THE STUDY OF WEEKLY RAINFALL VARIATIONS OF MAIN RESEARCH STATION HEBBAL, BANGALORE

Of all the meteorological parameters, rainfall is the most important one; as variations in it either above normal or below normal affect the life on the earth. Many of the rainfall studies of a place have brought about interesting features of the behaviour of rainfall and added to our knowledge in understanding its nature. The early work on rainfall analysis was mainly on monthly basis, mostly for the calender months of the year. Murali Mohan Rao and Ramana Rao (1968) have described the reliability of rainfall during crop-growing seasons of Bangalore and Kolar districts. They have obtained the percentage probability of getting a known amount of rainfall during June, July, August, September and October. The study of theoretical distribution of rainfall during growing season of semi-arid Bangalore region by Krishnan and Suryanarayana (1982) has indicated that the average growing season in Bangalore is quite long extending from mid April to the end of November. The main aim of the present communication is to describe the normal weekly rainfall of MRS Hebbal and to highlight its variations with respect to probabilistic considerations.

The Main Research Station (MRS) of the University of Agricultural Sciences, Bangalore is located at Hebbal at a distance of about eight kilometres from Bangalore city towards the northern-side on Bangalore-Hyderabad national high-way (Lat. 13°N, Long. 77°37′ E ; Alt. 899.0 metres). The daily rainfall data collected at this research station for a period of eighty-eight years (1897-1984) is arranged standard-weekwise and then totals worked-out. The mean weekly values thus obtained are shown in Fig. 1.

The highlights of this study as exhibited in the figure are as follows :

(1) The normal weekly rainfall pattern of Bangalore is trimodal and not bimodal, as was thought of earlier. The first peak appears during 20th week, the second during 34th week and the predominant third peak during 39th standard week of the year.

(2) There is a sudden increase in rainfall from 15th to 20th weeks (*i.e.,* from 9th April to 20th May) and it remains steady for the next two to three weeks and then it declines. The rainfall during these weeks (*i.e.,* from 15th week to 23rd week) could be profitably made use of for raising a short duration summer crop like redgram, horse-gram, bengal-gram, groundnut, sesamum etc.

(3) The probability of getting at least 10.0 mm of rainfall and also the probability of getting a
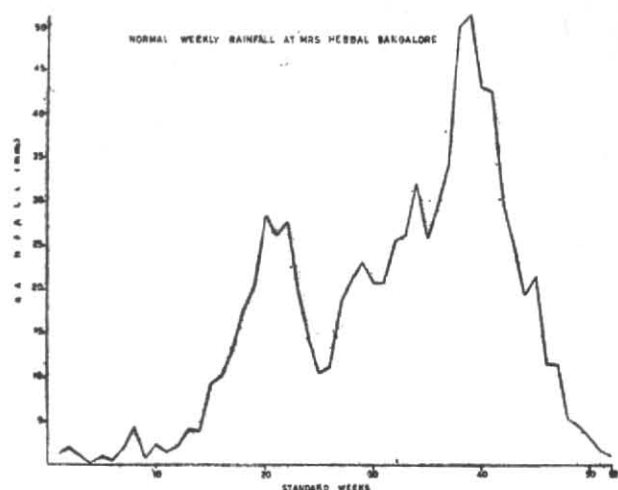

Fig. 1. Normal weekly rainfall at main research station(MRS) Hebbal, Bangalore

wet week followed by a wet week during the above period are fairly high, thereby indicating an assured summer crop as described above.

(4) There is a short period of decline in rainfall of about four weeks (24th to 28th), after which it increases gradually to 34th week and then further to the highest peak during 39th week to a value of 51.5 mm.

(5) The normal kharif crop could be taken during the period 28th to 39th weeks.

(6) The rainfall suddenly decreases from 42nd week onwards till the end of the year, meaning there by that the contribution by the NE-monsoon is very small to the annual rainfall of Bangalore.

References

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