

# Impact of Integrated Nutrient Management (INM) on Growth and Flower Quality of *Gladiolus* cv. Melody Open

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**Abstract**—An experiment was conducted at the Research Farm of the Division of Floriculture and Landscaping, ICAR-Indian Agricultural Research Institute, New Delhi during Rabi season 2016-17 to analyse the effect of organic and inorganic fertilizers on growth and flower quality of *gladiolus* cv. Melody Open. A set of twelve treatments laid out in simple randomized block design with three replications. The results revealed that the number of days taken for sprouting of corms was minimum (14.33 days) in T<sub>10</sub>(75% RDF + Vermicompost @ 10 t/ha + Azospirillum + PSB) followed by T<sub>12</sub>(50% RDF + FYM @ 5 t/ha + Vermicompost @ 5 t/ha + liquid NPK). Maximum percent of sprouting of corms (97.5%) was also observed in T<sub>10</sub> whereas least sprouting percent (93.3%) was observed in T<sub>2</sub> (75% RDF). Maximum plant height (125.66 cm), length of spike (115.66 cm), length of rachis (66.33 cm) and number of spike per plot (78.33) were recorded in the treatment 75% RDF + Vermicompost @ 10 t/ha + Azospirillum + PSB. Lowest plant height (102.33 cm), spike length (92.66 cm) and rachis length (56.66 cm) were recorded in the T<sub>1</sub> (Control). Thus, on the basis of present study, it can be concluded that the *gladiolus* crop should be provided the nutrition in the form of 75% RDF + Vermicompost @ 10 t/ha + Azospirillum + PSB per hectare for obtaining better plant growth and flower quality.

**Keywords:** Organic, Inorganic fertilizers, Growth, Flower quality, *Gladiolus*.