Research Note

Correlation of weather varialbles prevailed with growth and yield of sorghum (M-35-1)

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INTRODUCTION

Sorghum (*Sorghum bicolor* L.) is one of the most important millets grown under rainfed as well as irrigated conditions in most of the major states. Its importance ever increasing as a source of staple food for poor people, fodder for cattle and raw material for industries (Subramanian *et al.*, 1988). 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 establish correlation of weather variables prevailed *viz.,* rainfall, temperature, relative humidity, day length etc. with growth and yield of sorghum have been considered in this investigation.

A field experiment was conducted during *Rabi* season in 1998-99, at the department of Agricultural Meteorology (Central farm), Marathwada Agricultural 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 interaction. The experiment was conducted in Randomised Block Design (RBD) with four treatments and six replications. The land was ploughed about 20 cm deep. Fine tilth were achieved by a subsequent harrowing. The experimental area was cleaned and leveled and 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.

The results of the present investigation based on means and their test statistics are

Table 1 : Correlation of yield with weather parameters								
	Yield	Rainfall	Max.T	Min. T	Mean T	RH-I	RH-II	RH mean
Yield	1.0000							
Rainfall	-0.2705	1.0000						
Max. T	-0.0555	0.4910**	1.0000					
Min.T	-0.1042	0.6238**	0.8098**	1.0000				
Mean T	-0.1221	0.6250**	0.8491**	0.9904**	1.0000			
RH-I	-0.1398	0.6292**	0.5531**	0.8391**	0.8119**	1.0000		
RH-II	-0.1225	0.6343**	0.6601**	0.9702**	0.9444**	0.9058**	1.0000	
RH mean	-0.1248	0.6437**	0.6470**	0.9568**	0.9303**	0.9421**	0.9954*	1.0000
BSS	-0.1437	0.1532	0.0023	0.0845	0.1833	0.0653	0.1126	0.1038

* and ** indicate significance of values at P=0.05 and 0.01, respectively

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