

Identifying Occurrences of High and Low Rainfall as a Guide to Farmers to Raise Agricultural Production in the Arid and Semi-Arid Lands of Kenya.

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Farmers make various decisions in managing their farms that require informed use of climatic information in order to maximize production. Operational decisions like whether to spray pesticide in the afternoon and tactical decisions like which crop to plant this coming season require short-range and long range weather forecasts, respectively while strategic decisions like whether to invest in heavy machinery require climatic type of information. In the past, seasonal rainfall forecasts have been inaccurate and in absence of reliable information, farmers in the dry areas of Kenya have evolved indigenous methods to guide them in their decision making. A 1999 study in Makueni district, however, showed that farmers are willing to adopt strategies that reduce losses if accurate scientific forecasts of rainfall performance and drought occurrences in a rainfall season are given in good time. This study was conducted to address this need by attempting to find if there is a reliable way to tell when high rainfall or low rainfall amounts can be expected to occur so as to enable farmers to prepare well in order to maximize production during high rainfall years and employ strategies that minimize losses during low rainfall years. Forty three years of rainfall for Makindu Meteorological station were analyzed by comparing them to the long term mean to determine whether periodicities of high and low rainfall could be discerned. High amounts of rainfall were found to occur in years ending with 2, 4, 7 & 8 while low rainfall occurred in years ending with 0, 1, 5, 6 & 9. Years ending with 3 could not be classified as either high or low rainfall years.