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RESPONSE OF TWO CULTIVARS OF GLADIOLUS TO CHICKEN MANURE IN THE NEW RECLAIMED LAND.

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ABSTRACT

A split plot field experiment was conducted during two successive seasons of 2006 and 2007 in order to investigate the response of two Gladiolus cultivars; White Prosperity and Rose Supreme to the application of chicken manure at four rates (0, 30, 60 and 90 m^3 / fed.) in the new reclaimed soil at West Samalout. Minia, Egypt.

Obtained results showed that cv. White Prosperity was significantly superior to cv. Rose Supreme in few parameters and slight differences were detected for other ones. Concerning chicken manure application significantly enhanced the vegetative characters, flowering parameters, were detected bulb formation aspects and chemical constituents determinations. The highest ovrall values were obtained due to supplying both cultivars with chicken manure at 90 m^3 / fed.

INTRODUCTION

Gladiolus grandiflorus is one of the most important ornamental bulbs. It belongs to Family Iridaceae. It's inflorescences are excellent attractive cut flowers, which can be exported to different foreign countries in winter and spring. In Gladiolus, there are many cultivars which differ in colour, size and other flower characteristics, White Prosperity with white florets and Rose Supreme with rose florets are among many other gladiolus cultivars introduced to Egypt. Investigating the response of these cultivars to different agricultureal treatments including fertilization with different application of chicken manure to reach the optimum ones for better growth, flowering and corm production under the new reclaimed soil at west Samalout, Minia, Middle Egypt enviromanental conditions is needed.

Some recent studies emphasized the improving effects of different rates of chicken manure, composted plant materials and urban wastes of flowering bulb plants such as Gladiolus (Liu, *et al.*, 1998; Gangadharan and Gopinath, 2000; Conte *et al.*, 2001; Zaghloul and Moghazy, 2001; Zaghloul and Atta – Alla, 2001; Pimpini and Zanin, 2002 and Atta – Alla *et al.*, 2003). Similar enhancing effects were found by Badawy (1998) and Abd El – Karim (2001) on tuberose, Wu *et al.*, (1999) and Manish *et al.*, (2000) on Lilium, Goma (2000) on Ornithogalum, Aiello *et al.*, (1997) on Iris and Hetman *et al.*, (2001) on tulip.

The aim of the present study was to investigate the effect of chicken manure rates on growth, flowering and bulb production of two gladiolus cultivars, i.e. White Prosperity and Rose Supreme under the new reclaimed land at El – Minia growing conditions.