

Risks in the Supply Chain of the Persian Lemon: Mexican Case.

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Abstract. The Agri-Food Supply Chain (ASC) is vital for providing food and other derivatives, but it faces challenges such as meeting the growing demand for food, improving quality and safety, and reducing waste. Supply chains are susceptible to unpredictable events that can impact performance, and the complex structure of the ASC makes it even more vulnerable. Therefore, risk management is crucial. This study focuses on the Persian Lemon ASC in the Citrus District of Martinez de la Torre, Veracruz, and aims to identify potential risks and generate information to support decision-makers in designing risk management strategies. Through the opinions of nine experts, 38 potential risks (24 external and 14 internal) were identified and assessed. The Analytical Hierarchy Process (AHP) technique was employed to determine severity-impact weights for each risk. Subsequently, the Risk Priority Level (RPL) was determined using the Failure Mode and Effect Analysis (FMEA) technique. The highest priority risks are related to the supply of Persian Lemons. Providing a strategic framework to minimize risks and provide continuity to the process is essential, as well as creating resilience through risk detection and developing continuity plans.

Keywords Persian Lemon, Supply Chain, Risks, FMEA technique, AHP technique

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