



2026-02-03

Research program on Profitability of production of organic sesame and chia seeds by smallholder farmers and value chain analysis for export to the European Union

Background:

[The University of Hohenheim](#), Hans-Ruthenberg-Institute of Tropical Agricultural Sciences, and its Chair for Rural Development Theory and Policy (Prof. Dr. Manfred Zeller) in collaboration with national universities in Uganda (Busitema University, mainly Arapai campus near Soroti, Muni University in Arua, Makerere University in Kampala) are conducting research on the value chain for organic sesame and organic chia seeds grown by smallholder farmers. The sesame and chia seeds are mainly exported to the EU. Uganda is a major world supplier of organic sesame, and is in the process of expanding and improving its value chain in organic chia seeds for European markets. Major importing countries of organically produced sesame and chia seed are Germany and the Netherlands.

We are looking for MSc candidates who contribute to answering some of the research questions regarding farm-gate profitability and value chain analysis regarding organic sesame and chia. The students will gain valuable experience in the collection of qualitative and quantitative data, in data analysis and project management through a rigorous mentorship that we provide. For all the topics presented below, the ideal candidate would be enrolled in the third or higher semester of Master in Agricultural Economics but candidates from other Master programs including Agribusiness are welcome as well. Students should have ideally attended one or several modules offered by Chair for Rural Development Theory and Policy and/or by other professors of the Hans-Ruthenberg-Institute. Willingness to travel to and live in rural areas of Uganda for several weeks is expected for the field research. The value-chain-analysis topic could also be done via literature review and be further explored by phone interviews with companies and other stakeholders in the international value chain.

Interested candidates should send their CV, motivation letter or email, and transcript of records to manfred.zeller@uni-hohenheim.de with subject Master thesis topic 1,2 or 3 Uganda

Funding for field research may be applied for by the student from the Fiat Panis Foundation, Ulm with administrative support by the University of Hohenheim. See <https://tropen.uni-hohenheim.de/en/thesis-research-grant>.

Master Thesis Topics

Topic 1: Traceability and Profitability of Smallholder Farming of High-Value Export Crops: the Case of Organic Sesame in Arua district, Uganda

Objectives:

- (1) Identify and review innovative technological and institutional arrangements used in geo-referenced plot-level monitoring and sourcing of smallholder crops destined to European value chains which require traceability and certification with regard to organic production
- (2) Identify the major importing companies of (organic) sesame in the European Union who import from Uganda and seek to assess level of competitiveness in the value chain (oligopoly of exporters in Uganda and importers in the EU? Or other market structures?). Seek to describe- based on a literature review and internet search- their major market niche if any.
- (3) Conduct qualitative and/or quantitative field research among smallholder farmers who grow organic sesame for local buyers/exporters. Arua district is a major hub for the production of organic sesame in Uganda. What is the labor requirement, crop and post-harvest management, yield, gross margin, and overall profitability of organic sesame? What institutional arrangements do smallholder farmers conclude with crop buyers and other stakeholders in the value chain?
- (4) Carry out data analysis and identify constraints that might be better addressed in the future by the introduction of alternative technological or institutional innovations? Is the national policy framework in Uganda conducive for further growth of organic sesame for export?

Topic 2: Policy framework and Institutional Arrangements for Exporting Chia seeds from Uganda to the European Union

Objectives:

- (1) Review the policy framework by the Government of Uganda for supporting smallholders and processing/exporting companies so as to improve and to scale (organic) value chains for chia seeds
- (2) Review the policy framework of the EU/Germany for importing organic seeds (with a focus on Chia seed) from Subsaharan Africa, in particular from Uganda
- (3) Conduct qualitative research to identify and interview the major stakeholders in the emerging value chain for Chia seeds in Uganda
- (4) Conduct qualitative research among smallholder farmers who grow organic chia for local buyers/exporters in a selected district near Soroti town. Assess the labor requirement, crop and post-harvest management, yield, gross margin, and overall profitability of organic chia? Identify technologies and institutional arrangements used by crop buyers to ensure traceability and monitor compliance of smallholders growing chia for export?
- (5) Carry out data analysis and identify constraints that might be better addressed in the future by the introduction of alternative technological or institutional innovations? Is the national policy framework in Uganda conducive for further growth of (organic) chia exports?

Topic 3: From foundation to certified and quality-declared seed: Structure, conduct and performance of the seed multiplication subsector in Uganda with a major focus on chia, sesame and bean seed?

Objectives:

- 1) Assess the institutional landscape of government, non-government and private sector organizations in the production of foundation seed and of certified seed. Is the sector for the certification of organic seed sufficiently developed, and if not, what are the constraints and potentials?
- 2) Through qualitative interviews with major stakeholders in the seed value chain for beans, sesame, and chia, and through an extensive search in the literature and secondary data, assess the supply of and demand for foundation and certified seed in Uganda.
- 3) Is seed multiplication for chia, sesame or beans profitable? If so, which private sector companies or larger farmers reliably and sustainably sell high-quality seeds for chia, sesame and beans in Uganda? How is the conduct and performance of these suppliers of certified or quality-declared seed?
- 4) Which government policies could improve the legal and policy framework so as to expand and improve the multiplication of seed for high-value export crops, such as chia, sesame, and beans?