Research Paper:

Rainy season and its variability for crop planning in Basavakalyan region (Karnataka) VISHWANATH BIRADAR, BASWARAJ BIRADAR AND B. ARUNKUMAR

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SUMMARY

Correspondence to : VISHWANATH BIRADAR Agricultural Research Station, Near Hugeri, BIDAR (KARNATAKA) INDIA The analysis of daily rainfall data of thirty four years (1976-2009) indicated that the average annual rainfall for the Basavakalyan region was 759 mm spread over with a mean rainy days of 49.9 days. The lowest and highest recorded annual rainfall and rainy days was 392.3 and 1122.5 mm and 33 and 62 days, respectively. The standard deviation and coefficient of variation for mean annual rainfall and rainy days was 179.3 mm and 23.6 per cent and 7.8 days and 15.6 per cent, respectively. The highest mean rainfall of 162.6 mm with coefficient of variation of 60 per cent was highest in September month followed by August (158.1 mm) with coefficient of variation of 56 per cent. However, the lowest coefficient of variation of 45 per cent was noticed during June month with mean rainfall of 101.9 mm indicating lesser variability.

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The agricultural strategy to increase **L** production on a sustained basis should make use of scientific information generated by the agrometerological fraternity. Food production from dryland agriculture is always uncertain, due to large temporal and spatial variation in rainfall. In minimizing risk, climatological data of a location are very helpful (Vairavan et al., 2002). According to Pandey et al. (2002), seventy per cent rainfalls occurs during monsoon period, out of which the crops use only small amount and a large portion is lost as surface runoff. Rainfall is the main limiting factor affecting crop productivity. Therefore, its amount, time of occurrence and spatial variability controls the agricultural practices adopted in the region.

Mean monsoon rainfall over India as a whole during June-September is 840 mm with a coefficient of variation of 10 per cent. And this amounts to about 85 per cent of the annual precipitation (1081 mm) (Parthasarathy *et al.*, 1992; Gadgil *et al.*, 1999 and Gopinathan, 2000). Even in monsoon months the crops are subjected to moisture stress due to occasional dry spells. Although the rainfall is high, the distribution is erratic making the crop vulnerable even during monsoon.

Several workers like Sahu (2008) reported annual and seasonal variability of climate in south Saurastra agroclimatic zone. Parmer *et al.* (2005) and Krishnakumar and Prasad Rao (2008) reported rainfall variability in Gujarat and Kerala state respectively. Halikatti *et al.* (2010) reported annual and seasonal rainfall variability at Dharwad, Karnataka. In this context, a similar attempt was made at Agriculture Research Station, Bidar, to analyze the rainfall variability in month, season and annual wise for Basavakalyan region.

MATERIALS AND METHODS

Daily rainfall data for the past 34 years (1976-2009) were collected from District Statistical Office, Bidar, for analysis (Table 1). The rainfall data were critically examined for annual, seasonal and monthly values following the procedure of Panse and Sukhatme (1985). The standard deviation (S.D.) and Coefficient of Variance (C.V.) of rainfall were worked out.

RESULTS AND DISCUSSION

The daily rainfall data for the period from 1976 to 2009 were analyzed and the results were presented under different heads for mean, standard deviation (mm) and coefficient of variance (%) of annual and seasonal rainfall and the per cent of different seasonal rainfall *vis-à-vis* annual rainfall (Table 1). The highest

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