

Effect of Instant and Organic Fertilizer on the Development and Yield of Bush Snap Bean (*Phaseolus Vulgaris* L.)

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Abstract

Experiments were conducted during 1991 autumn season in Kanting (Pingtung prefecture), 1992 spring season in Meilong (Kaohsiung prefecture) and 1992 autumn season in Chaochou (Pingtung prefecture), to determine the responses of instant and organic fertilizer to the development and yield of bush snap bean. Three treatments plus a control were used. Each treatment was applied with the same rate of fertilizer in term of N-P₂O₅-K₂O at 100-90-100kg/ha. For treatment A (control), only traditional chemical fertilizers were used both for basal and top dressing; while for treatment B and C, in addition to traditional chemical fertilizers were used as basal application, Taife instant fertilizer No.4 or No.5 was spraying respectively at 15 and 30 days after sowing. For treatment D, traditional chemical fertilizers plus 2 ton/ha of Taife organic fertilizer were used as basal application, and only traditional chemical fertilizers were used for top dressing. Experimental design was randomized complete block design with 4 replicates. The results showed that Tr. B had the highest number of pods per plant and pods weight per plant in the average of three crops in two years. Tr. D gave the highest weight of total biomass and yield of graded pods in autumn 1991. In 1992 spring and autumn seasons, Tr. C had the highest total biomass. The average weight of total biomass in three crops in two years, the Tr.c also had the highest production. The total biomass in the autumn of 1991, the pods per plant in the spring of 1992, the pods weight per plant and yield of graded pods in autumn of 1991 were significantly different among the treatments at 5% of probability. The pods weight per plant was significantly different among treatments in the spring of 1992 at 1% of probability.

Keywords: Bush Snap Bean, Instant Fertilizer, Organic Fertilizer, Yield.