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Effect of spacing and nitrogen on growth, flowering and yield of gladiolus (*Gladiolus grandiflorus* L.) cv. American Beauty

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ABSTRACT : A multifactor experiment on effect of different plant spacing and nitrogen levels on growth, yield and quality of gladiolus (*Gladiolus grandiflorus* L.) cv. "American Beauty" was conducted in *Winter* season (2014-15) at the Fruit Research Station, Jambuvadi Farm, College of Agriculture, Junagadh Agricultural University, Junagadh. The treatments comprised of three levels of spacing (40 x 15 cm, 40 x 20 cm and 40 x 25 cm) and four levels of nitrogen (150, 200, 250 and 300 kg/ha) in a factorial randomized block design and replicated thrice. The result revealed that higher plant heightwas obtained at a closer spacing of 40 x 15 cm and fertilized with 250 kg nitrogen per hectare and wider spacing of 40 x 25 cm and fertilized with 250 kg nitrogen per hectare recorded maximum vegetative and flowering characters *viz*., number of tillers per plant, fresh weight of plant (g), dry weight of plant (g)**,** days required for opening of first spike emergence, number of spike per plant, number of spike per plot and number of spike per hectare.

Key Words: Gladiolus, plant spacing, nitrogen levels.