INVENTORY PLANNING SYSTEM OF INGREDIENT FROM MARGARINE AND SHORTENING USING FORECASTING AND EOQ METHOD AT PT SMART TBK.

Student’s Name : L Hartono Santoso
NRP : 9111201315
Supervisor 1 : Ir. Bobby Oedy P. Soepangkat, M.Sc., Ph.D.
Supervisor 2 : Dr. Sony Sunaryo, M.Si.

ABSTRACT

PT. Smart Tbk is a manufacture that produces margarine and shortening using a variety of ingredients as one of its raw materials. The implementation of ingredient inventory system is conducted based upon warehouse’s inventory data and PPIC Department’s policy. The ingredient inventory system has never been reviewed to conform with the current state of the company, so a more structured ingredient inventory system needs to be implemented by the company.

The first step in developing ingredient inventory is determining the appropriate forecasting model for ingredient based on margarine and shortening production data, and also ingredient consumption for the last five years. The second step is collecting lead time data and ingredient demand data during lead time. Then, the last step is calculating order cost, holding cost, shortage cost, economic order quantity (EOQ), reorder point, safety stock, and minimum total inventory cost.

The developed ingredient forecasting model has been able to estimate ingredient demand accurately. By implementing the total inventory costs could be decrease as much as 21.2% from the current ingredient inventory policy.

Key word : total inventory costs, EOQ, lead time, forecasting, reorder point, safety stock.