

Effect of different sowing dates on growth and yield of *Rabi* sorghum (M-35-1)

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ABSTRACT

The investigation on the effect of different sowing dates on growth and yield of *Rabi* sorghum (M-35-1) was carried out during 1998-99 in *Rabi* season with an object to assess the effect of different sowing dates on growth and yield attributes of *Rabi* sorghum in M-35-1 genotype. The four different time periods of sowing dates were used. Effect of D_2 sowing date on 28 Sept. 1998 (39th MW) gave highest yield. Similarly, the D_2 (28 Sept. 1998/39th MW) produced highest dry matter in M-35-1 genotype contributing the growth attribute.

KEY WORDS : Sowing dates, Growth, Yield, *Rabi* sorghum and M-35-1

Waghmare, P.K., Waghmode, D.B., Kedar, P.B., Zote, Ashalata K. and Shelke, V.B. (2010). Effect of different sowing dates on growth and yield of *Rabi* sorghum (M-35-1), *Internat. J. Forestry and Crop Improv.*, 1 (2) : 112-113.

INTRODUCTION

Sorghum [*Sorghum bicolor* (L.) Moench] is one of the most important millets grow under rainfed as well as irrigated conditions in most of the major states. Its importance is ever increasing as a the source of staple food for poor people, fodder for cattle and raw material for industries. Although sorghum has great importance as well as considerable area under *Rabi* season, its productivity is very low due to some factors like use of local low yielding varieties, low adoption of improved technology, untimely sowing, weather variables etc. Therefore, so as to find out most suitable time for the *Rabi* sorghum (which best stands in different crop environments) planting, four dates of sowing viz., D_1 (14th Sept), D_2 (28 Sept.), D_3 (12 Oct.) and D_4 (26th Oct.) which accommodates span of about 15 days which has been considered in this investigation.

MATERIALS AND METHODS

A field experiment was conducted during *Rabi* season in 1998-99, at the Department of Agricultural Meteorology (Central farm), Marathwada Agricultural

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University, Parbhani. The soil of the experimental field was fairly leveled, well retentive for soil moisture, clayey in texture, low in available N, medium in available P_2O_5 and high in K_2O and alkaline in reaction. The experiment was conducted in Randomized Block Design (RBD) with four treatments and six replications. The four treatments compared of four different sowing dates as main treatments viz., D_1 (14th Sept.), D_2 (28th Sept.), D_3 (12th Oct) and D_4 (26th Oct). The land was ploughed about 20 cm deep. Fine tilth was achieved by a subsequent harrowing. The experimental area was cleaned and leveled to kept the field ready for sowing. The genotype M-35-1 was used for the experiment. Data on respective parameters were collected from randomly selected and tagged ten plants from each net plots.

RESULTS AND DISCUSSION

The results of the present investigation based on means and their test statistics are interpreted under appropriate heads here-in. The differences between sowing dates were significant. The sowing date D_2 (28th Sept i.e. 39th MW) was found significantly to be more optimum in plant height, number of leaves and total dry matter per plant at 30, 45, 60, 75, 90, 105 days and at harvest after sowing as compared to rest of three sowing dates i.e. D_1 (14th Sept), D_3 (12 Oct) and D_4 (26 Oct) (Table 1).

However, the sowing date D_2 (28th Sept.) produced significantly higher grain (1691 kg/ha), fodder (5106 kg/ha) as well as bhoosa (498 kg/ha) yield than other three sowing dates. The more optimum time for planting (sowing)