

**RESPONSE OF TWO SNAP BEAN CULTIVARS TO  
BIO-AND NITROGEN FERTILIZATION AND  
FOLIAR BIOSTIMULANTS UNDER FIELD AND  
PLASTIC HOUSE CONDITIONS**

**By**

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B. Sc. (Vegetables), Fac. Agric., Cairo Univ., Egypt, ٢٠٠٢.

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**Date: \ \ ٢٠٠٧**

## **SUPERVISION SHEET**

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#### ABSTRACT

This study was carried out in Experimental Farm of Faculty of Agriculture, Cairo University, and included two parts. The first part aimed to study the effect of two biofertilizers and different levels of nitrogen on vegetative growth, yield and yield components of two snap bean cultivars under both of open and plastic house conditions. The second part aimed to study the effect of nitrogen application times and foliar biostimulants on vegetative growth, yield and yield components of two snap bean cultivars under both of open and plastic house conditions. The two cultivars of snap beans used in all experiments were Bronco and Paulista (determined types). Seeds of the experiments of the first part were sown in the field on 30<sup>th</sup> and 28<sup>th</sup> August in the first and second years, respectively, while they were sown in unheated plastic houses on 19<sup>th</sup> October in the two years. Each experiment contained 20 treatments (10 biofertilizers and nitrogen levels × 2 cultivars). On the other hand, seeds of the experiments of the second part were sown in unheated plastic houses on 9<sup>th</sup> and 12<sup>th</sup> February in the first and second year, respectively, while they were sown in the field on 19<sup>th</sup> February in the first year and on 1<sup>st</sup> March in the second year and the experiments contained 22 treatments (2 nitrogen application times × 2 foliar biostimulants treatments × 2 cultivars). The results of the first part experiments indicated that using Okadin + 30 kg N/fed, or Okadin + Rhizobacterin + 20 kg N/fed. led to producing the highest values of early and total yield, while Okadin + Rhizobacterin + 20 kg N/fed exhibited the best pod quality (TSS, carbohydrates and N, P and K contents). Results of the second experimental treatments indicated that adding nitrogen in split doses (20% before seed sowing and 20 and 20% after 21 and 40 days after seed sowing, respectively) and spraying plants with the biostimulants, especially Setter 2 + Faster gave the highest early and total yield; increased plant contents of N, P and K; and improved pod quality (TSS, carbohydrates and N, P and K contents).

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