

**FOOD LOSS ESTIMATION ON THE CORIANDER (*Coriandrum sativum* L.)
LEAVES VALUE CHAIN: A CASE STUDY ON EXPORT GRADE
PRODUCT IN TRADING COMPANY**

ABSTRACT

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Coriander leaves (*Coriandrum sativum* L.), a highly perishable leafy vegetable, are susceptible to damage from improper handling and physical injury throughout the supply chain, resulting in significant losses that affect food security and distribution efficiency. This study estimated food loss across the coriander value chain following the *Food Loss and Waste Accounting and Reporting Standard 2016*, complemented by qualitative techniques to identify loss based on quality defect and the drivers. A quality change study assessed key parameters (weight loss percentage, decay percentage, and color change) during distribution. Process activity mapping identified operational inefficiencies, The dominant types of defect and operational bottleneck identified are analyzed based on their root causes using fishbone diagrams. From the study conducted. Four primary defect categories were identified across the supply chain, with broken trunks accounting for the highest prevalence at 45%, followed by scrap (27%), spoilage (20%), and yellowing (8%). Total food loss was estimated at the farm (5%), at the factory (18%), and during distribution (7%). Storage for ten days induced significant physiological degradation, characterized by 9.69% weight loss, a 3.69% decay rate, and color parameter shifts, with L^* increasing to 44, a^* decreasing to -11, and b^* rising to 28.17, indicating a marked decline in freshness.

Keywords: *Cold chain, Coriander, Food loss, Quality changes, Value chain*

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INTISARI

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Daun ketumbar (*Coriandrum sativum* L.), sayuran yang mudah rusak, dan rentan terhadap penurunan kualitas akibat penanganan yang tidak tepat sepanjang rantai pasok, yang mengakibatkan *loss* yang memengaruhi keamanan pangan dan efisiensi distribusi. Studi ini memperkirakan kehilangan pangan di sepanjang rantai nilai berdasarkan *Food Loss and Waste Accounting and Reporting Standard 2016*, dengan teknik kualitatif untuk mengidentifikasi kehilangan berdasarkan *quality defect* dan faktor penyebabnya. Studi perubahan kualitas menilai parameter kunci (persentase kehilangan berat, persentase pembusukan, dan perubahan warna) selama distribusi. *Process Activity Mapping* mengidentifikasi ketidakefisienan operasional. Permasalahan kehilangan pangan dominan yang diidentifikasi dianalisis berdasarkan penyebab dasarnya menggunakan *fishbone diagram*. Empat tipe cacat utama diidentifikasi di sepanjang rantai pasok, dengan batang patah memiliki prevalensi tertinggi sebesar 45%, diikuti oleh limbah (27%), pembusukan (20%), dan kekuningan (8%). Kehilangan pangan total diperkirakan sebesar (5%) di pertanian, (18%) di pabrik, dan (7%) selama distribusi. Penyimpanan selama sepuluh hari menyebabkan degradasi fisiologis yang signifikan, ditandai dengan kehilangan berat 9,69%, laju pembusukan 3,69%, dan pergeseran parameter warna, dengan L* meningkat menjadi 44, a* menurun menjadi -11, dan b* naik menjadi 28,17, menunjukkan penurunan yang signifikan dalam kesegaran.

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