

Assessment of meteorological drought for Parbhani district of Maharashtra, India

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■ **ABSTRACT** : A study was carried out to estimate the drought occurrences for rainfed area of Parbhani district of Maharashtra, India. Rainfall plays an important role during crop growth in rainfed agriculture system. Rainfall data of 32 years (1983 - 2014) have been analyzed on annual, seasonal, monthly and weekly basis to find out drought occurrences at Parbhani. The drought analysis indicated that during the study duration the drought, normal and wet years were found to be 9.37, 68.75 and 21.87 per cent, respectively. The occurrences of drought, normal and wet seasons were 7.29, 73.95 and 18.75 per cent, respectively. The percentage of drought, normal and wet months were observed to be 48.43, 38.80 and 12.76 per cent, respectively while drought, normal and wet weeks were observed with a frequency of 70.07, 16.28 and 13.64 per cent, respectively. The research revealed that 9 years showed moderate drought intensity, 9 years showed mild drought intensity while the remaining 14 years observed with no drought condition. No severe or extreme drought was observed during this study duration. The mean value, standard deviation and coefficient of variation of annual rainfall were found to be 947.5 mm, 312.3 mm and 32.96 %, respectively. The analysis also indicated the need of assured irrigation during late winter and summer season.

■ **KEY WORDS** : Rainfall analysis, Meteorological drought, Drought year

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