

Analysis of Raw Material Inventory Control with Economic Order Quantity (EOQ) Method at Widya Banana Chips, Jember Regency

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ABSTRACT

Keripik Pisang Widya is a business owned by Mrs. Widyawati, established in 2016. This business has not yet implemented an optimal raw material inventory control system, which can result in repeated orders and inefficient ordering costs. This study aims to determine the calculation of banana raw material inventory control at Keripik Pisang Widya, the calculation of inventory control using the Economic Order Quantity (EOQ) method, and the comparison of inventory costs between the current policy and the EOQ method. The purchase quantity of 100 bunches per order and an ordering frequency of 138 times per year were obtained from 2024 data processing, with a total inventory cost (TIC) of Rp 1,443,020 based on the owner's policy. The EOQ method resulted in a purchase quantity of 316 bunches per order, an ordering frequency of 44 times per year, a safety stock of 153 bunches, a reorder point (ROP) of 253 bunches, and a total inventory cost (TIC) of Rp 276,311. The comparison shows a difference of 216 bunches in purchase quantity, 96 times in ordering frequency, 153 bunches in safety stock, 253 bunches in ROP, and Rp 1,116,709 in total inventory cost. The application of the EOQ method can reduce and optimize the total inventory cost that must be incurred by the owner.

Keywords: Inventory control, Economic Order Quantity (EOQ), Keripik Pisang Widya, inventory cost