

Agricultural Market Information System with Integrated Forecasting and Short Message Service (SMS) Accessibility

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Agriculture remains the major livelihood in most of the developing countries in Asian and Pacific region even at present. One of the major problems among the farmers of developing countries is the lack of knowledge of the market of their products. Farmer's participation in market is poor and they are being forced to sell their products to local middlemen at dumped prices. The Agricultural Market Information System with Integrated Forecasting and Short Message Service (SMS) Accessibility project presents an Information and Communication Technology (ICT) solution to the problem by giving the timely and unbiased Agricultural Marketing Information. It helps farmers to gain profitable decisions in the short term on when and which market to produce, what price to produce and what price to expect. A GSM modem and an SMS Gateway application are used to send and receive the SMS messages. The Time series algorithm model was constructed to forecast the agricultural products' market prices. Through the empirical data testing, the average relative error was 2.91% for Samba Rice, which shows that this model can achieve good predicted results. This time series forecasting model can be used in forecasting the prices of various types of agricultural products, with a premise that having enough data of agricultural products in the model training to determine the model structure and parameters.

Key words: Time series forecasting model, GSM modem, SMS