CHECKING THE BEHAVIOR OF SOME STRAWBERRY VARIETIES IN THE WESTERN AREA OF OLTENIA

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Abstract

The importance of strawberries, determined by the food value of the fruits, the possibilities of industrialization and fresh consumption, in a period when many fruits are lacking, to which are added the precocity, productivity and ecological plasticity, led to the expansion of this species. Regarding the ripening of the varieties, the earliest proved to be the Joly variety, followed by the Giusy variety with a semi-late precocity and the Monterey variety ripens later. The elements that are taken into account in assessing the quality of the varieties for fresh consumption, led to a small differentiation between the varieties. Following the accumulated score, all the researched varieties Joly, Giusy and the Monterey variety, stood out for their special qualities. Through this experience, we aim to improve the existing assortment, with the most valuable varieties in terms of productivity, quality and resistance to diseases and pests.

Key words: strawberry, production, variety

INTRODUCTION

The strawberry species has always been of great economic interest, with varieties of exceptional quality for the establishment of plantations. The strawberry species is characterized by a very pronounced ecological plasticity, namely numerous varieties produce very well. The area of the location of fruit shrub plantations must be taken into account, in order to maintain the composition of mineral elements as optimal as possible, (Voiculescu, N. et al., 2006). The resistance to anthracnose of strawberry species was achieved by the discovery in Japan of a clone superior to anthracnose, with high-quality fruits, called Sanchiigo, (Mori, T. et al., 2002). Current research indicates a real progress in breeding programs to obtain new high-performance varieties, adapted to the ecological conditions in our country, (Braniște, N. et al., 2007). The application of certain doses of residues has the effect of inhibiting the growth of primary and secondary roots, (Neri, D., et al., 2002). It is specified that the strawberry species is indifferent to daylight following research conducted, (Botu, I., Botu, M., 2003). The Induka, Jonsok, Dukat and Korona varieties from Latvia, present positive aspects in terms of fruit size, susceptibility to diseases and pests, (Laugale, V., Bite, A., 2009). It was found that the varieties grown in tunnels were more productive and of better quality than the varieties grown in the field (Daugovish, O., Larson, K., 2009). Varieties recommended for cultivation in Estonia in 2000 due to their qualities are the following: Bounty, Honeoye, Jonsok, Ostara, Pocahontas, Senga Sengana, Redgauntlet (Libek, A., 2002). Obtaining qualitative varieties, resistant to diseases, with productive and constant potential, are the objectives of the breeding program in Pitești, some selections being promising (Teodorescu, A. et al., 1989). The Kordistan variety is a representative variety for Iran and very well adapted along with the varieties Fresno, Missionary (Tehranifar, A. et al., 2002).

MATERIALS AND METHODS

The research was carried out in the period 2022-2023, within a plantation established in the spring of 2022 with different strawberry varieties, the experience was located within a private household, in the area of Peștișani commune, Gorj county, a competition crop with different varieties, with stolons of the elite biological category, coming from Mora Carp locality, Suceava county. The experience was organized in protected solariums, randomized in three repetitions, and the planting distance practiced was 30 cm between the rows in the strip and 30 cm between plants per row, and the distance between the billons is 50 cm. The number of plants per billon was 160, i.e. 2 rows/bin x 80 plants per row. The experience in the southern part of the country consisted of three new strawberry varieties, these being the following: Joly, Giusy, Monterey, for each variety two rows were made, with for rows of plants, a total of 320 plants/variety.

RESULTS AND DISCUSSIONS

The fruiting phenophases started in the previous year by differentiating the fruit buds are continued in the flowering year through visible phenophases. The beginning of flowering was recorded between March 21 and May 10, and the Giusy variety (control) began to bloom on May 3. Before this variety, the Joly variety began to bloom 42 days earlier, respectively on March 21. The flowering duration in the two fruiting years is between 15 and 20 days. The Joly variety proved to be the earliest ripening variety (18.IV-2.V) and the Giusy variety with semi-late ripening (24.V-8.VI). The Monterey variety matures later, starting from June 9-15, (Table 1).

Table 1. Ripening times of the studied strawberry varieties

Variety	Month of April			Month of May			Month of June		
Joly			***						
Giusy						******			
Monterey							*****		

In order to specify the order of earliness of strawberry varieties and to group the maximum harvest required for the harvest schedule, the earliness index was calculated. From the data obtained, we note that the earliness index is between 12 and 14 days in year I and 11 – 12 days in year II. Of the three varieties studied, the earliest proved to be the Joly variety (11 days) followed by the Giusy and Monterey varieties with a semi-late earliness (12 days). In the first year of fruiting, we specify that the attack of Mycospherella fragariae was reported in all three varieties analyzed. The frequency of attack by Mycospherella fragariae was between 5.1 and 11.0% in all varieties studied, classifying the varieties in resistance group 2. The resistance to the attack produced on the fruits by Botrytis cinerea manifested itself differently in the three varieties, thus in the first year the frequency of attack was between 5.0 and 25.0%. With a frequency of 5.1%, the Giusy variety was attacked, which was classified in resistance group I, and the Monterey and Joly varieties are classified in resistance group III, (figure 1).

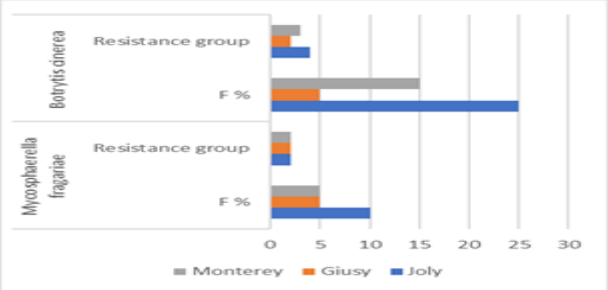

Figure 1. Resistance of strawberry varieties to attack by the main diseases

Lower production values compared to the average were noted for the Joly varieties – 0.85 kg/plant and for the Giusy variety which recorded a production of 0.80 kg/plant. The Monterey variety recorded the highest production of 1.8 kg/plant. Compared to the Giusy control, we have varieties with positive differences,

respectively for the Monterey variety (figure 2).

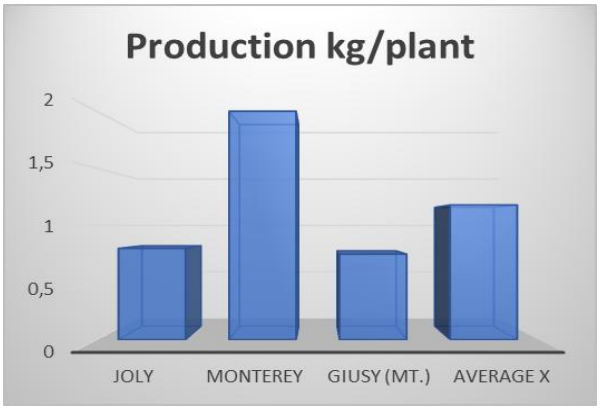

Figure 2. Fruit production of several strawberry varieties

The average production of the three varieties over the two years of fruiting was 1.15 kg/plant. The color of the pulp is a basic characteristic in assessing production for industrialization, particularly highlighting the Joly and Giusy varieties that received a score of 4. The overall score highlights the following varieties in first place in terms of fruit quality: Joly and Giusy – 26.0, then Monterey – 22.0, (figure 3)

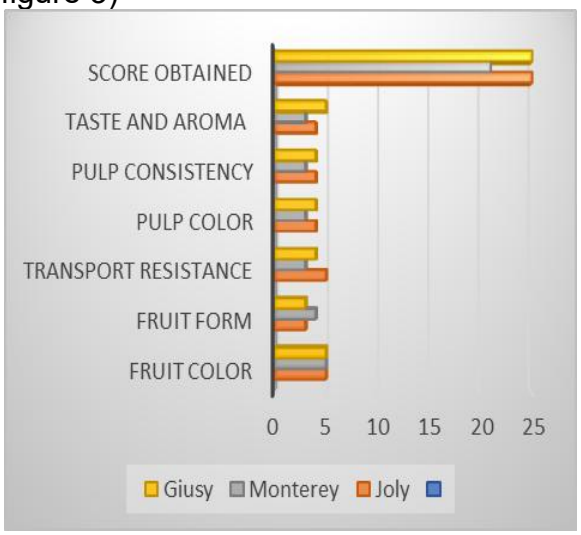

Figure 3. Fruit quality expressed through by score

The fruit shape scored close to the maximum in both production years for the Monterey variety. Regarding the weight of the strawberry varieties studied, varieties with a weight between 10.0 – 12.0 g/fruit are presented. The Giusy variety follows with a fruit weight of 11.5 g/fruit. The Monterey variety stood out with the largest fruits with a fruit weight of 12.7 g/fruit, (figure 4).

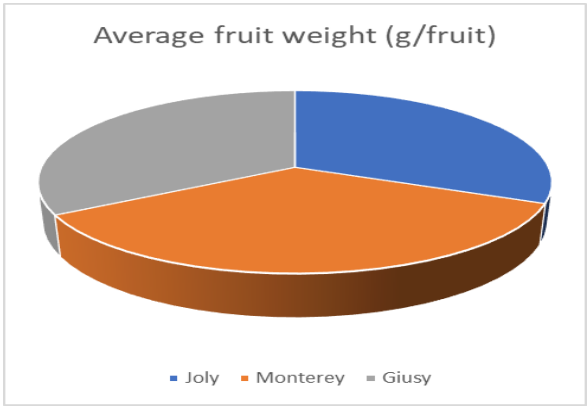

Figure 4. Average fruit weight of the strawberry varieties studied

It stands out for its unique color from all the varieties studied (score 5.0), (Picture1, 2, 3, 4).

Picture 1

Picture 2

Picture 3 – Solar image

Picture 4 – MONTEREY

CONCLUSIONS

Strawberry cultivation through the varieties studied in the southern part of the country is favorable to the climatic conditions and is current. Inflorescences appear in the first decade of March or the second decade of April in the southern conditions. Fruit ripening begins with the Joly variety, followed by the Giusy variety in May and the Monterey variety in June.

The Monterey variety produces the largest fruits. All varieties stand out for their superior qualities due to the accumulated score, but the order would be due to small differences: Joly, Giusy and the Monterey variety. In the southern part of the country, all varieties with the possibility of expansion to other areas can be retained for the assortment.

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