A holistic framework for reducing food loss and wastage along the supply chain

Food security is receiving considerable attention worldwide in the face of a growing global population. Food loss along supply chains is one of the major challenges to ensuring food security.

How can loss and wastage along fresh food supply chains be mitigated to improve food security?

Magalhães’s methodology to identify the cause of food loss and optimise mitigation strategies

- Establishing the chief goals of mitigation efforts
- Determination of the best criteria for analysis of mitigation strategies
- Analysis of the multidimensional impact of possible strategies
- Optimisation of strategies according to impact analysis
- Realisation of mitigation goals

Root causes of supply chain-related food loss identified in 2 case studies

Case study 1: Brazilian beef supply chain
- Logistics
- Demand
- Product

Case study 2: Portuguese fruit and vegetable supply chain
- Logistics
- Availability of real-time data
- Information flow along supply chain

The step-by-step framework for optimising mitigation strategies can help design effective food security policies for reducing food loss along supply chains.

Emerald and EFMD Outstanding Doctoral Research Award-winning research
Framework development for the prevention of food loss and waste: An analysis along the fresh food supply chain
Vanessa Sofia Melo Magalhães, University of Coimbra, Portugal; PhD obtained at University of Coimbra, Portugal
Advisors: Prof. Luís Ferreira and Prof. Cristóvão Silva, University of Coimbra, Portugal