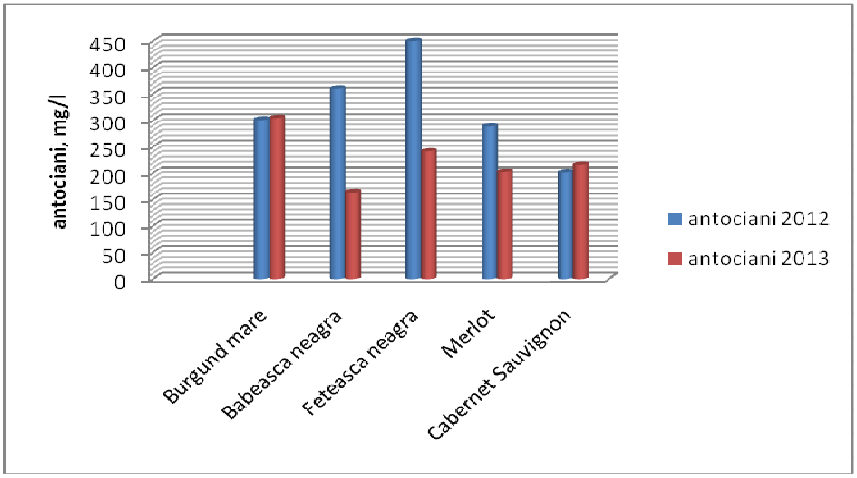

Fig. 4 - The content in wine anthocyanin, mg/l

The reaction of vanillin given degree of condensation of tannins which is inversely proportional to the intensity of the dye. The amount of tannins presented a dynamic similar to the polyphenols. In the case of wine in 2012, the report polyphenols / tannins ranged between hard 0.13 (Fetească albă) and 5.08 (Fetească neagră) and wines from 2013 report polyphenols / tannins was 0.22 (Fetească albă) and 8.34 (Burgund) .From organoleptic point of view wines of 2012 are higher than 2013 by extractives, varietal flavors and color compounds.

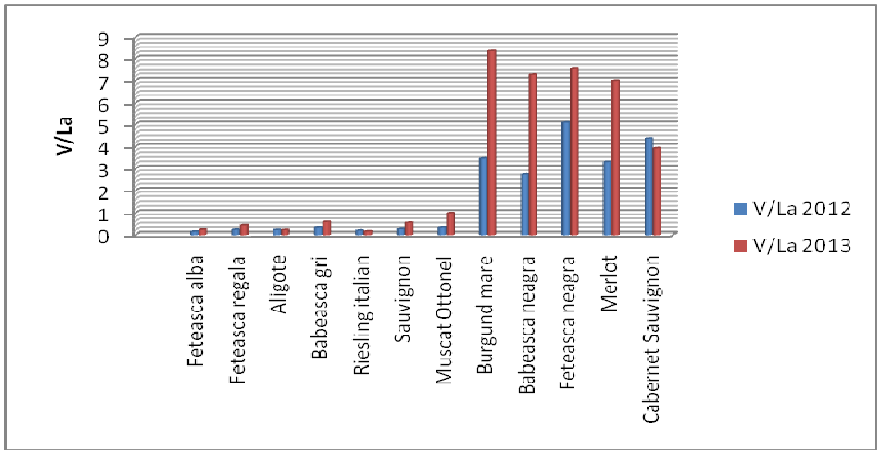

Fig. 5 - The report polyphenols flavan / tannin of wines

CONCLUSIONS

1. Plus sufficient rainfall above average and monthly distribution in 2013 have increased the potential specific grain variety and obtaining alcoholic wine than in May 2012 (severe drought) when grapes are left underdeveloped by blocking photosynthesis (high temperature, foliar burn) with negative repercussions on the accumulation of sugars without affecting color compounds.

2. The wines in 2012 compared with those in 2013 are less alcoholic but with high bet on anthocyanin, polyphenols extract unreduced and staining intensity.

3. In terms of organoleptic wines of 2012 are higher than 2013 by extractives, specific flavor variety and color compounds.

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