

- 1039. Prakash, C. 1986.** Analysis of drought occurrence and water harvesting potential in semi-arid climate of Kota. *Hydrology J. IAH*, IX(4):25-31.

To determine the frequency of droughts of different intensities and water harvesting potential of District Kota (Rajasthan), fifteen year (1965-79) meteorological data were analysed using climatic water balance approach. Analysis of data showed that out of 15 years, Kota experienced 8 droughts viz. 2 severe, 5 large and 1 moderate. Subnormal and erratic pattern of the rainfall accompanied by high water need were the major factors responsible for droughts. Water balance of Kota revealed that (i) precipitation (677 mm) exceeds evapotranspiration (247 mm) demand from July to September and water deficiency of 500 mm occurs from October to June and (ii) 36% of excess precipitation (430 mm) over water need appears as water surplus (153 mm) and remaining 64% goes to soil profile recharge (277 mm). Water surplus (during *kharif* season) offers an ideal opportunity for utilization

of excess water (stored in farm pond) to provide protective irrigation to *kharif* crops during period of moisture stress or to *rabi* crops as pre-sowing irrigation for increasing crop production under rainfed conditions.