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Comparative Data Regarding the Grapes Maturation Evolution at Feteasca Regala, Chardonnay and Pinot Noir Varieties During 2008-2010, in the Jidvei Vineyard

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Abstract. The Târnave vineyard is special from the south vineyards. It includes the wines plantations from the Tarnave, Mures and Secas. The region relief is very troubled, with hills whose altitudes varies between 175 m and 544 m. The maturation as an evolutive phase is a physiological process , genetically coordinated which is characterized by morphoanathomic and chemical complex changes chimică.Physiology research undertaken **(Rhodes 1980, Champagnol 1984, Fregoni 1998, Burzo 1998,)** bring to attention of specialists two notions: maturation and senescence. On this line the maturation represents the physio-biochemical process by which the grapes made their quality of size, color, taste, flavor, etc., and senescence is the decline process in which essential irreversible take place that lead to damage cell ultra structure, to degradation processes, to cell death and obviously the gradual loss of quality characteristics.

Keywords. Grapes, grapes maturation, Feteasca regala maturation, Chardonnay grape variety maturation, Pinot Noir grape maturation and comparative studies between varieties.

INTRODUCTION

The maturation process is aimed from grapes ripe entry (beginning of maturation), by taking periodic samples of grapes that are analyzed in the laboratory. Maturation should be monitored by varieties in each vineyard block plantations: bearing live young entrants, living full time in production, declining living old, to determine as accurately how the grape maturation is evolving.

MATHERIAL AND METHOD

To achieve the research 3 grape varieties were taken in study: Fetească Regală, Chardonnay and Pinot Noir, from Farm 8, Jidvei, Dealul Dealul Răzoarelor.

As a working method the following determination were used: Determinatio of Total Acidity STAS 6182/25-73, mass of 100 grape grains, and the determination of the glucose-acidimetric index.

RESULTS AND DISCUSSIONS

In the Jidvei vineyard, the grape maturation is usually achieved during 24 September and the 5th October. The maturation process for the studied varieties it is achieved in e period of 35-55 days. From the ripening until full maturation the sugars accumulations are very fast, on a range of 25-35 days.

Grape Maturation Evolution at Fetească Regală Variety

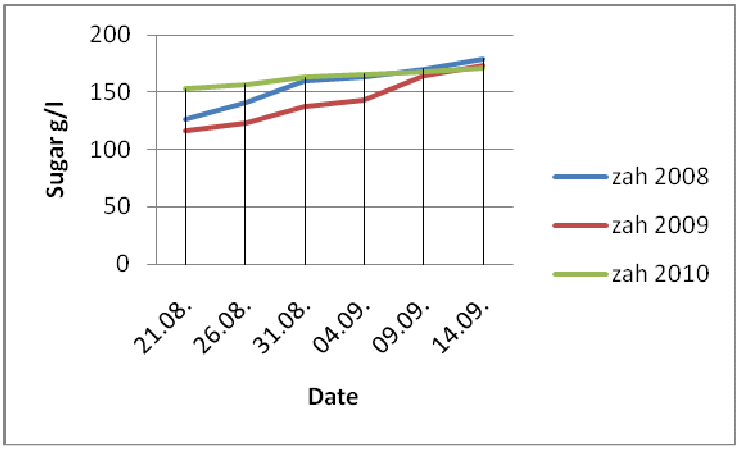

Fig. 1. Grape Sugar Evolution at Fetească Regală Variety

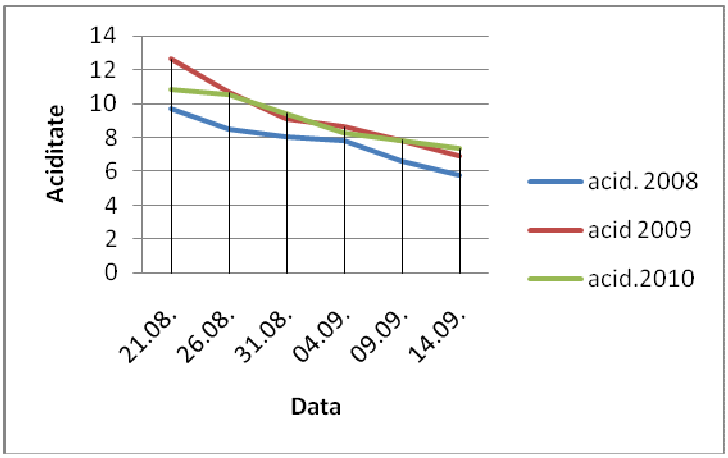

Fig. 2. Grape Acidity Evolution at Fetească Regală Variety

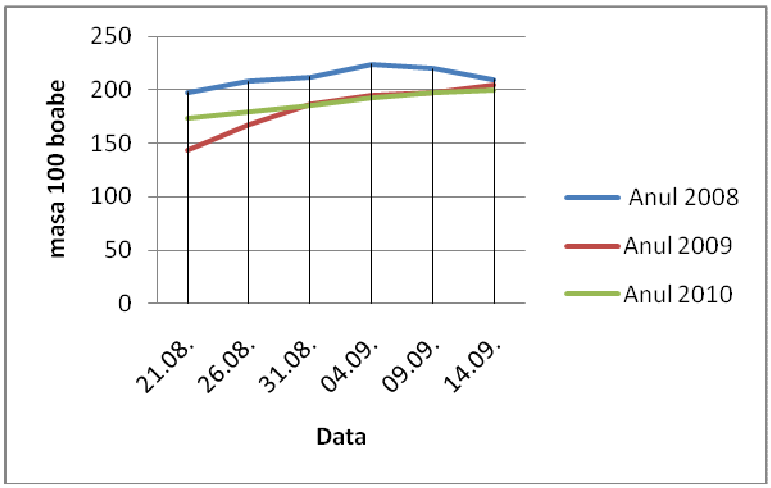

Fig. 3. Mass of 100 Grape Grains Evolution for Feteasca Regala Variety

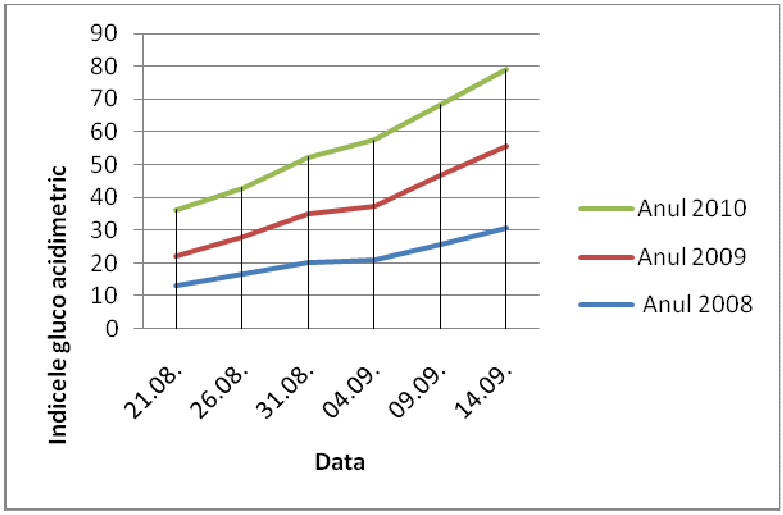

Fig. 4. Glucose Acidimetric Evolution for Fetească Regală Variety

Depending on variety and climatic conditions, the sugar content which accumulate in the grapes to full maturity varies between 125-204 g / l must. In 2009 variety Feteasca Regala had a more intense accumulation potential of sugars from the rest of the years due to pedoclimatic conditions that year, being a very positive year in this regard. The optimal time for harvesting depending on the sugar accumulation of weight gain acidity of the grapes is on 15 September.

Grape Maturation Evolution Chardonnay Variety

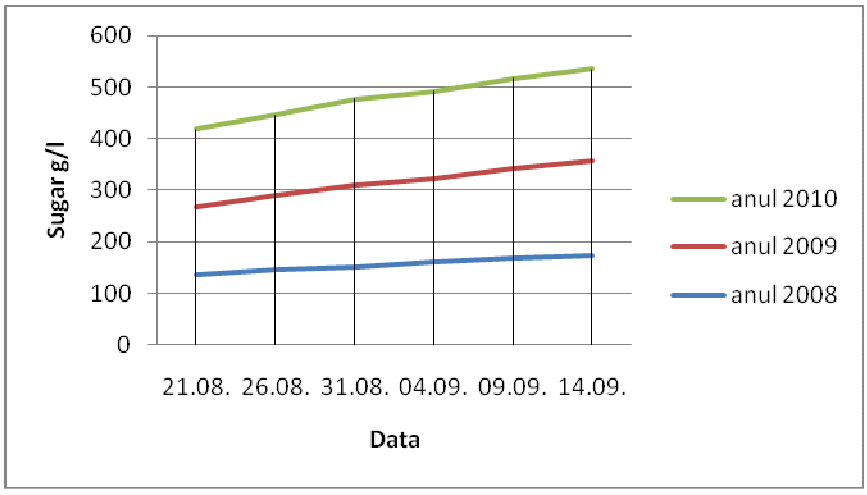

Fig. 5. Grape Sugar Evolution at Chardonnay Variety

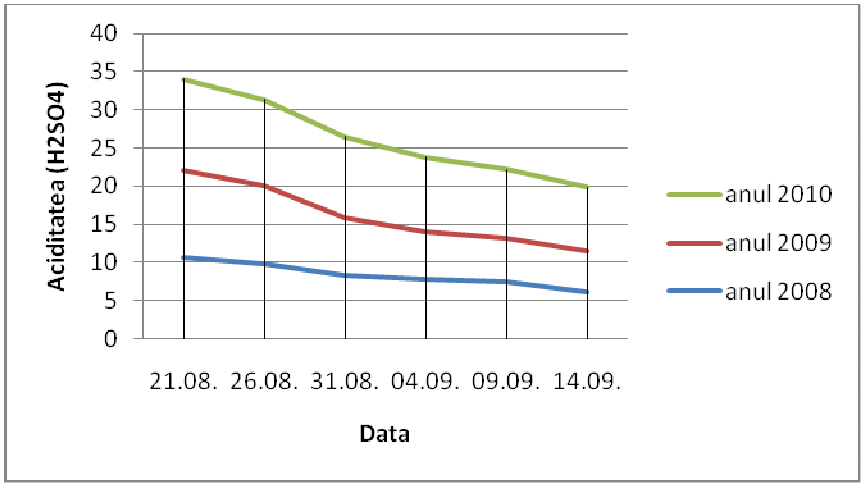

Fig. 6. Grape Acidity Evolution at Chardonnay Variety

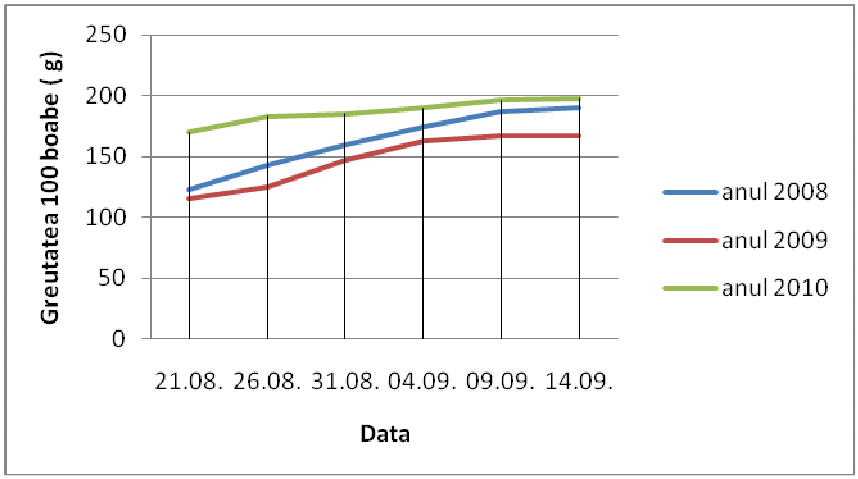

Fig. 7. Mass of 100 Grape Grains Evolution for Chardonnay Variety

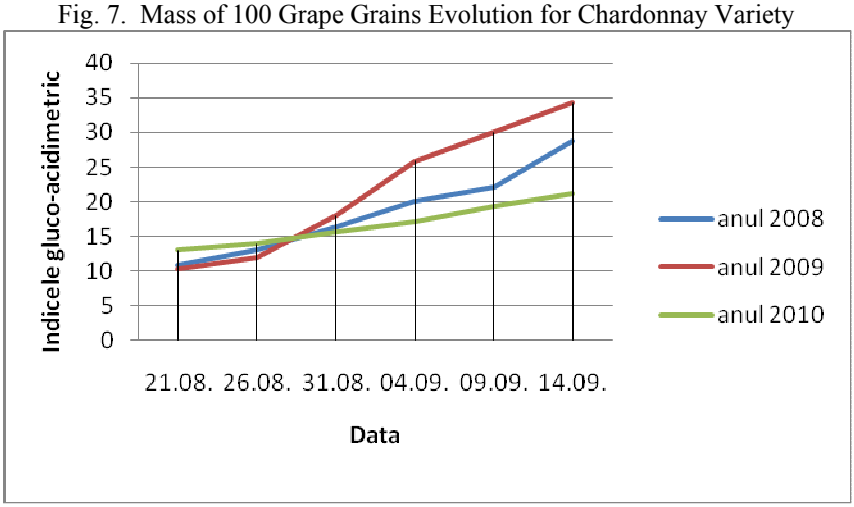

Fig. 8. Glucose Acidimetric Evolution for Chardonnay Variety

The dynamic of sugar accumulation ranges daily 1-3 g / l sugar in the time of ripening and the day of harvesting grapes or when the grapes reached the full maturity. During ripening, grain mass and content sugars is continuously growing, the curves on the graph of

maturation are rising, and total acidity decreases as the aging process progresses, the curve being decending.

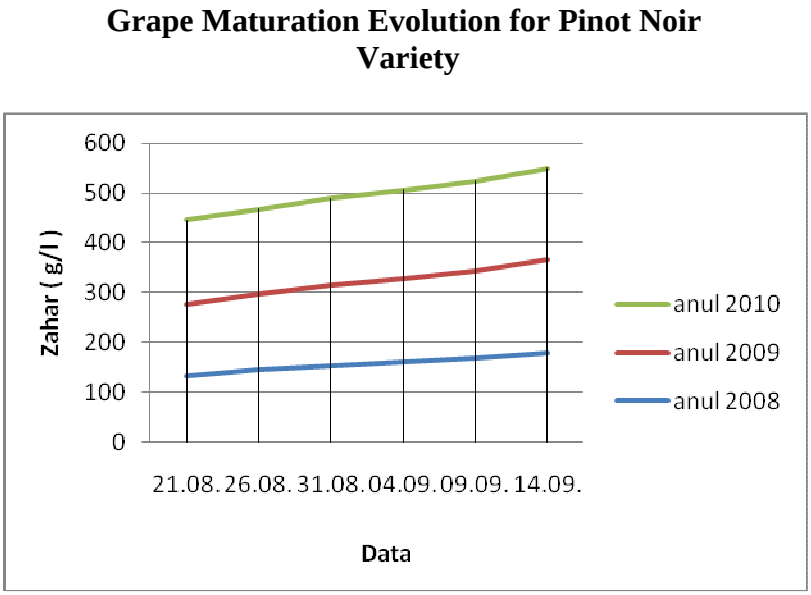

Fig. 9 Grape Sugar Evolution at Pinot Noir Variety

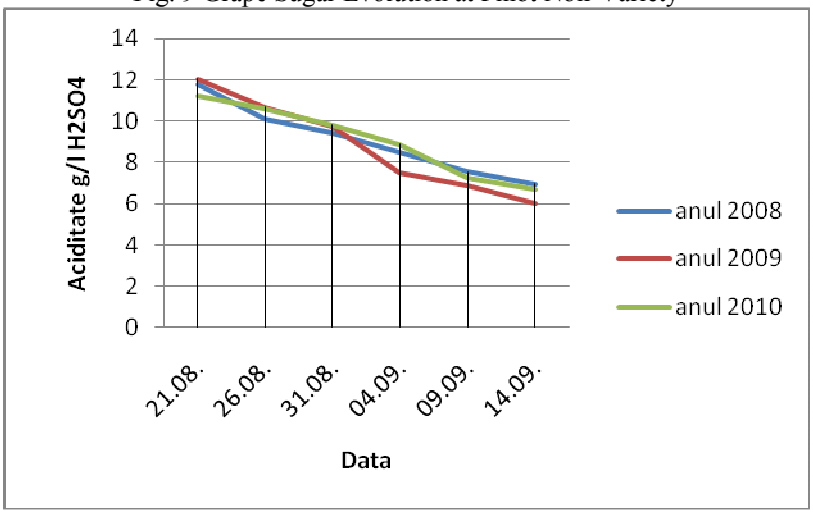

Fig. 10. Grape Acidity Evolution at Pinot NoirVariety

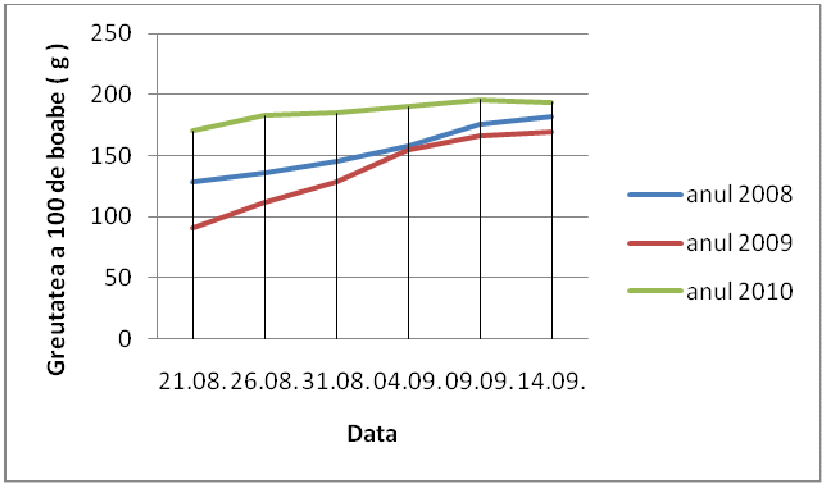

Fig. 11. Mass of 100 Grape Grains Evolution for Pinot Noir Variety

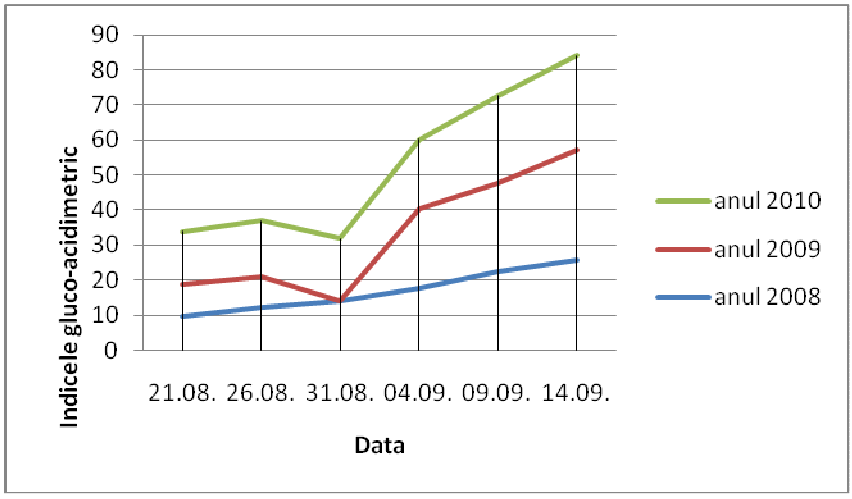

Fig. 12. Glucose Acidimetric Evolution for Pinot Noir Variety

2009 was a dry year during ripening, low rainfall and high temperatures during ripening were determined high rate of sugars accumulation. Sugars concentrations of Pinot Noir grapes, coupled with high acid proved to be a favourable environment for obtaining raw material for sparkling wines.

CONCLUSIONS

Given the climatic conditions followed during 2008-2010 ,and according to the results above, the Târnave Vineyard is perfect for obtaining superior white wines.

To obtain a quality sparkling wine are used dry wine made from whole and healthy grapes with the acidity of 6-7g / l sulphuric acid and 170 g / l sugar from the varieties: Chardonnay and Pinot Noir and Feteasca Regala.

Understanding the raw material is very important because it can be established scientifically, for each variety, the most appropriate direction for use; the quality of the base wine is for the sparkling wine quality.

Analyzing the data obtained and presented it is concluded that the grape varieties analyzed, Feteasca Regala, Chardonnay and Pinot Noir are suitable for use as raw material for producing base wine for the sparkling wine.

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