

Analysis of Soybean Raw Material Inventory Control in Tempe Production at UD Tempe Pratama, Jember Regency Using the Economic Order Quantity (EOQ) Method

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ABSTRACT

UD Tempe Pratama is an agro-industrial business that produces tempe located on Jalan PB. Sudirman X/185 RT 002 RW 018 Pagah Environment Patrang District Jember Regency. The aim of this research is to analyze the inventory control of soybean raw materials at UD Tempe Pratama using the company's conventional method and EOQ method and to analyze the comparison of the two methods. This research is research with quantitative approach using descriptive statistical data analysis techniques. The method used is the Economic Order Quantity (EOQ) method with 5 analysis techniques, including optimal raw material ordering, ordering frequency, safety stock, reorder point, and total inventory cost. The data used is inventory data and production data for soybean raw materials in 2023. The results of the study show that UD Tempe Pratama has purchased 37,800 kg of soybeans with an ordering frequency of 41 times and incurred a total inventory cost of Rp. 5,160,114. In addition, if using the EOQ method, an order quantity of 1,578 kg per order is obtained with an ordering frequency of 24 times in one year, a safety stock of 347 kg and reordering when inventory reaches 451 kg, while the total inventory cost incurred is Rp. 1,815,240. This shows that calculations using the EOQ method are more efficient and can save total inventory costs of IDR. 3,344,874 with a percentage value of 64.82%.

Keywords: Inventory Control, Soybeans, Tempe, EOQ, UD Tempe Pratama