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An Optimal Delivery Strategy for Multi-Perishable Products Through Supply Chain Network

SY Alghamdi, M Alquraishi, and KK Krishnan

Department of Industrial and Manufacturing Engineering,
Wichita State University
Wichita, KS 67260, USA

Corresponding author's Email: krishna.krishnan@wichita.edu

Abstract: The optimization of delivery plan is a critical issue specially for multiple perishable products in any profitable organization. This paper develops a model for the implementation of the multi-perishable products through supply chain network based on the commercial and economic factors. Shelf life, cost of transportation, and amount of profit are taking into account in the way of implementing the mathematical model. The products value or price is affected by shelf-life time factor which is addressed in the model which maximizes the gross profit of perishable products through the supply chain network. An optimal delivery plan is developed based on shelf-life, time to transport the perishable products within the network reaching to retailer, while including the minimization of transportation cost in the model. Also, the optimal delivery plan identifies the right quantity of each type of perishable products to be delivered. In this research, a mathematical model is utilized for the sake of solving a multi-objective mathematical problem which includes revenue maximization, and minimization of transportation models to perform an optimal delivery plan. This paper's central aim is to maximize the gross profit while identifying the best delivery method for multiple perishable products.

Keywords: Supply Chain Network, Perishable Product, Maximize Gross Profit