

Influence of present rainfall pattern for traditional paddy cropping calendar: A case study at Mapalana; Southern Sri Lanka

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Climate-potential in respect of onset, magnitude and risk associated with rainfall for rice production in Mapalana, Southern Sri Lanka, was assessed using the daily rainfall data for more than 50 consecutive years (1950-2000) recorded at the Mapalana meteorological station. The onset and the termination of the rainy season were assessed to demarcate the paddy-cropping calendar. The date of accumulation of 200 mm rainfall was considered as the commencement date of paddy cultivation as 200 mm water is needed for initiating wetland rice. The termination of the cropping season for rice was determined by backward accumulation of 500 mm rainfall. The criteria 500 mm rainfall accumulation was used as it represents the amount of water needed to sustain the rice crop, assuming that a fully charged soil profile was available at planting. The method, Markov chain principle was used to determine the frequency and probability of dry and wet spells within the rice growing seasons. Results revealed that Mapalana is unsuitable for pure rain fed rice cultivation in *Yala* season. It was attempted to formulate appropriate season with adjusted time for *Yala*. Based on forward and backward rainfall accumulation in the *Maha*, there is no rainfall limitation for pure rain fed paddy cultivation during *Maha* season.