RESEARCH ON AGROBIOLOGICAL ADAPTATION OF TABLE GRAPES VARIETIES IN THE VINEYARD STEFANESTI-ARGES

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Abstract
To improve the sortment of vatietis for table grapes at Ştefăneşti´s vineyard the the behaviour of four varieties: Augusta, Victoria, Argessis and Transilvania was observed for a perioad of 3 years. The table varieties have presented some superior characters of adaptation to the Ştefăneşti´s vineyard condition, this is why this this varieties was the subject of a detailed study. The authors recommend these varieties to be checked in the production plantations. During the period 2007-2009 were carried out research on a number of four native varieties for table grapes ripening with planting different varieties with valuable traits that can complete the requirements agrobiological market from July to September. Varieties are in a collection bearing the INCDBH Ştefăneşti ampelography.
In the study observations were made and determinations of frost resistance of varieties of winter, vine vigor, carrying the main phenophase, duration of vegetation period were calculated and relative percentages of fertility, indices of productivity, quality and quantity grape production.

Keywords: phenophase, varieties for table grapes, production, adaptation, frost rezistance

I. INTRODUCTION

Romanian viticulture confrontation with the international market with the first European production requires selection and promotion of the most valuable varieties, based on comparative studies of old and new, for every winery and vineyard in the center part.

Romanian viticulture will be argued in particular by re-assortment to share valuable local varieties, and promoting the culture of quality varieties of existing and valuable to be obtained.

An important objective of growing the practice is today the creation of new varieties adapted to climate and soil conditions, some varieties of table grapes with complex biological resistance.

2. MATERIAL AND METHOD

During the period 2007-2009 were carried out research on a number of four native varieties for table grapes ripening with planting different varieties with valuable traits that can complete the requirements agrobiological market from July to September.

Varieties are in a collection bearing the INCDBH Ştefăneşti ampelography. There have been grafted onto rootstock Berlandieri x Riparia Kober 5 BB and planted at 2.5 m distance between rows and 0.9 m at a time. The government of the hub was semitall Guyot . Pedo-climatic conditions are specific Ştefăneşti vineyard. Experiences from the vines were placed on a brown clay soil - iluvial with clay to loam-clay texture in the first 60-80 cm depth and texture is sandy in depth. Surface soil structure is as follows: soil reaction is acidic (5.6), humus is 1.82 and decreases in depth element potassium fared better in the A horizon, 0-20 cm in depth, this soil fall within the soil well supplied with potassium (40 mg/100 g soil). [1]

The meteorological data used were extracted from our database of research at the Institute Ştefăneşti collected between 2006 - 2009 (4 years). Under experimental territory belongs to the climate issue II, moderately warm - characterized by semi-humid area that includes an average annual temperature between 8 -10.5 ° C, solar radiation of 114 -128 Kcal / cm2, the sum of temperatures higher than 0 ° C between 3400 - 4100 ° C above 10 ° C between 2800-

3500 ° C and 10 ° C higher than the (actual) 1100 -1600 ° C. The area is also characterized by average annual rainfall between 450 - 700 mm.

3. RESULTS AND DISCUSSIONS

In the study observations were made and determinations of frost resistance of varieties of winter, vine vigor, carrying the main phenophase, duration of vegetation period were calculated and relative percentages of fertility, indices of productivity, quality and quantity grape production.

Varieties studied are:

AUGUSTA-A was obtained by controlled sexual hybridization Italy x Queen variety of vineyards, the Agronomic Institute Bucharest (Magdalena M. Neagu and Georgescu). Approval was variety in 1984. It requires the earliness (II era of aging), size and look to the grapes.

VICTORIA - It is a complex hybrid produced by crossing varieties: Cardinal x (Alphonse Lavallée x Ahmeur Ahmeur ox) x affusion white Ali. Hybridization were performed in the Research Institute of Horti-growing (ICHV) Bucharest, by Victoria Lepădatu. Work continued at SCV selection Drăgăşani, the variety was approved in 1978. It is one of the most valuable works of Romanian varieties for table grapes. It requires the earliness, but especially the grapes look very nice and high productivity.

STEFANESTI GOLDEN -was obtained by controlled hybridization between varieties: the beautiful white x INCDBH Ştefăneşti Augusta. (Camelia Popa, Gheorghe Smaranda, Margaret Bădiţescu) and approved in 2007. The novelty consists of: era of maturing grain golden yellow color, very round, good tolerance to disease.

ARGESSIS - Obtained through controlled sexual hybridization between varieties x Moldova Augusta INCDBH Ştefăneşti-Arges. (Margaret Bădiţescu, Camelia Popa). The variety was approved in 2002. It is distinguished by its beautiful appearance, the size and shape of grains and very good resistance to major fungal diseases.

Performance is synchronized phenophase complex the climate. In Table 1 gives the range (first and last day of phenophase) in the four years of study (2007 to 2009)[2].

The value of the percentage of viable buds showed that the four varieties have shown good resistance to frost. Most varieties had more than 80% viable eye, studied varieties having very similar values between them. [3]

Regarding fertility, the four varieties have averaged more than 63% shoots with fruit, the variety Victoria pepăşind at least 10% other varieties (Fig.1).

The production of grapes per vine varied from one variety to another and from year to year. In 2001 there were wine highest production values, variety Argessis reaching 6.1 kg / but., Followed by varieties: Augusta (5.25 kg / but.) Victoria (4.10 kg / but.) and Transylvania (3.33 kg / but.). Due to prolonged drought in 2000 growing grapes have stagnated and some varieties of raisins have suffered, losing weight, and production dropped considerably. This year's productions have ranged from: 2.9 kg / but. (Argessis) and 1.3 kg / but. (Augusta) [2].

Table. 1 Nain Phenophases Varieties (2007-2009)

Nr.c	**Soiul**	*Budless*	*blooming*	*mellow*	*full maturity*
1	**AUGUSTA**	07.04 – 10.04	24.05- 01.06	13.07- 18.07	17.08 – 05.09
2	**VICTORIA**	11.04 - 18.04	25.05 – 06.06	18.07- 29.07	05.09- 10.09
3	**AURIU DE ŞTEFĂNEŞTI**	04.04 - 14.04	23.05 – 30.05	09.07 – 15.07	25.08- 01.09
4	**ARGESSIS**	12.04 – 15.04	25.05 – 01.06	17.07 – 28.07	10.09 – 15.09

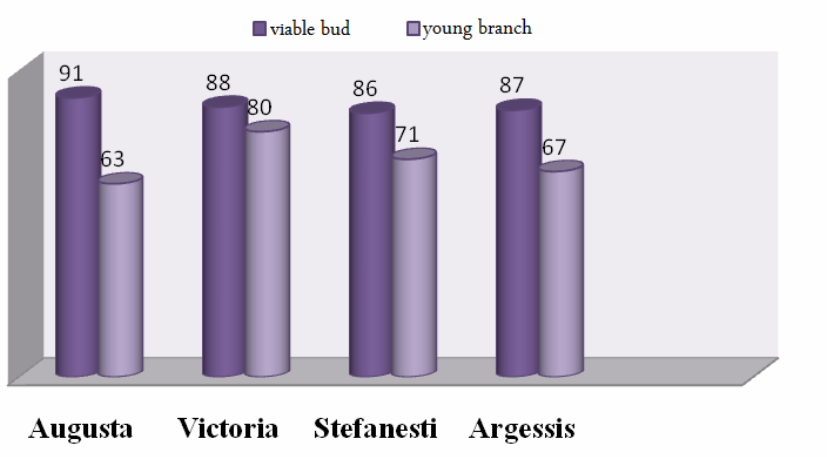

Fig.1. Elements bud viability and fertility of tillers (%) average in 2007-2009

Fig.2. The content of the wort sugars (g/ l) and acidity (g / l H2SO4) media from 2007 – 2009

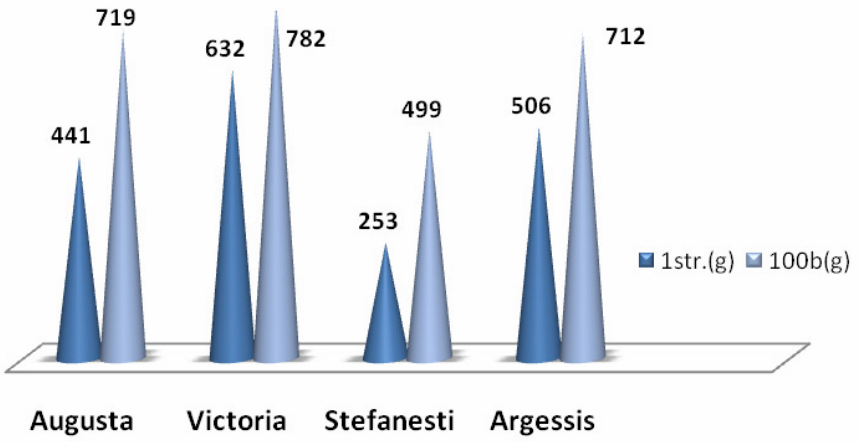

Fig.3. Grape and grain weight (average 2007-2009)

By media productions on four years of study, the varieties are classified in descending order as follows: Victoria (8.6 kg), Argessis (8.4 kg), and Gold St. Augusta. (6.3 kg). Calculated average production of grapes per hectare, within the group of productive varieties, with over 10to/ha. The average maturity of the grapes in sugar consumption varied from 128g / l and 153g Ştefăneşti variety / varieties him and Augusta Victoria. On average three years, have accumulated large amounts Argessis varieties of sugar.

Low quality items (sugar and acidity), grape and grain weight are mass varieties qualifying criteria. Varieties are listed with each post so hard, all reaching high values for this indicator (Fig.nr.3)

Grain size, expressed by weight of 100 grains on average presented values ranging from 792 g (Victoria) and 499g (Gold of Ştefăneşti). The weight of a grape, repeated their determination by weighing the stumps for 10, kept the same ranking as for grain weight. Thus, had the largest grape varieties Argessis Victoria (632-506), followed by Augusta and A.de Ştefăneşti varieties .

4. CONCLUSIONS

Under the climatic conditions of growing center Ştefăneşti-Arges, four varieties produced (Augusta,Victoria, and Gold of Ştefăneşti, Argessis) had higher qualitative characteristics of existing varieties or growing market.

Above varieties can not compare between them. Each, for the time of baking is very valuable.

It is recommended the planting of large areas such as replacement of varieties and varieties with these qualities are lacking.

5. REFERENCE

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