

AGROA-CLIMATIC POTENTIAL ASSESSMENT FOR CROP INTENSIFICATION IN SOUTHERN SRI LANKA - A CASE STUDY IN MATARA DISTRICT

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The climatic potential in respect to onset, duration and magnitude of the rainfall were assessed using the rainfall probability concepts and the climatic water balance approach. The rainfall data for 45 consecutive years (1950 - 1995) were collected from 10 stations in different agroclimatic regions of Matara district. The limits of 10 mm weekly rain at 75% probability and Hargreave's Moisture Availability Index of 0.34 in weekly basis were used to demarcate wet and dry weeks of the area.

The 1st - 10th and the 26th - 36th weeks of the calendar year are recorded as dry weeks in the selected regions except in Anninkanda. The duration of wet period during *Yala* and *Maha* seasons in the selected regions differs from 1 week to 21 weeks and it is closely related with the mean annual rainfall of the regions. Among all selected regions, the longest wet period is recorded in Anninkanda whereas the shortest wet period is recorded in Kekanadura and Dandeniya.

The onset of rain in *Yala* and *Maha* seasons falls during 9th - 20th and 34th - 40th meteorological weeks respectively in all the selected regions. The early onset of rain is expected in the locations where the annual rainfall is high. The duration and magnitude of rainfall increase from south to north and from east to west in the district.