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Research Paper :

Effect of nitrogen, phosphorous and potash on growth and bulb yield of onion (*Allium cepa* L.)

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ABSTRACT

An experiment was conducted to study the effect of nitrogen, phosphorous and potash on growth and bulb yield of onion during the *Kharif* season of the years 2003-04, 2004-05 and 2005-06. There were significant effects of nitrogen and phosphorous on bulb yield. Among the different nitrogen levels, application of 100 kg N ha^{-1} produced significantly the highest bulb yield of 679.04, 484.28 q ha^{-1} during the year 2003-04 and 2004-05, respectively with pooled mean of 544.70 q ha^{-1}. However, statistically it was par with the application of 75 kg N ha^{-1} during the year 2003-04, 2004-05 and in pooled. Application of 50 kg $P_2O_5ha^{-1}$ recorded significantly the highest bulb yield of 671.26, 476.03 q ha^{-1} during the year 2003-04 and 2004-05, respectively with pooled mean of 536.76 q ha^{-1}.Though, application of potash @ 50 kg ha^{-1} produced higher bulb yield during all the individual years and in pooled mean, but its effect was non significant. The results also revealed that increasing levels of nitrogen, phosphorus and potash, progressively increased the growth and yield attributes. With regards to economics, the maximum net returns of 70485, 68997 and 66278 Rs.ha^{-1} and benefit cost ratio of Rs. 1.83, 1.80 and 1.76 were recorded with the application of 100 kg N ha^{-1}, 50 kg $P_2O_5ha^{-1}$ and 50 kg K_2O ha^{-1}, respectively.

Key words : N, P, K, Bulb yield, Economics, Onion