ABSTRACT

PT XYZ is one of the companies runs in the beverage industry that produce milk in Bandung. Milk is one type of perishable food which has a lifetime. PT. XYZ produces a milk in the form of Pouch and Line Adicified Bottle (LAB). PT XYZ has the problem in controlling raw material inventory system because the product is perishable food, there is only one supplier who supply the material, and variation of lead time.

Inventory in PT XYZ are still not efficient seen from the number of overstock that indicate Fresh Milk raw material can expired in a certain time.This condition creates a stock that can not be used for the next month, thus incurring costs to be paid by PT XYZ.. This research is conducted to give the proposed raw material inventory policy to minimize total inventory cost. Inventory policy is carried out by considering the perishable item using joint replenishment method and P model.

The result of this policy on Fresh Milk raw material are economic order interval for 2.1 days and economic order quantity amounted to 9,932 units. Safety stock used for fullfilment of demand during lead time using 3,795 units while reorder point of 18,222 units. Deterioration cost is Rp. 25,204,611.

Proposed inventory policy can result in savings of Rp 46,832,701 or 58.27% from actual conditions. Further research can design applications for integrated replenishment processes with delivery from suppliers and inventory management.

Keywords: Joint Replenishment, perishable, safety stock , reorder point, economic order interval, economic order quantity