

## EFFECT OF PLANTING TIME, PLANTING DENSITY AND WEED CONTROL ON THE GRAIN YIELD OF BREAD WHEAT.

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### ABSTRACT:

A series of field experiments were conducted on sandy lam soil at cereal crops Research Institute, Pirsabak during 1990-93 to study the effect of planting time, planting density and weed control on grain yield of bread wheat. The treatments were comprised of three planting dates, three seeding rates and three weed control methods. The results demonstrated that grain yield per hectare was significantly affected by planting date, planting density of weeding methods. Maximum grain yield was obtained from planting on November 15 and yield declined significantly with late planting. Further date demonstrated that seeding rate of 100 Kg per hectare produced maximum grain yield followed by 150 Kg seeding rate per hectare. The data further revealed that maximum grain yield were produced by Chemical weed control followed by hand weed control.

### INTRODUCTION

Wheat (*Triticum aestivum* L.) is an important cereal crop both in respect of area and dietary need of world. In spite of great progress achieved wheat yield per unit area, is still below the potential yield. Planting dates, planting rates and weed control methods are the most important factors amongst the other production factors. The planting time of wheat crop like other crops is directly related to its provision of proper growth and development for exploitation of yield potential of cultivars. Similarly, plant density of wheat crop is also recognized as an important yield component. Beside this factor weed control is considered as one of the important factors for obtaining/getting potential yield, because weed infestation is the main cause of reducing the crop yield through competition for nutrients, light, water. Anand and Sinagh, 1958 reported that mid of November was the most suitable time for wheat planting for better growth and higher grain yield. Zeb et al., 1987 noted that the highest grain yield was obtained with earlier sowing (25th October) and lowest yield with later sown crop (24th December). Khan, 1986, reported that planting of wheat in the middle of November gave higher yield than early and late sown crop.

Waraich et al., 1982 observed that late October and early November sowing was better for grain yield among other dates. Ciba, 1983 suggested that delayed planting resulted in lower wheat yields. Poswal, 1974 have reported that growth, yield contributing traits and yields were significantly affected by varieties and seeding rates and Baker, 1982; reported highest grain straw yields with maximum seeds rate i.e 140 Kg per hectare.

In addition to this Toash and Misra, 1975 observed that chemical weed control in wheat crop gave very significant increase in grain and straw yield over no weeding. Gill et al., 1979 reported that yield losses occur because of weed infestation which vary 15-50 percent depending upon weed density. Tanji et al., 1987 noted that weeds competition resulted in grain yield losses upto 35 percent and straw upto 23 percent. Thus an investigation was made for three years to assess response of grain yield of wheat crop to planting time, planting rate and weed control methods under agro ecological conditions of Nowshera, N.W.F.P.