

## Effect of row planting design and planting distance on flowering and quality of gladiolus cut flower (*Gladiolus hybrida* cv. Oscar)

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### Abstract

The increasing of planting density of bulbous flowers is one of the most important step for more production of ornamental plants. One of the possible methods for increasing density, is cultivation of bulb plants in multiple rows pattern. In this research, the effect of one, two, and three row planting design bed were investigated on flowering and quality of Gladiolus (*Gladiolus hybrida* cv. Oscar) cut flower in climatic condition of Mollasani in Khuzestan province, located in south west of Iran on 1388 through 1389.. The treatments were the cultivation of corms in on row of 30 × 20 cm (control) and two and three-bed row (20 cm on row, 30 cm between main row and/or pattern with distance of 15, 20 and 25 cm between subordinate row). The results showed that cultivation of corm in three-row bed pattern with distance of 25 cm between subordinate row and/or cultivation of two-bed and three-bed row in distance between subordinate rows of 15 and 20 cm causes significant decreases on weight of cut flower, stem diameter and height of spike. Height of cut flower was not significantly different only in treatment of two-bed row with distance of 25 cm between subordinate rows when compared to control. The number of cormels were significantly decreased In treatment of three-bed cultivation pattern with distance of 25 cm between subordinate rows, as compared to control. The number of floret, only, in cultivation pattern of two-bed and three-bed row with distance of 15 cm between rows had significantly decreased when compared to control treatment. These treatments had no significant effect on diameter of cut flower, height of spike, diameter, width and weight of corms. The results indicated that the cultivation of gladiolus in pattern of multiple rows is possible but the decrease of distance between rows, reduce the quality of cut flower. It strongly suggested that more researches require to accomplish on various distances on subordinate rows.

**Keywords :** *Gladiolus, Culturing design, Cut flower, Planting distance.*