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Effect of Plant Density on Yield and Yield Components of Saffron (*Crocus sativus* L.) in Vertical Cultivation System

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Abstract

In order to study the effect of plant density on saffron yield in vertical cropping system, an experiment was conducted at farm research of agriculture in Tarbiat Modares University as a split, split plot based on randomized complete block design with three replication in (2015-2016). In this experiment plant density was selected as the main factor in three stages (192, 240 and 360 corms m^{-2}) walls spacing as sub factors in two stages(South wall and North wall) and walls classes as a sub-sub factor in three stages(150, 75 and 0 cm distance from the ground) were considered. The traits studied in this experiment were period of emergence, number of flower, flower fresh weight, fresh stigma production, petal fresh weight, stigma length, flower dry weight, dry weight of stigma, petal dry weight, leaf number, leaf length and number of active buds. The result analysis of variance showed that there was a significant difference in the number of flowers, flower fresh weight, fresh weight of the spruce between different densities at 5 % level, which was respectively, in density (320 corms m^{-2}) compared to the density (240 and 192 corms In the square meter, the number of flowers was 111 and 228 %, in fresh weight of flowers 76 and 162 %, in fresh weight of petals 63 and 145

Keywords: Saffron, stigma, vertical cultivation, yield

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