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EVALUATION OF SOME CHARACTERISTICS OF RASPBERRY CULTIVARS GROWN IN TIMIS COUNTY

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Abstract: Red raspberry is one of the world's most popular berries. For consumers, raspberry fruit is very interesting because of its pleasant aroma and color, high nutrient content, low calories, and health benefits that manifest in the high number of antioxidants. In this study, we examined the morphological properties (fruit weight, fruit height, fruit diameter, and number of fruits/branches) and chemical properties (sugar content) of four raspberry cultivars (Glen Ample, Radiova, Laszka, Polka) grown in the Sânnicolau Mare region under the climatic conditions of 2022 and 2023. The Laszka variety had the best morphological properties, with an average fruit diameter of 1.67 cm, fruit height of 2.28 cm, and fruit weight of 9.10 g. This cultivar was followed by the Glen Ample and Polka cultivars. The fruit sugar content was between 23.06(oBrix) in Glen Ample and 25.84(oBrix) in Polka cultivar in 2023. Among the cultivars, the Polka cultivar was noted for its high sugar content, followed by the Laszka cultivar.

• Introduction

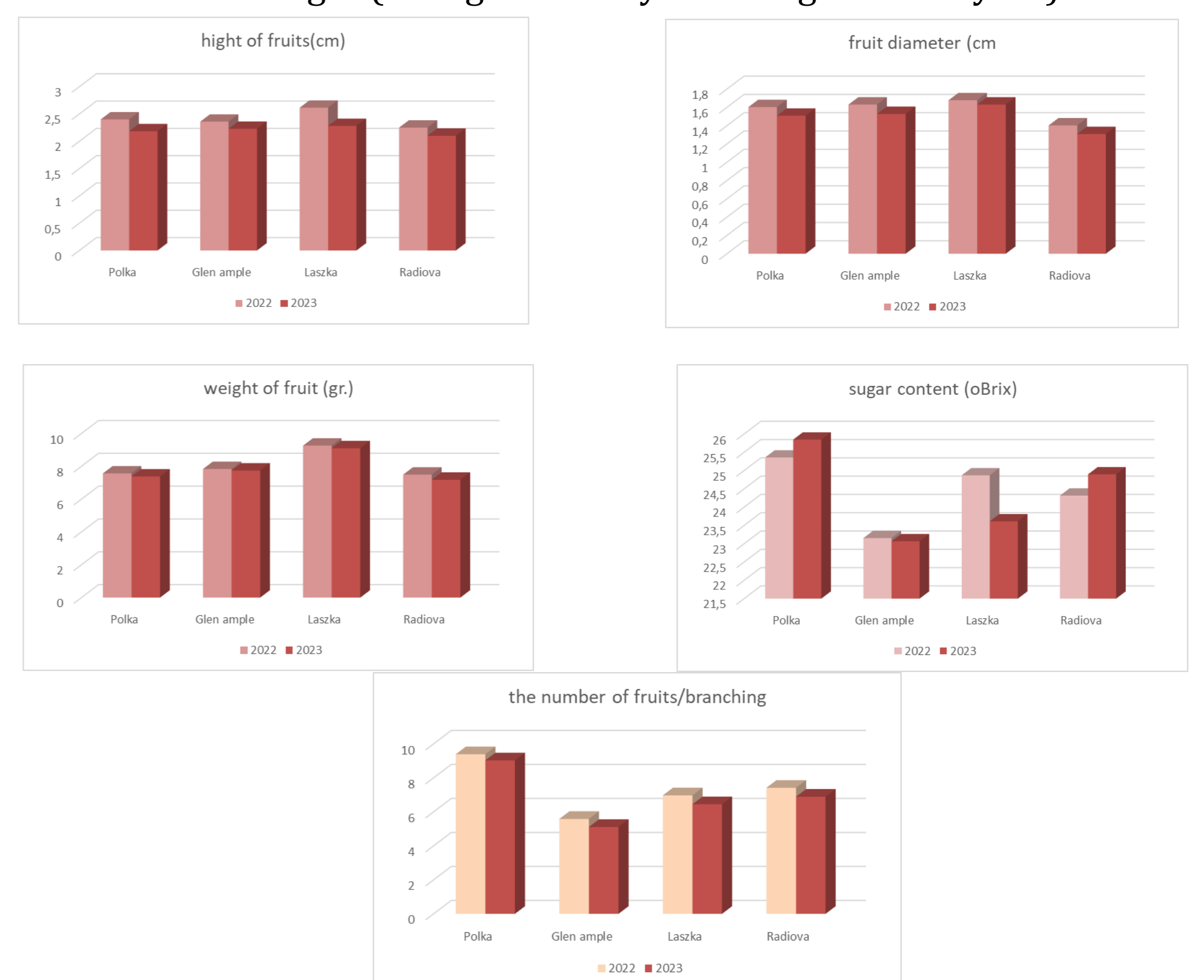
Red raspberry (*Rubus idaeus* L.) is a major small fruit and the most profitable fruit species. Red raspberry contains numerous organic and non-organic compounds (sugars, acids, pectins, anthocyanins, phenol compounds, mineral matter, etc.). Their content varies among cultivars (Janda, Gavrilovi, 1983), and depends on various issues viz. environmental factors (temperature, rainfall, soil type), irrigation, yield efficiency, ripeness of harvested fruits (Tešovi, 1988), agrotechniques, control of pests and diseases, etc. Growing raspberries continues to be one of the most profitable small-scale farming businesses. Introducing raspberry cultivars with higher nutritive and antioxidant values could increase fruit consumption for beneficial health purposes without decreasing the commercial effect of production. Raspberry production that can be obtained per hectare reaches 12 tons if the chosen variety is productive, but also if the plantation is well cared for. Apart from fruit production, raspberry leaves, and stems can also be used in the medicinal tea industry, as they have therapeutic properties in combating diarrhea, dysentery, angina, and tonsillitis.

• Material and method

In this study, four raspberry cultivars were analyzed (Glen Ample, Radiova, Laszka, Polka), cultivated in the Sânnicolau Mare region, Timis County, in the years 2022 and 2023. In these varieties, we examined their morphological properties (fruit weight, fruit height, fruit diameter and number of fruits/branches) and sugar content. The sugar content was determined using a portable refractometer.

• Results and discussions

Considering the results regarding the height of the fruit, it can be observed that the height of the fruits in the cultivars analyzed was between 2.11 cm for the genotype Radiola and 2.28 cm for Laszka in 2023 years. For 2022, the height of fruits registered was between 2.25 cm in Radiola and 2.65cm in Laszka cultivar. None of the cultivars significantly outperformed the Polka control. Regarding fruit diameter, it can be observed that varied from 1.40 to 1.67 for Radiola and Laszka in the climatic conditions of 2022 years. The cultivar Laszka recorded very significantly positive results in terms of fruit weight (9.25 gr. in 2022year-9.10gr. in 2023year).



The sugar content varied from 23.06 (oBrix) to 25.84 (oBrix). The Glen ample genotype recorded the lowest sugar content, with the result obtained being significantly negative. The genotypes Laszka (23.61 oBrix) and Radiova (24.89oBrix) recorded a higher sugar content but did not significantly exceed the genotype Polka (25.84 oBrix) in the 2023 year conditions.

•Conclusions

In the conditions of culture analyzed, the Laszka cultivar had the best morphological properties, followed by the Polka cultivar.



Glen Ample



Radiova



Polka



Laszka