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Sustainable Aquaculture for a Secure Future

Title: Forecasting Farm-Gate Catfish Prices in Uganda Using SARIMA Model

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Abstract: Stabilization of prices of essential agricultural commodities continues to remain an area of major concern for policy makers; given that price instability affects both producers and consumers, and has macroeconomic implications. This paper examines farm-gate price behavior in the African catfish markets in Uganda, and develops a forecasting model that adjusts for the seasonal fluctuations in the price series. The analysis utilizes monthly catfish real price series for the period January 2006 to December 2013. The model provides good in-sample and out-of-sample forecasts for the eight-year time period. The out-sample predictions based on SARIMA (1, 1, 1) (0, 1, 1)₁₂ model suggest that the stochastic seasonal fluctuations depicted in the price series are successfully modeled, and that catfish real prices follow an upward trend. The findings can assist policy makers and major stakeholders to gain insight into more appropriate economic and sectorial policies that can lead to the development of reliable market information systems and up-to-date data on catfish supply, demand and stocks

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