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# Foliar application of amino acids and bio fertilizer promote execution of broad bean plant (*Vicia faba* L) under newly reclaimed land conditions.

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**Abstract :** Two experiments were achieved through winter season of 2012/2013 and 2013/2014 at the experimental station of the National Research Centre at Nubaria zone, (North Egypt) to search the echo of broad bean plants to foliar application of different concentration of amino acid (Amino mix) at 1%, 2% and foliar spraying with water together with pollination by N-fixers bacteria (piogen) at 1kg/fed, 2kg/fed. and without bio-fertilizer and interaction effect for leverage plant growth, total pods yield and its components as well as seeds feeding value of broad bean plants c.v. Koprosay. These treatments were laid out in split plot styling configuration with three replications. The concise results obtained from this field search that:

1- Foliar application by high concentration of amino mix ( 2%) significantly improved the most plant growth characters, total yield and its components as well as the seeds contents of the percentage of N, protein, P and K followed in descending order by that plants spraying by 1 % followed with the control treatment (foliar spraying with water).

2- Inoculated broad bean plants by highest level of N-fixing bacteria (piogen) (2 kg/fed.) significantly exceed vaccinated by low level (1 kg/fed.) and without inoculated (control) in plant length, number of shoots and leaves/plant, fresh and dry weight of plant and pod characters (length and wide), number of pods/plant, total yield (ton/fed.) and weight of 100-seeds as well as the content of N %, protein %, P % and K% in seeds tissues.

3- The interaction among bio-fertilizer and foliar application of amino mix generated no significant variance except plant length, number of leaves plant and total pods yield as well as K% in seeds tissues in both seasons and fresh weight of stems, N% and protein% in first season only.

**Key words:** broad bean plants- impregnation by N-fixing- amino mix concentration- growth-yield- nutritional status.

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