

Analysis of Tapioca Flour Raw Material Inventory Control Using the Economic Order Quantity (EOQ) Method at the Lestari Tempe Chips UMKM, Lumajang Regency

Paramita Andini, S.ST., M.ST. *as chief counsellor*

Shalasatin Nuril

Agroindustry Management Study Program

Department of Agribusiness Management

ABSTRACT

UMKM Keripik Tempe Lestari is a business that produces tempeh chips with tapioca flour as the main raw material located in Randuagung District, Lumajang Regency. UMKM Keripik Tempe Lestari carries out the production process with a capacity of 20-30 kg per production. The process of purchasing tapioca flour raw materials was carried out 52 times in 2023 and 53 times in 2024 with a purchase capacity of 18-50 balls. This research uses the EOQ method and POM-QM software. This study aims to (1) Analyze the inventory control of tapioca flour raw materials at UMKM Keripik Tempe Lestari. (2) Analyze the control of tapioca flour raw material inventory at UMKM Keripik Tempe Lestari using the EOQ method. (3) Analyze and calculate the comparison of raw material inventory costs between the inventory policies implemented by UMKM Keripik Lestari and the cost of inventory using the EOQ method of the POM-QM application. The method used is descriptive quantitative. The results of research at UMKM Keripik Tempe Lestari in 2023-2024 using the EOQ method the optimal number of orders is 1,592 kg in 2023, 1. 605 kg in 2024 and 6 times the frequency of purchases in one year for 52 days and a minimum inventory cost of Rp 315,290 in 2023 and Rp 317,637 in 2024. The reorder point of the EOQ method is 488 kg in 2023 and 459 kg in 2024, the safety stock is 456 kg in 2023 and 426 kg in 2024. The application of the EOQ method to the control of tapioca flour raw material inventory saves the frequency of ordering 46 times in 2023 and 47 times in 2024, saving costs of Rp 1,004,491 in 2023 and Rp1,028,353 in 2024 or 76%.

Keywords: *Tapioca Flour, Inventory Control, Raw Materials, EOQ*