

## PERFORMANCE OF VARIOUS RAPESEED (*BRASSICA NAPUS*) GENOTYPES AT DIFFERENT ROW SPACINGS AND SOWING DATES

Mohammad Aslam Hayat, Manazar Ul Haq, Muhammad Azim Malik, Rashid Ibrar<sup>1</sup> and Muhammad Aslam<sup>2</sup>

<sup>1</sup>University of Arid Agriculture, Rawalpindi and

<sup>2</sup>National Agricultural Research Center, Islamabad.

### ABSTRACT

The study to evaluate the effect of sowing dates and row spacings on growth and yield of four *Brassica napus* genotypes was conducted during fall season 1994-95. Plant height, number of primary branches plant<sup>-1</sup>, number of silique plant<sup>-1</sup> and 1000 seed weight showed significant differences over sowing dates, row spacings and genotypes. Highest seed yield of 2777 kg ha<sup>-1</sup> was produced by CON-I and CON-III at 30 cm row spacing sown on 13th October. The seed yield decreased with wider row spacing and delayed sowing.

### INTRODUCTION

The yield of rapeseed can be increased by improving agronomic practices such as seedbed preparation, time of sowing, certified seed of improved varieties, plant population per unit area and fertilizer application. Cultivation of improved varieties of rapeseed and mustard can enhance yield from 20-30 % (Khan et al., 1987) and their early planting increased the yield whereas delayed planting reduced the yield (Vasi et al., 1986). Sowing dates had marked effect on plant height, number of primary branches plant<sup>-1</sup>, number of pods plant<sup>-1</sup> and seed yield of rapeseed (Thurling, 1974). Delayed sowing of various *Brassica napus* genotypes resulted

plant<sup>-1</sup>. In addition there was an advantage of residual soil moisture of the monsoon season which resulted in earlier emergence and good stand establishment (Manzoor and Stringan, 1991). The present study was designed to determine the appropriate sowing time with suitable spatial arrangements for various *Brassica napus* genotypes.

### MATERIALS AND METHODS

To evaluate the effect of sowing dates (13th October, 23rd October, 2nd November, 12th November, 22nd November and 2nd December) and row spacings (30cm, 45cm and 60cm) on plant height, yield and yield components of four *Brassica napus* genotypes (CON-I, CON-II, CON-III and Westar), an experiment was conducted at National Agricultural Research Centre, Islamabad during fall season 1994-95. The experiment was laid out in a split-split plot design with three replications. Sowing dates were kept in main plots, row spacings in subplots and genotypes in sub sub plots. The main plot size was 5 x 21.6 m, the sub plot sizes were 5 x 4.8 m, 5 x 7.2 m and 5 x 9.6 m for 30, 45 and 60 cm row spacings, respectively. The sub sub plot sizes were 5 x 1.2 m, 5 x 1.8 m and 5 x 2.4 m for 30, 45 and 60 cm row spacings, respectively. The seed rate was used @ 6 kg ha<sup>-1</sup>. Whole of the experimental