

Comparative study on effect of different spacing and application of organic and inorganic fertilizers on growth, flowering and yield of *Gladiolus (Gladiolus grandiflorus L.)*

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ABSTRACT : An experiment was conducted in factorial Randomized Block Design (FRBD) with three replications and twelve treatments. The allocation of treatments to the individual plots was done using random numbers in each replication. The corms were planted on 17 Oct. 2015. The treatments consisted of three various spacing i.e., 30cm x 30cm, 30cm x 15cm and 40 x 15 cm and four combinations of fertilizers RDF 200:200:200, NPK 75% + FYM 25%, NPK 75% + GM25%, NPK 75% + VC25%. The treatment T₁₂ : 30 x 15cm² + NPK 75% + VC25% performed higher in number of leaves per plant, height of the plant (cm), crop growth rate (CGR), days to spike emergence, length of the spike, number of florets per spikes, vase life of cut spikes (days), days to opening of first florets, longevity of first florets (days), whereas the earliest 50% sprouting, number of sprouts per mother corm, the yield of corms per hectare, number of corms per plant, number of spike per plant and spike yield per hectare, was recorded highest in Treatment T₈ : 30cm x 15cm + NPK 75% + VC25% and the treatment T₁₁ : 40 x 15cm² + NPK 75% + GM 25% performed best in Diameter of corms (cm) and Weight of corms (g). Treatment T₁₀ :40x15 cm² +75% NPK + 25% FYM i.e. observed highest in width of leaf (cm). The cost and return associated with the cultivation of gladiolus in the present investigation clearly indicated that the net return Rs.14,28,591/ha and benefit cost ratio (2.89 : 1) were highest in treatment T₈.

Key Words : *Gladiolus (Gladiolus grandiflorus L.)*, growth, flowering, yield, manures, fertilizer, spacing.