



كلية الزراعة
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عنوان البحث

ABSTRACT

Pot experiments were carried out in the greenhouse of the Faculty of Agriculture, Fayoum University, to study the effect of water hyacinth and banana wastes compost (0, 10, 15 and 20 ton/fed) combined with inorganic nitrogenous fertilizers namely ammonium sulphate, ammonium nitrate and urea (in the rate of 60 kg N/Fed and this rate was 50 % of the recommended dose), on the growth, yield and nutrient content of cowpea plants. All pots received P and K as recommended. The addition of various rates of water hyacinth and banana wastes compost (H.B.C.) under study significantly increased all plant growth parameters under the study, i.e., plant height, plant fresh weight and dry weight of both shoots and roots, number of root nodules as well as the nutrient content of the different plant organs compared with the control and the chemical fertilizer application of the recommended dose (100 %). There was a marked increase in pod characters, yield and its components, i.e., number of pods per plant, length, diameter and weight of pods per plant. The highest values of growth characters of yield and its components and the contents of nutrient elements were noticed when applying compost at the higher rates (20 ton/fed.) followed by 15 and 10 ton/fed., in a descending order as compared with the control. The best combination of nitrogen forms and the compost is considered to be one of the primary factors for high yield production and quality as well as yield components of cowpea. The highest significant increase in growth characters, yield and yield components as well as the total carbohydrates and crude protein content of the seeds were obtained via the application of compost in combination with ammonium sulphate at the rate of 20 ton/fed.