



Research School for Operations
Management and Logistics

Robust data-driven sustainable food supply chain

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Food supply chains contain different types of uncertainty; from quality of supplied material to traffic congestion in last-mile delivery. These uncertainties often result in food losses and waste, aggravating the environmental footprint of the chain. As such, there is a need for robust policies that can address this uncertainty. Recently, we have seen how machine learning techniques, such as Neural or Kernel-based classifications, are used in Robust Optimization to derive robust policies by extracting important information from historical data. However, the computational complexity of these approaches still remains an issue. In this project, we want to build on this recent stream of research and design approaches in data-driven robust optimization capable of tackling problems arising in food supply chain settings. By using machine learning techniques within the framework of robust optimization we intend to then design robust policies that mitigate the negative effects of uncertainties within the food system.