Journal of Research in Ecology

An International Scientific Research Journal

ISSN No: Print: 2319 –1546; Online: 2319-1554

Effect of *Rhizobium leguminosarum* and spray with vitamin B-complex in the growth and yield on bean (*Vicia faba* L.)

Authors:
Maitham Hussien Al-Kafaji,
Turki Muftin Saad and Falah Hasan Issa

Institution:
Department of Plant Production, Faculty of Agriculture, Al-Muthana University, Iraq.

Corresponding author:
Maitham Hussien Al-Khafaji

ABSTRACT:

A field experiment was carried out during the winter season (2016 -2017) in Al-Rumaitha district (43km northern Al-Samawa city, center of Al-Muthanna province) to evaluate the response bio fertilizer of *R. leguminosarum* (R_1 and R_2) and foliar application by vitamin B-complex 0, 20, 30mg/L on the growth and yield of bean (*Vicia faba* L. cv. Aquadulce). The experiment was setup using Randomized Complete Block Design (RCBD) with three replicates, the means were compared using LSD of each variety at 0.05 level of significance. The results of the experiment showed that the isolate R_1 was significant and superior than others in (dry weight of the shoot, number and size of the root nodes, number of pods, biological yield, total seed yield, and protein contain in the seeds reached (73.44 g, 8.41 nods, 0.73 cm^3, 1.39t/ha, 5.15t/ha and 22.66% respectively). Treatment of 20mg vitamin B-complex/ L was increased significantly on dry weight of shoot, number and size of root nodes, number of pods, biological yield, total seed yield, and protein contained in the seeds reached (71.81g, 7.78 nods, 0.71cm^3, 16 pods, 1.34t/ha, 4.73t/ha and 22.57% respectively). The interaction of treatment R_1 with 20mg vitamin B-complex/L has increased significantly on the size of root node (0.78cm^3/nod).

Keywords:
Rhizobium leguminosarum, Vitamin B-complex, Bean.

Journal of Research in Ecology