

NEW RESULTS REGARDING ENOLOGICAL POTENTIAL OF VARIETIES PINOT CULTIVATED IN SOUTH MEHEDIŢI HILLY VINEYARDS

Ionela Popa, M. Gheorghiu

¹University of Craiova, Faculty of Horticulture, A.I. Cuza Street, no.13. Craiova,
Dolj, E-mail: ionela.popa@yahoo.com

Abstract

In the conditions at a competitive scramble, which are in present on wins market, the produce quality is the essential acceptability criterion for the consumer with high pretensions. The variety, through his genetic nature, is the principal factor which gives the quality at the finite produce- wine. Between the highly quality varieties are Pinot group formed by Pinot Gris, Pinot Chardonnay and Pinot Noir. These are for obtain some exceptional quality wines, in traditional areas in Europe and in new wine-growing country like Australia, New Zealand and South Africa, too. Cultivate in famous vineyards Orevița and Golul Drâncei which are situated in south Mehedinți district, these varieties have an exceptional technological potential which are presented in this paper.

Keywords: vineyard, variety, enological potential, wins composition.

Introduction

In hilly areas situate in south Mehedinți district, for all times was and are the most favorable natural conditions for cultivated the pretentious varieties grapes.

Evidence writes about the quality and the fame of wines which are obtained at the end of XIX century and beginning at XX century and also the good effects on economy, we have the great scholars and specialists like: Rădulescu (1896), Nicoleanu (1900), Munteanu Carnu (1900) and Teodorescu (1929).

In that period, the wins are obtained using an autochthon assortment formed by: Braghină with red grape, Neagra (soft Black), black Coarba neagră and Tămâioasă with round grape.

After the Second World War the South Mehedinți viticulture was remade with strange varieties. Wins obtained by Cabernet Sauvignon and Riesling Italian varieties have received important medals in many international competitions.

In present, the South Mehedinți viticulture is development with some varieties for high quality red and white wines, which are capable to make face at the big competition on the world, wine market (Teodorescu, 1970). The results which are presented in this paper are about the enological potential of some varieties of grapes which are recently cultivated in Golul Drâncei vineyard.

Experimental

The researches were effectuated in the years 2005 and 2006 on grape varieties by Pinot group: Pinot Gris, Pinot Noir and Pinot Chardonnay cultivated in Opreșor – Golul Drâncei areas. Under enological aspects we were interested about following maturation process of grapes, the grape contents in glucides, acidity and anthocyan at the fullness and technological maturation process, the productivity and output elements of grapes and determination at the principal compositions characteristics of wines.

Results and Discussions

In the most favorable natural condition in Opreșor – Golul Drâncei areas, the grape varieties of Pinot group have a superior enological potential, aspects shown in table 1.

We can say at the fullness maturity, when the bigger grape productions at are vine and area conventional unity, the relative contents in glucides are between 209 and 224 g/l. This content can assure to obtain wines with an alcohol concentration about 12% vol. In all situations, at these moments, the acidity contents in grapes are also between 4.42 g/l (Pinot Noir - 2005) and 5.03 g/l (Pinot Noir - 2006) and they are adequately for high quality wines. In a same mode we can say for the anthocyan contents in Pinot noir grapes.

After 15-16 days, at technological maturity, the glucide proportions increase by all odds, many times, 230 g/l, without decrease under 225 g/l. These contents give the possibility to obtain a different

type of wins with residual sugar. In the same time that wins are good contents in acidity and anthocyanins for Pinot noir.

Table 1. The main compositions characteristics of grapes at fullness and technological maturity 2005 and 2006

Varieties	Production years	The fullness maturity			Technological maturity		
		Glucides g/l	Acidit. g/l H ₂ SO ₄	Anthocians mg/kg b.	Glucides g/l	Acidity g/l H ₂ SO ₄	Anthocians mg/kg b
Pinot Gris	2005	212	4.95	-	231	4.35	-
	2006	215	4.69	-	229	4.26	-
Pinot Chardonnay	2005	217	5.01	-	233	4.42	-
	2006	224	4.89	-	230	4.20	-
Pinot Noir	2005	216	4.42	662	225	3.93	782
	2006	209	5.03	654	231	4.06	779

The dates from table 2 can reinforcement the image of the Pinot varieties through big production 7 t/ha, accredited with economical advantage. Regarding the must output and relative contents in glucides, we obtain, like synthetic indicators, the glucides and alcohols quantity.

Table 2. The productivity and output elements of the grapes at technological maturity and over maturity in 2005 and 2006

Varieties	Production years	Prod. grapes. kg/ha	Output must l/100kg grapes	Must l/ha	Glucides g/l	Glucides kg/ha	Alcohol	
							l/ha	kg/ha
Pinot Gris	2005	7010	68.0	4767	231	1101	647.6	511.2
	2006	6968	67.2	4682	229	1072	630.5	497.7
Pinot Chardonnay	2005	7110	67.7	4813	233	1121	659.4	520.5
	2006	6870	68.1	4678	230	1076	633.0	499.6
Pinot Noir	2005	6880	66.9	4603	237	1091	641.8	506.6
	2006	7056	67.2	4742	231	1095	644.2	508.5

The glucides quantity in must 1072 kg/ha (Pinot Gris - 2006) and 1121 kg/ha (Chardonnay - 2005) and, also, the alcohols quantities 497.7 kg/ha (Pinot Gris - 2006) and 520.5 kg/ha (Chardonnay - 2005)

show that for tree varieties the different between productivity and output elements are small.

The level of the main composition characteristics of wins (table 3) gives the possibility to see the high enological potential of Pinot grapes. So, the alcohols content never decrease less than 12.8 % vol. but can increase at 13.3% vol.; acidity is between 3.76 g/l (Pinot Noir - 2006) and 4.24 g/l (Pinot Gris-2005); the glycerol content have values between 10.1 g/l and 11.2 g/l; a very good extractivity, over 22 g/l at white wins and between 25.4 and 26.1 at red wins; the value of glycerol proportion beside alcohols and the ash proportion beside unreducing extract are good arguments for enological potential of Pinot grapes group.

The dates from table 4 shows that the Pinot Noir red wins present a chromatic structure most favorable in point of view sensorial and visual. The anthocyanins contents are sufficient and the chromatic attribute (*Ic*, *Tc* and *dA*%) through his values shows a harmonious participation a yellow-orange and red pigments less than blue pigments. The wins have also “firmness” specifics for this type; aspects accentuate by totals polyphenols contents (2.62-2.74 g/l) and also tannins contents (2.36-2.42 g/l).

Table 4. The main compounds of poliphenoal complex by Pinot noir wins

Years	Anthocianins mg/l	Chromatics structures			Polyphenolis total g/l	Tannin g/l
		Ic	Tc	dA%		
2005	312	0.52	0.72	50.2	2.62	2.36
2006	336	0.57	0.70	51.34	2.74	2.42

Conclusions

The varieties of Pinot grapes dispose in Opreșor-Golul Drâncei areas by exceptional conditions adjustment for physiological and biochemical necessity. In this area the varieties shows a rather pipe character and can accumulated important glucides proportions without correction of must and wins acidity. The Pinot Noir varieties get in berry membrane sufficient anthocyanins contents. The wins, which are, obtain, under these aspects: alcoholic content, volatile acidity,

Table 3. The main physical, chemical and compositions of obtain wins by grapes variety Pinot (2005 and 2006).

Varieties	Wine-growing years	Alcohol %vol	Acidity g/l H ₂ SO ₄	Glycerol g/l	Residual sugar g/l	Unreducing extract g/l	Ash g/l	Glycerol 100/alcool	Ash 100/Unreducing extract
Pinot Gris	2005	13.1	4.24	11.2	4.7	22.1	2.10	10.8	9.50
	2006	12.8	4.16	10.7	10.4	22.3	2.15	10.5	9.64
Pinot Chardonnay	2005	13.3	4.06	11.0	5.3	22.9	2.18	10.4	9.52
	2006	13.0	3.98	10.9	8.4	22.4	2.21	10.6	9.87
Pinot Noir	2005	12.8	3.88	10.1	6.9	25.4	2.53	10.0	9.96
	2006	13.2	3.76	10.7	4.2	26.1	2.62	10.3	10.03

New Results Regarding the Enological Potential of the Pinot Varieties in South-Mehedinti Hilly Vineyards

glycerol, extract, ash, anthocyanins contents (for Pinot noir), glycerol · 100/alcohols rapport and ash · 100/extract are situated on the high quality range.

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