

## PHYSIOLOGICAL EFFECTS OF NITROGEN AND PHOSPHORUS APPLICATION ON WHEAT II YIELD COMPONENTS OF THREE CULTIVARS

Arif, H., A.A. Sajid and N. Ahmad\*

*Four fertilizer combinations (60-60, 60-140, 140-60 and 140-140 kg NP/ha) were applied to three varieties of wheat; Faisalabad-83, Punjab-85 and LU-26S. Grain number per spike increased by increasing NP levels but decreased at the highest NP level. Maximum grain numbers were obtained in the variety Faisalabad-83. Grain weight, dry matter production, economic and biological yields and harvest index increased by increasing NP level up to 140-60 kg/ha but all these values decreased when NP level was increased to 140-140 kg/ha. All these traits were found to be maximum in variety Punjab-85. Economic analysis revealed that the cost-benefit ratio was the highest for the 140-60 kg NP/ha.*

### INTRODUCTION

Wheat is an important and ancient cultivated form of cereals. It is a principal source of carbohydrates, proteins and energy amongst the cereals. Its straw is also an important source of livestock feed. It is grown on an area of 7911 thousand hectares in Pakistan with a production of 1456.5 tonnes, and an average yield of 1841 kg/ha (Pakistan Economic Survey, 1991-92) National average yield of Pakistan is much lower than other wheat producing countries of the world

Faisalabad. Three varieties, Faisalabad-83, Punjab-85 and LU-26S were sown with four NP levels 60-60, 60-140, 140-60, 140-140 kg/ha. Layout was a split plot replicated 4 times. net plot size was 1.5 x 7 m. Varieties were kept in the main plots and NP levels in sub-plots.

A uniform dose of 100 kg/ha urea was applied to all the varieties. After germination the distance between plants was maintained at 3-3.5 cm.