

EFFECTIVENESS OF FERTILIZER ON THE PRODUCTION OF WHEAT UNDER RAINFED CONDITION OF D.I.KHAN.

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ABSTRACT

A field experiment was conducted on a loamy clay soil during 1988-89 in order to determine the optimum level of fertilizer for improved wheat variety 'Pirsabak-85' under the arid conditions of Dera Ismail Khan. Different levels of N and P were applied in randomized complete block design with three replications. A total of 97mm rainfall was received during the growth period. The result indicated that all fertilizer treatments showed significant effect on yield over control. The highest grain yield of 2990 kg ha⁻¹, was obtained under fertilizer level of 75-50-0 kg ha⁻¹, but the increase was statistically at par with fertilizer rate of 50-25-0 kg ha⁻¹, giving yield of 2630 kg ha⁻¹. No response to K application was observed.

INTRODUCTION

No doubt that fertilizer has a very active role in increasing the per unit grain yield of wheat and may overcome the yield gap for the increasing population in the country. But so far, research work conducted on fertilizer has been limited to irrigated agriculture and importance of balanced fertilizer use in dry land was ignored. Consistence struggle in this respect will certainly be promising. However, Rehman *et al.*, (1967) and Barg and

Hermat and Szeme (1984), Rehman *et al.*, (1970) and Gandapur and Bhatti (1983) reported similar results with the facts that combined application of nitrogenous and phosphatic fertilizers have significant effect on the grain yield of wheat.

The present study was conducted to find out the optimum level of fertilizer with the increased yield of wheat under the arid climate of D. I. Khan Division.

MATERIALS AND METHODS

Research experiment was conducted at Arid Zone Research Farm Dera Ismail Khan under rainfed conditions during the year 1988-89 in order to determine the optimum level of fertilizer for increased crop production. The soil was loamy clay in texture containing 0.69 percent organic matter with pH of 8.2

The seed bed was properly prepared and weighed quantities of fertilizer were broadcast and ploughed in according to the following treatments (kg ha⁻¹).

Treat	N	P ₂ O ₅	K ₂ O
T1	0	0	0
T2	50	0	0