



كلية الزراعة  
قسم الميكروبيولوجيا الزراعية

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جامعة الفيوم

**البحث الخامس :** (فردى مشترك مع آخرين من خارج التخصص- منشور)

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Effectiveness of organic and inorganic fertilization in presence of some growth regulators on productivity and quality of Egyptian cotton.

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عنوان البحث

### ABSTRACT

Two separate field experiments were conducted during 2010 and 2011 seasons, at the Research and Experimental Center of the Faculty of Agriculture at Moshtohor, Benha University, Kalubia Governorate, Egypt, to study the effect of organic manure (sheep manure compost) alone or combined with mineral nitrogen fertilizer and foliar application with Kinetin (K) or Gibberellic acid (GA<sub>3</sub>) alone or mixture on growth attributes, yield and chemical composition of seeds as well as fiber quality of Egyptian cotton (*Gossypium barbadense*, L.) Giza 86 cotton cultivar. The results could be summarized as follows: The highest ammonifying and nitrifying bacteria counts were in case of sheep manure compost + ammonium nitrate application at a rate of 30 kg N fed<sup>-1</sup> from each of them and sprayed with kinetin treatment. The application of sheep manure compost at rate of 30 kg N fed<sup>-1</sup> combined with 30 kg N fed<sup>-1</sup> mineral and sprayed by kinetin significantly increased growth characters (dry weight plant<sup>-1</sup>, leaf area plant<sup>-1</sup>, leaf area index, chlorophyll a, b, a+b, carotenoids, plant height and number of fruiting branches plant<sup>-1</sup>), yield and yield components (number of open bolls plant<sup>-1</sup>, boll weight, seed index, seed cotton yield plant<sup>-1</sup> and seed cotton yield fed<sup>-1</sup>), chemical composition of cotton seeds (oil% and protein%) and fiber quality (Micronaire reading and Pressley index) in both seasons.