



# Enhancing Post-Harvest Handling Techniques to Mitigate Fruit and Vegetable Losses in Côte d'Ivoire: A Methodological Approach

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## Abstract

Côte d'Ivoire is a significant producer of fruits and vegetables in West Africa but faces substantial post-harvest losses due to inadequate handling practices. A mixed-methods approach combining quantitative surveys with qualitative interviews was employed. Data were collected from 20 randomly selected farmers' markets in Côte d'Ivoire, using a structured questionnaire to assess current handling practices and their effectiveness. Current post-harvest losses varied significantly between different types of produce (e.g., mangoes: 30%, cucumbers: 15%). The identified loss reduction techniques showed promise in preliminary trials, particularly the use of modified atmosphere packaging for certain fruits. Implementers should prioritise training on new handling methods and provide access to affordable technologies like refrigerated storage units. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** African geography, post-harvest loss reduction, quality assessment, risk management, sustainable agriculture practices, participatory evaluation, agroforestry systems

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