

THE BEHAVIOUR OF SOME VARIETIES FOR SEEDLESS GRAPES-CANNER - IN VINEYARD OF ȘTEFĂNEȘTI-ARGEȘ

Cezarina NECULA¹, Camelia POPA², Stefania IORDACHE¹, Clara STIRBU¹

¹University Valahia, Targoviște

²INCDBH, Ștefănești

Abstract

The distinct trait comprised in the nowadays and future programmes concerning the genetic improving the grapes with the view to getting more productive and qualitative varieties, with higher resistance to the main diseases and pests. They also take into consideration the genetic changed varieties, having qualities able to respond to the more efficient intervention of mechanization or to the new and simple culture technologies. Because the Romanian viticulture comprises just a few varieties destined to the raisins production, it is desirable to extend in culture new varieties of this group, where from, as many clones as possible will be then selected. In the experimental fields from INCDBH Ștefănești there was conducted a comparative three years study on the main seedless varieties. The attention of researchers was especially got by the Canner variety, a seedless one with medium ripeness. In order to make a presentation of the main qualities of this variety, it was compared to the Perlette one, which is more extended in the Romanian vineyards. The study was conducted on a period of three years and consisted in ampelographical, agrobiological and technological determination of this variety compared to Perlette.

Key words: maize, hybrids, biomass components.

The Romanian viticulture impact on the international and especially European market imposes to choose and promote in production the most valuable varieties on the basis of comparative studies between old and new varieties, for each vineyard and viticulture centre, separately.

The Romanian viticulture will be able to assert itself through a diversification of assortment varieties function on the usage destination, on the valuable native varieties but also on those foreign varieties introduced in culture and through promoting in culture some existent and future valuable varieties.

Researches on the behavior of some consumption varieties were conducted by Gh., Constantinescu, M., Neagu, V., Popa, GH., Gorodea, Otilia, Toma, Ioana, Ioniță ș.a.

MATERIAL AND METHOD

During the period 2006-2008 there were conducted researches on some varieties of consumption and seedless grapes, varieties having valuable agrobiological traits which can complete the market demands.

For their good commercial aspect but also for their special qualitative traits, the Canner seedless variety was highly appreciated, which made it the subject of a study for many years, under different climatic conditions.

The varieties are fruitful in an ampelographic collection at I.N.C.D.B.H. Ștefănești. They were grafted on the Kober 5 BB graft and planted at a distance of 2,5 m between rows and 0,9 m on the row. The grapevine shape was Guyot on medium-tall stems.

The pedo-climatic conditions are specific to Ștefănești vineyard. The experimental field was located on a clay-brown soil, having a loam to clay texture at the surface – 60-80cm depth, and deeper the clay was 1,82 cm even smaller at high depth. The potassium element is better presented in horizon A at a depth of 0-20 cm.

The climatic data were collected from the own database of Ștefănești Institute, covering the period 2006-2008 (three years). From climatic point of view, the Institute is located in a mild-warm-semihumid area which is characterized by medium-annual temperature of 8 – 10,5°C, solar radiation of 114 - 128 Kcal / cm², the sum of temperature beyond 0°C between 3400 - 4100°C, beyond 10°C between 2800 - 3500°C and superior to 10°C (effective) - 1100 - 1600°C. The medium annual precipitation have values between 450 - 700 mm.

There were conducted observations and determinations on the varieties resistance during winter frost, the grapevine vigor, the main phenophases order, the vegetation period duration, there were calculated the absolute and relative fertility coefficients, the productivity indexes, the quantity and quality of grapes production.

RESULTS AND DISCUSSIONS

Morphological characteristics: *The adult leaf* is large pentagon-shaped, with big teeth, glabre. *The grape* is large, lax and with many branches. The grape is medium-sized, elliptic-shaped and yellow-green-coloured, rusty-coloured on the side exposed to sun.

Agrobiological and technological characteristics: The variety is part of those ones with very high growth vigour. It shows medium tolerance to low temperatures during winter and to manna and *Uncinula necator*. It reaches maturity during IV epoch.

The phenophases order is much synchronized to the influence of climatic factors. In table no.1 are presented within limits (the first and the last day of the phenophases) during the three study years (2006-2008).

The value of the bud viability percentage has demonstrated that the four presented varieties showed a good resistance to frost, which is not specific to seedless varieties. The most varieties showed more than 75% viable buds. The Canner variety proved to be more resistant to frost than the Perlette variety.



Figure 1 Canner Variety

Table 1

Varieties phenophases (2006-2008)

Nr. crt	Variety	Budless	Bloomed	Medium-ripened	Full maturity
1	CANNER	13.04 – 23.04	26.05- 17.06	20.07-28.07	16.08 – 09.09
2	PERLETTE	09.04 - 18.04	24.05 – 08.06	15.07-30.07	05.08 - 28.08

As for the weight of 100 grapes (*fig. 3*), the differences are very high, varying between 315-501 g Canner variety, compared to Perlette variety – 185-200 g. To be noticed that the analysed variety shows a weight of the grape (*fig. 4*) of 298

– 498 g, this one not being affected by the summer drought.

During the years favourable to viticulture, the grape of the respective variety exceeds 7 g, a value which is rarely seen in case of seedless varieties

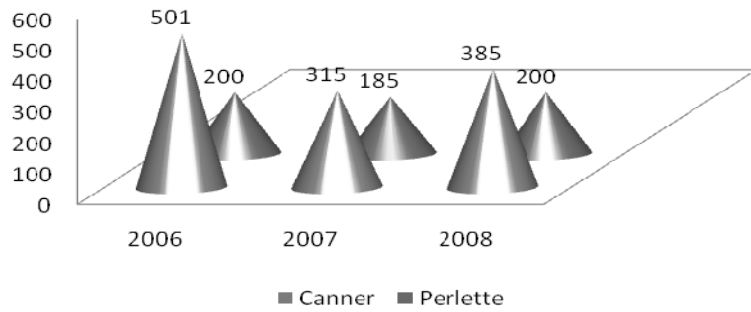


Figure 2. Buds viable

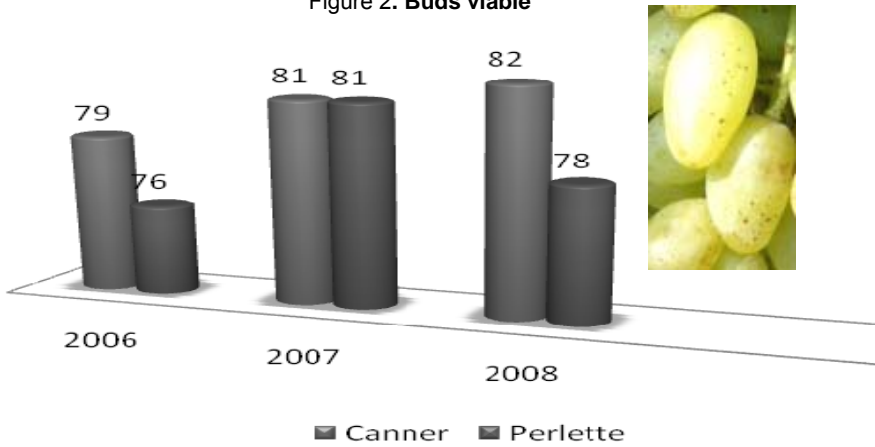


Figure 3 Weight of 100 grapes - 2006-2008

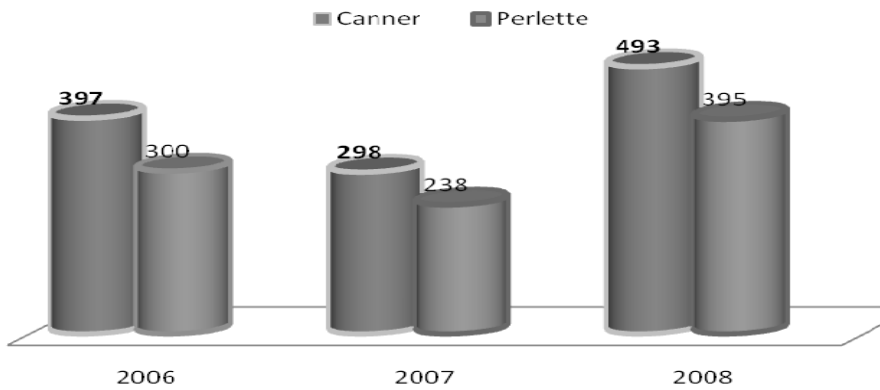


Figure 4 Grape weight

Some other elements contributed to the qualitative traits of this variety, such as: the grapes weight (396) and of grape (100 grapes – 400 g), which exceeded the standard variety with 100 g, respectively 300 g (fig. 3).

As for the content of sugar from the grape must, this is typical to the grapes variety used in confiture production, with medium ageing. Higher accumulations of sugar in 2007 – 220 g/l are noticed in case of Canner variety, and constant values for Perlette variety – 135g/l (fig. 5).

The grapes must acidity was higher in 2008 in case of Canner (4,1 g/l H₂SO₄), and lower in 2007 (3,25 g/l H₂SO₄).

The productivity indexes: absolute and relative ones proved to be also higher in Canner (medium value 2006-2008 was of 437 IPA și 230 IPR) which include it into the productive seedless variety group.

The medium production per hectare varied during the three study years from 3,15 hg/grapevine in 2007 to 7,9/hectare in 2008, function on the climatic conditions of the viticulture year. The rainfall in June 2009, which is the period when the grape gets shape is one of the indexes that helped to the development of the grape and, implicitly to the achievement of grapes production.

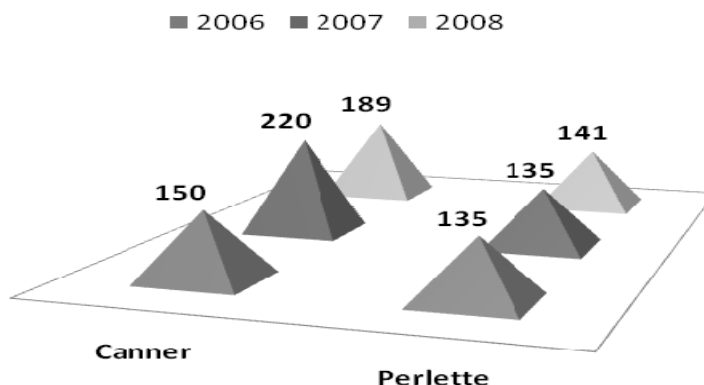


Figure 5 The sugar grapes must content (g/l)

CONCLUSIONS

Of the total plant biomass of corn, in average of the three years of experimentation, grains are the largest part 40 - 46.3%.

Under the climatic conditions of the wine-growing centre Ștefănești-Argeș, the Canner seedless variety showed a good behaviour, being remarked for the grape and bunch of grapes size.

The high accumulation of sugars recommends it as a good variety for confiture and mass consumption, being able to replace some other varieties from this sortment.

It is recommended to use the variety in hybrid combinations with the view to create new varieties.

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