

WHEAT RESPONSE TO POTASSIUM APPLICATION

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ABSTRACT

Naturally soils vary in texture and contain varying amount of clay minerals. Flood plain soils are rich in mica clay, which is the main stream of K supply. In this region, river and groundwater also contain on an average about 7 mg l⁻¹ of K which is another source of K for crops. The K supply from soil and water sources seems to be adequate in our soils but because of higher cropping intensity which is approaching to 200 percent and high yielding crop varieties, there is heavy removal of nutrient from soil with very low K fertilizer addition. Keeping these factors in view, the wheat response to K application was studied at research area of Soil Chemistry Section, Ayub Agricultural Research Institute, Faisalabad and in the farmer's fields. Potassium was applied @ 0, 75, 150, 225 and 300 kg ha⁻¹ along with recommended dose of NP (120-100) kg ha⁻¹. The initial extractable K status of soil in four experimental sites was satisfactory to adequate (114-260 mg kg⁻¹). The results indicated that the wheat responded to K application at two sites, at Ayub Agricultural Research Institute, Faisalabad where lower dose (75 kg ha⁻¹) during 1998-99 and lower and medium doses of K₂O (75 and 150 kg ha⁻¹) gave significantly higher and economical grain yield over NP treatment. At Chak No. 2/JB Ramdewali, there was an improvement in grain yield with K application but statistically non-significant. At Dharmkot location wheat significantly responded to higher dose of K application over NP level (300 kg ha⁻¹). It is concluded that there is an indication of wheat response to K application but still detail investigations are required to determine the dose of K for different crops and soil types.