

GROWTH AND DEVELOPMENT OF DIFFERENT SPINACH VARIETIES

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Spinach (*Spinacia oleracea*) is a member of the *Chenopodiaceae* family. Spinach is a low growing fleshy leaved annual that forms a heavy rosette of either smooth or wrinkled leaves. Spinach varieties are classified by leaf types: savoy (wrinkled), semi – savoy and flat. Savoy and semi-savoy are used for fresh markets, while smooth (flat) types are used for baby spinach.

The aim of the study was to determine the growth, development and productivity of some spinach varieties. Objects of study: a) Spinach hybrids – Clipper F1 (C); Mercat F1; Spinach varieties – Matador and Victoria. Clipper F1 served as a control because it is the only hybrid registered in the Register of Plant Varieties of the Republic of Moldova. An important indicator of the quality of spinach production is the external appearance of the plant, which is characterized by: the number of leaves formed in the rosette, the intensity of the color of the leaves, the shape of the leaves, the degree of roughness of the leaves. Consumers have a higher preference for spinach varieties with a large number of leaves, a dark green color of them, with a thicker leaf blade, with a longer petiole of the leaves to facilitate mechanized harvesting of the plants.

The period from sowing to emergence, varied insignificantly depending on the variety, being of 9-10 days. Spinach is one of the crops with the earliest maturation, according to the ripening conditions the studied spinach varieties can be divided into two groups: up to 30 days (V1-Mercat F1) and 31–35 days (V1-Clipper F1 -32 days; V3-Matador – 33 days; V4-Victoria – 35 days). In the experience were not varieties with a vegetation period longer than 35 days.

The highest average production was obtained with the variety Matador being 2.1 kg/m², and the lowest production was obtained with the Victoria variety being of 1.6 kg/m². High productivity was also recorded at the hybrids Clipper F1 and Mercat F1 with productions of 1.9 kg/m² and respectively 1.8 kg/m².

Spinach being a susceptible species to the photoperiod (duration and intensity of light), very quickly in long day conditions forms the floral stem, to the detriment of the quality of the leaves. It was identified that at the age of 60 days after sowing, a more pronounced increase in the length of the aerial part is evident to Mercat F1 hybrid. This increase in the height of the internodes of the plant can be argued by the fact that, being an earlier variety, it is obliged by its genetic characteristics to reach faster maturity.

Keywords: leaves, productivity, spinach, varieties, vegetation period.