

عنوان مقاله:

A location-routing-inventory problem for a perishable product in a sustainable closed-loop supply chain with multi-compartment vehicles

محل انتشار:

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خلاصه مقاله:

Today, competitive conditions in a market and changing demand of customers is becoming a problem for companies, which produces perishable products. While remaining unsold products that some of them are expired because of passing the shelf life, a retailer's depot is against the sustainable development rules. This study tries to solve a location-routing-inventory problem to designate an efficient sustainable closed-loop supply chain. A multi-compartment vehicle for pickup and delivery is used to take advantage of the closed-loop structure. The main objectives of this study are to minimize network operational costs and environmental side-effects of implementing a network while maximizing the satisfaction degree of the customers, personnel, and society. Finally, the developed mathematical model is solved by GAMS software. Since results for the problem are promising, the technical correctness of the model is verified.

کلمات کلیدی:

Perishability; Location- Routing-inventory problem; Closed-loop supply chain; Pickup and Delivery; Sustainability

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