



Effect of various doses of chemical fertilizer (kristalon) individually or in combination with different rates of bio-fertilizer on growth and corm yield of *Galdiolus grandiflorus*

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Abstract : The present investigation was carried out in the green house at the Research and production Srtation of the National research Center (NRC) in Nubaria during the two successive seasons of 2012 and 2013. The aim of this study was to investigate the effect of various doses of Chemical fertilizer (Kristalon) individually or in combination with different rates of bio-fertilizer on growth, flowering and corms yield of *Galdiolus grandiflorus* L. Results showed that treatments increased all growth parameters in both seasons compared with untreated plants. Kristalon at 80 mg/m² + 80 ml/ m² gave the maximum values of corms/plant and spike length, while the untreated plant growth gave the minimum values. Additionally, carbohydrates, nitrogen, phosphorous and potassium content increased by all fertilizers treatments in the two seasons. The highest value of carbohydrates percentage was obtained by 80 gm/m² Kristalon + 80 ml/ m² biofertilizer followed by 60 gm/ m² + 60 ml/ m² bio-fertilizer. Kristalon at 80 gm/ m² gave the highest nitrogen, phosphorous and potassium percentage followed by 60 gm/ m² Kristalon. So, in this experiment, biofertilizer enhances the effect of chemical fertilizer which increases soil fertility and crop production in sustainable farming.

Keywords: *Galdiolus grandiflorus* L, Kristalon, nitrogen, phosphorous ,potassium, biofertilizer.

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