Analysis of Raw Material Control for Macaroni Using The Economic Order Quantity(EOQ) Method at CV Macarindo Berkah Group Jember

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ABSTRACT

CV Macarindo Berkah Group is an agro-industry business, established since 2017, located at Jl. Sriwijaya 20 No. 11, Kec. Sumbersari, Kab. Jember. This company produces snacks in the form of macaroni snacks called "Macarina (Macaroni Nagih)" with various flavors. The purpose of this study is to use the Economic Order Quantity (EOQ) method to analyze the optimal availability of raw materials in 2021 to 2023, such as determining the optimal amount of raw material inventory, the right reorder point, how much safety stock must be available and how much inventory costs (Total Inventory Cost) must be provided in the procurement of macaroni raw materials. The Economic Order Quantity (EOQ) method is used by researchers as a research method. Based on the results of the analysis using the EOQ method, the optimal amount of raw material purchases in 2021 was 1,010 kg with a total of 9 purchases in that year, in 2022 it was 856 kg with a total of 8 purchases in that year, and in 2023 it was 711 kg and a total of 6 purchases in that year. The safety stock in 2021 was 52.64 kg, then in 2022 the safety stock was 98.7 kg and in 2023 the safety stock was 106.92 kg. Reorder Point can be done if the remaining raw materials are 82.44 kg in 2021, and 121.66 kg in 2022, and 120.9 kg in 2023. The total amount of inventory costs using EOQ in 2021 is Rp1,556,211.28, then in 2022 it is Rp1,318,416.61 and in 2023 it is Rp1,094,475.34.

Keywords: Inventory, Macaroni Raw Material, Economic Order Quantity (EOQ)