

Title Optimisation of fresh-food supply chains in uncertain environments, Part II: A case study
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Citation Biosystems Engineering, Volume 99, Issue 3, March 2008, Pages 360-371
Keywords supply chain; fresh food

Abstract

In the first part of this paper, a general framework for modelling a fresh-food supply chain and an optimisation methodology to improve the performances of the network while preserving the quality of the product have been presented. The proposed modelling and optimisation framework explicitly considers the presence of uncertainty in the behaviour of the chain, providing solutions that are robust with respect to possible perturbations. The performance is improved by optimising the values of the physical and the logistic parameters describing the supply chain.

The objective of this second part is to illustrate and to test the proposed approach on a real-world case study, concerning a beef meat refrigeration and distribution chain. After a model development phase, optimisation is carried out with the aim to reduce costs while guaranteeing both correct meat refrigeration and delivery due dates. The numerical solutions provided by the proposed algorithm are discussed and their robustness with respect to uncertainty is evaluated.