

## **Effect of different levels of vermicompost, NPK and FYM on performance of gladiolus (*Gladiolus grandiflorus* L.) cv. HAPPY END**

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### **ABSTRACT**

The present investigation was carried out to ascertain the performance of gladiolus to varying treatments of vermicompost, NPK and FYM under Muzaffarnagar conditions in Uttar Pradesh. Results revealed that among the three treatments *i.e.* (F<sub>1</sub>) Vermicompost (125 gm/sqm.), (F<sub>2</sub>) NPK (75 gm/sqm) and (F<sub>3</sub>) FYM (2.5 kg/sqm), F<sub>3</sub> treatment was recorded with best results for plant growth, flowering and corm yield parameters and the same was considered to be the treatment for growing a successful crop.

**Key words :** Gladiolus, Vermicompost, NPK, FYM, Happy End.

**G**ladiolus (*Gladiolus grandiflorus* L.) is one of the most popular flowers in the world, especially for commercial purpose. It is popular for its attractive spikes having florets of huge form, dazzling colours, varying size and long keeping quality. Gladiolus is ideal as cut flower. It is also very good for beds, herbaceous border and does well in pots. It is one of the leading commercial cut flower and ranks next to tulip in Holland and some other countries. In India, the improvement in gladiolus had not still reached to the expected level. Productivity of gladiolus depends to a large extent on nutrition. All plants require supply of organic and inorganic substances from outside as mineral nutrition. The major lack in the commercial cultivation of this important flower is non availability of comprehensive and standard information about optimum dose of organic and inorganic fertilizers. The present investigation was carried out to ascertain the performance of gladiolus to varying treatments of vermicompost, NPK and FYM under Muzaffarnagar conditions in Uttar Pradesh.

### **MATERIALS AND METHODS**

The present study was carried out at Horticultural Research Field of Ch. Chhotu Ram (P.G.) College, Muzaffarnagar in 2002-03 with three treatments *i.e.* Vermicompost - F<sub>1</sub> (25 g/sqm), NPK - F<sub>2</sub> (75 g/sqm) and FYM - F<sub>3</sub> (2.5 kg/sqm) in a Factorial Randomized Block Design (FRBD) replicated thrice with plot size 1.4 m x 1.4 m. Soil of the experimental field was loam in texture deficient in nitrogen and organic matter with soil pH 7.7.

After proper layout of experimental field, calculated amount of Vermicompost, NPK and FYM per plot were incorporated in to the soil @ 25 g, 75g and 2.5 kg per sqm, respectively as basal dressing. Before sowing corms were treated with 0.2% Bavistin solution for five minutes to protect them against fungal infection. Regular intercultural practices such as hoeing, weeding etc. and proper irrigation was done throughout the experiment as and when required. Five competitive plants were selected randomly and tagged for observations of various of traits *viz.* number of sprouts, days required for sprouting, number of leaves, number of tillers, plant height, number of spikes, number of corms and cormels, length of spike, diameter of corms and cormels, weight of corm and cormels.

The data collected and recorded during course of investigation were subjected to statistical analysis as per method of "Analysis of variance" by Fisher (1958). The results have been interpreted on the basis of "F" test and C.D. at 5%.

### **RESULTS AND DISCUSSION**

Analysis of Table 1 revealed that an early sprouting of corms (9.09 days) was observed with F<sub>3</sub> treatment. Height of plant (49.49 cm), number of leaves (6.93) and number of tiller (1.16) were observed maximum for F<sub>3</sub> treatment. Similar results were observed by Gangadharan and Gopinath (2000). Length of spike (61.14 cm), number of spikes (1.84), number of florets (15.22), diameter of spike (1.12 cm), closing of last floret (127.87 days) and number of corms (2.33) were achieved maximum with F<sub>3</sub> treatment. The present results are in conformity to the