

ASSESSMENT OF BIOLOGICAL ADAPTATION TO CLIMATIC CONDITIONS OF DIFFERENT VITICULTURAL CENTERS OF VICTORIA VARIETY

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Abstract

Knowing the wine-growing bio-systems and the exact determining of the ecological relations between grapevine types and the environment have a special importance with the view to the scientific organizing of the high quality viti-viticultural production, to the choosing the maximum favorability biotopes for a sustainable, qualitative viticulture. Expanding the wine-growing crops, respectively, introducing new varieties in a certain area involves the evaluation of the ecological favorability of the area intended for this purpose. Thus, optimum and restrictive factors can be highlighted, a certain production direction for the investigated wine-growing centre can be imprinted, or those varieties best adapted to the existent environmental conditions can be chosen.

The confrontation between the Romanian wine-growing and the international or European market imposes the choosing and promoting in production of the most valuable varieties based on comparative studies (old and new ones) for each vineyard and wine-growing centre at turns.

The Romanian wine-growing will be competitive on the market if it diversifies the grapes varieties function on the usage destination, on the valuable native varieties along with the international ones, as well as promoting in culture the existent qualitative varieties and the valuable ones that are to be obtained.(1)

The comparative study had into view the determining of the following indicators of the respective variety in the two areas: the potential of real fructification (fertility coefficients: absolute and relative), the productivity potential of the variety (productivity parameters: absolute and relative), qualitative potential (grapes weight, must content in sugars and acidity).

1. INTRODUCTION

Extension of the vine culture, namely the introduction of a specific area of new varieties requires environmental assessment space allocated to this purpose. Doing so may reveal optimal and restrictive factors, you can print a direction of center of wine production can be investigated or choose those varieties which are best adapted to existing environmental conditions. [1]

Coping Romanian viticulture international market with the first European production should be chosen and promote the most valuable species, based on comparative studies of the old and new, for every winery and vineyard in the center part. Romanian viticulture will be able to say in particular by diversifying the types of varieties, depending on the intended use of the valuable local varieties as well as those introduced in the global range, and promoting the culture of quality varieties of existing and valuable will be obtained. [2]

Research on mass comportatea varieties were made by: Gh Constantinescu, M. Neagu, V. Popa, GH. Gorod, Otilia Toma Ioana Ionita, etc. To this end was a comparative study of the behavior of the variety Victoria in climatic conditions in the EDS Banu Mărăcine and INCDBH Ștefănești.[1]

2. MATERIAL AND METHODS

During the period 2008-2009 were carried out research on some table grape varieties with different maturation periods, varieties with valuable attributes which can complement agrobiological market requirements.[2]

For commercial look like but also qualitative characteristics of the particular variety was found on Victoria. To this main qualities of this variety was planted and studied in 2 different plantations at the EDS Banu Mărăcine and INCDBH Ștefănești. Plantations have up to 10 years old, and hubs were grafted to Kober 5BB, distance 1.2 / 2.2 m and 0.9 / 2.5 m. The form of management of the hub was stripped

semitall Guyot. The study was conducted over a period of 2 years and consisted in determining ampelographic, agrobiological and technology varieties.[3]



Fig.1- Victoria-grape

The first experimental device was placed in the experimental vineyard of the resort polygon Teaching University of Craiova, framed in terms of administrative Banu Mărăcine wine vineyard in the center.[3]

Thermal regime of the center is leading wine Banu Mărăcine particularly rich thermal resources, this being a prerequisite for obtaining products favorabilității its wine quality. Thus, the annual average temperature (averaged over 35 years) is 10.7 ° C, average monthly temperatures ranging between - 1.9 and 21.2 ° C for the same period considered.

Fund of the polygon pedological experiment is represented by soil type - foxy protosol few luvic. Texture predominantly middle ground gives such a high value for native vines.

Pedo-climatic conditions of the device are two specific vineyard Ștefănești. Experimental field was located on a brown clay soil - iluvial, Lutoasa to clay-textured clay .. Under climate issue within the area belongs Institute II moderately warm - including semiumedă area characterized by average annual temperature between 8 -10.5 ° C.

Looking briefly climate data (air temperature, air humidity and rainfall) recorded in growing centers and Ștefănești Banu Mărăcine in 2008-2009 shows that average monthly values of temperature fall within normal limits and

ensure the conditions necessary for the conduct physiological processes and necessary for growth and biochemical rodirii vine.

Observations and determinations were made on varietal resistance to frost in winter, vigor hubs, carrying major fenofaze, during the growing season were calculated coefficients of absolute and relative fertility, indices of productivity, quality and quantity of grapes.

3. RESULTS AND DISCUSSIONS

The percentage of fertile shoots as an indicator of potential actual fruition of varieties in a vineyard area, provides information on specific genetic potential of varieties but also soil and climate resources and recovery of cultural value system, depending largely on the characteristics and fotoperiodicitate accumulation of nutrient reserves.[1]

The study compared the percentage of fertile shoots in the varieties analyzed provide evidence in a number of differences within the same variety of different areas. Thus, agro-pedo-climatic conditions of growing centers Banu Ștefănești Mărăcine and the variety Victoria is leading a high fertility on the block. (Figure 2).

Fertility Fertility expressed by coefficient values (cf. and CFA) shows the obvious differences between plantations and between vines. Mean relative fertility coefficient ranged between 0.84 and 0.86 (the Banu Mărăcine) and 1.03 and 1.42 (at Ștefănești) and the absolute fertility coefficient of between 1.45 and 1.37

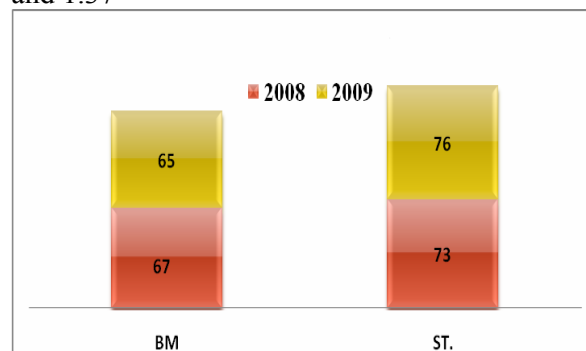


Figure 2 - Percentage of fertile shoots in table grape varieties for wine Banu Mărăcine Victoria centers and Ștefănești

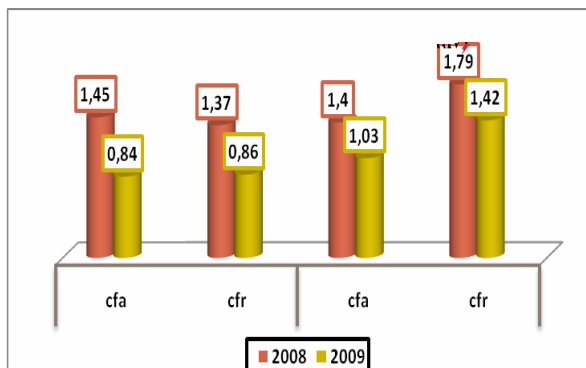


Figure 3 - Fertility variety Winning the plantations of the Banu Mărăcine and Ștefănești

(Banu brambles) and 1.79 and 1.4 (Ștefănești). (Figure 2). We note also that the fertility potential of the variety studied is much lower than in the vineyard in 2009, thanks in particular sub-optimal moisture conditions.(2) To better express the yield potential of varieties in relation to cultivation conditions, we calculated indices of relative and absolute productivity (IPR and IPA).

Relative productivity index, which shows how a vine is producing on average, in addition to the growing significance of value terms, the function of determining the load of shoots per unit area or block to achieve the planned production.(3).

Very good results in terms of productivity stands at Ștefănești, productivity index values of 885-797 for the productivity index ratio (IPR) and, 1115-1083 for absolute productivity index (IPA). Fig.3 Mărăcine (171-163g / 1 sugar in the mash) which is maintained constant those two years and weight of grapes (400g).

Grape acidity ranged in both experiments, the value of 3-3,4 g / L H₂SO₄.

In regard to potential quality (fig 4), it was found that the greatest potential for accumulation of sugars was highlighted at the center of the variety Victoria B.[2]

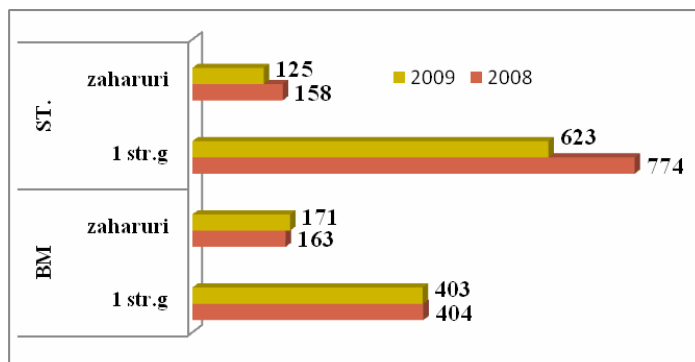


Fig.4. Quality potential at full maturation of some variety

4. CONCLUSIONS

Climatic conditions Ștefănești-growing centers Arges and Banu Mărăcine-Craiova had a positive influence on the main features and technological agrobiological variety for table grapes Victoria remarcândese particularly by grain size and grape.

High accumulation of sugars is recommended in addition to good looks fit variety Winning the category table varieties greatly appreciated and can substitute other varieties of range.

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