



Figure 2.1: Time Series Analysis on a 50 year data of rainfall and temperature (Cutrim et al 2000).

but the results showed that rainfall and temperature varied coherently, with a cycle of about 2-3 years. An inverse relationship in trend was noted between rainfall and daily temperature range using linear regression among the variables. The ARIMA models showed autocorrelation and seasonality providing time series models.

It was concluded that: There is a cyclic pattern noted in both the rainfall and temperature time series and a cycle of about 3 years in the rainfall and temperature data sets suggesting a coherent variance in the relationship. This finding suggested a cyclic nature of large rainfall events over time and was confirmed by the recent large rainfalls events in 2009-10. Linear regression showed an inverse relationship in trend between rainfall and temperature range only even though the r value was around 0.27.

Time Series Analysis on the Agricultural Commodities Prices

Other than prices, the data includes variables reflecting demand and supply factors affecting agricultural prices. Series are on a monthly basis. On the demand side it has been considered that monetary aggregate will be the proxy for world real aggregate expenditure, production of ethanol and biodiesel, several proxies for trading activity in futures markets, and the U.S. dollar–Euro exchange rate. On the supply side the price of oil, price of fertilizers, and volume of exports by major world producers are used.

The data gathered was from 2002 to 2009. The end of the series was restricted due to unavailable data, and restrictions at the beginning of the series were due to the presence