

**FORECASTING OF PRICE TRENDS OF FRUITS
AND DEVELOPING MARKETING INFORMATION
SYSTEM**

(A CASE STUDY IN JAFFNA DISTRICT)

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ABSTRACT

Concerning the fruit production in Sri Lanka, Jaffna District plays a major role by cultivating fruit types like banana, mango, jack fruit, papaya and grapes. Though these fruits are demanded by buyers, especially for the export market of value added products in Sri Lanka. The marketing information linkage between fruit growers and buyers is not available. Therefore, the requirement of developing a marketing information system was identified in order to reduce the limitations in marketing of fruits by providing information regarding fruit growers and price trend of fruits. Stratified sampling technique was used to determine the sample of fruit growers from each fruit cultivation and data of fruit growers were collected by using structured questionnaire. As a result of descriptive analysis, there are fruit growers who are able to market their produce with quality and adequate quantity. Thereby, those fruit growers were selected for fruit marketing. Subsequently, database was developed by using 'My SQL' software with the information gathered about fruit growers. Meanwhile, price data of each fruit were gathered from year 2005 to year 2014 and price trend analysis was performed by using Seasonal Auto Regressive Integrated Moving Average (SARIMA) Model. As a result of price trend analysis, price of fruits has been increased with the time and it will rise in future years as well. Information obtained by price trend analysis was incorporated into the system which assists in forecasting price for the next years. Eventually, Marketing Information System (MIS) was designed to easy access by users.

The MIS carries fruit growers' information such as name of grower, cultivated fruits, selling quantity, quality of fruit, contact details, etc. Consequently, this MIS will assist buyers in getting information on fruit growers and price trends of different fruits which supports to predict price of fruits for next years.

Key words: Marketing Information System, Time series analysis, Price trend analysis, ARIMA model, SARIMA model, Price forecasting