ABSTRACT

Dower Food Shop in Lamongan Regency is known for its spicy food, especially geprek chicken. Managing the stock of slaughtered chickens is a challenge due to fluctuations in demand that are affected by certain seasonal factors, such as holidays, and special events. Mistakes in stock management can lead to a shortage or excess of stock that negatively impacts the business. This study aims to develop a prediction model for slaughter chicken demand using the Fuzzy Time Series Markov Chain method. With daily sales data from May 2022 to May 2024, this model is expected to be able to accommodate uncertainty and fluctuations in demand, providing accurate estimates to optimize chicken stocks. Model implementation is carried out through data collection and cleaning, model validation, sales prediction, and report preparation. The prediction results are displayed on a website, for special use for Warung Makan Dower. The model evaluation was carried out using the Mean Absolute Precentage Error (MAPE) method to ensure the accuracy of the prediction. This study is expected to show that the Fuzzy Time Series Markov Chain method can improve the efficiency of slaughter chicken stock management in Dower Food Stalls, reducing the risk of shortage or excess of slaughter chicken stock.

Keywords: *Forecasting, Stock Optimization, Fuzzy Time Series, Markov Chain, Website.*