International Journal of Agricultural Sciences
Volume 9 | Issue 1| January, 2013 | 237-241

RESEARCH PAPER

Rainfall and rainy day trends at Dharwad, Karnataka

U.V. MUMMIGATTI*, N.E. NAVEEN AND B.T. NINGANUR
Agromet Advisory Service Unit, Directorate of Research, University of Agricultural Sciences,
DHARWAD (KARNATAKA) INDIA (Email : aasunitdharwad@gmail.com)

Abstract : Rainfall data of 27 years (1985-2011) obtained from Agromet Observatory, Main Agricultural Research Station (MARS), University of Agricultural Sciences, Dharwad was analysed for rainfall and rainy days. The trend indicated that the tract received a mean annual rainfall of 720.2 mm in 54 rainy days with maximum contribution (62.93%) from south west monsoon (June to September). July was the rainiest month (129.7mm) with 11 rainy days. This region experienced severe drought (mean rainfall of 379.8 mm) during the period 2000 to 2004. On the contrary, during recent the last 7 years (2005-2011), the annual rainfall was exceptionally above normal, which ranged from 866.2 mm to 1140.4 mm with a mean value of 986.8 mm and lower standard deviation (97.72) and co-efficient of variation (13.56 %), indicating lesser variability and more dependability. The annual rainfall variability during the last 27 years (1985 to 2011) indicate that 17 years normal rainfall (-4.8 to 58.2%) and 5 years slightly drought (-13.2 to -24.4%) and 2 years moderate drought (-26.9 to -39.6%) and 3 years severe drought (-49.7 to -75.7%).There were no significant trend in the mean annual rainfall. The mean annual 54 rainy days of 27 years (1985-2011) was recorded with maximum contribution of 68.72 per cent with 37 rainy days from south west monsoon (June to September).

Key Words : Rainfall, Rainy days, Annual, Seasonal

View Point Article : Mummigatti, U.V., Naveen, N.E. and Ninganur, B.T. (2013). Rainfall and rainy day trends at Dharwad, Karnataka. *Internat. J. agric. Sci.*, **9**(1): 237-241.

Article History : Received : 16.08.2012**; Revised :** 16.10.2012**; Accepted :** 04.12.2012

INTRODUCTION

Main Agriculture Research Station (MARS) Dharwad is located in University of Agriculture Sciences Dharwad main campus on the Pune-Bangalore National Highway No.4 at an latitude of 15-26' N , longitude of 75-07' E and altitude of 678 meters (MSL) with mild summers and winters, with mean annual rainfall of 720.2 mm rainfall (1985 to 2011). The area experiences tropical climate/semiarid climate with a distinct seasons (1) summer (2) rainy season and (3) the winter. The relative humidity is generally high as over 80 per cent in the monsoon season and less in non-monsoon periods. In April month the whirlwinds are common.

Rainfall variability is a major factor influencing the agricultural productivity and sustainability in tropics (Virmani, 1994). The development of improved crop production technology in the rainfed areas to increase food production requires spatial quantitative understanding of temporal variation of rainfall during crop growth. The annual and seasonal rainfall received and its variability directly influences the success or failure of crop through its favourable or adverse effect on crop growth and yield. Therefore, the study of variability of annual and seasonal rainfall is essential in selection of suitable crops and to take appropriate mitigating measures based on rainfall characteristics of a given location and dependability. Such analysis is helpful in prediction of annual and seasonal rainfall probability for the next one or two years, in turn crop planning. Similarly, rainfall variability analysis at Akola was done by Tupe *et al.* (2010), Singh *et al.* (2009) reported for Bihar and Krishnakumar and Prasad Rao (2008) for Kerala and Hanumanthappa *et al*. (2010) reported the rainfall variability in coastal district of Karnataka. Therefore, the study of general trend and distribution of monthly rainfall and rainy day is essential in selection of suitable crops and to take appropriate mitigating measures based on rainfall characteristics of a given location and dependability. Rainfall and rainy days are important weather inputs that limit the crop productivity in a particular location. Hence, it is essential to understand characteristics of these parameters for better agricultural planning.

*** Author for correspondence**