

The study quantified rainfall variability for March-May (MAM) and October-December (OND) seasons in Tharaka district, Kenya. The parameters analysed were inter-annual variability of seasonal rainfall, onset and cessation using daily rainfall data in three agro-ecological zones' stations. Percentage mean cumulative method was used to determine onset and cessation, and seasonal variability was estimated using rainfall variability indices. Although both seasons are highly variable, OND has been persistently below mean over time while MAM shows high within-season variability. Despite the near uniformity in the mean onset and cessation dates, the former is highly variable on an inter-annual scale. The two rainfall seasons are inherently dissimilar and therefore require specific cropping in agro-ecological zone LM4 and LM4-5. It is possible that farmers in IL5 are missing an opportunity by under-utilising MAM rainfall. The results should be incorporated in implications of climate variability and vulnerability assessment in semi-arid Tharaka district.