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EFFECT OF VARIOUS POTASSIUM LEVELS IN COMBINATION WITH NITROGEN AND PHOSPHORUS ON THE AGRONOMIC CHARACTERS OF MAIZE (*Zea mays* L.)

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ABSTRACT

Effect of various levels of potassium (0, 30, 60 and 90 Kg ha^{-1} alongwith 100 Kg of nitrogen and 50 Kg of P_2O_5 ha^{-1} were studied on the yield and agronomic characters of maize CV. Sarhad White) during 1989 at Agricultural Research Institute, Ratta Kulachi, Dera Ismail Khan. It was noted that various levels of potassium did not affect plant height significantly. Higher doses of potassium accelerated silking, whereas tasseling and maturity were delayed by high levels of potassium application.

INTRODUCTION

Maize (*Zea mays* L.) an important kharif crop is grown throughout Pakistan in irrigated tract. It has a short duration with high yielding potential. Low yield and poor quality in maize due to poor management of crops is the main problem for the growers of Dera Ismail Khan Division. In the past improved cultural practices and some fertilizers have been used to minimize yield constrain. Owing to its increased use in Industry, as a feed for animals and poultry and food for human beings, it has been attaining a prominent place in agricultural crops. However, inspite of its high yielding potential, its yield in our country is very low which requires adoption of certain measures to enhance its yield. Some success has already been attained in evolving new hybrid and synthetic varieties and adoption of improved new management practices for getting greater returns. The improved high yielding varieties some times fail to accomplish the desired end unless provided with balance nutrients, especially nitrogen, phosphorus and potassium at appropriate time.

Though nitrogen and phosphorus are now commonly applied to the soil, little attention has been paid to the application of potassium which owing to continuous and intensive cropping might have made deficient in soil of our country.

The present study was, therefore, designed to investigate the effect of various levels of potassium in combination with recommended doses of nitrogen and phosphorus