

EFFECT OF KIND, QUANTITY AND TIME OF FERTILIZER APPLICATION ON MASHBEAN

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ABSTRACT

A field experiment was conducted to study the "effect of kind, quantity and time of fertilizer application on mashbean" during kharif 1993. The experiment was laid out in a split plot design. Two types of fertilizer combination viz, K_2SO_4 + SSP + Urea and K_2SO_4 + DAP + Amm. sulphate were applied in 8 different levels (single and split doses). Nodulation was studied after three months of the sowing of crop. The effect of fertilizer types was significant on No. of nodules plant⁻¹, No. of pods plant⁻¹ and grain yield but was non-significant for No. of seeds pod⁻¹ and 1000-grain weight. The differences due to different fertilizer levels were significant for all the parameters studied except No. of seeds pod⁻¹. The interaction between different fertilizer types and levels showed significant difference for all the parameters. It was recommended that for getting higher grain yield of mashbean, the NP fertilizers be applied in two split doses instead of single dose.

INTRODUCTION

Pulses or grain legumes provide a valuable source of protein and have wonderful ability to thrive on relatively poor soils and adverse environmental conditions. It also helps to enhance soil productivity by fixing atmospheric nitrogen and addition of organic matter to the soil.

For efficient production of mashbean crop, soil must be managed properly to allow optimum uptake of water and nutrients. The fertilizer application to mashbean is mostly important due to its favourable effect on the yield and other important parameters. The higher yield can be obtained only when NPK fertilizers are applied at optimum rates and at proper time.

Ghafoor (1985) observed that application of 20 kg N + 75 kg P_2O_5 ha⁻¹ increased the plant height, No. of pods/plant, No. of Seeds/pod, 1000-seed weight and seed yield of mashbean and he recommended that N must be applied in combination with P and K to leguminous crop for obtaining maximum yield. Tomar *et al.*, (1984) in a research on four (*Vigna mungo*) cultivar reported that No. of pods/plant, No. of Seeds/pod, 1000-seed