

FACULTY OF AGRICULTURE AND ANIMAL SCIENCES DEPARTMENT OF AGRIBUSINESS AND EXTENSION

PROFITABILITY OF AVOCADOS IN MUKONO DISTRICT, UGANDA

BY

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DECLARATION

I hereby declare that this dissertation is my ow other degree award before.	n work and it has not been submitted for any
Signature	Date 9th/october/2024
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APPROVAL

This Special Project Report has been submitted to the Department of Agribusiness and
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DEDICATION

I dedicate this work to my family especially my father whose passion and love for agriculture impacted my academic life enormously.

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All praise is due to Allah the Sustainer of the world. I thank Allah for enabling me to complete this course.

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LIST OF ACRONYMS

FAO: Food and Agriculture Organization

MAAIF: Ministry of Agriculture, Animal industry and Fisheries

NARO: National Agricultural Research Organization

SPSS: Statistical Package for Social Scientists

TMEA: Trade Mark East Africa

ABSTRACT

Avocado is emerging as one of the important "new export crops" in developing countries and farmers are expected to benefit enormously from the production and selling of the crop. The aim of this study was to analyze the profitability of avocados in Uganda. A case study of Mukono District. Data was collected using a structured questionnaire where a sample size of 120 respondents that included 70 farmers and 50 traders was used. Multi-linear regression model was used to analyze the factors that affected avocado production and the factors that affected the profitability avocados for farmers and traders in Mukono district. The gross margin analysis was used to estimate the profitability of avocado fruits for farmers and traders in Mukono district. The results revealed that, male farmers were more than female farmers and female traders were more than male traders, most farmers were within age category of 56-65 years and most traders were within age category of 26-35 years. Most farmers had primary level of education and most traders had secondary level of education. Majority of the farmers and traders were married. Factors such as education level of the farmer, climate conditions and total acreage had a positive significant effect on avocado production while lack of access to credit and not being in farmer organizations had negative significant effect on avocado production. The Gross margin of avocado farmers was 87.5% and that of avocado traders was 25.2%. The results showed that education level and demand had positive significant effect on avocado profitability among farmers while pests and diseases had negative significant effect on avocado profitability. The results also showed that lack of modern technology, not being in farmer organizations, lack of export opportunities, government policies had negative significant effect on avocado profitability among traders while access to market information had positive significance effect on avocado profitability. The following recommendations were suggested; Creating awareness campaigns to educate both farmers and traders on the potential financial returns from avocados, Training, seminars and demonstration should be offered to farmers and traders to help them understand good agricultural practices, Farmers should be encouraged to grow grafted avocado varieties, initiatives such as bulk purchasing agreements, transportation subsidies and access to better supply chain logistics should be introduced in order to improve avocado profitability for traders and lastly, partnerships between farmers, traders and agricultural advisors should be established to foster a supportive ecosystem that addresses challenges collectively.

1.0 CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Avocado (Persea americana) also referred to as green gold/butter fruit (Juma et al., 2019) is a medium-sized, evergreen tree in the *Lauraceae* family. It is a climacteric fruit that originated from Central America, specifically from Mexico, Guatemala, and West Indies, way back in the 1500s (Gaspard et al., 2021a) Avocados are of different species and are divided into Mexican, West Indian, and Guatemalan races. The Mexican race is small (weighing 90–240 grams), thinskinned and excellent quality for example Zutano, Duke and Mexicola. The Guatemalan race produces fruits of medium to large size (240-1,000 grams) and has thick woody skins for example Hass, Nabal, Tonnage and Dickinson. West Indian race has medium to large sized fruits with smooth, leathery and glossy skin, for example Waldin, Simmonds and Fuchsia. Hybrids include; crosses of Mexican and Guatemalan for example Ettinger, Pinkerton, Fuerte and Bacon and crosses of Guatemalan and West Indian for example Choquette, Beta, Lula, Semil34 and Monroe (Marakas, 2022). Avocados are scattered from northern Mexico through the southern United States, east through the West Indies and south through Central America; Columbia, Venezuela, Guiana, Brazil, Ecuador, Peru, Bolivia and Chile. It was introduced into Florida, California and Hawaii in the early 1800s, Indonesia in 1750, Brazil in 1809, the Levant in 1908, South Africa and Australia in the late 19th century and is now found worldwide where growing conditions are suitable (Faris, 2016).

Globally, the total avocado production is about 8.06 million metric tons (MT). Mexico leads the global rankings with 2.4 million MT of production, followed by Colombia with 980,000 MT, Peru with 777,000 MT, Indonesia with 669,000 MT, Dominican Republic with 634,000 MT, Kenya with 417,000 MT, Brazil with 300,000 MT, Haiti with 248,000 MT, Vietnam with 213,000 MT and Chile with 169,000 MT (Shahbandeh, 2021). In Africa and East Africa, Kenya is the leading producer of avocado with 417,000 MT followed by Ethiopia with 152,000 MT (Mureithi, 2023).

Avocado is one of the most commercialized and profitable fruits in the international market. Its prices remain stable, while demand is growing. The global avocado market size was valued at USD 14.85 billion in 2022 and is expected to grow at a compound annual growth rate of 7.3% from 2023 to 2030 (Shahbandeh, 2022). Avocado market Players (importers) include; United States, Canada, Germany, France, U.K., Italy, Russia, China, Japan, South Korea, India, Australia, China Taiwan, Indonesia, Thailand, Malaysia, Mexico Brazil, Argentina Korea, Colombia, Turkey Saudi Arabia, UAE and Korea. The most produced and commercialized

REFERENCES

Asfaw, E., Erko, B., Temasgen, M., & Achamyelh, K. (2020). Production and Marketing Constraints of Major Sub-Tropical Fruits in Jimma Zone, South West Ethiopia. 7(1), 1–7. https://www.paperpublications.org/upload/book/Production and Marketing-1471.pdf

Astin, H. &. (2010). what is the scope in digitalization? | 4 Answers from Research papers. https://typeset.io/questions/what-is-the-scope-in-digitalisation-3fmcs8jw3k

Berck, P., & Helfand, G. (2014). Production Economics. In Encyclopedia of Agriculture and Food Systems (pp. 536–543). https://doi.org/10.1016/B978-0-444-52512-3.00121-2

Boniphace, J., Kadigi, R. M. J., & Kangile, J. R. (2023a). The Role of Avocado Production and Trade in Major Producing Districts, Tanzania: Income Inequality Decomposition Approach. 1620–1636. https://doi.org/10.4236/me.2023.1411085

Boniphace, J., Kadigi, R. M. J., & Kangile, R. J. (2023b). Profitability of Avocado Production for Export Trade amongst the Smallholder Farmers in Rungwe and Hai Districts, Tanzania. Open Journal of Business and Management, 11(06), 3343–3360. https://doi.org/10.4236/ojbm.2023.116182

Busayo. (2020). Socio-Demographic: Definition & Examples in Surveys. In Form plus. https://www.formpl.us/blog/socio-demographics

Dijkxhoorn, Y., Galen, M. van, Barungi, J., Okiira, J., Gema, J., & Janssen, V. (2019). The Uganda vegetables and fruit sector: Competitiveness and investment opportunities. www.wur.eu/economic-researchhttps://www.google.com/

Faris, A. (2016). Review on avocado value chain in Ethiopia. Industrial Engineering Letters, 6(3),33-40.IndustrialEngineeringLetters,6(3),33-40. https://core.ac.uk/download/pdf/234685505.pdf

Felsmann, B. (2016). Do institutions matter in business strategy? – The changing focus of strategic management to institutions: a literature review. In Vezetéstudomány / Budapest Management Review (pp. 2–11). https://doi.org/10.14267/veztud.2016.05.01

Forecasts. (2020). Global Avocado Market. In Research and market reports. https://www.researchandmarkets.com/reports/5174352/global-avocado-market-forecastsfrom-2020-to

Gaspard et al. (2021a). An Economic Analysis of the Factors Influencing Avocado Production, Profitability and Sustainability in Rwanda: A Case Study of Burera, Gicumbi, and Musanzse District. International Journal of Finance and Banking Research, 7(6), 164. https://doi.org/10.11648/j.ijfbr.20210706.14

Gaspard, N., Jean Claude, T., Protais, M., Felicien, N., Jean Claude Noel, M., Jean Claude, I., Fidèle, H., & Otieno Ogweno, J. (2021b). An Economic Analysis of the Factors Influencing Avocado Production, Profitability and Sustainability in Rwanda: A Case Study of Burera, Gicumbi, and Musanze Districts. In International Journal of Finance and Banking Research (Vol. 7, Issue 6, p. 164). https://doi.org/10.11648/j.ijfbr.20210706.14

Gebru, M., Baye, K., Demissie, M., Bogale, S., & Science, F. (2022). Benefits, opportunities, and challenges: Lemo Woreda's experience in Hadiya Zone, Southern Ethiopia

November2022.November. https://cgspace.cgiar.org/server/api/core/bitstreams/f77af983-8a63-473b-8de3-2a2d4f131010/content

George, O., Odhiambo, G. D., Wagai, S., & Kwach, J. (2019). An analysis of socioeconomic factors affecting avocado production in saline and flooded areas around Lake Victoria Basin of Western Kenya. 14(35), 2048–2061. https://doi.org/10.5897/AJAR2019.14153

Gurmis, N., & Melese, T. (2022). Analyzing the Factors that Influence Market Participation among Avocado Producers in Kaffa Zone of South-Western Ethiopia Analyzing the Factors that Influence Market Participation among Avocado Producers in Kaffa Zone of SouthWestern Ethiopia. International Journal of Fruit Science, 22(1), 794–808. https://doi.org/10.1080/15538362.2022.2129549

John, S., James, A., & Hosea, M. (2016). Report on a pilot study in Mukono District, Uganda, using the Household Economy Approach (HEA). Walker Institute, August. https://doi.org/10.5281/zenodo.5113323

Juma, I., Fors, H., Hovmalm, H. P., Nyomora, A., Fatih, M., Geleta, M., Carlsson, A. S., & Ortiz, R. O. (2019). Avocado production and local trade in the southern highlands of Tanzania: A case of an emerging trade commodity from horticulture. In Agronomy (Vol. 9, Issue 11). https://doi.org/10.3390/agronomy9110749

Karuiru. (2018). Value chain management and the performance of avocado fruit among small scale farmers in Kandara sub county, Muranga county, Kenya. Journal Homepage:

International Journal of Physical and Social Sciences International Journal of Physical and Social Sciences, 8(10),24–40.

https://www.indianjournals.com/ijor.aspx?target=ijor:ijpss&volume=8&issue=10&article=00 3

Malekela, A. (2022). Value Chain Challenges: Experiences from Avocado Farmers and Traders in Njombe Town, Tanzania. East African Journal of Education and Social Sciences, 3(2), 17–25. https://doi.org/10.46606/eajess2022v03i02.0155

Marakas. (2022). All Avocado Varieties Explained - Characteristics and Advantages - Wikifarmer.https://cdn.wikifarmer.com/wp-content/uploads/2022/02/elevate_webEN.pdf

Moreno-Echeverri at el. (2020). Key findings and lessons from Dutch publicly funded horticulture initiatives in low- and middle-income countries. https://knowledge4food.net/wpcontent/uploads/2020/12/200910_VVSynthesisPaper_Revised 6.pdf

Mureithi. (2023). Kenya climbs ladder in the global avocado production rankings _ Nation. https://nation.africa/kenya/business/kenya-climbs-ladder-in-the-global-avocado-productionrankings--4320816

NAADS. (2024). NAADS trains Farmers in avocado and macadamia farming at the Harvest Money Expo 2024 – National Agricultural Advisory Services. https://naads.or.ug/naadstrains-farmers-in-avocado-and-macadamia-farming-at-the-harvest-money-expo-2024/

Randela, M. Q. (2018). Climate change and avocado production: a case study of the Limpopo Province of S.A (Issue January, pp. 7–85). https://repository.up.ac.za/handle/2263/67885

Shahbandeh. (2022). Avocados: global market value 2026. In Statista. https://www.statista.com/statistics/931183/global-avocado-market-value/

Shahbandeh, M. (2021). Global production of avocados by country 2021. In Statista. https://www.statista.com/statistics/593211/global-avocado-production-by-country/

Sina et al. (2024). (PDF) Assessment of the Constraints and Challenges in Avocado (Persea Americana Mill.

Tugume et al. (2012). Assessment of Marketing Constraints of Avocado (Persea americana) in Kabarole District, Western Uganda. Rwenzori Journal, 2(2), 25–38. https://www.researchgate.net/publication/283009913

UEPB. (2024). UEPB: product. https://ugandaexports.go.ug/product/2/Cocoa

VanDerZanden, A. M. (2008). Environmental factors affecting plant growth | OSU Extension

Service. In OSU Extension Service (pp. 1–10).

https://extension.oregonstate.edu/gardening/techniques/environmental-factors-affectingplant-

Zyl, J. L. Van, & Ferreira, S. G. (1995). An Overview of the Avocado Industry in South

Africa As requested by: Development Bank of Southern Africa.

23–30.

growth

 $https://www.avocadosource.com/Journals/SAAGA/SAAGA_1995/SAAGA_1995_PG_02303\\0.pdf$