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Title: Response of faba bean to organic amendments in calcareous soil

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Faba bean (*Vicia faba* L.) is one of the principal winter legume crops in Egypt as a source of protein for food and feed. Growth and yield of faba bean are greatly influenced by both physical and chemical properties of calcareous soil. Field experiment was carried out at Nubaria region during two successive seasons of 2012/2013 and 2013/2014 to study the effect of different organic amendments on growth, nodulation, yield and nutrients uptake of two faba bean cultivars namely; Nubaria 1 and Nubaria 2 and four organic amendments, (compost, humic acid, fulvic acid and compost tea). Humic acid combined with 50% mineral NPK fertilizer achieved the highest significant increase in plant height and number of branches for both cultivars in the two seasons. Fulvic acid application accompanied by 50% NPK significantly increased yield up to 1455 and 1705 kg acre⁻¹ for Nubaria 1 and Nubaria 2, respectively. The yield of cv. Nubaria 1 was greater than cv. Nubaria 2 in the seasons. Humic and compost applications resulted in substantial increases in number and fresh weight of nodules. The total counts of rhizosphere bacteria, fungi and actinomycetes as well as the dehydrogenase activity were increased due to compost and compost tea application. Meanwhile, humic acid amendment enhanced nitrogenase activity as measured by the acetylene reduction assay (ARA) in 2013 season. On the other hand, the amendment with fulvic acid improved nitrogenase activity during the second growing season of 2013/2014. The highest NPK uptake was recorded in shoot and grains of plants grown in soil amended with fulvic acid. Fulvic acid application, however, resulted in a significant increase in grain protein content of both cultivars in the two seasons.