

## Effect of Planting Dates and Plant Population Densities on Physiological Indices of Gladiolus (*Gladiolus grandiflorus L.*) cv.Chloe

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### Abstract

In this research the effects of planting dates and plant density on physiological indices of gladiolus were investigated. The experiment consisted of two planting dates (15 October and 15 November) and three plant densities (120, 100, 80 plants / m<sup>2</sup>) with two treatments and 4 replication. The objective of the work was to find out the appropriate planting time and plant density for the growth of gladiolus. Results indicate that early planting (15 October) and the highest plant density (120 plants / m<sup>2</sup>) increased leaf area, leaf area index (LAI), leaf area duration (LAD), crop growth rate (CGR), relative growth rate (RGR) and net assimilation rate (NAR) due to the increase in the number of plants per m<sup>2</sup>. But vase life and quality of cut flowers decreased in high plant density (120 plants / m<sup>2</sup>), due to competition between the plants for nutrition and absorbing the water. In conclusion, with increasing of plant density, the growth and vase life of gladiolus cut flower is decreased.

**Keywords:** *Gladiolus*, *Planting date*, *Physiological Indices*, *Plant density*