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Factors Influencing Marketing Supply of Avocado Fruits: A Systematic Literature Review

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Abstract: *The global avocado industry is experiencing rapid growth due to increasing demand in both domestic and international markets. However, the efficiency and sustainability of avocado supply chains face numerous challenges. The objective of this paper is to conduct a systematic literature review on the factors influencing the marketing supply of avocado fruits from the years 2015 to 2025. The review was conducted on 10 articles published in various journals, using a qualitative methodology through MS Excel and ATLAS.ti software. Despite analysing 10 papers, the research used to present a qualitative analysis of the Factors Influencing the Marketing Supply of Avocado Fruits. The selected papers employ various methodologies, including systematic literature reviews, qualitative case studies, meta-analyses, and dynamic modelling approaches. Key findings highlight issues such as environmental degradation, postharvest losses, infrastructure gaps, weak stakeholder coordination, and limited smallholder market integration. The strengths and weaknesses of each paper are examined to identify gaps in knowledge and areas requiring further research. The study underscores the importance of multi-dimensional strategies involving ecological sustainability, technological innovation, and inclusive value chain governance to improve avocado marketing supply systems.*

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Introduction

The avocado (Persea Americana Mill) originated in southern Mexico and by the early 1500s it was widely spreading to the western hemisphere. It has been expanding throughout the world because to its organic properties and financial advantages(Asfaw & Nigussie, 2024).

The avocado fruit, prized for its nutritional content and commercial appeal, has become one of the most financially valuable horticultural crops in recent decades. The need to build effective, sustainable, and inclusive avocado supply chains has grown in response to rising demand worldwide, notably in Europe, North America, and Asia. Despite this impetus, several avocado-producing areas, notably in Latin America and Africa, are still hampered by systemic and operational obstacles that restrict their ability to market their products (Muita et al., 2025).

Given the high nutritional value of vitamins A, B, C, potassium, phosphorus, magnesium, iron, unsaturated fatty acids, and antioxidants, the avocado fruit is widely used and consumed in many nations. Furthermore, it has been shown that eating this fruit lowers the risk of cardiovascular illnesses, hyperlipidemia, and visceral fat tissue, as well as aids in weight management and healthy aging (Ramírez-Gil et al., 2019).

The justification for this comparative analysis is the necessity to educate researchers, politicians, and development professionals about a holistic understanding of the avocado value chain. By highlighting best practices and important gaps across various geographical and institutional contexts, this study promotes evidence-based approaches for improving the avocado market's performance and resilience.

This study seeks to analyze and integrate academic understanding of the primary variables impacting the marketing supply of avocado fruits by using ten high-impact, open-access review articles. These studies cover a wide range of topics and methods, including stakeholder-based value chain analyses, postharvest technology reviews, ecological and social impact assessments, and more. Using a comparative lens, we analyze the techniques, essential results, advantages, and disadvantages of each publication to identify common trends and ongoing roadblocks in the avocado supply chain (Vikaliana, 2021).

Objectives

- To review factors influencing marketing supply of avocado fruits
- To compare the methodologies, findings, strengths, and limitations of different analytical and review studies.

Methodology

- **Method**

In conducting this study, a systematic review methodology was adopted. Preferred reporting items for systematic reviews and meta-analyses (PRISMA) statement was created to aid systematic reviewers in transparently describing why the study was conducted, what the authors did, and what they discovered. The statistical software ATLAS.ti22 was used to analyze qualitative data(Tolossa & Mr. Yohannes Negussie, 2023).

- **Database Selection**

To maintain the process and achieve the desired result, the study established inclusion and exclusion criteria. Consequently, 204 publications were selected during the data extraction process, and the following features were extracted:

  - The dataset from Scopus has been chosen.
  - Just papers from academic journals are included.
  - Articles from the fields of Agriculture, Biological Science, Chemistry, Biochemistry, management, and the social sciences have been included.
  - Unless the extracted papers were published between 2015 and 2025, they were rejected and

- **Data Tool and Collection**

Data Analysis

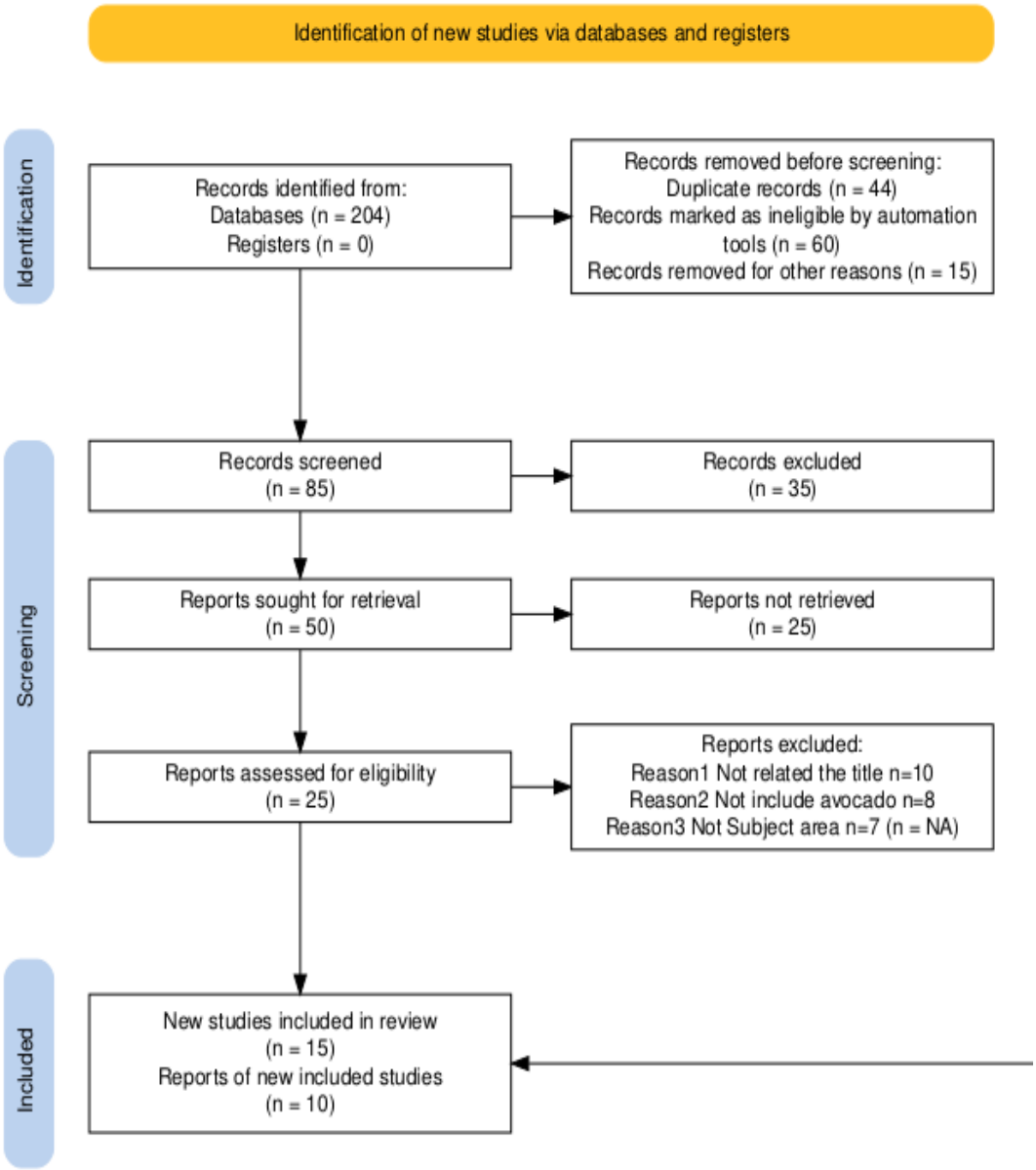

Figure 1: Prisma Diagram

Results

- **Description of included studies and selection process of articles**

We retrieved 204 articles through searches of the MED- LINE/PubMed, EMBASE, and CENTRAL databases. After removing duplicates in Rayyan QCRY software, 85 articles remained. During title and abstract screening, 35 records were removed based on the initial exclusion criteria. Fifty articles remained for full-text review and 25 articles were excluded. The most common reasons for study exclusion were no related title (n = 10), avocado not included (n = 8), and n=7 not subject area. The study to use the systematic literature review is n=10 (Fig. 1).

The PRISMA diagram is a flowchart intended to make it easier to perform systematic reviews in a planned manner. Identification, screening, eligibility, and inclusion are the four main phases of this process. A search strategy is developed and implemented in the identification phase to find pertinent research. The research is evaluated for relevance during the screening stage using predetermined criteria. Studies are assessed for eligibility in the eligibility stage based on their value and applicability. Studies are added to the systematic review during the inclusion stage.

- **Document by Year**

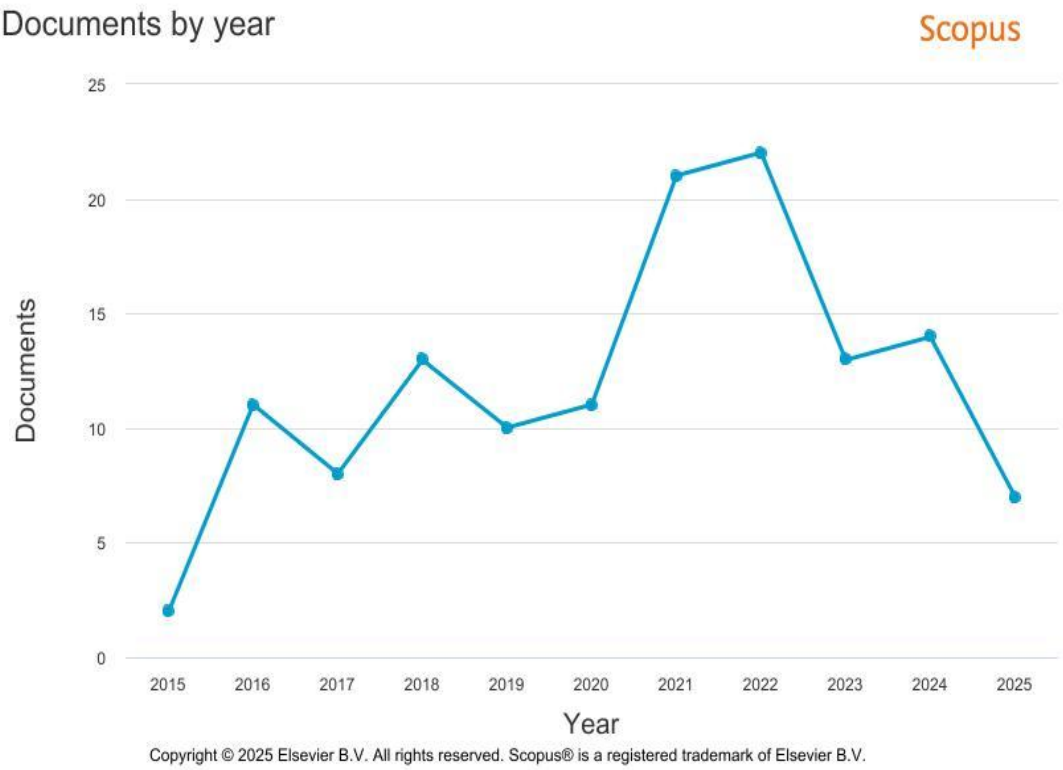

Figure 2: Document by year

The graph provides data on the yearly documents produced from 2015 to 2025.

The number of documents shows a general upward trend from 2015 to 2022, followed by a noticeable decline from 2023 through 2025.

- **Sharp Rise:** There was a significant increase from 2015 to 2016 (2 to 11 documents).
- **Peak Period:** The highest number of documents were published in 2022 (22 documents), followed by 2021 (21 documents).
- **Fluctuations:** Moderate fluctuations occurred from 2016 to 2020.
- **Decline:** A sharp decline occurred after 2022, down to 7 documents in 2025.

The growth from 2015 to 2022 indicates rising interest or funding in the research topic. The decline after 2022 could be due to a shift in research priorities, reduced funding, or delays in indexing recent publications.

However, it is essential to note that these fluctuations in document production could be influenced by various external factors, such as changes in funding, staffing, or priorities of the organization producing the documents.

Without more context, it is difficult to draw any firm conclusions from this graph besides noting the fluctuations in document production over time.

- **Document by Country**

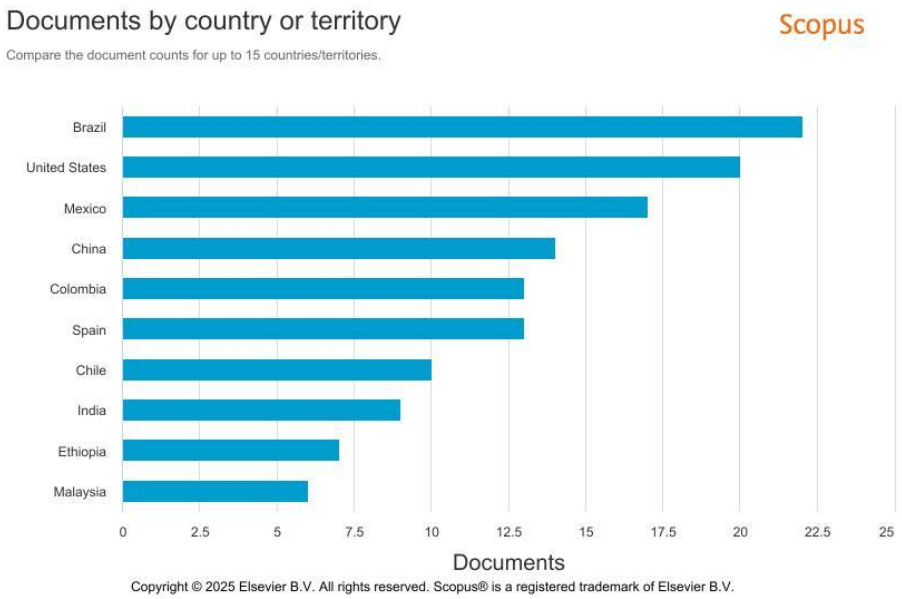

Figure 3: Document Analyses by Year

From the figure indicated Latin **American countries** (Brazil (22), Mexico (17), Colombia (13) and Chile (10)) are significantly represented, suggesting a regional research article emphasis on the topic. **Ethiopia's** presence among the top 07 indicates notable research activity from Africa in this area, likely signalling growing academic interest or relevance of the topic to national priorities gives for avocado fruits production. **Developed and Developing countries** like the United States (20), Spain (13), China (14), and India (9) also have strong contributions, showing global interest and investment in the research article emphasis on the topic.

- **Document by Subject**

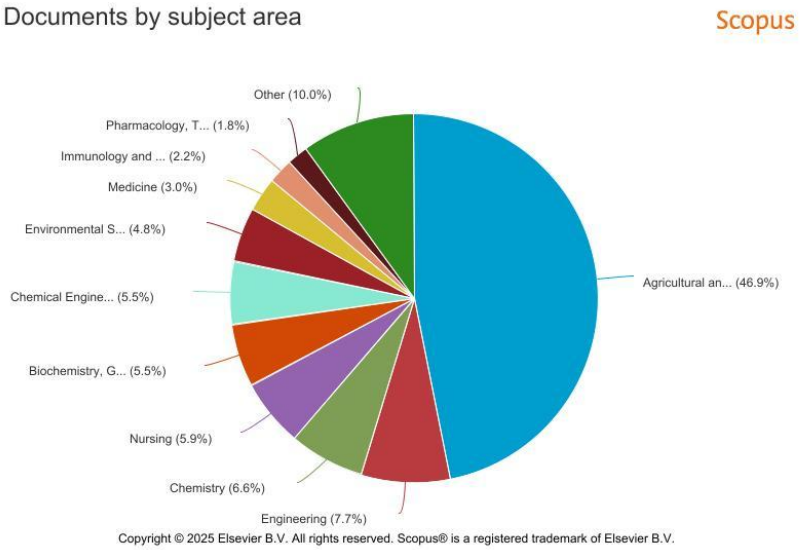

Figure 4: Document Analyses by Subject

From the above figure indicated Agricultural and Biological Sciences dominate the research output, accounting for 46.9% of the total documents. This shows that nearly half of all publications fall within this domain, suggesting a strong focus or relevance of the research topic to agriculture and biological systems. Other notable subject areas include:

- Engineering – 7.7%
- Chemistry – 6.6%
- Nursing – 5.9%
- Biochemistry, Genetics and Molecular Biology – 5.5%
- Chemical Engineering – 5.5%
- Environmental Science – 4.8%
- Medicine – 3.0%
- Immunology and Microbiology – 2.2%
- Pharmacology, Toxicology and Pharmaceutics – 1.8%
- Other fields – 10.0%

Findings

Comparative Analysis of Review Papers on Factors Influencing Marketing Supply of Avocado Fruits

This document presents a comparative analysis of ten high-impact open-access review or research papers on factors influencing the marketing supply of avocado fruits. The comparison includes methodology, critical findings, strengths, and weaknesses of each paper to provide insights for researchers, policymakers, and stakeholders in the avocado value chain.

Table 1: Comparative Analysis of the Article

Paper	Methodology	Critical Findings	Strengths	Weaknesses
(Denvir et al., 2022) "Ecological and human dimensions of avocado expansion in México"	Systematic literature review + case studies + spatial/environmental data analysis	Avocado expansion in Mexico causes deforestation, water overuse, social inequality; sustainability practices are weak or absent.	Multi-dimensional (ecological, social, economic); strong geospatial analysis; policy relevance	Country-specific (Mexico); limited applicability to Africa or global export patterns
(Arias Bustos & Moors, 2018) "Reducing post-harvest food losses through innovative collaboration"	Qualitative case studies in Colombia & Mexico; semi-structured interviews; stakeholder mapping	Collaboration among value chain actors significantly reduces avocado post-harvest losses and improves marketing efficiency	In-depth supply chain mapping; highlights real-life cooperation models	Limited quantitative data; focus restricted to Latin America
Review of the concept of quality in Hass avocado and the pre-harvest and harvest factors that determine it under tropical conditions" (Ramírez-Gil et al., 2019)	Literature review and synthesis of previous research findings.	Quality is multidimensional—includes physical (size, shape, color), chemical (oil, vitamins), microbiological, sensory (taste, texture), and ethical aspects (sustainability).	Provides a holistic and detailed view of avocado quality determinants. -Combines scientific literature with practical observations from tropical regions.	Lacks empirical or experimental data to statistically support findings. -Limited discussion of post-harvest and marketing aspects.

(Anacona Mopan et al., 2023) "System Dynamics of Avocado Supply Chain in Colombia"	Quantitative systems dynamics modeling; data simulations; stakeholder consultations	Identifies feedback loops in supply delays, bottlenecks in logistics, and inefficient forecasting in avocado flow	Quantitative rigor; predictive modeling; actionable recommendation	Focused on simulation, limited qualitative insights; case-specific to Colombia
Characterizing avocado production systems for Ugandan exports" by Frontiers in Sustainable Food Systems (Sseruwagi et al., 2025)	Case study + stakeholder interviews; SWOT; agro-ecological & institutional lens	Highlights neglect of pollination, lack of post-harvest handling/cooling, food safety gaps, traceability absence	In-depth local insights; connects production systems to market readiness	Qualitative only; lacks quantitative economic measures
Avocado by-products: Nutritional and functional properties (Araújo et al., 2018)	Systematic literature review of avocado processing and utilization (focus on waste valorization).	Identified high economic and functional value in avocado by-products (pulp, seed, peel); highlighted market potential.	Comprehensive coverage of biochemical, health, and market relevance; good policy implications.	Focuses less on actual marketing and distribution constraints; not region-specific.
Determinants of Post-Harvest Losses in the Avocado Value Chain: Insights from Farmers in Murang'a County(Muita et al., 2025)	Field survey and case study; interviews with smallholder farmers.	Losses of 30–40% due to poor harvesting practices, inadequate sorting, lack of cold storage, and rough handling.	Focused on post-harvest segment; detailed analysis of value chain activities.	Regional in scope; does not explore upstream production constraints.
Systematic Review on Avocado Consumption and Health Impact (James-Martin et al., 2024)	Meta-analysis of intervention and observational studies using GRADE framework.	Positive link between avocado consumption and cholesterol control; implications for export marketing.	Very strong statistical synthesis; robust quality control (GRADE, Cochrane).	Focus is on consumption and health, not directly on supply chain/marketing.
Assessment of the Constraints and Challenges in Avocado Production and Marketing in Southern Ethiopia (Sina et al., 2024)	Survey method with structured questionnaires; descriptive statistics.	Identified lack of improved seedlings, pests and diseases, post-harvest losses, inadequate market access, and lack of training as core constraints.	Field-based data collection; covers both production and marketing; regional specificity.	Lacks econometric modelling; findings may not be generalizable beyond the study area.
Trends and Drivers of Avocado Production in	Systematic literature review.	Poor access to credit, climate vulnerability, limited extension	Wide national scope; extensive referencing.	No primary data collection; lacks specificity to regional

Ethiopia: A Review)(Asfaw & Nigussie, 2024)		services, and weak value chain coordination are key production constraints.		contexts.

Summary

The reviewed papers collectively explore diverse aspects of the avocado marketing supply chain, ranging from ecological impacts and postharvest handling to policy frameworks and international market potential. The methodologies employed include systematic literature reviews, qualitative interviews, quantitative modeling, and mixed method approaches, providing a rich methodological diversity.

- Environmental & Social Dimensions: (Denvir et al., 2022) revealed critical environmental challenges, such as deforestation and water overuse due to avocado expansion in Mexico.
- Postharvest Management: (Bill et al., 2014) and (Muita et al., 2025) reports emphasized that inefficient postharvest practices directly reduce supply quality and profitability. (Arias Bustos & Moors, 2018) highlighted how collaborative models among stakeholders can reduce postharvest losses.
- Technological Innovation: (Anacona Mopan et al., 2023) and the shelf-life review showed that dynamic modeling and innovative packaging/coating techniques can mitigate bottlenecks and extend fruit shelf life.
- Market Constraints: Kenya and Ethiopia's production constraint report both identified poor infrastructure, limited farmer training, and weak institutions as core barriers to effective supply.
- Consumer and By-product Focus: The avocado by-product study (2018) and the 2024 health impact review shift focus toward consumer demand and secondary product utilization, suggesting value addition as a strategic direction.

Conclusion

The reviewed literature consistently identifies production inefficiencies, postharvest losses, weak value chain integration, and inadequate infrastructure as the main factors limiting the effective marketing supply of avocado fruits. While some papers offer quantitative precision (e.g., (Anacona Mopan et al., 2023)), others provide rich contextual and policy insights (e.g. Ethiopia studies). The lack of integration between consumer-market demand trends and upstream supply dynamics is notable. Furthermore, although export markets are considered in a few cases, smallholder constraints and domestic market linkages remain under-addressed.

Overall, improving avocado supply chains requires a multi-dimensional strategy: integrating ecological sustainability, collaborative governance, postharvest innovations, and tailored policy support.

Suggestions for Further Study

- **Cross-Regional Comparative Research:** There is a lack of comparative studies between major avocado-producing regions like East Africa, Latin America, and Asia. Future work should benchmark systems across geographies to identify scalable best practices.
- **Smallholder-Focused Supply Models:** Many studies focus on large-scale or export systems. Research should delve deeper into inclusive models for smallholder integration, access to finance, and group marketing structures.
- **Consumer Behavior and Domestic Markets:** While export orientation dominates, little is known about domestic market dynamics and local consumer preferences in avocado-producing countries.
- **Climate Resilience and Sustainability:** As climate change increasingly threatens production, future studies should explore climate-smart practices, water-efficient technologies, and agro-ecological supply chain adaptations.
- **Data-Driven Market Intelligence:** Building real-time data systems for farmers and traders could reduce supply mismatches and market inefficiencies. Research should investigate cost-effective digital market access tools.

Reference

1. Anacona Mopan, Y. E., Rubiano-Ovalle, O., Paz, H., Solis Pino, A. F., Chong, M., & Luna, A. (2023). Fresh Product Supply Chain Analysis in Cauca, Colombia — A Hass Avocado System Dynamics Approach. *Systems*, *11*(1), 1–19. https://doi.org/10.3390/systems11010029
2. Araújo, R. G., Rodriguez-Jasso, R. M., Ruiz, H. A., Pintado, M. M. E., & Aguilar, C. N. (2018). Avocado by-products: Nutritional and functional properties. *Trends in Food Science and Technology*, *80*(August), 51–60. https://doi.org/10.1016/j.tifs.2018.07.027
3. Arias Bustos, C., & Moors, E. H. M. (2018). Reducing post-harvest food losses through innovative collaboration: Insights from the Colombian and Mexican avocado supply chains. *Journal of Cleaner Production*, *199*, 1020–1034. https://doi.org/10.1016/j.jclepro.2018.06.187
4. Asfaw, E., & Nigussie, Z. (2024). Trends and Drivers of Avocado Production in Ethiopia: A Review. *World Journal of Food Science and Technology*, *8*(4), 72–78. https://doi.org/10.11648/j.wjfst.20240804.11
5. Bill, M., Sivakumar, D., Thompson, A. K., & Korsten, L. (2014). Avocado Fruit Quality Management during the Postharvest Supply Chain. *Food Reviews International*, *30*(3), 169–202. https://doi.org/10.1080/87559129.2014.907304
6. Denvir, A., Arima, E. Y., González-Rodríguez, A., & Young, K. R. (2022). Ecological and human dimensions of avocado expansion in México: Towards supply-chain sustainability. *Ambio*, *51*(1), 152–166. https://doi.org/10.1007/s13280-021-01538-6
7. James-Martin, G., Brooker, P. G., Hendrie, G. A., & Stonehouse, W. (2024). Avocado Consumption and Cardiometabolic Health: A Systematic Review and Meta-Analysis. *Journal of the Academy of Nutrition and Dietetics*, *124*(2), 233-248.e4. https://doi.org/10.1016/j.jand.2022.12.008
8. Muita, D., Okello, D., & Opondo, F. (2025). Determinants of post harvest losses in the avocado value chain: insights from farmers in Murang'a County, Kenya. *Discover Food*, *5*(1). https://doi.org/10.1007/s44187-025-00337-2
9. Ramírez-Gil, J. G., Franco, G., & Henao-Rojas, J. C. (2019). Review of the concept of quality in Hass avocado and the pre-harvest and harvest factors that determine it under tropical conditions. *Revista Colombiana de Ciencias Horticolas*, *13*(3), 359–370. https://doi.org/10.17584/rcch.2019v13i3.10503
10. Sina, B., Demissie, H., & Rezene, Y. (2024). Assessment of the Constraints and Challenges in Avocado (Persea Americana Mill.) Production and Marketing in Southern Ethiopia. *International Journal of Fruit Science*, *24*(1), 60–72. https://doi.org/10.1080/15538362.2024.2317775
11. Sseruwagi, P., Lehmann, E., Sigombe, P., Ddamulira, G., Van Casteren, J. W., & De Bauw, P. (2025). Characterizing avocado production systems for Ugandan exports: the need for consolidation and support for sustainable development. *Frontiers in Sustainable Food Systems*, *9*(February). https://doi.org/10.3389/fsufs.2025.1500012
12. Tolossa, M. D. N., & Mr. Yohannes Negussie. (2023). *RELATIONSHIP BETWEEN TEACHERS ' JOB SATISFACTION AND JOB PERFORMANCE IN HIGHER EDUCATION : A SYSTEMATIC REVIEW*. *2*(1), 12–17.
13. Vikaliana, R. (2021). *Blockchain Technology Meets Traceability in Fruit Supply Chain Management : A Systematic Review*. *12*(3), 232–238.

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