



Journal

**J. Biol. Chem.
Environ. Sci., 2017,
Vol. 12(2): 101-118
www.acepsag.org**

THE EFFICIENCY OF SOME NUTRIENT SOURCES ON GROWTH, AND YIELD OF FABA BEAN PLANTS (*VICIA FABA* L.)

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ABSTRACT

Our objective was to evaluate the effect of some nutrient sources, i.e., recommended NPK (20/31/24 kg, N, P₂O₅ and K₂O/feddan) as soil application as well as five fertilizer treatments added as foliar spraying at rate of 2% four times, namely, compound fertilizers (19/19/19), monoammonium phosphate, MAP (12/61/0.0), diammonium phosphate, DAP (18/48/0.0), monopotassium phosphate, MKP (0.0/52/34) and dipotassium phosphate, DKP (0.0/40/54) N, P₂O₅ and K₂O, respectively under twice foliar spray humic substances (HS) at the rate of 3% on growth, yield and its components, N, P and K uptake by faba bean (*Vicia faba* L.) grown in alluvial clay soil. Therefore, two field experiments were conducted at the Farm of Sids Agricultural Research Station (ARC), Beni Suef Governorate, Egypt in 2014/2015 and 2015/2016 seasons. The results show that humic substances application increased growth, yield components, seed and straw yields, N, P and K uptake. The values of plant height, dry weight/plant, number of pods/plant, number of seeds/pod, seed and straw yields and NPK uptake obtained by foliar spray of MKP or DPK solution combined with foliar spray of HS were statistically equal to those obtained by recommended NPK rates.

Key words : diammonium phosphate, dipotassium phosphate and nutrient uptake and efficiency, Faba bean, yield and its components, mixture fertilizers, monoammonium phosphate, growth.