

EVALUATION OF THE GROWTH AND PRODUCTIVITY OF NEW STRAWBERRY VARIETIES IN OPEN FIELD

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The aim of this study was to examine the agrobiological indicators of growth and fruiting of new Italian strawberry varieties, which are actively imported due to the limited availability of domestic cultivars. The goal was to identify the most productive, visually appealing, and resilient varieties suitable for commercial use. An experimental plantation was established in mid-July 2022 in the village of Cunicea, Floresti district, using “frigo” seedlings of the Aprica, Lycia, Sibilla, Arosa, and Marmolada varieties, all from the CIV Italia selection.

The study revealed that the varieties differed significantly in growth vigor and vegetative shoot formation. The largest vegetative mass and the strongest root system were developed by the Aprica variety, which had superior indicators such as bush height, leaf area and gross weight among the studied varieties. The other varieties were in the following descending order in terms of bush development capacity: Sibilla - Arosa - Marmolada - Lycia. The Sibilla variety was characterized by the formation of the smallest number of stolons per bush. In the first year of fruiting, the highest yield per unit area was recorded in the Arosa variety, at 27.6 t/ha. The Lycia variety had the lowest yield, producing 20.4 t/ha - approximately 26% less than Arosa.

In the second year of fruiting, average fruit weight decreased across all varieties. For Marmolada, it dropped by 7.8% to 17.1 g. Despite this, yield per hectare increased by 0.3–1.6 t/ha due to more flower stalks per plant. Over two years, Arosa had the highest total yield (55.9 t/ha), followed by Sibylla, Marmolada, Aprica, and Lycia. In the first year, fruit size was largest, averaging 21.3–27.3 g. Although berries were smaller in the second year, yield slightly increased due to more fruits per plant. Dry matter content ranged from 10.3% (Aprica) to 12.5% (Marmolada). Pulp density peaked at 0.83 g/cm² in Arosa. Vitamin C content ranged from 29.9 to 37.0 mg/100 g, with higher values in later-ripening varieties. Thus, an extensive agrobiological study of 5 varieties of Italian-selected strawberries allows us to recommend for production the early-ripening Aprica variety, the mid-ripening Sibylla variety, and the late-ripening Arosa variety, which, according to

a set of technological, biochemical and commercial characteristics, presented the best results in the studies conducted.

Keywords: strawberries, cultivars, growth indicators, productivity

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