

EVALUATION OF THE CONSUMER PREFERENCE FOR SWEET CHERRY FRUITS AT THE “SWEET CHERRY FEST” IN ISTRİȚA - BUZĂU

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Abstract

Since 2013, the University of Agronomic Sciences and Veterinary Medicine of Bucharest yearly organizes at the Istrița Nursery and Didactic-Experimental Farm the “Sweet Cherry Fest” in the first decade of June. The event is part of the “Agriculture for Life, Life for Agriculture” International Conference programme and consist in a large sweet cherry exhibition and tasting of fresh sweet cherry fruits gathered from own trial orchards or from commercial sweet cherry plantations within the country. Depending on the environmental conditions and weather conditions of each year, the samples of cherries for tasting session varies a lot but comprise as many as possible varieties, most of them from early to medium harvest time. In 2017, the tasting panel evaluated 24 samples coming from 17 varieties. These were as follows: ‘Early red’, ‘Burlat’, ‘Celeste’, ‘Kordia’, ‘Firm red’, ‘Grace Star’, ‘New Star’, ‘Early Bigi’, ‘Giant red’, ‘Summit’, ‘Ferrovia’, ‘Ulster’, ‘Van’, ‘Rubin’, ‘Katalin’, ‘Skeena’ and ‘Lapins’. Best score was recorded by ‘Early red’ followed by ‘New Star’ and ‘Giant red’. The fruit size and appearance of the ‘Early red’ and ‘Giant red’ varieties were rewarded by tasting panel with high appreciation scores. The taste was also remarked by the consumers for ‘Early red’ and also the aroma for ‘New Star’.

Key words: *variety, organoleptic assesment, taste, fruit appearance, consumer preference.*

INTRODUCTION

Since 2013, the University of Agronomic Sciences and Veterinary Medicine of Bucharest yearly organizes at the Istrița Nursery and Didactic-Experimental Farm the “Sweet Cherry Fest” in the first decade of June.

The event is part of the “Agriculture for Life, Life for Agriculture” International Conference programme and consist in a large sweet cherry exhibition and tasting of fresh sweet cherry fruits gathered from own trial orchards or from commercial sweet cherry plantations within the country.

Depending on the environmental conditions and weather conditions of each year, the samples of cherries for tasting session varies a lot but comprise as many as possible varieties, most of them from early to medium harvest time.

Besides many researches conducted in this field (Amidei R. et al., 2017; Ross C.F. et al., 2010; Chauvin M.A. et al., 2009), the sensorial

analyses taken by panelists versus common consumers support retailers, farmers or breeders to figure out the key drivers for sweet cherry market need (Revell J., 2008).

Different compounds of the fruits are identified (Legua P. et al., 2017) and associated with the consumers preference (Vavoura M.V. et al., 2015; Serradilla M.J. et al., 2012).

But characterization of sweet cherry cultivars only by lab instruments is unpaired without tasting evaluation session.

MATERIALS AND METHODS

The exhibition and tasting session within the 4th edition of the “Sweet Cherry Fest” took place in Istrița Nursery and Farm in 10th of June, 2017.

The tasting panel consist of 44 persons which assessed 24 samples represented by 17 varieties (Figure 1). The gender balance was good, in the session participating 25 male and 19 female above 18 years.

Sweet cherry varieties introduced in the contest were as follows: 'Early red', 'Burlat', 'Celeste', 'Kordia', 'Firm red', 'Grace Star', 'New Star', 'Early Bigi', 'Giant red', 'Summit', 'Ferrovía', 'Ulster', 'Van', 'Rubin', 'Katalin', 'Skeena' and 'Lapins'.



Figure 1. Participants during the tasting session - 10.06.2017 at Istrita, Buzau

The samples provenience were mainly from the University of Agronomic Sciences and Veterinary Medicine Bucharest.

The host - Istrita Nursery and Fruit growing Farm provided nine varieties and the Faculty of Horticulture Bucharest came with 10 sweet cherry varieties from the didactic and experimental field situated in the Bucharest campus.

Two private companies: "Livada fermecata" Agroclaas SRL (Haret, Vrancea) and Multifruct SRL (Chiselet, Calarasi) introduced in the tasting session another five varieties.

From the Research and Development Fruit Growing Station Iasi, the varieties and hybrids were presented only in the exhibition.

The samples were encoded and each participant move from one variety to another marking in the tasting sheet their appreciation (Figure 2).

In total, eight items were analyzed for the sweet cherry assessment.

The fruit size, appearance, skin color, firmness, juiciness, juice color, taste and flavor.

The external traits gather 10 points, the internal characters 9 points and the taste 7 points maximum plus 4 points from the flavor. Total score is 30 points.



Figure 2. Tasting sheet used by the participants in the sweet cherry quality assessment

RESULTS AND DISCUSSIONS

All the samples accepted in the contest were scored by the evaluators and centralized after collecting the sheets.

Summarizing the scores from each item we obtained the total scores that ranked better the 'Early red' variety from the Istrita Nursery and Farm (27.25 points out of max 30 points) (Figure 3).

The second best variety was 'New Star' from the Istrita Nursery and Farm with 26.44 points followed by 'Giant red' from the same institution (25.51 p).



Figure 3. The distribution of total scores among all sweet cherry samples participating in the tasting evaluation session (2017)

Considering the size of the fruit, the highest scores were registered by ‘Early red’ (Figure 4), ‘Firm red’ and ‘Giant red’ from the Istrita Farm and Nursery Station. Bigger fruits were also remarked at ‘Burlat’ from “Livada fermecata” and ‘Grace star’ from Multifruit SRL.



Figure 4. The appearance and fruit size of ‘Early red’ variety

In terms of appearance of the fruits, the most appreciated variety was ‘Burlat’ from the “Livada fermecata”, Haret, Vrancea which gain an average of 2.94 points out of maximum 3.00 points. In the second position was noticed ‘Early red’ from the Istrita Farm and Nursery and in the third level ‘Celeste’ from the same institution.

The highest appreciation for the skin color was highlighted by the same ‘Early red’ from Istrita followed closely by ‘Burlat’ from “Livada fermecata” (Figure 4).

Surprisingly, ‘Ferrovia’ from the Multifruit SRL impress the tasters with a very firm fruits (2.81 p out of 3.0 p). The second place was occupied by ‘Firm red’ from Istrita, the name of the variety is in this way reconfirmed.

‘Celeste’ from Istrita was the variety with higher content of juice in the perception of assessors together with ‘Early Bigi’ from Multifruit SRL.

The color of juice emphasized ‘Burlat’ from “Livada fermecata” and ‘Early red’ from Istrita followed by ‘Kordia’ and ‘Celeste’ from Istrita too.

The most important feature of the sweet cherry fruit is the taste. As we expected, ‘Early red’ from Istrita was very much appreciated, with an average score of 5.98 p out of 7.0 p. ‘Burlat’ even that is an old variety earn the respect

of the evaluators which scored with 5.42 p. (Figure 5).



Figure 5. Variety 'Burlat' from "Livada fermecata", Vrancea

'Kordia' and 'Celeste' from Istrita also were remarked from this point of view. The most disliked varieties were 'Lapins', 'Katalin' and 'Ferrovia'.

A strong correlation between taste and aroma was found, most of the evaluators ranking higher the same varieties of sweet cherry. Therefore, 'Early red' and 'Burlat' plus 'Kordia' and 'Celeste' were considered the most aromatic fruits between the samples.

CONCLUSIONS

Best total score was recorded by 'Early Red' from Istrita Nursery and Farm followed by 'New Star' and 'Giant red' from the same institution.

The biggest fruit size was remarked at 'Early Red', followed by 'Firm red' and 'Giant red' varieties from Istrita Nursery and Farm.

In terms of fruit appearance and skin color, 'Burlat' from "Livada fermecata" and 'Early red' from Istrita were rewarded by the evaluators with higher scores.

The firmest pulp had 'Ferrovia' from Multifrukt SRL and 'Firm red' from Istrita.

The taste and aroma of 'Early red', 'Burlat' and 'Kordia' was remarked and highly appreciated by the consumers.

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