

ROW SPACING AND FOLIAR FERTILIZATION EFFECTS ON PRODUCTION OF *FOENICULUM VULGARE* MILL.

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Abstract

Throughout history, people have become aware of the possibility of using plants, both as raw materials in food and for treating various medical conditions. Also, along with the evolution of mankind, the methods of using various species of aromatic and medicinal plants have been attained. At the same time, a multitude of information about the curative effects of plants, as well as the level of toxicity of some species, has also been accumulated. The objective of this research was to establish the effects of row spacing and foliar fertilization on fresh grass, seeds and essential oil production of two fennel varieties: *Foeniculum vulgare* var. *vulgare* and *Foeniculum vulgare* var. *dulce*. The field experiment was set in Research Station – Ezăreni Farm University of Life Sciences, Iasi, in three years, 2020, 2021 and 2022. The results showed a significant impact of both rows spacing and foliar treatments on the production values. A genetic influence of variety can also be distinguished, the fresh grass, seed and essential oil production showing higher values in case of *Foeniculum vulgare* var. *vulgare*, compared to *Foeniculum vulgare* var. *dulce*. In case of both fennel varieties, the highest production values were obtained with 50 cm between rows and complex foliar treatment (amino acids, macronutrients and micronutrients).

Key words: row spacing, foliar treatments, seed production, grass production, essential oil production