

## Time Series Analysis on the Production of Fruit Juice: A Case Study of National Horticultural Research Institute (Nihort) Ibadan, Oyo State

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**Abstract :** The research was carried out to investigate the time series analysis on quarterly production of fruit juice at the National Horticultural Research Institute Ibadan from 2010 to 2018. Documentary method of data collection was used, and the method of least square and moving average were used in the analysis. From the calculation and the graph, it was glaring that there was increase, decrease, and uniform movements in both the graph of the original data and the tabulated quarter values of the original data. Time series analysis was used to detect the trend in the highest number of fruit juice and it appears to be good over a period of time and the methods used to forecast are additive and multiplicative models. Since it was observed that the production of fruit juice is usually high in January of every year, it is strongly advised that National Horticultural Research Institute should make more provision for fruit juice storage outside this period of the year.

**Keywords :** fruit juice, least square, multiplicative models, time series

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