ABSTRACT

CV XYZ is a producer of "mie soun" located in Klaten Regency, Central Java. The core activity of this company is to produce "mie soun" for sale to customers. To ensure the availability of the required raw materials, CV XYZ needs to plan and manage raw material inventory effectively and ensure a consistent supply for production.

Currently, CV XYZ faces difficulties in determining the optimal amount of raw material inventory due to the absence of decisions regarding the order quantity, stock checking schedule, and the appropriate reorder point for raw materials. As a result, there is overstock of raw materials at CV XYZ, leading to high total inventory costs exceeding the budgeted costs by 20%.

To address the challenges faced by CV XYZ, a proposed solution is to design a raw material inventory policy and decision support system using the periodic review method (R, s, S). The periodic review inventory control policy (R, s, S) is a policy that depends on three main variables for decision-making. These variables include the review interval (R), reorder point (s), and maximum inventory level (S). The decision support system is used to assist decision-makers at CV XYZ in implementing the proposed inventory policy with the periodic review method (R, s, S).

*The results of designing the inventory control policy using the periodic review method (R, s, S) are able to reduce total inventory costs by Rp 113,076,507. This indicates that the periodic review method (R, s, S) can minimize total inventory costs by 22% from the existing condition. The periodic review inventory policy (R, s, S) also yields a review interval value of 0.0549656 years or equivalent to 21 days, a reorder point of 4561 kg, and a maximum inventory level of 4643 kg.Keywords: **inventory, periodic review, raw materials, overstock***