



Food and Agriculture Organization
of the United Nations

Annex 2

Appendix 2 - Market Assessment

Example Crops Produced Under EbA and their Potential Contribution Towards Resilient Livelihoods

For the GCF-FAO Project “Ecosystems-based Adaptation for resilient Watersheds and Communities in Malawi (EbAM)”

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List of Abbreviations

CA	Conservation Agriculture
EbA	Ecosystems-based Adaptation
FARMSE	Financial Access for Rural Markets, Smallholders and Enterprises
FOs	Farmers Organisations
FFS	Farming Field School
GCF	Green Climate Fund
ICRAF	International Centre for Research in Agroforestry
LUANAR	Lilongwe University of Agriculture and Natural Resources
MFIs	Microfinance Institutions
MoA	Ministry of Agriculture
MoFNR	Ministry of Forestry and Natural Resources
M&E	Monitoring and Evaluation
MGDS	Malawi Growth and Development Strategy
NAIP	National Agriculture Investment Plan
NAP	National Adaptation Plan
NASFAM	National Smallholder Farmers' Association of Malawi
NGO	Non-governmental Organisation
NTFP	Non-timber forest products
PES	Payment for Environmental Services
POs	Producers Organisations
SACCOs	Savings and Credit Cooperatives
SDG	Sustainable Development Goal
MSMEs	Micro Small and Medium Enterprises
TOC	Theory of Change
VSLA	Village Savings and Loans Associations
4P	Public Private Producers Partnerships

1 The Project's Nature Positive Production Systems Focus and Market Opportunities

The Project Approach and Markets

1. EbAM will support smallholder's resilience to climate change by helping them adopt and develop integrated, nature positive production systems, based on Ecosystems-based Adaptation (EbA), producing a diversity of crops for household consumption and sale.
2. The transformation of agricultural production systems towards more climate resilient and nature positive practices must be seen as part of wider food system transformation effort which also entails the creation of consumer awareness with regards to origin and production system and preference for such products. The economic and social goal is to stimulate long-term sustainable public and private investment in the desired 'transformed' production system landscapes and ensure ecosystem restoration and climate resilience.
3. EbAM will support market linkages between local producers from the project areas who grow crops in diversified systems, using nature positive, EbA-based production techniques, and national or international off-takers – processors and traders, who demonstrate an interest in prioritising this type of production and serving increasingly climate-responsive and nature conscious domestic, regional and international markets. Without solid market linkages, adoption of EbA would not be feasible or sustainable.

1.1 The Purpose of the Market Assessment

4. The purpose of the present market analysis, as part of the feasibility study (Annex 2 of the Funding Proposal), is to assess the political economy and agribusiness sector context in Malawi, and the marketing opportunities for crops and products selected on the bases of EbA criteria. The focus is on the eleven districts that have been identified as targets for the Project and characterized by high climate vulnerability: six in the south (Zomba, Mangochi, Thyolo, Neno, Mwanza, Nsanje); one in the central (Dedza); and four in the north (Nkhata Bay, Rumphi, Karonga and Chitipa).
5. EbAM is a food system transformation intervention that aims to stimulate diversification and resilience of the supply of sustainably produced local food to the market, while allowing farmers that adopt Ecosystems-based Adaptation (EbA) production practices to have a dependable agriculture-derived income. EbA translates into agricultural practices that use ecosystem services and biodiversity to increase the ability of crops and other food products to adapt to climate change, i.e. agroecology.
6. Ecosystems restored strengthened by EbA approaches will produce food that is more nutritious than other agricultural systems. EbAM will engage the consumer in an awareness and education campaign around traditional cuisine and the linkages between native and traditionally used products, human health and the resilience of the natural environment.
7. While production diversification will result in a multitude of crops being produced by smallholder farmers in the project areas, the market analysis will only focus on those which demonstrate marketing potential for 4P commercial linkages or local SME development based on the diversity and sustainability of production, as well as suitability in the context of climate change (see project climate impact potential).
8. Key crops currently present in the project areas are selected to demonstrate the potential commercial impact that increased EbA production may have on the farming community, by considering an overview of the demand, market and a variety of potential commercialization channels. Crop diversification lies at the heart of EbA, which is driven by biodiversity.
9. Maize and groundnut, however they will not be examined in this analysis. The reason for excluding maize from this assessment is the fact that it is the most widely researched and government supported crop, allowing for limited value-added to additional analysis, its omission is also aimed to strengthen the focus on diversification efforts away from heavily subsidized maize (input subsidies) which heavily dominates agriculture and food trade in the country. Opportunities offered by crops other than maize are examined to highlight diverse economic opportunities for

smallholders in the project areas. Groundnut will not be directly promoted under EbAM because of food safety risks.¹

10. To analyze the various value chains from the perspective of their market potential, the crops are grouped according to the type of commercial product they fall under, in this case these commercial groups were defined as: Commodity crops, Food crops and Niche crops – defined in each section accordingly. Further to this, crops are grouped according to their type i.e. horticulture products, nuts, legumes etc., which also impacts the kind of supply chains, perishability, logistics and markets they are a part of.

11. Among the variety of crops produced in the project target areas, the following examples, organised in Table 1 where selected to demonstrate the current diversity upon which EbAM can build.

Table 1: Selected variety of crops currently produced in project areas

MARKET TYPE	CROP/PRODUCT TYPE	Farming relevance	Household
Commodity crops			
Cowpea	Legumes/oilseeds	Cash/food	
Soybeans		Cash/food	
Coffee	Perennial / agroforestry	Cash	
Macadamia nuts		Cash	
Food products			
Vegetables and local greens	Horticulture products	Food/cash	
Sweet potato		Food/cash	
Sorghum	Cereal	Cash/food	
Niche products			
Honey	NTFP	Cash	
Moringa products		Cash/supplement	

12. Interventions in the regular and increased production of these crops is expected to contribute to achieving Outcome 2: Productivity and farmers' incomes are increased, while making livelihoods and food systems more resilient.

13. Under Component 2: Resilient Livelihoods and Food systems, there are three sub-components that address extension, market access through 4Ps and access to finance for climate resilient investment solutions.



Figure 1: Project Components and sub-components

14. An understanding of the political economy and more specifically agribusiness development context are needed to adequately identify and address investment and market barriers under the project interventions.

¹ Which in cases is beyond what is deemed safe for human consumption and has severely impacted formal trade and export of groundnut from Malawi

1.2 Methodology and structure

15. The market analysis is based on literature review, interviews with key stakeholders in the country (Annex 7 of the FP) as well as direct field observations of various nodes of the market supply chain, such as producer organizations, local and wholesale markets, off takers and retail.

16. The available literature varies considerably in terms of depth and scope of available information with regards to markets for different crops, whereby staples and commercial crops such as soybean have received considerably more attention than other niche or relatively new crops, such as moringa or local fruits etc. These gaps in data have where possible been addressed in the key stakeholder interviews that inform this analysis.

17. The analysis adopts a systems approach where constraints to the commercial and economic development of the value chain is seen from a broader perspective in order to address causalities even when beyond the specific crop context.

2 The Malawian political economy context

2.1 Overall business environment

18. The political economy context determines not only the prospects for agribusiness development but also shapes the characteristics of the market demand that drives productivity and overall agri-food sector development and transformation.

19. According to the World Bank Doing Business Report and Country Profile², Malawi's economy is largely defined by:

- Reliance on subsistence, rainfed agriculture, which limits its growth potential, increases its susceptibility to weather shocks, and creates food insecurity.
- Trade policies and a business environment that continue to impede investment and commercialization, as well as erratic electricity supply that limits value addition and slows economic diversification.
- Low public investment, offset by large and increasing subsidies to maize production.
- Weak fiscal management and economic policies that have contributed to recurring and increasing fiscal deficits, which have been largely funded by high-cost domestic borrowing and resulted in a surge in public debt.

² <https://www.worldbank.org/en/country/malawi/overview>

TABLE 2 Malawi / Macro poverty outlook indicators

(annual percent change unless indicated otherwise)

	2019	2020	2021e	2022f	2023f	2024f
Real GDP growth, at constant market prices	5.4	0.8	2.8	2.1	4.3	4.2
Private Consumption	5.4	0.8	2.9	2.5	5.0	5.2
Government Consumption	5.4	0.8	-2.9	7.1	0.5	-3.6
Gross Fixed Capital Investment	5.4	0.8	6.1	0.8	2.5	6.2
Exports, Goods and Services	5.4	0.8	5.5	2.1	3.6	4.1
Imports, Goods and Services	5.4	0.8	4.3	3.6	4.0	5.2
Real GDP growth, at constant factor prices	6.0	0.8	2.8	2.1	4.3	4.2
Agriculture	5.9	3.4	5.2	-3.0	3.4	3.1
Industry	7.7	1.2	1.9	2.0	4.1	4.5
Services	5.5	-0.5	2.0	4.4	4.7	4.6
Inflation (Consumer Price Index)	9.4	8.6	9.3	12.6	11.5	9.8
Current Account Balance (% of GDP)	-13.8	-11.7	-13.0	-14.4	-13.6	-13.4
Net Foreign Direct Investment (% of GDP)	0.3	0.6	0.3	0.8	0.6	0.6
Fiscal Balance (% of GDP)	-4.4	-6.4	-7.1	-9.4	-8.2	-8.3
Debt (% of GDP)	45.3	52.8	53.6	61.5	60.3	58.9
Primary Balance (% of GDP)	-1.5	-3.3	-3.3	-4.9	-2.9	-3.2
International poverty rate (\$1.9 in 2011 PPP)^{a,b}	73.5	74.3	74.3	74.4	74.0	73.4
Lower middle-income poverty rate (\$3.2 in 2011 PPP)^{a,b}	90.4	90.7	90.7	90.8	90.5	90.3
Upper middle-income poverty rate (\$5.5 in 2011 PPP)^{a,b}	97.1	97.2	97.2	97.2	97.1	97.1
GHG emissions growth (mtCO₂e)	1.6	1.4	2.1	1.9	2.4	1.8
Energy related GHG emissions (% of total)	34.2	34.2	34.2	34.5	34.7	34.9

Source: World Bank, Poverty & Equity and Macroeconomics, Trade & Investment Global Practices. Emissions data sourced from CAIT and OECD.

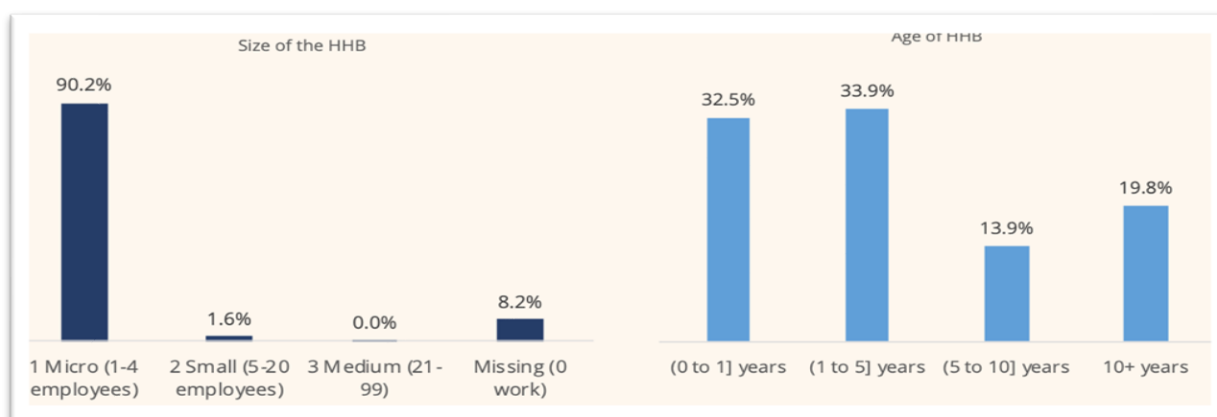
a/ Calculations based on 2019-IHS-V-Actual data: 2019. Nowcast: 2020-2021. Forecasts are from 2022 to 2024.

b/ Projection using neutral distribution (2019) with pass-through = 0.7 based on GDP per capita in constant LCU.

Figure 2: Macro Poverty Outlook Indicators¹

20. While official data often contains contradictory figures, the economic overview offered by the World Bank Country Profile³ and the country Macro Poverty Outlook⁴, as well as by the National Statistical Office data presented by Trading Economics, confirm that Malawi's economy is beginning to show signs of recovery after being heavily affected by the COVID-19 pandemic.

21. The private sector is characterised overwhelmingly by micro-businesses, which comprise more than 92% of the private sector and are mostly family run with fewer than 5 employers and most of them are new having been established within less than 5 years, demonstrated in Figure 3⁵.


Figure 3: Business size and years of operations overview⁶
³ <https://www.worldbank.org/en/country/malawi/overview>
⁴ <https://thedocs.worldbank.org/en/doc/bae48ff2f6c5a869546775b3f010735-0500062021/related/mpo-mwi.pdf>
⁵ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.84

⁶ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.84

22. Such small and young business environment is highly vulnerable to economic and other external shocks and also indicates the lack of solid experience in private sector development on the part of individual entrepreneurs.

23. According to the World Bank study⁷, 34% of the ‘young’ businesses do not survive more than a year, with the tendency of female-owned businesses to be more fragile. In addition, start-ups with less than a year of experience that have stopped operations for whatever reason, are unlikely to resume in 74% of the cases.

24. Successful business management is directly linked to education and experience, with young owners more likely to discontinue operations than their more experienced peers. Those over 30 years of age and those with higher education are also more likely to resume business operations after interruptions, which correlates to lower returns or losses from the business⁸.

25. Further impediments to business growth are the lack of electricity, which affects 8 out of 10 businesses and hampers development of processing activities and value-addition in all sectors. Majority of businesses are based at home or mobile (Figure 4).

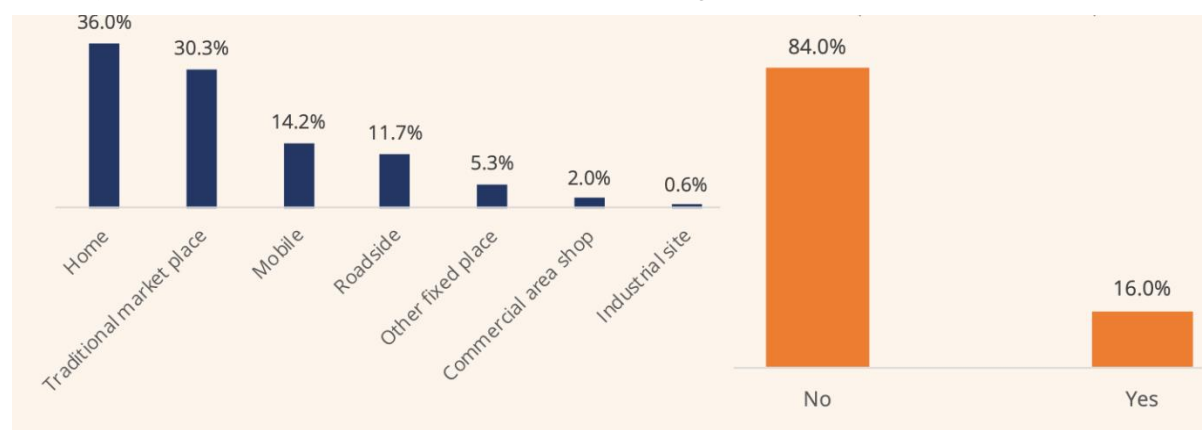


Figure 4: Access to electricity and Business location⁹

26. Further to this, business finance is lacking even for this level of activity, with over half of businesses relying on own savings to start operations (Figure 5).

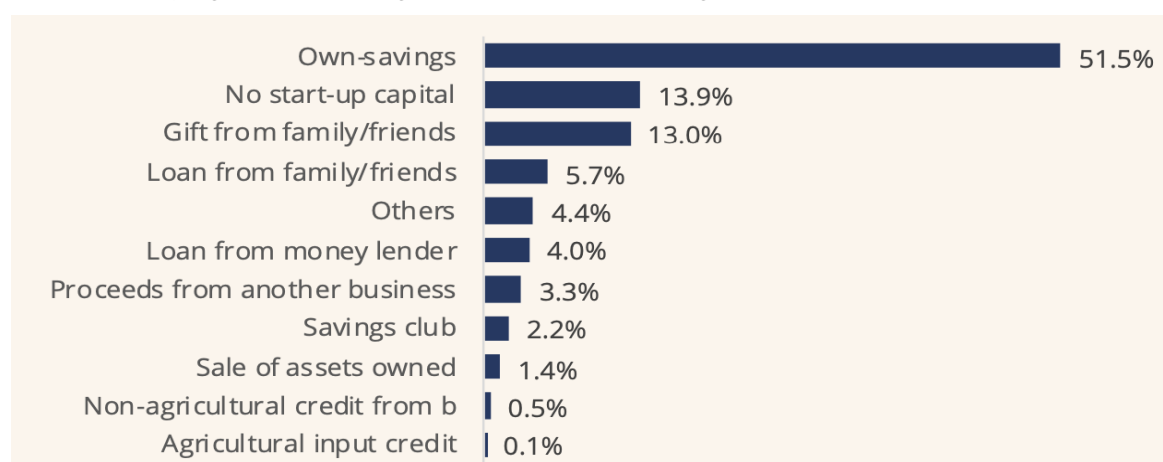


Figure 5: Sources of start-up capital (% of HH businesses)¹⁰

⁷ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.85-86

⁸ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.85-86

⁹ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.85

¹⁰ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.85

27. Many small businesses do not register as enterprises or keep any financial records of their business transactions. These businesses appear to be more susceptible to interruptions as business owners are self-taught on terms of basic business management. Only 5 % report obtaining skills' training from formal programs, while a mere 1 % received training from a university or technical education, and fewer than 20% of household businesses have accessed business support, despite being aware of its availability due to reservations about relevance and impact, their own capacity to participate and time requirements¹¹.

28. According to business surveys by FinaMark Trust¹² (2019), only 12% of business appear to have higher growth prospects characterised by employees, above-average income, and a perception of growth in the previous year. These businesses usually share the following similarities:

- Older owners and are usually in mature stages of business development with over 10 years of experience
- Have access to electricity
- Are owned by men and are located in the urban centres of the Centre and South
- Use financial products
- Have more educated business owners

29. According to the World Bank reports, growth is projected to decline to 2.1 percent in 2022, from 2.8 percent in 2021. This reduction is largely due to weather-related shocks, macro-fiscal imbalances, and the impacts of the Russia-Ukraine war. The heavy rainfall and floods caused by Tropical Cyclones Ana and Gombe, have negatively impacted production of key export crops and other sectors that rely on agricultural inputs. Electricity disruptions from the damaged Kapichira hydroelectric power station are affecting industry. The Russia-Ukraine war and instability in global commodity markets is resulting in higher prices for fuel and fertilizer, negatively impacting food production, consumer prices and industry overall.

30. A breakdown of imports and exports by category (Figure 6 and Figure 7) demonstrate the importance of fertilizer imports and the persisting dominance of tobacco as a source of revenue, followed with a considerable margin by cash commodities such as tea and coffee.

Printed Books, Newspapers, Pictures	Machinery, Nuclear Reactors,...	Electrical, Electronic Equipment	Iron and Steel	Soaps, Lubricants, Waxes, Candles, Modelling Pastes	Miscellaneous Chemical Products	Salt, Sulphur, Earth, Stone, Plaster, Lime and Cement
9.3%	7.8%	5.0%	3.0%	2.7%	2.6%	2.3%
Fertilizers	Vehicles Other Than Railway, Tramway	Plastics	Cereals	Articles of Iron or Steel	Paper and Paperboard, Articles of Pulp, Paper and Board	Miscellaneous Cattle Preparations
8.6%	7.0%	4.2%	2.0%	1.8%	1.7%	1.6%
Mineral Fuels, Oils, Distillation Products	Pharmaceutical Products	Tobacco and Manufactures Tobacco Substitutes	Optical, Photo, Technical, Medical Apparatus	Essential...		
8.0%	6.0%	3.9%	1.4%	0.74%	0.67%	
		Other Made Textile Articles, Sets, Worn Clothing	Rubbers	Milling...		
		3.4%	1.2%	Articles of...		
		Animal, Vegetable Fats and Oils, Cleavage Products	Furniture, Lighting Signs,...	Dairy...	Glass...	
		3.2%	1.0%	Wood and...	Aircraft, Spacecraft	
			0.79%			

Figure 6: Imports by Category¹³

¹¹ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.90

¹² <https://finmark.org.za/data-portal/MWI>

¹³ <https://tradingeconomics.com/malawi/imports-by-category>

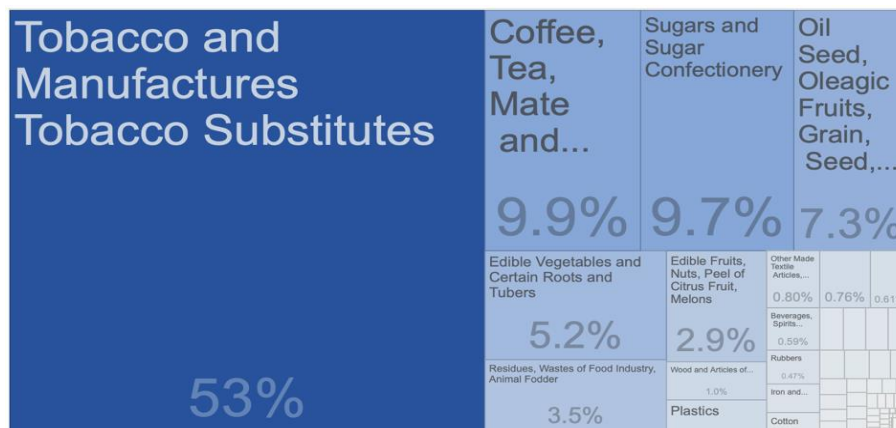


Figure 7: Exports by Category¹⁴

31. According to the Macro Poverty Outlook report, fiscal pressure from the pandemic and government expansionary policies, including the Affordable Input Program (AIP), and weak revenue performance contributed to the fiscal deficit widening to 9.1 percent of GDP in FY21/22. The deficit will be financed using high-cost domestic resources, further exacerbating an already challenging public debt situation. In addition, expenditure is expected to increase significantly to 26 percent of GDP, driven by a surge in domestically financed development expenditure, rising debt servicing costs, social benefits (including implementation of the Affordable Input Program), and grants.

32. The Macro Poverty Outlook reports that food inflation reached 15.3 percent in February 2022, largely due to an increase in maize prices, while according to the National Statistical Office of Malawi, food inflation reached as high as 31 percent in June 2022, in a significant jump from previous years. Figure 8



Figure 8: Food Inflation last 5Y¹⁵

33. Despite a bumper maize harvest, food insecurity continues to be at a high level. The number of people facing high-level acute food insecurity was 1.1 million in September 2021 (over 5 percent of the population). Rising food prices have impacted households' budget by reducing consumption levels, resulting in declining welfare and counteracting improvements in economic growth. In turn, Malawi's \$1.90 international poverty rate has remained at 74 percent.¹⁶

34. Rising domestic financing and borrowing from regional development banks on a non-concessional basis have significantly increased Malawi's public debt from 32 percent in 2013 to 55 percent of GDP in 2020. This is increasingly reducing fiscal space for development spending and risks crowding out private sector investment.

35. According to the World Bank Outlook review, investment is limited by a weak business environment characterized by limited access to credit, numerous non-tariff barriers, and high

¹⁴ <https://tradingeconomics.com/malawi/imports-by-category>

¹⁵ <https://tradingeconomics.com/malawi/food-inflation>

¹⁶ <https://thedocs.worldbank.org/en/doc/bae48ff2f6c5a869546775b3f010735-0500062021/related/mpo-mwi.pdf>

transport costs. Together with erratic electricity supply, this constrains diversification and increased value addition despite the growth of some sectors, such as soya and mining. High reliance on subsistence rainfed agriculture, susceptible to weather shocks, further impedes economic activity and necessitates interventions to support improved climate resilience and productivity of the largely traditional agricultural society.

36. Agriculture remains the main source of household income Figure 9, despite its low returns and lack of overall transformation as a sector.

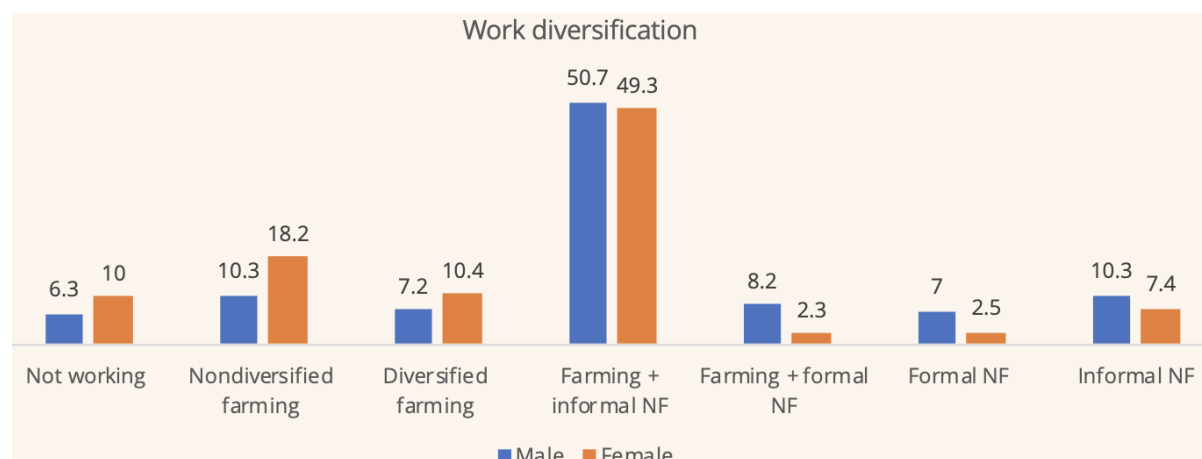


Figure 9: Degree of diversification of work by gender¹⁷

37. In addition to the limited livelihood options, women are at a particular disadvantage, as they face disproportionate barriers accessing inputs and resources which affects their ability to perform Figure 10.

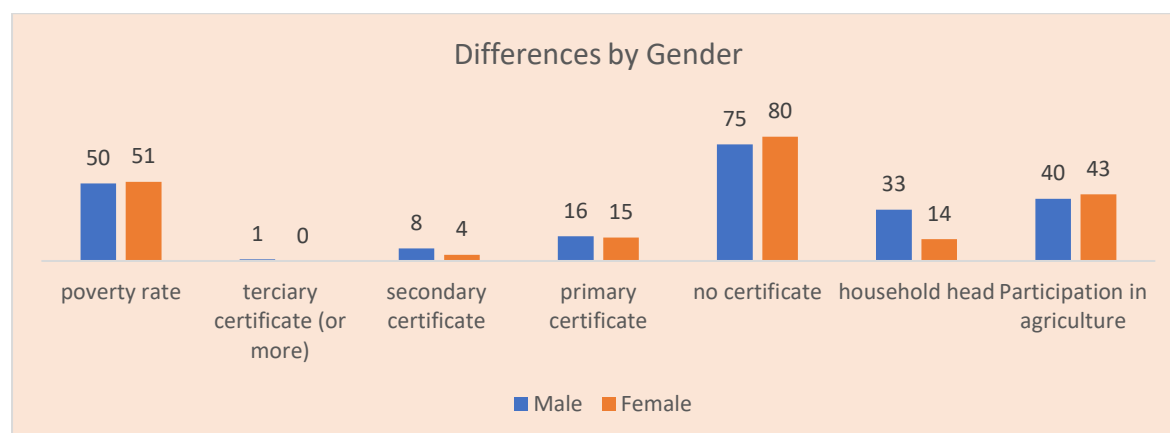


Figure 10: Disparities in education and economic activities between women and men¹⁸

38. According to the Malawi Poverty Assessment by the World Bank Group in 2022¹⁹, female productivity in agriculture is lower than for men, mainly due to differences in the access and use of inputs, the smaller size of land and the fewer farm assets that they own. In addition, women need to dedicate a considerable amount of time to household chores and family-care, which limits the time available for productive work outside of home, such as working in the fields or running a

¹⁷ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.149

¹⁸ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.149

¹⁹ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.24

business. In addition, less women have bank accounts, while at the same time they are more likely to borrow at high interest rates from village banks and money lenders. (also refer to Gender Annex)

2.2 The agribusiness investment environment

39. Most poor households are dependent on agriculture. However, the higher the dependence on agriculture, the higher the likelihood of household poverty (57% poverty rate vs. 51% national average) as many factors such as technical education, distance to markets and volume of produce bear on productivity. The North Region shows higher productivity, however the lack of structural and systemic change endangers this relative success.

40. About 80% of the poorest households engage in agriculture daily, as opposed to 44% of richest households. At the same time, poorer households combine farming with ganyu labor (occasional labour, mostly unskilled). By region, the Rural Center and Rural South report more households with some agricultural activity combined with ganyu labour. Overall, only a third of households outside agriculture are poor and half of the richest households (top 40%) are outside agriculture²⁰.

41. Most farmers engage in agriculture for subsistence purposes and on average work in plots of half a hectare (0.5 ha), while households selling a portion of what they produce work in larger plots (0.8 ha on average). An average household harvests about 0.5 ha, while poor households harvest 0.1 ha or less.

42. Almost half of households (44 percent) do not sell anything of what they produce, while another 20 percent sell small quantities of their final produce (up to 20 percent). Few households (10 percent) sell more than 60 percent of their total production²¹.

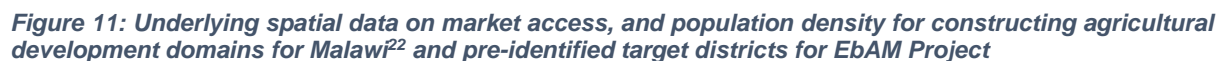
43. Physical market access also has an impact on production investment returns and facilitate market opportunities overall. As clearly demonstrated in Figure 11, the districts selected for EbAM implementation offer a multitude of trading centers within or near the target areas.

44. Overall, there is a linear relationship between market access and the types of profitable agribusiness development. While major urban markets are important for some high-value commodities, all products such as horticulture and honey are also traded widely locally. Therefore, while related, physical access to markets should be differentiated from market opportunities. Opportunities arise wherever local in/formal and small-scale trade exists or where specialized products are of interest to off-takers and dedicated supply chain channels to link supply and demand.

²⁰ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.44

²¹ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.53

The market trading centers displayed are used in the Nationwide Integrated Household Survey [IHS]



²² T.Benson, A. Mabiso, F.Nankhuni (2016), Detailed Crop Suitability Maps And An Agricultural Zonation Scheme For Malawi; Research Paper 17 July 2016

46. Cash crops or crops that could be potentially exchanged for cash (such as tobacco, groundnut, rice, soybean, and sunflower) are sold by 32 percent of households. The composition of food/cash crops does not change by household income but does differ by region; cash crops are rare in the Rural South but more than half of households produce cash crops in the Rural Center. The few urban households who practice agriculture focus mainly on crops for consumption²³.

47. In terms of agribusiness enabling environment Malawi has an over-reaching government with some of the most interventionist policies in the region, that can both promote but also stifle private investment growth. For instance, pre-independence regulation remains such as the Control of Goods Act, 1968 (Cap. 18:08) and Act No. 15 of 2018 enable the Minister to regulate and control the import into and export out of Malawi, of certain classes of goods, which translates into investment uncertainty for private sector.

48. Another is the Special Crops Act (SCA) which was passed in 1963 and gives the Minister of Agriculture wide-ranging powers to intervene in the market whenever the Minister is satisfied that the development of any crop should be promoted or fostered. Special Crop Authorities are also empowered to pass regulations for the licensing of crops that are declared “special”. Once a special crop is declared, any individual or firm involved in its production, processing, marketing and export may also then be subject to various licensing requirements. The conditions of these licenses vary, but mainly control the buying and selling of the crops and inputs for their production. Occasionally, the licenses set technical standards for processing and accounting of special crops. As of 2021, at least nine special crops have been declared. These crops are: cashew, coffee, cotton, groundnuts, macadamia, tea, tobacco, tung and flue-cured tobacco²⁴.

49. More recently The Agricultural (General Purposes) Act (AGPA) was passed in 1987 for the general regulation of the agriculture industry, aimed at increasing cash crop production and reducing food crop prices by providing private traders with incentives to become fully engaged in agricultural marketing.

50. However, under the Act, the Minister may license the buying, selling or marketing of crops; decide who is permitted to obtain a license; set the minimum and maximum prices for a crop, and enumerate export procedures. The legal framework established by the Act further led to the passing of the Agricultural Produce (Marketing) Regulations. Under these regulations, a license is required to profit from or engage in the business of buying any agricultural produce from producers. Only Malawi nationals or businesses majority controlled by citizens of Malawi may apply for license. Conditions for these licenses are somewhat tight, limiting the period of the year during which one may purchase produce, and necessitating that only approved weights and measures be used, which are then subject to inspection²⁵.

51. Agricultural Inputs Programme (AIP/FISP): names groundnut production as a national priority, specifically increasing income and self-sufficiency for poor households. The program has been implemented since 2005/2006 and has enhanced food security in the country. For the 2018/2019 growing seasons, FISP concentrated on maize fertilizer, cereal seed (maize, rice, sorghum) and legume seed (beans, groundnuts, pigeon peas, soya beans, cowpeas).

52. In practice, for example soybean and other crops receive strong public support (via programs such as FISP) whereby beneficiary farmers get 100 kg of subsidized fertilizer, 5 kg of hybrid maize seed, plus 2 to 3 kg of improved seed for legumes, including common bean, cowpea, pigeon pea, groundnut, and soybean. However, few private or public institutional incentives exist for soybean value chain development, such as contract farming opportunities or targeted value chain structuring or governance that can improve efficiencies, gains and market opportunities.

53. At the same time through private sector contract farming arrangements, tobacco firms, for example, provide input loans to smallholder farmers that can be repaid after harvest.

²³ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.56

²⁴ FINMARK TRUST. (2021). Agricultural Finance Scoping Malawi

²⁵ FINMARK TRUST. (2021). Agricultural Finance Scoping Malawi

54. According to a study conducted by IFPRI²⁶, Malawi has the potential to reorient its smallholder agriculture away from being primarily focused on household subsistence and self-sufficiency to increased market-oriented production, including of soybean. But this reorientation will require that government creates the conditions for private sector to invest in the increased production of commercial crops, such as soybean, not only through the support via input loan packages but also a more stable marketing environment for the crop.

55. In developing the commodity trade, in 2017 the government approved The Warehouse Receipt Act (WRA) which defines the legal status of warehouse receipts as documents of title. It clarifies the rights and obligations of warehouse operators and holders of warehouse receipts in accordance with international best practices. The Act specifies that purchasers of goods covered by a negotiable WR receipt shall acquire title to the document and the goods covered by the document. The title is superior to all other claims, with the sole exception of goods placed in the warehouse by a thief. The act also specifies that a warehouse operator shall have the right to keep goods covered by a warehouse receipt in lieu of accrued storage, transportation and insurance charges²⁷.

56. Warehouse receipts are mostly used by large processors and trading companies, rather than farmer organizations or small traders.

57. In 2018 the Reserve Bank of Malawi (RBM) approved The Commodity Exchange Directive which includes provisions for the RBM to license and regulate the Commodity Exchange (Comex). It prohibits the Comex from directly or indirectly trading on its own markets except under exceptional circumstances and with the approval of the RBM. It includes financial penalties for individuals or companies who maintain, inflate, depress or cause fluctuations in the market price for any commodity by fraudulent or fictitious transactions²⁸. However, according to a study by IFPRI²⁹, the provisions of the WR Act and Comex Directive are still not widely understood. Nevertheless, both pieces of legislation provide a solid legal basis for the future development of Comex in Malawi.

58. However, overall, the political economy context spells out a challenging environment for private sector development, especially in an agriculture sector that is vulnerable to both climate and limited transformation policies.










59. The USAID Feed the Future Program references the World Bank's Enabling the Business of Agriculture Index (EBA) as a unique tool for measuring the ease of doing agribusiness based on the strength of the legal and institutional environment for agribusinesses across eight topics: seed, fertilizer, machinery, finance, markets, transport, water, and ICT. Overall, Malawi's scores within sub-categories highlight burdensome time and cost associated with registration of seed, fertilizer, and machinery (see Figure 12). The scores also reveal ICT as a clear area for improvement as there are virtually no digital services on scale and e-commerce linkages are nascent to non-existent.

²⁶ IFPRI (2016), Under What Policy And Market Conditions Will Malawi's Smallholder Farmers Switch From Tobacco To Soyabean?; MASSP POLICY NOTE 26 • October 2016

²⁷ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

²⁸ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

²⁹ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

COUNTRY		MALAWI
REGION		Sub-Saharan Africa
INCOME GROUP		Low income
	Enabling the Business of Agriculture SCORE (0-100)	41.51
	Supplying seed SCORE (0-100)	37.92
Time to register a new cereal variety (days)		579
Cost to register a new cereal variety (% of income per capita)		1536.4
Quality of seed regulation index (0-9)		7
	Registering fertilizer SCORE (0-100)	11.11
Time to register a new fertilizer product (days)		913
Cost to register a new fertilizer product (% of income per capita)		2284.5
Quality of fertilizer regulation index (0-6)		2
	Securing water SCORE (0-100)	60.00
Securing water index (0-10)		6
	Registering machinery SCORE (0-100)	49.87
Time to register a tractor (days)		15
Cost to register a tractor (% of income per capita)		6.2
	Sustaining livestock SCORE (0-100)	18.33
Quality of manufactured feed index (0-5)		1
Quality of veterinary medicinal products index (0-6)		1
	Protecting plant health SCORE (0-100)	20.00
Quality of phytosanitary regulation index (0-5)		1
	Trading food SCORE (0-100)	54.88
Time to obtain agriculture-specific export documents (hours)		96
Cost to obtain agriculture-specific export documents (US\$)		23
Trading food index (0-7)		3
	Accessing finance SCORE (0-100)	80.00
Warehouse receipts index (0-5)		4
Inclusive finance index (0-5)		4

2.2.1 Types of farmer organisations and role in agribusiness development

60. For smallholder farmers to gain scale and market presence, especially in cases where they seek to partner in supply-chain relationships, they need to aggregate their production and act as 'one' economic partner. Broadly speaking there are 4 main types of farmer organisations, summarised in the Table 2 below, which present different options based on the purpose behind the group.

61. Most smallholders are registered as clubs, which is the most 'loose' form of cooperation, while few have formed cooperatives and companies in order to engage in commercial activities. Farmer associations are mainly value chain governance bodies and while they do not have a direct business role, they do represent business interests via advocacy engagement with donors and government.

Table 2: Comparison of Farmer Grouping options

	Cooperative	Farmer Club	Association	Company
<i>Purpose</i>	To address a common need through provision of goods and services to its members (Members at center of delivery of desired services)	To provide easy access loans to its members, through use of group collateral	To represent interests of its members or to speak on behalf of its members (advocacy)	To maximize profits
<i>Law that guides registration</i>	Cooperative Societies Act Cap. 47:02	Not developed	Trustees Act Cap 5:03	Companies Act Cap 46:03
<i>Requirement for training before commencement of operations</i>	It is a pre-requisite to undergo cooperative member education as part of the registration process	Informal organization that does not require registration	Not needed	Not needed
<i>Universally accepted principles, values, and practices</i>	All cooperatives embrace the same principles in the conduct of their business	N/A	N/A	N/A
<i>Involvement of members in developing by-laws</i>	Members take part in developing the by-laws for the cooperative societies by using a template to ensure standardization	Members formulate rules that are not legally binding	Constitution for the Association is drafted by contacted legal experts	Lawyers draft articles of association for the company
<i>Shares</i>	Members buy shares that cannot be traded. Shares are withdrawable upon resigning membership or transferred to a fellow member or	There are no shares	There are no shares	Shareholders do buy shares which can freely be traded

³⁰ World Bank. 2019. Enabling the Business of Agriculture 2019. Washington, DC: World Bank. doi: 978-1-4648-1387-0. License: Creative Commons Attribution CC BY 3.0 IGO p. 67

	nominee upon death			
<i>Entrance Fee</i>	Paid once upon admission to membership and not refundable	Paid every year and at failure to pay one ceases to be a member	Paid every year and at failure to pay one ceases to be a member	N/A
<i>Distribution of Surplus/profits</i>	Surplus is distributed to members in accordance with the cooperative by- laws	A club does not make profits	Association does not make profits	Profits are distributed to shareholders in accordance with the governing Laws
<i>Assets</i>	Belong to members who are aware of the value	Farmer club assets do not have specific owners	Only Trustees know of value of assets	Belong to shareholders
<i>Membership</i>	buying/acquiring shares	membership fee	membership fee	purchasing shares
<i>Annual auditing Requirement</i>	mandatory	not mandatory	not mandatory	mandatory
<i>Cost of Registration (2022)</i>	MK5,600	Free	MK50,000	several registration fees (up from MK100,000)

62. The Malawi Federation of Cooperatives is the apex body in the tri-tiered cooperative framework in the country and in 2017 had 529 agricultural cooperatives, as well as 19 apiculture cooperatives nation-wide forming by far the largest type of cooperative presence.

63. In the project areas there are several cooperatives that are currently registered as agricultural cooperatives, as well as some cooperatives around apiculture. (Table 3)

Table 3: Types of cooperatives by district (2017)³¹

District	Unions	SACCOs	COMSIP	Agro based	Livestock	Dairy	Honey	Timber	Rice	Others
Balaka		1	1	9			1			
Blantyre		23	3	12	4		1			3
Chikwawa		7		16	2		2		1	
Chiradzulu		1	2	5	2	1	1			
Chitipa		1	2	17			1			
Dedza		2	7	17	4	3		1	1	
Dowa		4	2	36		3				
Karonga		6	9	21					8	1
Kasungu		3	15	23	2		1			
Likoma			1							
Llongwe	3	44	45	60	8	6		2		2
Machinga		2	1	14	2					
Mangochi			2	18			1		1	
Mchinji		1	22	22	2	1	2			
Mulanje		4	12	12	2		1			
Mwanza		1		10		1	1			
Mzimba	2	16	15	46	10	3		10		2
Neno		1	3	5		1				
Nkhata Bay		6	6	17	2	2	1		1	
Nkhotakota		5	2	23			1		2	1
Nsanje		1	3	5	1					
Ntcheu		2	2	12			1			
Ntchisi	1	3	3	26		2	1			
Phalombe		2	3	13		1				
Rumphi		5	7	28	3					
Salima	1	3	3	28			3		4	
Thyolo		5	11	9	3	3				
Zomba	1	6	19	25	3	3		2	1	
Total by type	8	155	201	529	50	30	19	15	19	9

64. In addition to Cooperatives, farmers are also organized in Associations that operate under the National Smallholder Farmers' Association of Malawi (NASFAM)³². However, despite their non-commercial nature, many engage in commercial activities that are concentrated within the associations and NASFAM's commercial subsidiary company, NASFAM Commercial (registered as NASCOMEX). NASFAM Commercial buys and sells farm products from farmer members at

³¹ Source: The Malawi Federation of Cooperatives

³² <https://www.nasfam.org/index.php>

competitive price through their local associations (which act as commercial hubs) and supports the marketing and export of value-added products.

2.2.2 Access to production assets and prevailing production practices

65. Regulation with regards to access to water for productive use falls under guidelines for integrated water resource management as part of the legal framework established under the National Water Policy of 2005. However, these guidelines have never been tested, as no lake/basin institutions exist, nor are there any basin plans. Irrigation is instead regulated through a permit system and permit renewal where public notice of applications for individual water use permits is not required by law.

66. Perhaps among the most important impediments for agriculture sector growth is the weak performance in plant breeding, variety registration, and seed quality control. Although companies can produce breeder and foundation seed of local public varieties, there is no law granting and protecting plant breeder's intellectual property rights, thus discouraging private investment in seed systems. The country has a comparatively strong legal framework for seed variety registration. However, the system is arduous and expensive, taking 579 days at 2,038% per capita income to register a seed. Finally, seed quality control weaknesses stem from a poor post-control testing system and no mandatory traceability or recordkeeping of plant reproductive material.

67. Similarly, although the system for fertilizer registration is comparatively strong it takes 913 days to register new fertilizer products for a cost of 3,030% per capita income. This is compounded by the fact that fertilizer import, and distribution regulations require permits on a per-shipment basis, which are only valid for three months, while each permit takes seven days to obtain at a cost of 16.5% income per capita. Once on the market, there is adequate quality control of these products through enforcement of mandatory labelling guidelines.

68. About 80 percent of households use fertilizers, especially if they produce a mix of cash and food crops. On average they use 197 kilograms of fertilizer per hectare (kg/ha). Food crops use more fertilizer per hectare (217 kg/ha). Richer households use larger amount of fertilizer than poorer households (141 kg/ha in contrast to 51 kg/ha). Beneficiary households receive two or three coupons, each of which can be exchanged for 50 kg of fertilizer or 5 kg of seeds. While coupons should be focused on poorer households, the evidence shows that support is evenly distributed across income groups³³.

69. With regards to transport of agricultural goods Malawi has better regulation of domestic transport than cross-border transport. Domestically, individual truck licenses allow for greater competition in the sector than a company-level system that requires more strict criteria. However, there are no guidelines on the transport of perishable goods which leads to food losses and inefficiencies.

70. Overall, Malawi poses few barriers to accessing agricultural machinery and technologies. However, while vendors are required to obtain 'type' approval for the sale of tractors and the authorities do not recognize approvals issued by other countries and test reports issued by manufacturers. As a result, it takes vendors 240 days at a cost of 429% per capita income to obtain tractor type approval.

71. Manual tools are, overwhelmingly, the main instruments available to most households for cultivation and most households have at least one tool (such as, hand hoes, slashers, axes, sickles, cultivators, and watering cans) to work the land and raise livestock. Almost no one owns tractors, generators, or motorized pumps, all of which are important in generating higher value. Fewer than 10 % of households own an ox cart or an ox plough, however in the Rural North the figure is closer to 20 %. Other more mechanized tools like sprayers and grain mills are owned on average by one in five households and are more common in the North region. Also in terms of

³³ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.59

households that have chicken houses, poultry kraal, pigsties, or livestock kraals the Rural North tends to predominate. Finally, grain storage is kept by fewer than 5 percent of households ³⁴.

72. Land tenure security in Malawi is categorised as a customary residence system of landholding. According to estimations by the FAO, customary land accounts for 70 to 80% of the country's total land. Malawi has both matrilineal and patrilineal customary residence systems, where the former is widely practiced in the southern and central parts of the country, where smallholders and estates primarily produce tea, and the latter in the northern regions.

73. In 2016, the Government of Malawi released a Customary Land Act (CLA) allowing smallholder farmers to transform their customary land rights into private land rights with registered titles, to be known as Customary Estates (CEs). This is hoped to provide the security needed especially for smallholders to incentivise investment in improving the productivity of the land.

74. Nationwide, the farm landscape is particularly challenging given the prevalence of smallholder farmers already operating less than 5 hectares of land, limiting farmer ability to diversify and service both their food security needs as well as supply to local markets. Under such pressure, farmers are less likely to allow land to sufficiently rest between harvests, leading to premature degradation of the soil.

75. A lack of organisation amongst farmers also inhibits productivity of the agricultural economy. Only 18% of the 4.2 million smallholder farmers in Malawi belong to any form of collective farmer organisations, largely concentrated in the high-value and better structured coffee and tea industries. This negatively impacts farmer's ability to integrate and be more active in later-stage value chains or increase profitability resulting from improved cost-benefit or technological efficiencies.

76. Very few farmers have commercialized their product through a farmers' association. According to the household survey of 2019 (IHS5), less than one percent of all farmers have sold their product to a farmer's association, while five percent have used the club to obtain inputs such as fertilizers and three percent for seeds³⁵.

77. According to a scoping report on agriculture financing by FinMark Trust³⁶, the rise of medium-scale farmers in a land-scarce country is of note. The report further quotes a 2014 survey of 300 farmers across three districts of Malawi uncovered that the total area of land acquired by medium-scale farmers had almost doubled between 2000 and 2015. Of these medium-scale farmers, just over half reported that they had successfully expanded from being smallholder farmers; a significant number of them were urban-based professionals, civil servants, or entrepreneurs who had acquired land and started farming rather than being born into families which farmed.

78. This diversification of farmer profiles and entry of urban professionals and entrepreneurs with a higher level of formal education and skillsets can lead to significant positive impacts on uptake of innovation, and EbA practices, as well as crop diversification and agribusiness development.

79. The same IFPRI study³⁷ referenced in the section above, suggests the need for pilot programs designed to provide input loans to crop farmers and to identify which models will work best in different farming contexts in order to determine how best to create the conditions for the private sector to expand.

80. Government should also improve the stability of markets for export crops by minimizing ad hoc trade policies that increase market uncertainty. For example, while Malawi has promoted soybean exports since 2013, it has also imposed temporary bans on soybean exports in the name

³⁴ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.57

³⁵ G. Caruso, L.C. Sosa; (2022) Malawi Poverty Assessment: Poverty Persistence in Malawi: climate shocks, low agricultural productivity and slow structural transformation; World Bank Group, p.65

³⁶ FINMARK TRUST. (2021). Agricultural Finance Scoping Malawi

³⁷ IFPRI (2016), Under What Policy And Market Conditions Will Malawi's Smallholder Farmers Switch From Tobacco To Soyabean?; MASSP POLICY NOTE 26 • October 2016

of value addition, while an export levy on oilseeds could actually reduce the domestic supply of oilseeds and value addition in the long run.

81. The risk that government may exercise these powers without consultation increases price related risks that farmers face and dissuades investments as well as discourages production in such as the oilseeds sector. Predictable policies and stable prices, therefore, can help all actors along the agri-food value chains – from farmers and aggregators to processors and exporters – to better plan their activities and investments.³⁸

82. In addition to general considerations with regards to the enabling environment for agribusiness and commercial growth of production, consideration needs to be given to the potential need for transition of current agricultural practices towards EbA and climate-resilient agriculture, and the possible market rewards for safe and quality produce resulting from these product systems.

83. As described in the appendix about EbA solutions, climate-resilient agriculture/EbA includes minimum soil disturbance, permanent ground cover and crop rotation or intercropping (including the use of legumes for nitrogen fixing), practices can also be considered agro-ecological and which according to research³⁹ are practiced by over 70% of farmers. The same research finds that almost 9 out of 10 farming households applied some kind of organic content to the soil, in the form of crop residues, animal manure, compost or green manure. This indicates that agro-ecology is not something new that must be introduced but is part of existing practice.

84. Therefore, there is a need for a strategy on how to change attitudes and perceptions and demonstrate evidence for both production and economic benefits of such transition towards EbA. Currently, from a regulatory and policy point of view there are no food safety and quality market requirements to incentivise a shift towards EbA and reduction in the use of chemical inputs. In addition, the price-sensitive consumer market lacks general awareness of these issues and as a result does not offer price or preference-based incentives for farmers to transition.

85. Finally, the transition from subsistence to commercial farming will only suit some households, which will need to be supported in strengthening their entrepreneurial skills, including supply contract management and basic bookkeeping skills.

2.2.3 Characteristics of the domestic consumer markets

86. The increasing economic stagnation and rising cost of living exacerbates further the price sensitivity of consumer markets. Maize remains critically important to food security: 60% of the national caloric consumption comes from maize, nearly all farmers grow maize, and 50% of farmers grow maize exclusively⁴⁰.

87. In addition, overall consumer awareness of the links between climate change, production systems and human food security and safety is very low. This poses a demand barrier that impacts the ability to offer economic incentives through market linkages for EbA production transformation on the ground.

³⁸ IFPRI (2016), Under What Policy And Market Conditions Will Malawi's Smallholder Farmers Switch From Tobacco To Soyabean?; MASSP POLICY NOTE 26 • October 2016

³⁹ African Centre for Biosafety, (2014); Running to Stand Still: Small-scale farmers and the Green Revolution in Malawi, October 2014

⁴⁰ Wilson, P. N. (2014). Malawian Agriculture: The Commercialization Challenge, Working Papers 281278. University of Arizona, Department of Agricultural and Resource Economics.

88. According to interviews conducted by the project formulation team with key retailers and food companies⁴¹, there is currently no discussion among consumer groups and civil society on the issue of food production systems and impacts on the natural and social environment, as well as resilience towards climate change. The more affluent urban consumer market is relatively small, and according to the main food retail companies like Shoprite and Chipiku, limited awareness and interest in issues such as 'chemical free' or 'nature positive' production currently results in limited demand which is largely satisfied through imports. The share of organic food in terms of the total food market in Malawi is negligible, at 0.1% (Figure 13) and online revenue share accounting for 1% of food businesses⁴². Domestic food demand is price sensitive, formal retail as well as agri-food processing is primarily concerned with price, volumes and all-year round supply, over issues of resilience, sustainability and health of food production-systems.

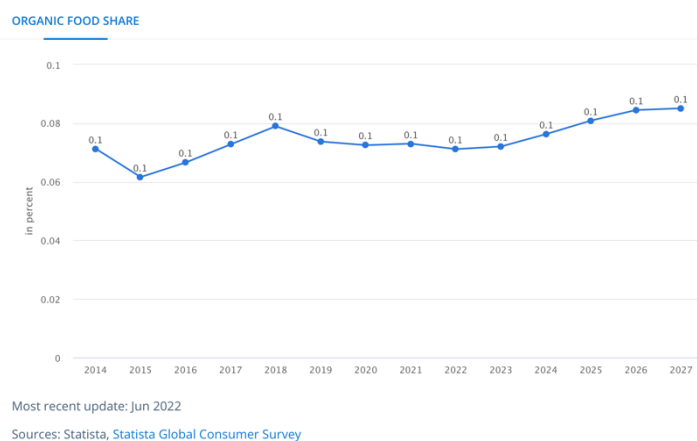


Figure 13: Organic food share of food market in Malawi

89. A study in 2014 based on integrated household survey data⁴³ shows that household income growth is likely to have higher impacts on food consumption than adjustment of prices. The study indicates that policies intended to assist producers through increase in food prices would not significantly impact consumers' consumption patterns, especially with regards to staples. However, policies targeting income would mean that consumers would be able to purchase more non-staple foods and food allocation patterns would fundamentally change with consumers spending more on meat, fruits, sugar/fats, spices and beverage away from some traditional foods such as local vegetables, legumes among others.

90. Food categories with elasticity⁴⁴ greater than one (Figure 14), such as fruits, meat, sugar, fats, spices and beverages are considered 'luxury' and will be impacted more severely by prices than foods such as vegetables that are considered a necessity and a staple.

Food category	Expenditure Elasticity	Expenditure Share
Cereals	0.060	0.205
Root tubers	0.595	0.042
Legumes	0.721	0.066
Vegetables	0.404	0.137
Meat	1.821	0.216
Fruits	1.636	0.018
Milk product	0.930	0.008
Sugars/Fats	1.784	0.203
Spices	3.323	0.067
Beverage	1.556	0.037

Figure 14: Consumer's food expenditure and share by food category⁴⁵

⁴¹ Consultations with key food retail companies, Shoprite and Chipiku, conducted 26 September – 7 October, 2022.

⁴² <https://www.statista.com/outlook/cmo/food/malawi#revenue>

⁴³ Maganga, A. M., Phiri, A., Mapemba, L., Gebremariam, G., & Dzanja, J. (2014). A Food Demand System Estimation for Rural Malawi: Estimates Using Third Integrated Household Survey Data

⁴⁴ 'Elasticity' definition:

⁴⁵ Maganga, A. M., Phiri, A., Mapemba, L., Gebremariam, G., & Dzanja, J. (2014). A Food Demand System Estimation for Rural Malawi: Estimates Using Third Integrated Household Survey Data

91. Based on these market behavior observations, it is reasonable to expect that climate-resilient/ “nature positive” value chains that are not regarded as staple foods, will not have much space for growth under current economic constraints and need to create or strengthen linkages to regional or international markets for products such as coffee, NTFPs – baobab products, nuts, honey, and other ‘non-essential’ food crops.

92. A study done by the African Centre for Biosafety in 2014⁴⁶, found that more than 80% of households surveyed had consumed maize, green leafy vegetables, ‘other’ vegetables (including tomatoes, onions, okra and others) and legumes in the past three days and fewer than 60% had consumed rice, wheat products, any kind of meat, potatoes, fruit or vegetables high in Vitamin A. Due to poverty and irregular availability of food 69% of respondents indicated they sometimes, often or always could not eat foods they are used to, while only 15% were always able to eat the foods they are used to.

93. According to the latest 2022 WFP Report⁴⁷ on Food and non-Food Prices and Availability, the food-related minimum costs continue to raise across all regions of the country.

- The Survival Minimum Expenditure Basket (SMEB)⁴⁸ rose by 4.4 percent in the urban cities; by 0.8 percent in the rural Northern Region; by 3.5 percent in the rural Central Region; and by 2.6 percent in the rural Southern Region. Generally, increases in the prices of maize grain, beans, cassava, and vegetables contributed a significant share of the rise in the SMEBs across all the regions.
- The price of maize grain surged to MK 326 per kg by end July from MK 307 per kg during mid-July 2022 owing to continued hoarding of the grain by producers and traders.
- Beans were trading at MK 1,360 per kg, an increase of 2.2 percent since the last round.
- The prices of both cowpeas and pigeon peas decreased to MK 788 per kg and MK 588 per kg, respectively. The price of cowpeas decreased by 2.7 percent while that of pigeon peas fell by 5.8 percent since the last round due to new harvests.

94. The current economic and market situation in Malawi is increasingly complex because of factors such as climate change, COVID-19 mitigation, and the impact of Ukraine-Russia conflict on global trade, all of which resulting in constrained growth and a further impoverished consumer. This somewhat volatile macro-economic and domestic market environment makes it increasingly difficult and ‘high-risk’ for private sector to invest in agriculture and engage smallholder farmers and their organisations unless a clear positive business case can be demonstrated or exists.

3 Overview of the market development potential for the proposed nature positive value chains

95. Currently market awareness around the issues of sustainability of crop production and its linkages to the natural environment, human health and nutrition is low, and therefore there is little demand for nature-positive production, or adoption of organic practices demanded by consumers.

96. Domestic food demand is price sensitive, formal retail as well as agri-food processing is primarily concerned with price, volumes and all-year round supply, over issues of resilience, sustainability and health of food production-systems.

97. According to the scoping report on agriculture financing by FinMark Trust⁴⁹, despite its relative important share of the economy, agricultural productivity in the country is poor and the country’s agricultural output per worker is one of the lowest globally. This is attributed to poor and degraded soils resulting from continuous cultivation, despite heavy use of subsidized fertiliser.

⁴⁶ African Centre for Biosafety, (2014); Running to Stand Still: Small-scale farmers and the Green Revolution in Malawi, October 2014

⁴⁷ WFP (2022) Minimum Expenditure Basket in Malawi Round 60 | 25—30 July 2022, 17 August 2022

⁴⁸ The food commodities selected to calculate the SMEB are those that make up a typical rural and urban survival diet and include cereals, roots and tubers (cassava and sweet potatoes), pulses, oil, vegetables, fish, eggs, sugar, and salt.

⁴⁹ FINMARK TRUST. (2021). Agricultural Finance Scoping Malawi

98. In addition to low farm yields, a limited industrial base and weak linkages between sectors and value chain actors further constrict downstream agricultural activities and disincentivise production.

99. In a food insecure country, allowing croplands to rest between cultivation is not a viable strategy to most, alternative practices for preventing the degradation of soils such as avoiding mono-cropping and operating with minimum tilling offer more viable alternatives.

100. These crops can be understood in two categories: staple crops, which are primarily consumed within the country contributing to nutrition and subsistence (such as groundnuts, local greens) and cash crops (such as coffee, nuts and soybeans), which are exported for foreign revenues. Unlike many other SSA countries, Malawian smallholders hold a large share of the cash crop industry, largely due to the structure of the tobacco supply chain and its transformation from an estate to a smallholder crop.

101. Most smallholder farmers mitigate risk and address their consumption needs through diversification of their production, ensuring where possible that both food and cash needs are met. Such strategy is particularly relevant considering the volatility in prices (ex: soy) and market access (ex: tobacco) seen from year to year and considering climate shocks that impact productivity.

4 Food crops

102. In this study, a food crop is defined as a crop primarily produced for use as food by the grower, part of which is also sold commercially.

4.1 Horticulture products - Vegetables

4.1.1.1 Overview

103. The horticulture products considered in this section are a large variety of locally produced vegetables, a 'basket' which currently includes among others: tomatoes, okra, onion, beetroots, sweet potato, red potato, carrots, beans, aubergines, peppers, salads, cucumbers, pumpkin as well as variety of leafy greens, and leaves from pumpkin, okra, beans and cassava leaves – all of which are part of the local diet and important to nutrition. In addition, there are also many native vegetables with the potential to make substantial contribution to EbA and improved nutrition but have become almost unknown to the wider public with the growth of globalization of agriculture.

104. Vegetable production is almost entirely done by smallholders and much of the urban supply relies on imports from South Africa.

105. The sector governance falls under the Horticulture Development Organization of Malawi (HODOM) that was established under the Ministry of Agriculture and Irrigation more than a decade ago as part of a German supported development programme but appears to be largely inactive at present.

106. Horticulture production is mostly done on a small 'home-garden' scale. There are a handful of semi-commercial vegetable growers in Malawi who cultivate on a slightly larger scale (3 – 5 ha) and employ teams of wage labourers, while the owner is mainly in charge of the input supplies, production organisation and produce marketing. On the next level, there are few commercial growers who in turn have a few contracted out-growers and who engage in onward sales to the supermarkets and wholesale agents.

107. While currently consumer consciousness of food quality and safety related to EbA products is not strongly developed, there is an increasing awareness that vegetables offer an important contribution towards nutrition and balanced diet, as well as increasing demand for native poultry.

108. The horticulture sector is largely challenged by high postharvest losses of crops due to various factors such as pest and disease infestation both during pre and postharvest, lack of knowledge on proper postharvest handling practices which result in mechanical damage, lack of proper storage and packaging materials, and poor infrastructure such as poor road networks and poor market structures and facilities. On average, it is estimated that more than 50% of the fruits and vegetables are lost particularly when they are in their peak season. This is a great loss to the economy of the country when it is struggling to feeding the growing population.

4.1.1.2 Consumption and Market trends

109. As in many countries in the region, horticulture products are of increasing demand in particular by the middle-class in the growing urban centres and by the expanding formal retail networks. While the formal retail sector is still estimated to be under 20% of the total volume of sales, the expectation is that overtime it will continue to grow. The raising consciousness of the local consumers on issues of nutrition and balanced diets is driving this trend. However, the consistent supply of quality fresh produce to markets is often a challenge due to dispersed, small-scale and seasonal production as well as issues related to supply chain logistics and organisation that result in losses in efficiency and value.

110. Furthermore, the association of fresh produce with 'production system' or 'origin' labels does not yet exist on the domestic market, yet there is a gradual increase in consumer awareness around reduction of chemical use in food production that can provide the basis for product differentiation on such basis. Production coming out of EbAM areas will directly benefit from such consumer interest.

111. The first market driven production and supply initiative of high-quality fresh vegetables through which the growing supermarket sector in Malawi was to be supplied throughout the year with fresh produce was envisaged through a franchise arrangement with SPAR International and its contacts with the 'Seed2Feed' initiative of Rabobank Foundation, Wageningen University & Research, AGRA and Greenport Holland.⁵⁰ However, the South African chain, SPAR, withdrew from the national market in 2020.

112. Currently this space is taken by an Israeli investment – Inosselia Commercial Ltd⁵¹ that has entered into a public private partnership with the Green Belt Authority in Malawi and has constructed a number of green houses near the capital, supplying the formal retail sector with the objective of reducing the imports of fresh fruit and vegetables from South Africa⁵². The production by Inosselia is also responding to the retail demand for continuous 'all-year round' supply of quality products, which the urban market currently expects.

113. In addition to formal retail, the vast majority of local produce that comes from smallholders is sold through traditional open-air markets that supply the rural consumer and much of the less-affluent urban population. Figure 15 shows the prices that market traders get for a large variety of fresh produce offered. It is also worth to note that the small volumes/measures at which produce is sold indicates price sensitivity on the part of the consumers.

BOX 1: Pamudzi Bar and Eatery

The unique traditional cuisine that is offered at Pamudzi Bar and Eatery has clearly struck the chord of so many people around the city of Blantyre. From noon the place is a beehive of activities as cars are continuously coming in and going out. Situated in Mandala, the place oozes a special traditional appeal. From the dressing of the staff to the naming of the eating shelters, everything retains a distinct traditional feel. Food is served at the khonde from the main house, kwa mbuya by a group of female staff who are draped in their traditional chilundu regalia complete with a head cloth (duku). Patrons can either chose to enjoy their meal in mphala, pabwalo and gowelo shelters.

"In a typical village setting we have these three structures present. I pictured a situation where someone upon being served his food, depending on how one is feeling can make a decision to enjoy his food in either of these places," says owner of the place Loveness Msanide.



⁵⁰ Frank Joosten (2013); Development Of A Horticultural Fresh Produce Supply Chain In Malawi: Scoping Mission

⁵¹ <https://www.inosselia.com/company/>

⁵² <https://www.foodbusinessafrica.com/malawi-to-start-supply-of-high-value-vegetables-from-sadcs-largest-greenhouse-facility/>

114. There is growing consumer interest in traditional cuisine (See Box 1) which will open market development opportunities for nature positive value chains, such as horticulture, nuts and pulses.

115. While leafy greens are an important part of the traditional cuisine, their use is often associated with poverty and lack of dietary alternatives. However, in recent years, urban consumers are becoming increasingly aware of the benefits of fresh and native products, an example of which is the rapid increase of the popularity of the 'native' variety of chicken, as opposed to broiler chickens distributed at large volumes via retail.

4.1.1.3 Formal private sector presence in the value chain

116. Most of the local vegetable production is sold to aggregators/traders who then re-sell to local market traders. Such sales are made in relatively small volumes and the perishables quickly change hands to get to the consumer with as little losses as possible. In urban centres, the supermarkets strive to supply a consistent quality, volume, and variety through various and mostly informal supply chain arrangements. There are currently a relatively limited number of large retail investments, Table 4 briefly describes the two largest retail off-takers currently dominating this space.

Strawberries - 500gr @ 2,000MWK
Lettuce - 1 head @ 300
Beetroot – 1 bunch @ 500
Cauliflower – 1 head @ 600
Broccoli – 1 head @ 600
Cucumber – 3 pieces @ 400
Green beans – 200gr @ 200
Eggplant – 3 pieces @ 500
Green peppers – 4 pieces @ 500
Red peppers – 3 pieces @ 1000
Papaya – small 200, medium 500, large 1000
Tomatoes – 4 pieces @ 200
Okra – 4 pieces @ 200
Traditional green leafy greens (pumpkin, beans, okra leaves) – bunch @ 200
Hibiscus (dry) – cup @ 1000

Figure 15: Price of vegetables at urban fresh market (Blantyre Oct 2022)

Table 4: Examples of larger/formal off-takers

Type of off-taker	Company name	Brief description
Supermarket	Chipiku Plus	Local retail chain which sources directly from informal trader and farmers who deliver to outlet gate. Produce accepted based on physical appearance
Supermarket	Shoprite	International chain from RSA which has supply agreements with traders and farmers to deliver specific products which are judged on quality and regularity of supply
Hospitality	Sunbird Hotels Chain	The hotel restaurants offer a weekly traditional cuisine lunch for which they source local greens and vegetables from traders

4.1.1.4 Market challenges

- Seasonality of supply results in price variations and market gluts that make profitability unpredictable
- The formal retail sector contributes to the creation of consumer expectations around the 'lack of seasonality' and continuous supply of fresh products mostly based on green-house production and imports
- Cultivation of vegetables for commercialisation is not viable without 'professionalisation' of production in terms of water management, varieties and techniques to improve output

- Quality inputs seeds and, organic fertilizers are difficult to find and costly, and many farmers lack knowledge of production (for example compost-making) and correct use
- No tailored lending products to account for specific needs (seasonality-tailored repayment schedules, appropriate guarantees and risk assessments/cost of credit analysis and adjustments)
- Fragmented production and supply chain that relies on middlemen for coordination, aggregation and informal lending, with farmers participating on individual basis rather than as under any form of organisation to lend 'weight' to their role in the commercial process
- Post-harvest handling, primary processing and timely farm off-take are irregular and mainly lacking in efficiency if they exist
- No food safety standards exist or are observed with regards to quality of water or nature of chemicals used for production and post-production purposes
- The formal retail meets the supply gap through imports of vegetables such as tomatoes, pumpkins, sweet and white potatoes, onions and garlic etc. from neighbouring countries, especially South Africa.
- Seeds for native vegetables are not systematically banked and exchanged in the country and many consumers are unaware of which vegetables are native and which are exotic or invasive

4.1.1.5 Market opportunities

- Increase consumer awareness and demand for local, sustainably produced, and nutritious food
- Increase supply to domestic urban market to improve import substitution
- Diversify supply to domestic rural and urban market of native varieties of leafy greens and vegetables

4.1.2 Sweet potato

4.1.2.1 Overview

117. Sweet potato is among the most important crops grown across the country as a snack and as a major food crop during periods of food shortage. In Malawi, sweet potato has the advantage of having a short growth cycle of 4-5 months after planting to supplement/relay food availability. In addition, sweet potato crop is grown as a "low risk crop" that does not require a lot of external inputs and is mostly rain fed.⁵³

118. Sweet potato production in Africa has doubled from 1.0 to 2.0 million tons between 2002 and 2012. Predominantly white or yellow fleshed varieties are cultivated, while orange-fleshed sweet potato (OFSP) which is rich in beta-carotene converted into vitamin A in the human body is also on the rise.⁵⁴

4.1.2.2 Consumption and Market trends

119. In Malawi, 60 percent of children under the age of five are vitamin A deficient, which can lead to compromised immune systems, blindness, and is associated with stunting. Orange fleshed sweet potato is one important food that can contribute to reducing this deficiency. However, despite these nutritional advantages very little scaling up has been achieved. Sweet potato in Africa is perceived as a drought tolerant food security crop however, there is limited awareness on the potential of sweet potato as a viable cash crop.⁵⁵

⁵³ Obed Mwenye & Felistus Chipungu (2019) CURRENT STATUS OF SWEET POTATO RESEARCH IN MALAWI, Bvumbwe Research Station (PPT)

⁵⁴ D. van Vugta,b,*, A.C. Franke (2018) Exploring the yield gap of orange-fleshed sweet potato varieties on smallholder farmers' fields in Malawi Field Crops Research 221 (2018) 245–256

⁵⁵ D. van Vugta,b,*, A.C. Franke (2018) Exploring the yield gap of orange-fleshed sweet potato varieties on smallholder farmers' fields in Malawi Field Crops Research 221 (2018) 245–256

120. Sweet potatoes are primarily grown by smallholders, who farm on less than one hectare of land, as a subsistence food consumed in the household. While there is fast-paced growth of sweet potato production, the market is flooded at harvest time with few opportunities for processing or storage, and tons of nutritious sweet potatoes go to waste.

121. To address the production glut in Malawi, Universal Industries Limited is partnering with the International Potato Center (CIP) to strengthen the sweet potato sector, by adding new sweet potato product lines to their existing operations. Universal Industries is using sweet potato puree and flour in affordable, shelf-stable products such as chips and biscuits. They are now a major sweet potato buyer at harvest time, using sweet potatoes that otherwise may have gone to waste. These business innovations are resulting in reduced sweet potato post-harvest losses, new market opportunities for smallholder farmers, and nutritional food products for rural and urban consumers.⁵⁶

122. Other products that are emerging at artisanal level are: sweet potato juice, sweet beer, pan cakes, doughnuts, 'Golden, bread, as well as porridge.

123. In terms of production and area under cultivation, the data shown in Figure 16 and Figure 17 demonstrates the steady growth in cultivation for both domestic use and sale.

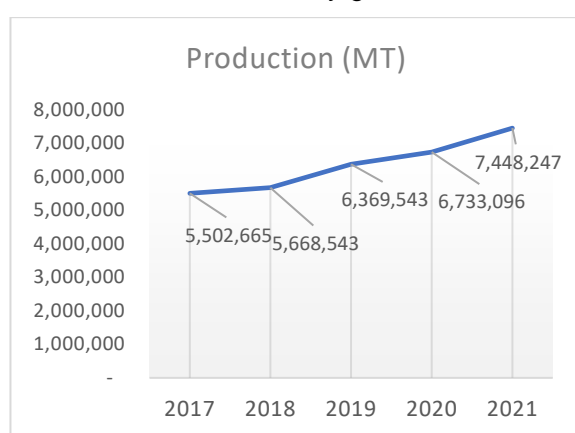


Figure 16: National sweet potato production 2018-22⁵⁷

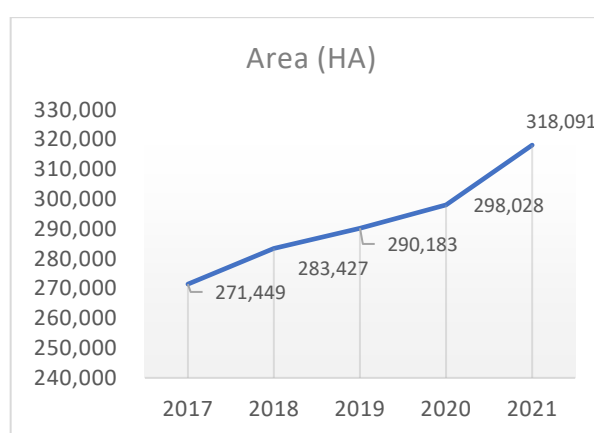


Figure 17: Area under sweet potato production⁵⁸

4.1.2.3 Formal private sector presence in the value chain

124. Universal Industries Limited⁵⁹, is the main larger off-taker, with the vast majority of trade remaining at informal market level.

4.1.2.4 Market challenges

- Like many other food crops, commercial supply suffers in cases when other food crops fail and farmers keep their produce for household consumption, failing to fulfil their supply chain commitments. For example, due to maize shortages in 2016, farmers consumed most of their sweet potato yields rather than selling them to Universal Industries which was then unable to keep up with the market demand for its processed sweet potato products. As a result, the local processor lost market shares to imported similar products.⁶⁰

4.1.2.5 Market opportunities

- Build on the experience of Universal Industries to change the way consumers perceive sweet potato from a poor person's crop to a nutritional, tasty food choice.⁶¹

⁵⁶ Feed The Future (2020) Commercializing Sweet Potato in Malawi

⁵⁷ CIP Malawi (2020) Root and tuber crops for agricultural transformation in Malawi: Sweetpotato seed multipliers

⁵⁸ CIP Malawi (2020) Root and tuber crops for agricultural transformation in Malawi: Sweetpotato seed multipliers

⁵⁹ <https://universal.co.mw>

⁶⁰ Feed The Future (2020) Commercializing Sweet Potato in Malawi

⁶¹ Feed The Future (2020) Commercializing Sweet Potato in Malawi

4.1.3 Bambara nut

4.1.3.1 Overview

125. Bambara groundnut (*Vigna Subterranea*) is a greatly undervalued crop throughout sub-Saharan Africa, and Malawi. The crop is highly important to women, who play a significant role in its production and marketing. However, despite many benefits, production, and consumption of bambara remain low, and market opportunities under-exploited. Bambara groundnut is grown mainly as a subsistence crop. Small amounts are also sold for cash and provide a source of seasonal income for women. One reason why Bambara groundnut remains a neglected and under-utilized crop is that markets for the grain are not well developed.⁶²

126. The symbolic meanings of bambara include fertility, healing and protection, and it has been widely used in traditional medicine and spiritual practices. These meanings have developed into a set of socio-cultural practices and have in the past strongly defined who should grow bambara, benefit from its sale, and consume it.⁶³ However, while acknowledged, these traditional taboos are no longer practiced by the younger generations.



Photo credit: Lora Forsythe 2011

BOX: Bambara groundnut traditional significance

According to study done by NRI on Beliefs, Taboos and Gender¹, Bambara groundnut is found to have a symbolic significance of both life and death that is demonstrated in various ways in the study areas. The dual meanings seem contradictory; however, this paradox is common in many belief systems throughout the world, as the symbolism of death strongly relates to notions of life and fertility (Moore 1998, Moore et al. 1999). The origins of these beliefs are largely unknown. Rural communities in Malawi have an oral tradition, whereby the village elders play an important role in communicating local knowledge to the youth. Elderly women interviewed during the study were asked where the beliefs were derived from, and the common response was that it is knowledge passed through their families and reasons behind the beliefs and taboos were seldom known. One elderly woman in Mzimba said *“in the past we didn’t question things. We just followed our elders and they did not explain why”*.

Bambara agronomic, marketing and consumption practices are influenced by these meanings, as well as its use in spiritual and medicinal healing, and rituals. These beliefs and taboos are perceived by community members and leaders to keep access, control and benefit from the groundnut to specific groups of people, and in this case, women. However, there is also evidence that these beliefs are changing.

There are several taboos found during the focus groups discussions that restrict bambara consumption, particularly among men, which is due again to its association with death. For example, a taboo found in the study locations is that people employed in jobs perceived as high risk – often associated with male roles - such as soldiers, police officers, hunters, and even criminals, are restricted from consuming bambara so as not to make themselves more vulnerable to death.

Figure 18: The Symbolic Significance of Bambara⁶⁴

127. Bambara groundnut is generally cultivated in small plots in semi-arid areas, predominantly by women and it grows well in light, free-draining soils and is more tolerant of drought conditions than most other crops grown in similar environments. The grain contains high levels of protein and

⁶² <https://www.ccrp.org/grants/bambara-groundnuts-iii/>

⁶³ <https://www.nri.org/latest/news/2013/beliefs-taboos-and-gender-the-case-of-bambara-groundnut-in-malawi>

⁶⁴ <https://www.nri.org/latest/news/2013/beliefs-taboos-and-gender-the-case-of-bambara-groundnut-in-malawi>

carbohydrates and is also rich in minerals and vitamins. This makes it a useful component of the diet of people whose main source of food is from cereals such as maize, millet and sorghum.⁶⁵

128. In Malawi the name often relates to the color of the small circular seed, such as red, white, black and mixed. It is a highly nutritious crop with high protein and calorie content, containing a range of vitamins and minerals, making it an important crop for poorer people who are unable to afford animal protein. The gross energy value is greater than other common pulses including cowpea, lentil and pigeon pea and it is a good source of fiber, calcium, iron and potassium. The seeds contain 63% carbohydrate, 19% protein and 6.5% oil.⁶⁶

129. As a nitrogen-fixing legume, bambara also contributes to the maintenance of soil fertility. Although normally grown in areas where cowpea and groundnut are grown, it is considered to have an advantage over those crops in its adaptation to poor soils and tolerance to drought, yielding well under conditions which are too arid for groundnut, maize and even sorghum.⁶⁷

4.1.3.2 Consumption and Market trends

130. Bambara groundnut is a popular snack crop and there are numerous traditional recipes throughout sub-Saharan Africa. Seeds can be eaten fresh or cooked while immature. At maturity they become hard and require boiling before further preparation. Bambara groundnut is often viewed as an accompaniment with the main staple nsima, a traditional dish made with maize flour and water. Bambara remains under-utilised because it takes a long time to cook and contains anti-nutritional factors such as tannins and trypsin inhibitors, and it has poor milling characteristics, as it does not dehull easily. The long cooking time consumes more fuel and water than might be required for cowpea or phaseolus bean. Boiling from fresh may take 45-60 minutes, while dried beans may take as much as 3-4 hours.⁶⁸

131. In Malawi, bambara production remains at the subsistence level and approximately 70 to 80 percent of produce is kept for consumption. The majority of bambara groundnut producers are women, who are responsible for production and post-harvest activities, including marketing and preparation.⁶⁹

132. There are two 'short' bambara value chains in Malawi, fresh and dried. Small amounts of both fresh and dried bambara are sold by producers at an open market or from the homestead. Small-scale traders, who are also mostly women, sell bambara at village markets or district centers, with either their own produce or that purchased from producers in their locality.

133. Less than 100 kilos was reported to be sold during a typical year, but both average trade volumes and selling prices were reported to be increasing between 2007 and 2009⁷⁰. However, profits remained low, with traders buying the bambara at an average price of 130MwK per kg and selling at the average price of approximately 145 MwK per kg, resulting in a profit margin of only 4% (including transportation costs).⁷¹

4.1.3.3 Formal private sector presence in the value chain

134. There are currently no formal and dedicated off-takers or processors in the value chain.

4.1.3.4 Market challenges

- Overall, the challenges relate to seeds, poor demand, and markets, along with the beliefs and taboos restricting production to certain groups of people

⁶⁵ <https://www.ccrp.org/grants/bambara-groundnuts-iii/>

⁶⁶ Lora Forsythe, Mala Nyamanda, Agnes Mbachi Mwangwela & Ben Bennett (2015) Beliefs, Taboos and Minor Crop Value Chains, Food, Culture & Society, 18:3, 501-517, DOI: 10.1080/15528014.2015.1043112

⁶⁷ R.J. Hillocks, C. Bennett And O.M. Mponda (2011) Bambara Nut: A Review Of Utilisation, Market Potential And Crop Improvement, African Crop Science Journal, Vol. 20, No. 1, Pp. 1 - 16

⁶⁸ R.J. Hillocks, C. Bennett And O.M. Mponda (2011) Bambara Nut: A Review Of Utilisation, Market Potential And Crop Improvement, African Crop Science Journal, Vol. 20, No. 1, Pp. 1 - 16

⁶⁹ Lora Forsythe, Mala Nyamanda, Agnes Mbachi Mwangwela & Ben Bennett (2015) Beliefs, Taboos and Minor Crop Value Chains, Food, Culture & Society, 18:3, 501-517, DOI: 10.1080/15528014.2015.1043112

⁷⁰ Lora Forsythe, Mala Nyamanda, Agnes Mbachi Mwangwela & Ben Bennett (2015) Beliefs, Taboos and Minor Crop Value Chains, Food, Culture & Society, 18:3, 501-517, DOI: 10.1080/15528014.2015.1043112

⁷¹ Lora Forsythe, Mala Nyamanda, Agnes Mbachi Mwangwela & Ben Bennett (2015) Beliefs, Taboos and Minor Crop Value Chains, Food, Culture & Society, 18:3, 501-517, DOI: 10.1080/15528014.2015.1043112

- The high cost of bambara and its similarity to other, much cheaper, dried beans and legumes seems to indicate that dried bambara will remain a niche market, with potential exports mainly for the diaspora.
- The lack of viable markets for the crop is a major factor for its low production.

4.1.3.5 Market opportunities

- The beliefs and taboos that have in the past impeded the proliferation of the crop are less influential on the perceptions of youth who see these beliefs as part of the “old ways” allowing for improved future uptake.
- The well-known low input requirements and benefits for the soil will also stimulate adoption.
- An opportunity to utilize some of the potential ‘unique selling propositions’ linked to the positive meaning of beliefs such as love, partnership and fertility, which if used could be a strong selling point. In addition, it is seen as nutritious, physically appealing, and with good flavour/texture profile.
- As a competitor to fresh legumes and soya beans, while bambara is likely to be more expensive, due to under-production, it may have potential as a novel alternative to peas, certain beans and soya beans in the fresh vegetable and salad markets. For this market, a considerable effort would be needed to launch the products by persuading chefs to try it out and by explaining the product qualities to perspective buyers.⁷²
- Bambara snacks would have to compete with various nuts, particularly peanut, which is very cheap by comparison. A key element of the snack market is its investment in packaging and promotion. Previous efforts to launch new nuts have not been very successful because of this high entry cost. However, bambara has sufficient qualities of nut size, taste and high protein content, that it might, with a suitable partner, be a potential new international snack.⁷³
- The growing health food sector in South Africa may represent a potential and accessible market for countries in southern Africa, although food quality and traceability issues would have to be addressed.

5 Commodity / cash crops

135. For the purpose of this market study, commodity crops are defined as crops grown, often in large volume and specifically for the purpose of sale to the commodities market, as opposed to direct consumption or processing.

136. Malawi is unusual in having two commodity exchanges: Agricultural Commodity Exchange for Africa (ACE) and Auction Holdings Commodity Exchange (AHCX) Ltd.

137. ACE, was established in 2006, gradually diversifying from physical spot auctions to an electronic bulletin board, to a WRS with certified warehouses, to forward contracts. ACE consists of two parts: ACE Ltd, a limited liability commercial company and ACE Trust a non-profit organization that has implemented various development projects. ACE has received substantial donor support since its inception and is now arguably the second longest running Comex in Africa after SAFEX.⁷⁴

138. AHCX was established in 2013 and followed a model similar to the East Africa Exchange (EAX) in Rwanda, investing heavily in e-trading infrastructure and exchange-owned warehouses followed by high profile launch involving the President of Malawi. AHCX is a ‘fully commercial platform’ owned by Auction Holding Ltd, which is itself partly owned by the Agricultural

⁷² R.J. Hillocks, C. Bennett And O.M. Mponda (2011) Bambara Nut: A Review Of Utilisation, Market Potential And Crop Improvement, African Crop Science Journal, Vol. 20, No. 1, Pp. 1 - 16

⁷³ R.J. Hillocks, C. Bennett And O.M. Mponda (2011) Bambara Nut: A Review Of Utilisation, Market Potential And Crop Improvement, African Crop Science Journal, Vol. 20, No. 1, Pp. 1 - 16

⁷⁴ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

Development and Market Corporation (ADMARC), Malawi's main agricultural marketing and processing parastatal. AHCX enjoys considerable government support⁷⁵.

139. Following the collapse of the pigeon pea market in mid-2016, an above average harvest, but very low prices in the 2017/18 agricultural season both Malawian Comex experienced falling trading volumes. This resulted in substantial debts to commercial banks and in the case of AHCX to their parent company.

140. Figure 19 show the annual volumes traded by commodity on ACE and AHCX since 2012 and 2013, respectively. Maize is by far the most important crop, which makes the Comex vulnerable to frequent fluctuations in harvests and traded volumes. Paradoxically, poor agricultural years for Malawi are often good ones for the Comex and vice-versa because of higher procurement by food agencies, such as the Strategic Grain Reserve of the Malawi government, or WFP for development partners⁷⁶.

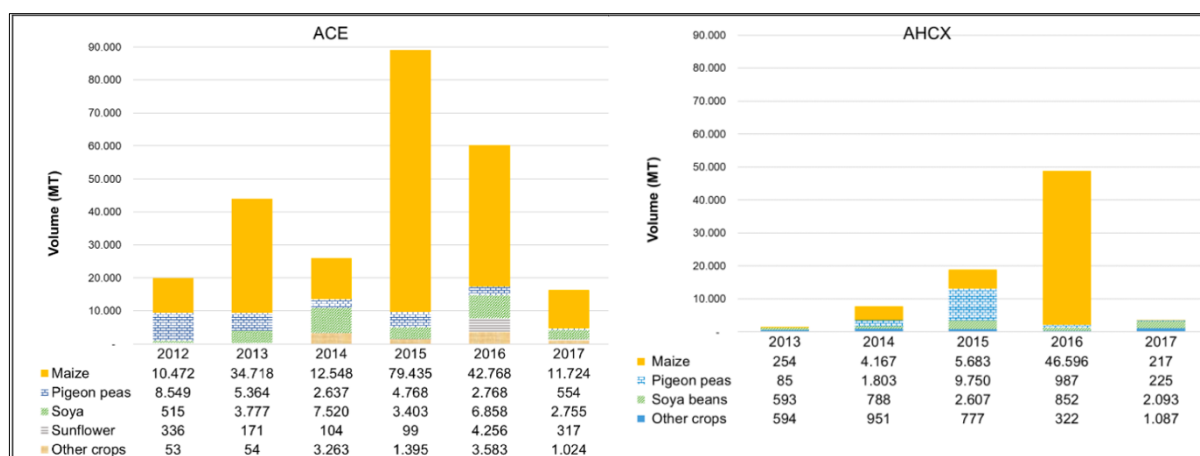


Figure 19: Volumes Traded on ACE and AHCX, by commodity and year⁷⁷

141. However, overall, both commodity exchanges have met with limited success and are declining in relevance.

142. Currently the market is dominated by soybean emerging as one of the substitute cash crops replacing tobacco. In addition to soybean, pigeon pea and cowpea are also widely grown.

143. In addition to these legumes, this section will provide another example of a commodity cash crop – macadamia nut, which has been grown in both estates and smallholder systems around the country and provides an important supplementary source of income during time of the year when other production-based income is low.

5.1 Legumes/oilseeds/cereals/nuts

5.1.1 Soybean

5.1.1.1 Overview

144. Smallholder farmers (>250,000 households) account for over 90% of total production, many of the producers are organised in cooperatives and associations to facilitate access to inputs, extension and other services, as well as donor programmes. These cooperatives and producer groups then typically sit beneath other umbrella institutions: associations such as the Farmers Union of Malawi (FUM), the National Smallholder Farmers' Association of Malawi (NASFAM) and the Malawi Union of Savings and Credit Cooperatives (MUSCCO).

145. Soybean is allegedly viewed as a 'woman's crop' or 'garden crop' and thus most of the production and primary processing activities are controlled by female farmers: threshing,

⁷⁵ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

⁷⁶ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

⁷⁷ IFPRI (2018) Commodity Exchanges and Warehouse Receipts in Malawi. Strategy Support Program: Working Paper 25

winnowing, sorting and cleaning are typically female responsibilities, while men have a greater role in marketing, sales and money- handling.

146. Soybean is important for household nutrition and food security, enhancing rural incomes, and also counteracting soil degradation by contributing to the nitrogen economy of the soil. Soybean fixes on average approximately 50–60% of its nitrogen, which effectively aids in the fertilisation of the soil and surrounding crops. Soybean is well adapted for production in all agro-ecological zones of Malawi, and there are eight soybean varieties currently registered for commercial production in Malawi. However, Malawian producers typically use three soybean varieties: Makwacha, Nasoko and Tikolole. A further three are cultivated in limited areas, largely due to seed availability: Ocepara-4, Solitaire and Soprano⁷⁸.

147. Local NGOs, Ministry of Agriculture and local agro-dealers are the primary seed suppliers, with the majority of farmers using their own recycled seed in a rain-fed and manual labour managed production system. Key factors that affect productivity are the amount of labour required, direct extension support, the volume of seeds produced in the previous year, farm gate price and the education level of lead farmers, which positively influences capacity for improved production⁷⁹.

148. The soybean VC shows great potential for expansion and improved productivity with low-cost techniques including the use of inoculants, compost manure and increased plant populations demonstrating positive impacts on profitability and yields.

149. Smallholder soybean farmers sell their crops directly to buyers at local markets, as well as to companies, NGOs, and middlemen traders. A 2015 survey of soybean value chain participants showed that majority of farmers (85.2%) sell their produce to traders and only 29.6% sell directly to consumers at government markets. The surveyed traders accomplished extremely high, 'supernormal' profit margins while smallholder farmers' profits were much lower.⁸⁰ Groundnut and soya producers, are particularly interchangeable as most smallholders and SMEs will deal in both goods.

150. The key soya production areas are: Lilongwe, Kasungu, Nsanje, Mangochi, Mzimba, Chiradzulu, Zomba, Balaka, Dedza, Dowa, Salima, Chitipa.

5.1.1.2 Consumption and market trends

151. In 2011, Markets and Economic Research Centre of the NAMC suggested that the demand for soybeans in Malawi was expected to grow to 131,000 by 2020 (approximately 7.7% p.a. growth)⁸¹, which appears to be on track.

152. According to market research, local consumption accounts for more than 60% of total production, largely as a result of donor and government-led interventions and the promotion of soy as a crop with high protein content, oils and other essential minerals⁸². This produce goes to supplemental food programmes (e.g. school lunches, hospitals, orphanages and refugee relief programmes). Maize flour is also sometimes enriched with approximately 20% soybean flour to enhance the protein content⁸³.

153. A significant part of the production is processed by larger, peri-urban actors, either for animal feeds, or value-added products for domestic human consumption, for example oil accounting for 18% and meal 38% of the processed beans.

154. Finally, a small portion of the production is kept for household consumption to be eaten raw or after minimal small-scale processing at home. Figure 20 below shows that majority of

⁷⁸ Corley (2019) Unlocking the Potential of Soy in Malawi. Available: <https://www.agrilinks.org/post/unlocking-potential-soy-malawi>

⁷⁹ Corley (2019) Unlocking the Potential of Soy in Malawi. Available: <https://www.agrilinks.org/post/unlocking-potential-soy-malawi>

⁸⁰ Corley (2019) Unlocking the Potential of Soy in Malawi. Available: <https://www.agrilinks.org/post/unlocking-potential-soy-malawi>

⁸¹ NAMC (2011) The South African Soybean Value Chain. Available: <https://www.namc.co.za/wp-content/uploads/2017/09/NAMC-Soybean-Industry-and-Competitiveness-Study-June-2011.pdf>

⁸² Pauw and Ecker et al (2015) Poverty, Food Prices, and Dietary Choices in Malawi. Available: <https://>

⁸³ USAID (2013) Cost and impact of restrictions on soybean trade in Malawi. Available: https://massp.ifpri.info/files/2014/05/2014-Cost-and-Impact-of-Market-restriction-on-Soybeans-in-Malawi-FINAL_-REPORT-NASFAM-FUM.pdf

produce is sold directly to vendors and wholesalers, where vendors often act as middlemen for animal feed mills and oil processors.

155. Middlemen traders have great influence on the price of soybeans, smallholder farmers hold very little bargaining power in the market. Price setting is done by individual traders rather than by any government body or regulating authority.

156. In many countries soy production expansion is led by large commercial actors, with South Africa and Nigeria leading the growth of the commodity in the region (Figure 21). The expansion of production is demand driven by the animal feed sector and the growth of the livestock and poultry sectors that need soymeal-based feed.

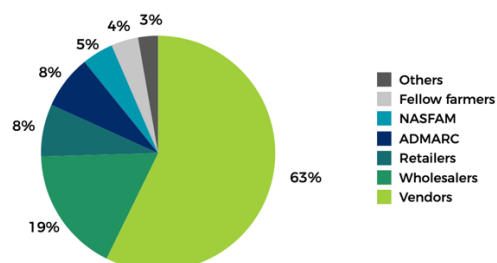


Figure 20: Type of buyer from smallholder producers (%)⁸⁴

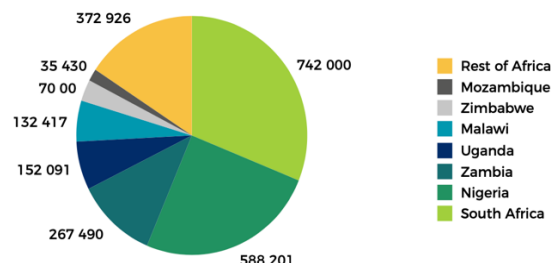


Figure 21: Tonnes produced by African countries in 2016⁸⁵

157. Despite the smallholder production base and associated challenges, Malawi's exports of soybean have significantly grown to SADC markets and South Africa in particular, with soybean seed and soybean oilcake being among the most valuable forms of exported soy. In 2018 Malawi exported over 50,000 T which generated more than USD 22 million (at an average export price of 1.6 USD/Kg in 2018)⁸⁶.

158. Figure 22 shows the steady growth on national volume of production of soya, which is matched by a steady increase in prices Figure 23.

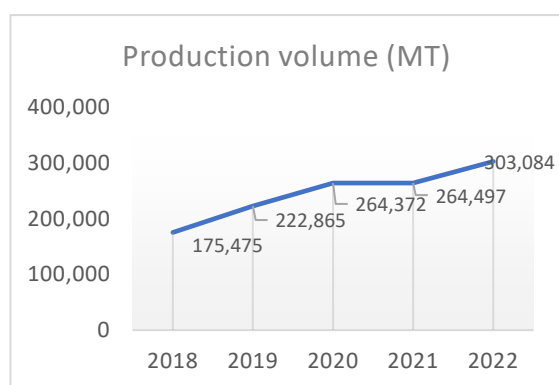


Figure 22: National soybean production 2018-22⁸⁷

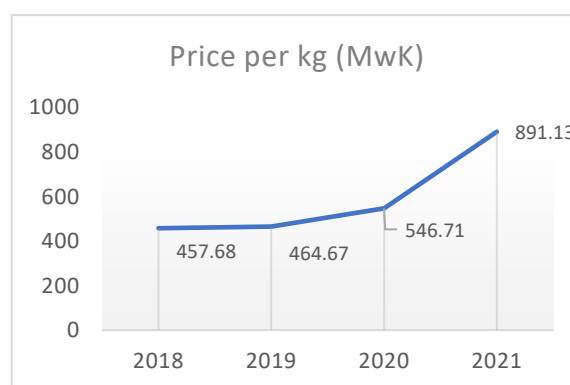


Figure 23: National soybean prices per kg (MwK)⁸⁸

159. In addition to production and prices, the areas under soya production are also increasing, part of which is attributed to switching from coffee or other crops to this more lucrative opportunity.

⁸⁴ Agricultural Finance Scoping Malawi Finmark Trust 2021

⁸⁵ Agricultural Finance Scoping Malawi Finmark Trust 2021

⁸⁶ Wamuchi (2020) Malawi Soya Beans Market Insights. Available: <https://www.selinawamucii.com/insights/market/malawi/soya-beans/>

⁸⁷ Source: Malawi Ministry of Agriculture 2022

⁸⁸ Source: Malawi Ministry of Agriculture 2022

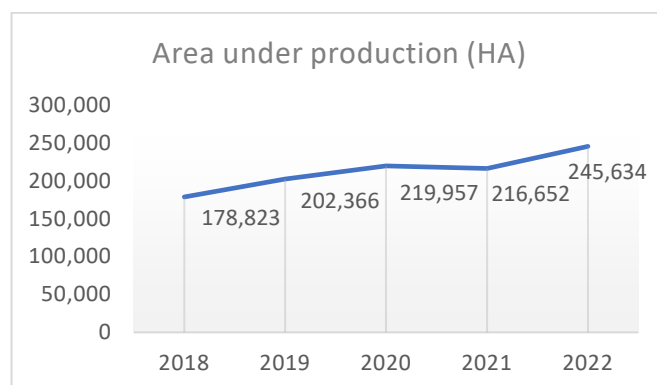


Figure 24: Area under soybean production⁸⁹

5.1.1.3 Formal private sector presence in the value chain

160. The key market players in Malawi that drive the commerce of soybean are described in Table 5 and constitute an example of the off-takers that the project may engage in 4P initiatives.

161. As demand for soya is on the rise the processing capacity in the country is considerable and currently surpasses the production volumes. Some of the key off-takers are listed in Table 5, many of which are sourcing from smallholders via local traders who aggregate the production.

Table 5: Examples of Key Private Sector Market Players in the soya VC in Malawi

Company name	Brief description
Alpha Milling Company (CP Feeds)	Chicken feed producer, sources soybean from smallholders
Mount Meru Millers	<p>8 manufacturing & processing plants across Africa, ideology to support the entire eco-system by making a positive impact on the lives & the livelihoods of the farmers.</p> <p>Joint ventures with several farmers on various schemes such as Out growers' scheme, Effective Farming aid, and techniques training, good quality yield output training, etc. with an assurance of supporting the farmers from sowing the seeds to purchasing the seeds throughout the year.</p> <p>In Malawi focus is on soya oil and soya meal</p>
Rab Processors Ltd.	Processor of a number of commodities including soy bean, processed into food food products.
Sun Group of Companies	Sunseed Oil Limited extracts and refines oil from locally grown oil seeds especially soybeans and sunflower.
SunSeed	<p>The factory was established in solidarity with the Malawi Government's priority of promoting value addition and agro-processing as part of the Malawi Growth and Development Strategy II (MGDS-II).</p> <p>In addition, it is also in harmony with National Export Strategy (NES) under the oilseed products cluster (cake export and cooking oil exports).</p> <p>Leader in the premium cooking oil sector in Malawi and the region (SADC and COMESA) through innovative business models which integrate local communities and smallholder farmer for sustainable rural livelihoods.</p>

⁸⁹ Source: Malawi Ministry of Agriculture 2022

5.1.1.4 Market challenges

- The majority of smallholder production takes place on **customary land** where cultivation rights and usage are orchestrated by traditional authorities of the area. Due to the country's rapidly increasing population, the availability of customary land has decreased significantly over recent generations, leading to widespread disputes over land ownership and use.
- Low quality and availability of inputs such as seeds and inoculant, together with lack of best practices, result in **low productivity** that traps smallholder farmers in a subsistence rather than commercial production mode.
- Commodity development is stagnated due to **poor market access and fragmentation of production**, and high volatility of prices.
- **Gender-related constraints** remain crucial, for example land owned by female-headed households shows lower productivity (25%) than comparable land owned by men due to issues such as lack of mobility; lower literacy and numeracy; poor access to agricultural inputs (and improved technologies) and markets; tenure insecurity and related investments in land, despite matrilineal land ownership structures in parts of the country.
- The government hinders export opportunities by setting **administrative restrictions** on soybean exports and holding a controlling influence on domestic price-fixing.⁹⁰
- The requirements with regards to **export licences** remain ambiguous and inconsistent.

5.1.1.5 Market opportunities

- Demand for soya for value addition is high both for human and animal feed industries, including by the growing national poultry and fish industry
- Grown by smallholders across the country, 91% of total production is from small holdings, well adapted to all agro-ecological zones
- As a widely grown and processed commodity, there is a wide range of international and regional examples in processing and product development to draw from and develop local value addition (such as for example the already piloted processing of soya into a meat substitute for the local market)

5.1.2 Cowpeas

5.1.2.1 Overview

162. Cowpea is increasingly grown by smallholders, intercropped mainly with maize. It is native to Malawi and found primarily in the Southern region, with production concentrated in the Lower Shire Valley and in districts south and southwest of Lake Chilwa. Cowpea are used primarily for own consumption within the household, but many farmers sell part of their harvest. With increased risks of drought or floods, in particular, farmers along the lakeshore may be less likely to produce bean, cowpea, or pigeon pea than are farmers in the mid-altitude plateau upland areas.

163. Most cowpea in Malawi is grown from local farm-saved seed, offering great possibility that landrace seeds are preserved. The Consultative Group for International Agricultural Research (CGIAR) estimated that cowpea grown from improved seed accounts for only 10% of Malawi's 2009 cowpea harvest. Results from more recent fieldwork from the African Centre for Biosafety (ACB) appear to support this because 87% of the farmers interviewed that grew cowpea (admittedly a small number) were using non-certified seed (74% of cowpea seed was replanted from the previous harvest)⁹¹.

164. In the formal system, foundation seed comes from the public-sector Department of Agricultural Research Services. There are about 5 metric tons of basic cowpea seed available in

⁹⁰ ReNAPRI (2018) Modelling soybean markets in Eastern and Southern Africa. Available: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC109252/jrc_renapri_2018_final.pdf

⁹¹ African Centre for Biosafety 2014. *Running to stand still: Small-scale farmers and the Green Revolution in Malawi*. Johannesburg: African Centre for Biosafety.

Malawi (compared to over 60 metric tons of bean seed and almost 210 metric tons of groundnuts), according to the Seed Trade Association of Malawi⁹².

165. The main production regions are: Chikwawa, Neno, Thyolo, Mulanje, Chiradzulu, Zomba, Balaka, Ntcheu, Dedza, Lilongwe, Dowa, Kasungu.

5.1.2.2 Consumption and Market trends

166. Just over 2% of all households produce cowpea, with commercially oriented households selling over 66% of the crop, while on average households sell about 60% of their total production.⁹³ Cowpea is consumed in the form of stew and both the seeds and the leaves are used. The long cooking time for cowpea (up to two hours) presents energy challenges for poorer households, together with a limited variety of cowpea-based products which limits the wider use of dry whole cowpea seeds.

167. According to farmers what the consumers rate most in terms of important culinary traits is varieties that offer faster cooking times, are good for mashing and are of a cream colour⁹⁴.

168. On the national level, cowpea is an important protein source in areas unsuitable for bean and groundnut production. It has also been proposed as an important potential weaning food for infants and young children⁹⁵.

169. Production volumes have not been stable (Figure 25) as the demand for cowpea is limited, despite the raising price (Figure 26).

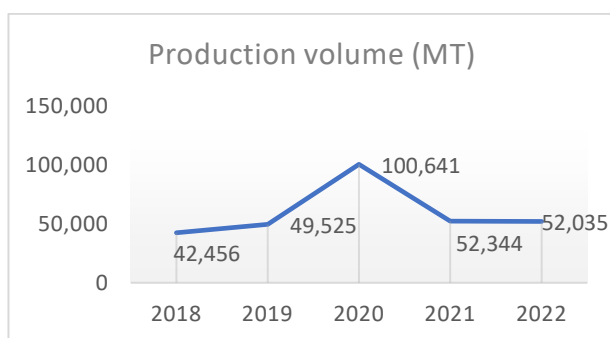


Figure 25: National cowpea production 2018-22⁹⁶

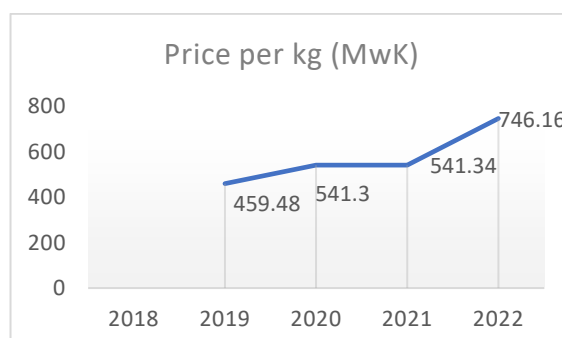


Figure 26: Cowpea prices per kg (MwK)⁹⁷

170. In comparison to soya, cowpea fetches a lower price per kg and despite its nutritional value is not as popular due to its limited commercialisation.

171. The land under production has increased slightly over the last five years (Figure 27), but it is still less than half of the land dedicated to soya.

⁹² Seed Trade Association of Malawi 2014. *Malawi Seed Industry*. Presentation given at Bunda College of Agriculture, 8th April 2014. http://aginnovation.org/malawi/workshop/Malawi-Seed-Industry_Mr.%20Supply%20Chisi.pdf. Accessed 16/02/2015.

⁹³ Todd Benson, (2020) Promoting Participation in Value Chains for Pulses in Malawi: Who and where to target, IFPRI Policy Note 40, November 2020

⁹⁴ Nkongolo, K.K., Bokosi, J., Malusi, M., Vokhiwa, Z. & Mphepho, M. 2009. Agronomic, culinary, and genetic characterization of selected cowpea elite lines using farmers' and breeder's knowledge: A case study from Malawi. *African Journal of Plant Science* 3(7):147–156.

⁹⁵ http://www.sneb.org/2014/SNEB%20presentation_Lungu.pdf

⁹⁶ Source: Malawi Ministry of Agriculture 2022

⁹⁷ Source: Malawi Ministry of Agriculture 2022

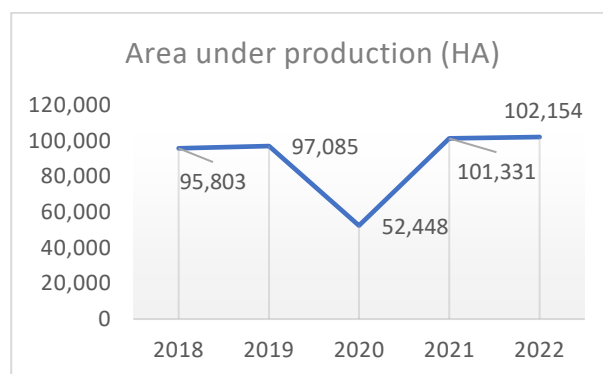


Figure 27: Area under cowpea production⁹⁸

172. Overall, cowpea remains more of an artisanal crop and one which is relevant for household nutrition and food security, with somewhat limited commercial value for the farmers.

5.1.2.3 Formal private sector presence in the value chain

173. Cowpea is mainly traded on local market via informal channels and small volumes. Nonetheless, processors such as Rab Processors Ltd. (Table 5) do source commodities, including cowpea.

5.1.2.4 Market challenges

- Cowpea production in the central region appears to be more commercialised than in other areas – this region accounts for only 24% of national production but 51% of national sales value⁹⁹. This indicates the low commercialization of the crop in other regions.
- However, cowpea has the lowest rural demand elasticity¹⁰⁰ and a negative urban elasticity, meaning urban residents buy relatively less of this product as their incomes grows, which does not offer a positive market growth outlook.

5.1.2.5 Market opportunities

- Regional collaboration with Tanzania and Mozambique on the development of new varieties that address post-harvest challenges posed by pests and diseases and their propagation and adoption for household and commercial farming could potentially result in growing markets
- Participation of producer organisations in COMEX

5.1.3 Sorghum

5.1.3.1 Overview

174. Sorghum (*Sorghum versicolor*) is native to Malawi and is a major food grain in most of Africa and has multiple uses such as food, feed, fodder, and fuel. In Malawi, NASFAM has been promoting crop diversification among its member farmers to enhance their resilience to the impacts of climate change and broaden their income base.

175. Drought tolerance and lower crop input costs are some of the advantages that sorghum has over maize in agronomic terms. It also has the advantage of being a maize substitute in livestock rations and in ethanol production.

176. Sorghum is one of the crops capable of adapting and growing in harsh climates. The crop grows in dry conditions, it tolerates both heat and water logging, making it an ideal crop for semi-

⁹⁸ Source: Malawi Ministry of Agriculture 2022

⁹⁹ J. Dzanja, M. Matita, H. Kankwamba, M. Dolislager, D. Tschirley; (2017); Mapping Market Prospects for Grain Legumes in Malawi; African Journal of Agricultural and Resource Economics Volume 12 Number 3; September 2017

¹⁰⁰ The elasticity of demand refers to the degree to which demand responds to a change in an economic factor. Price is the most common economic factor used when determining elasticity. Other factors include income level and substitute availability.

arid areas. The main production areas are Chikwawa, Nsanje, Thyolo, Mulanje, Blantyre, Zomba, Phalombe, Balaka, Machinga and Mangochi.

5.1.3.2 Consumption and Market trends

177. Despite its resilience and familiarity to farmers, sorghum remains a neglected crop, mainly grown for supplementary household needs of human and animal feeds.

178. Despite the slight increase in the area under sorghum production, volumes and price of production has shown little fluctuation in the last 4 years (see Figures below).

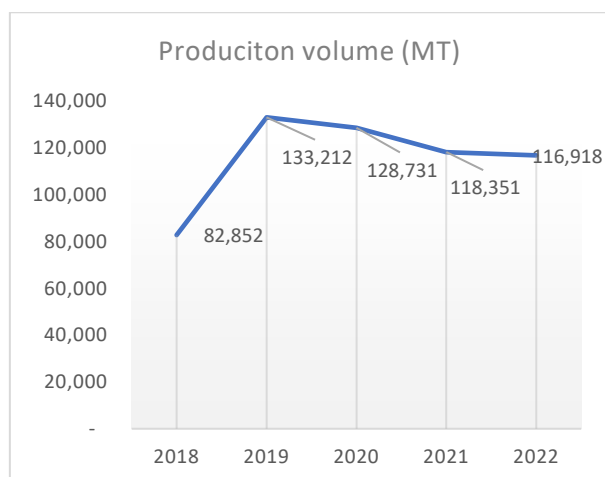


Figure 28: National sorghum production 2018-22¹⁰¹

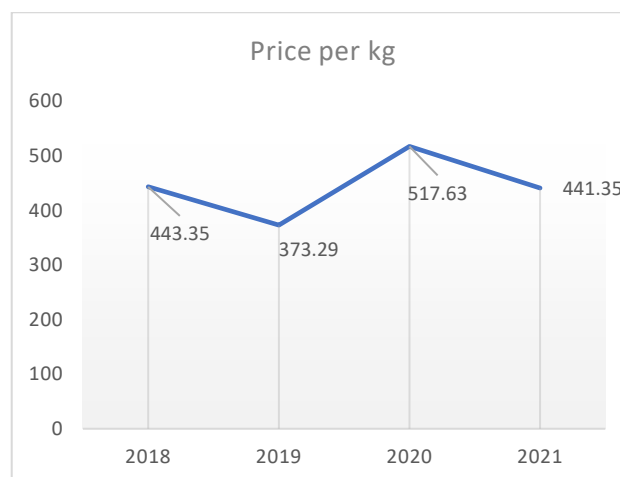


Figure 29: Sorghum prices per kg (MwK) ¹⁰²

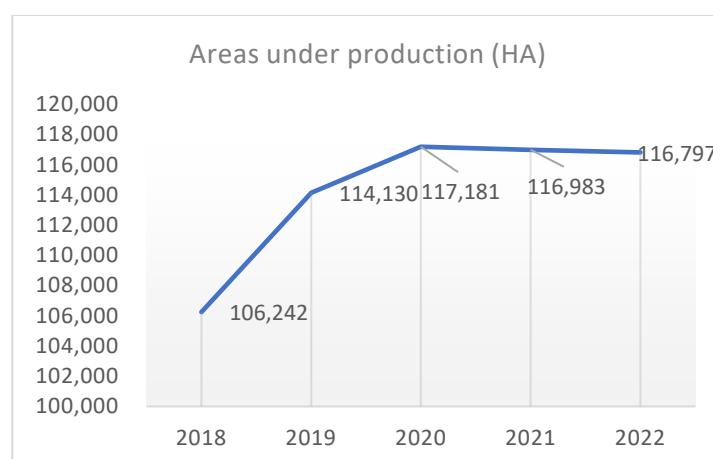


Figure 30: Area under cowpea production¹⁰³

5.1.3.3 Formal private sector presence in the value chain

179. There is currently limited private sector interest of scale, apart from Chibuku Products Limited (CPL) – a local brewer.

5.1.3.4 Market challenges

- Production and commercialisation of sorghum in Malawi has fluctuated substantially in recent years, increasing through the 1970 - 2019 period and reaching 137,000 tonnes in 2019.¹⁰⁴ According to NASFAM farmers cite lack of access to improved seed varieties,

¹⁰¹ Source: Malawi Ministry of Agriculture 2022

¹⁰² Source: Malawi Ministry of Agriculture 2022

¹⁰³ Source: Malawi Ministry of Agriculture 2022

¹⁰⁴ <https://www.nasfam.org/index.php/news/53-reviving-sorghum-production-in-balaka>

poor production practices and lack of diversification, as well as lack of profitable market as some of the challenges associated with sorghum production in Malawi.¹⁰⁵

5.1.3.5 Market opportunities

- Currently, the brewing industry has presented farmers with a new supply chain opportunity. The NASFAM Association for Balaka, secured a business deal with Chibuku Products Limited (CPL) which has engaged 120 farmers. In the deal, CPL has offered to buy 20 tonnes of sorghum from the farmers in Balaka. The company has further challenged the smallholder farmers to produce even more in the coming years.

5.1.4 Nuts: Macadamia

5.1.4.1 Overview

180. Macadamia is a profitable cash crop for Malawi. In 2018, the country was the fourth-largest exporter of macadamia nuts that were valued at USD 20 million. The majority (90%) of this crop was grown by large commercial estates with smallholder's production only contributing about 10% of the total crop production.¹⁰⁶ However, since then the country has dropped in global importance.

181. A 2017 USAID and Michigan University study concluded that Malawi was well positioned to increase its global market share if the country found new ways for smallholder farmers to access finance and better integrated smallholder farmers into the macadamia value chain through private and public partnerships. The study also notes that there are large tracts of land in the Central and Northern regions of the country that are suitable for macadamia production.¹⁰⁷

182. The yield of macadamia trees tends to increase with tree age. Thus, trees ranging from 3–5 years can yield around 5 kg of nuts per tree per year, and older trees over 5 years have been reported to yield over 20 kg of nuts per year depending on the growing region.¹⁰⁸

183. According to a study by the Pretoria Institute of International Affairs on the macadamia sector in Malawi, the macadamia industry is currently well established with strong growth potential. The total production area has increased by 83% between 1996 and 2019 from 5,280ha to 9,660ha, of which approximately 1,500ha is under smallholders.¹⁰⁹ Disaggregated, this represents a 35% increase in the mature crop and a 4-fold increase in immature trees. Showing that while current productive tree count has increased, the future potential is for a quadrupling of production. The bulk of the macadamia expansion in terms of area and volumes predominantly emanates from existing farmers expanding primary operations, while new entrants contribute very little growth into primary production.¹¹⁰

5.1.4.2 Consumption and Market trends

184. Macadamia has considerable export potential, while its domestic market and nutritional importance are somewhat limited. South Africa receives the majority of all exported raw macadamia nuts, while the remaining nuts are roasted for the domestic market.¹¹¹

¹⁰⁵ <https://www.nasfam.org/index.php/news/53-reviving-sorghum-production-in-balaka>

¹⁰⁶ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

¹⁰⁷ Toit, J.P.; Nankhuni, F.J.; Kanyamuka, J.S. Can Malawi Increase its Share of the Global Macadamia Market? Opportunities and Threats to The Expansion of Malawi's Macadamia Industry; Michigan State University: East Lansing, MI, USA, 2017

¹⁰⁸ White, N.; Hanan, J. A model of macadamia with application to pruning in orchard. *Acta Hort.* 2016, 1109, 75–81.

¹⁰⁹ Parshotam, A. Cultivating Smallholder Inclusion in Southern Africa's Macadamia Nut Value Chains; South African Institute of International Affairs: Pretoria, South Africa, 2018.

¹¹⁰ Parshotam, A. Cultivating Smallholder Inclusion in Southern Africa's Macadamia Nut Value Chains; South African Institute of International Affairs: Pretoria, South Africa, 2018.

¹¹¹ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

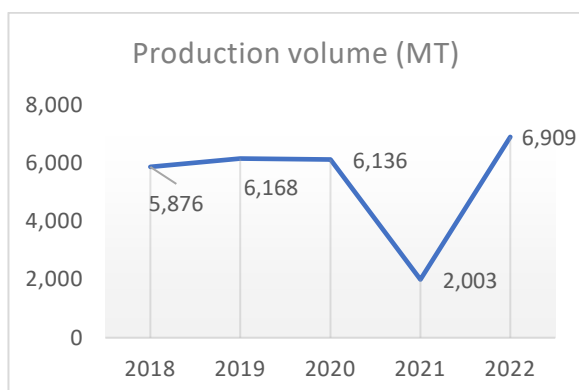


Figure 31: National macadamia production 2018-22¹¹²

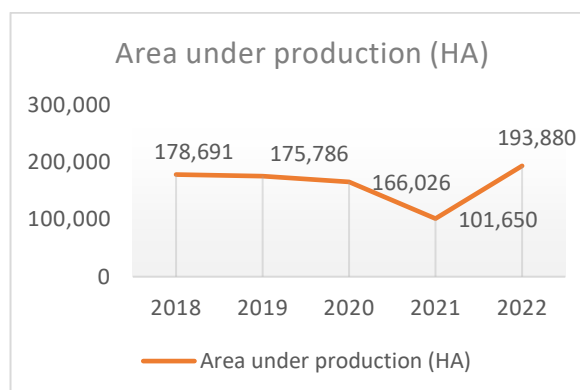


Figure 32: Area under macadamia cultivation¹¹³

185. While the production volumes (Figure 31) and areas under production (Figure 32) have only slightly increased, the relevance of macadamia in terms of revenue has remained relevant.

186. In the last 5-year period (2018-2022) the farmgate price of macadamia has dropped partly because of the disruption of supply chains during the COVID-19 pandemic, as well as the currency fluctuations in the country. In 2018, the farmgate price was 1,700 MwK /kg dropping to about 1,300 MwK /kg in 2020/21 and expected to recover to around 1,500 MwK /kg for the coming season in 2022¹¹⁴. In dollar terms, the price has dropped from 2.35 USD/kg in 2022, to about 1.45 USD/kg, due to the recent 25% devaluation of the national currency. Clearly on the ground, there is also a variation in prices farmers receive from formal and informal buyers, also depending on quality of the produce.

187. Despite the reported drop in farmgate prices, when compared to other commonly traded commodity crops (Figure 33) macadamia clearly offers an important source of income, especially during the season of low crop productivity.

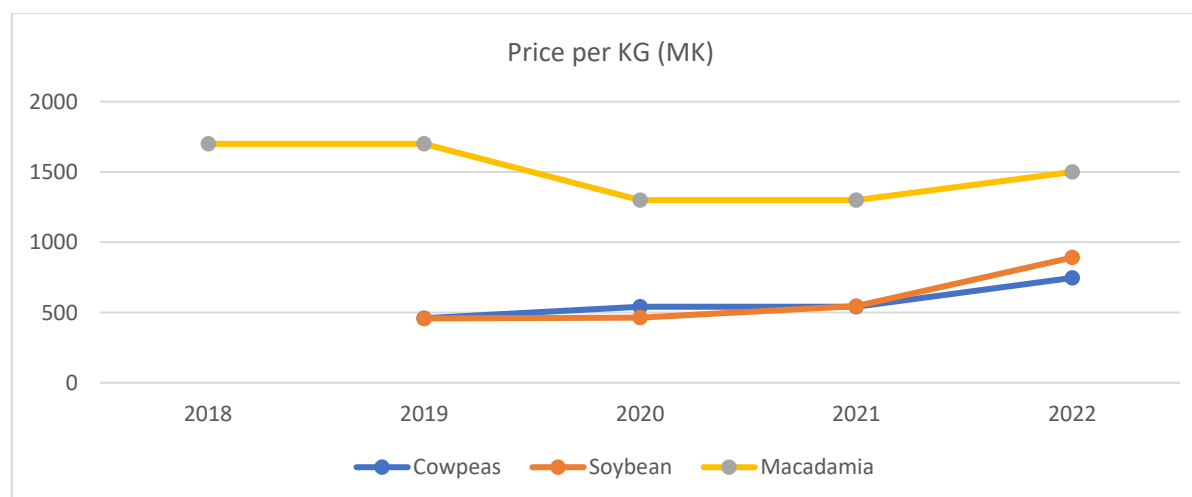


Figure 33: Price comparison between 3 common commodities (MK/kg) 2018-22^{115&116}

5.1.4.3 Formal private sector presence in the value chain

188. Currently Malawi has 7 major producers who drive the sector (Table 6). Some companies are exclusively involved in processing and marketing of macadamia while others have vertically

¹¹² Source: Malawi Ministry of Agriculture 2022

¹¹³ Source: Malawi Ministry of Agriculture 2022

¹¹⁴ Source: Nutcellars – applied farmgate prices 2018-2022

¹¹⁵ Source: Malawi Ministry of Agriculture 2022

¹¹⁶ Source: Nutcellars – applied farmgate prices 2018-2022

integrated and are growing, processing, and marketing. Like the South African and Kenyan macadamia industry, the Malawian macadamia industry is built around processors and marketers because they perform the leading share of the industry's value chain activities. These firms provide research and extension services to growers and develop new macadamia products and markets for existing and new products.

189. Naming'omba Tea Estate Limited, Plantation and General, Sable Farming, PGI and Tropha Estates produce, process and market their own production as well as that of smallholder farmers. While Conforzi and Kawalazi Estates focus on their own production and processing.

Table 6: Examples of Key Private Sector Market Players in Macadamia VC in Malawi target districts

Type of off-taker	Company name	Target districts presence
Production and processing of own and SH	Eastern Produce and Plantation General International	Thyolo
Production and processing of own	Kawalazi Estates	Nkhata Bay
Production and processing of own and SH	Sable Farming	Chiradzulu districts
Production and processing of own and SH	Tropha Estates	Mzimba district
Production and processing of own	Conforzi Estate	Thyolo district
Production and processing of own and SH	Naming'omba Tea Estate Limited	Thyolo districts
3850 smallholder farmers spread throughout the country	HIMACUL	Rumphi; Mwanza; Neno, Ntchisi, Dowa, Mchinji

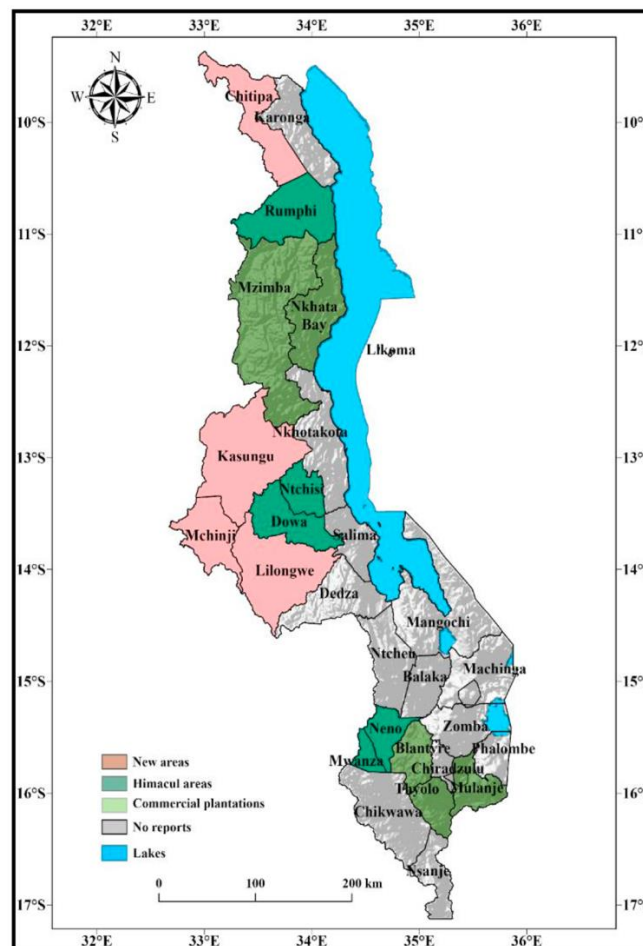


Figure 34: Macadamia Growing Areas in Malawi¹¹⁷

190. The Neno Macadamia Trust continues to provide long term support to district level smallholder-owned primary cooperatives through the Highlands Macadamia Cooperative Union Limited (HIMACUL). These cooperatives are vibrant and growing.

191. Figure 34 shows the macadamia growing districts in Malawi where The Highlands Macadamia Cooperative Union Limited (HIMACUL) is actively operating, representing smallholder growers, and districts with commercial macadamia plantations and processing. Other districts show activities at an early stage of development or have a high potential for the establishment of primary cooperatives to be affiliated to HIMACUL.

192. Over 90% of the macadamia production comes from commercial estates, while an estimated 3,850 smallholders are spread out over the southern (Mwanza, Neno, and Thyolo districts) and central (Dowa, Ntchisi, Lilongwe and Mchinji districts) and northern (Mzimba and Rumphi districts) regions in the country, representing about 10% of the production.¹¹⁸

193. In 2013, Tropha Estates established a macadamia processing plant in the northern region of Malawi, which has led to an increase in smallholder macadamia planting in the region, especially

¹¹⁷ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

¹¹⁸ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

in Chitipa, Mzimba, Nkhatabay, and Rumphi districts.¹¹⁹ Sable farming similarly worked with smallholders in Mzimba and Thyolo districts to plant macadamia and form cooperatives.

194. In 2015, the Clinton Development Initiative (CDI) developed a five-year Plan Vivo (2016–2021), with payments for farmers' ecosystem services.¹²⁰ The Plan Vivo is a framework for supporting rural smallholder farmers and communities to manage their natural resources more sustainably for their livelihoods and wellbeing, to generate climate, livelihood, and ecosystem benefits. Participants undertake decision-making on the land uses to be implemented, for example, woodlots, orchards, agroforestry, and forest conservation.

195. Over the past five years Neno Macadamia Trust in partnership with HIMACUL has been developing a Climate Smart Macadamia Agroforestry system supported by a PES based on a pilot carbon damage mitigation system supported by climate change academics at Imperial College.

196. Finally, the buying and selling power in a small market like macadamia, is concentrated in the hands of a few large commercial estates that ultimately control the industry value chain. While the control of the industry value chain by these commercial estates is not ideal, it would not be feasible to extend smallholder production without them.

5.1.4.4 Market challenges

- The majority of exported macadamia are sourced from commercial estates rather than smallholder farmers. This is due to the lack of upstream traceability by the smallholders and independent middlemen. The disaggregation of the production base and challenges related to post-harvest handling and supply chain structuring is also a considerable handicap to commercialisation growth.
- Lack of access to quality seedlings and their high-cost are also allegedly a barrier to smallholder entry into production. This is further exacerbated by lack of adequate information on the right cultivars for production among smallholders, as well as minimal access to extension services with regards to the potential benefits of agroforestry, which are needed to stimulate commercial production and market development.
- Infrastructure and equipment, including storage sheds, drying racks and processing facilities need to be accessible within production areas and are currently only available to the large processing companies, leaving smallholders behind.

5.1.4.5 Market opportunities

- In 2019, Nutcellars, a UK based startup company, started to process macadamia nuts sourced from HIMACUL smallholder farmers into various products such as butter and chocolate. This shows the potential of further processing the crop in Malawi and the integration of smallholders.
- Opportunities for expansion of larger commercial processors to engage more smallholders in production
- The macadamia nuts produced in Malawi enjoy strong reputation for good quality on which industry can build, aiming to start value-addition through further processing in-country.

5.2 Coffee - perennial crops from agroforestry

5.2.1.1 Overview

197. Coffee (arabica varieties) was introduced by missionaries in 1800s and has a history of production in Malawi. Different varieties of coffee grow in different agro-ecological areas of the country. Although traditional production methods imply costly inputs and require significant management, coffee has allowed farmers to diversify their income and is highly compatible with other important agricultural crops in Malawi as part of agro-forestry practices or farm diversification.

¹¹⁹ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

¹²⁰ Zuza, E.J.; Maseyk, K.; Bhagwat, S.; Emmott, A.; Rawes, W.; Araya, Y.N. Review of Macadamia Production in Malawi: Focusing on What, Where, How Much Is Produced and Major Constraints. *Agriculture* 2021, 11, 152. <https://doi.org/10.3390/agriculture11020152>

198. The coffee industry is divided into estates and smallholder systems. Estates coffee is grown in altitude that range between 900 and 1200m above sea level and production is confined to the South in Thyolo, Mulanje, Zomba and Mangochi and is dominated by a high input production system that yields between 2 and 4Mt of green beans per hectare. Many estates have irrigation and often mix coffee production with tea, macadamia, or tobacco as their major crop. However, production from Estates has dropped from 6700Mt in early 90's to 1000Mt in recent years.¹²¹

199. Only 5 Estates are active now with very small holdings, while Sable Farming is the only major coffee producer currently.

200. At the same time, the Mzuzu Coffee Planters Cooperative Union¹²² based in Mzuzu, Northern Malawi, is apex organisation that involves over 2,600 smallholder farmers organized into 5 different cooperatives across north and central Malawi: Misuku hills in Chitipa district, Viphya North in Rumphi, Nkhatabay Highlands, South East Mzimba, and Ntchisi East.

201. Under each cooperative, farmers are a part of a business center unit (smaller group of farmers) who are part of business zones (each zone has a CPU).

202. Mzuzu also has several other businesses, including roasted coffee for local and regional consumption, a coffee shop, a cooperative-owned coffee Estate called Usingini, and tea and honey production.

203. Smallholders produce a total of about 350 and 450Mt of coffee annually and while more planting is taking place, production is characterised by high coffee tree losses due to inadequate use of organic and chemical fertilizers.¹²³

204. Nonetheless, smallholders produce Mzuzu Coffee which is grown in altitude of between 1200 and 2500Mt above sea level and has reached speciality markets in Japan, Europe and America where it has consistently obtained premium prices.

205. In some areas, where links to other markets exist, coffee production has seen a decrease losing out the more profitable plants like macadamia.

5.2.1.2 Consumption and Market trends

206. Green coffee beans produced in Malawi are mainly sold unrefined to the international market, largely to the United States and Europe. A very small volume of Malawian coffee is consumed by the domestic market. Over 3,200 smallholders are involved with the industry, predominantly in Northern Malawi. These smallholders tend to average smaller yields than the estates operated in the south, but both produce high quality coffee sold into international markets.¹²⁴

207. The Arabica type of coffee is the only one grown in Malawi. Previously, the country had a different favorite, the Caturra variety. However, between 1999 and 2007, the plant was slowly replaced with the Catimor, which was done due to its resistance to coffee leaf rust. You can still find other varieties including the Cuatai, K7, Ruiru11, SL28, and SL34.¹²⁵

208. The K7 matures quickly; the Ruiru11 is highly resistant to disease and has good cup quality. Both the SL28 and SL34 have a good cup quality and are very susceptible to disease. Although there are a couple of varieties for coffee in Malawi, the staple is the Catimor.¹²⁶

209. The Malawi coffee beans claim one of the topmost positions in quality. Its key characteristic is that it has a full body and a smooth flavor with a hint of chocolate, offering steep competition to its Ethiopian and Kenyan counterparts. According to experts, Malawi's best kind of coffee is grown in higher altitudes.

¹²¹ <https://www.mzuzucoffee.org/news/malawis-coffee-industry-profile/>

¹²² <https://www.atlascoffee.com/coffees/mzuzu/>

¹²³ <https://www.mzuzucoffee.org/news/malawis-coffee-industry-profile/>

¹²⁴ <https://coffeeaffection.com/malawi-coffee/>

¹²⁵ <https://coffeeaffection.com/malawi-coffee/>

¹²⁶ <https://coffeeaffection.com/malawi-coffee/>

210. Figure 35 and Figure 36 show that overall national production and area under cultivation are on a slight increase over the last five years.

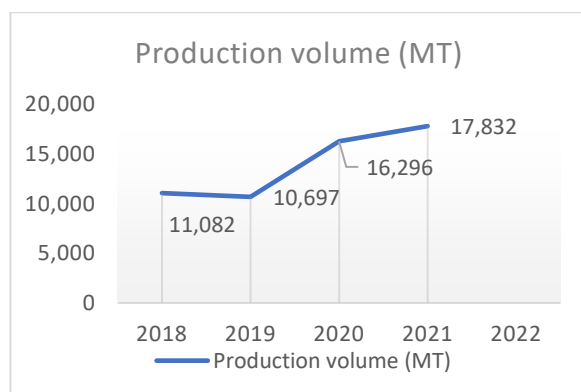


Figure 35: National coffee production 2018-22¹²⁷

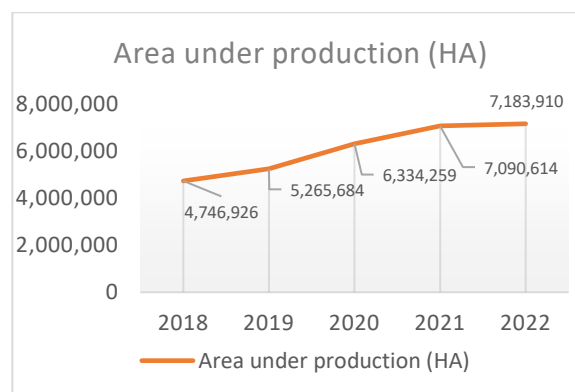


Figure 36: Area under coffee production¹²⁸

5.2.1.3 Formal private sector presence in the value chain

211. Most coffee estates are very small with Sable Farm and Satemwa (<https://www.satemwa.com/coffee-break>) among the few larger producers that supply both domestic and export markets, producing their own as well as sourcing from out growers.

5.2.1.4 Market challenges

- The lack of infrastructure, such as roads introduces inefficiencies and costs that make the cost of production and aggregation uncompetitive.
- Competition from neighboring Tanzania and Kenya puts Malawian coffee at a slight disadvantage as the broader market will opt for the better-known neighbouring brands.
- A recent increase in the wage structure for Malawian workers has driven up the production price for coffee, making it less desirable as a cash crop of choice.

5.2.1.5 Market opportunities

- Capitalise on the existing industry knowledge to upgrade the industry and re-enter higher end international markets for 'responsibly produced' coffee.
- Capitalise on the less known varieties such as the Geisha variety that exhibits good quality characteristics.

6 Niche products and markets - NTFP

212. In this study, niche product is defined as a product targeting a specific section of a larger market. Because niche products are fulfilling a particular specialist demand, demand tends to be more price inelastic¹²⁹. This enables a firm selling niche products to generate a higher markup and profit margin which can compensate for the lower volume.

213. Niche products can be provided by multinational companies, but they also give a better chance for smaller, private firms to be able to compete – because there is less need for economies of scale and high output.

¹²⁷ Source: Malawi Ministry of Agriculture 2022

¹²⁸ Source: Malawi Ministry of Agriculture 2022

¹²⁹ Demand is price inelastic when a change in price causes a smaller percentage change in demand. It occurs where there is a price elasticity of demand (PED) of less than one. Goods which are price inelastic tend to have few substitutes and are considered necessities by users. (<https://www.economicshelp.org/blog/531/economics/inelastic-demand-and-taxes/>)

6.1 Apiculture - honey

6.1.1.1 Overview

214. Modern beekeeping equipment (framed hives) is entering the market and allowing beekeepers to improve their yields and turn honey sales into a profitable venture. However, such equipment remains expensive and difficult to source and as a result much of the honey is produced through traditional means or collected from the wild.

215. The Food and Agriculture Organization of the United Nations (FAO) and the Government of Malawi are promoting commercial beekeeping for income generation and livelihoods diversification among smallholder farmer groups in Malawi, by providing capacity building and also beekeeping equipment to 125 farmer groups.

216. The initiative targets distribution of 7,000 beehives and essential beekeeping equipment with support from the KULIMA and AfiKepo programmes which are being funded by the European Union and the PROSPER project funded by the Foreign and Commonwealth Development Office. These three projects are being implemented in 14 districts of Chitipa, Karonga, Mzimba, Nkhatabay, Nkhatakota, Kasungu, Salima, Phalombe, Mangochi, Balaka, Chiradzulu, Chikwawa, Thyolo, and Mulanje and will enable overall production of up to 336 MT of honey, and other bee-related products, which would support income generation for the groups and the economic empowerment of the smallholder farmers involved.

217. The main honey producing districts in Malawi are: Mzimba, Nkhata Bay, Chitipa districts, however, honey cooperatives are registered across the country, providing a rudimentary but somewhat organised foundation for apiculture development. Table 7 shows the number of cooperatives registered by the Malawi National Federation of Cooperatives, which remains relatively stable at around 20 organisations nation-wide.

Table 7: Honey cooperatives by district 2015-17¹³⁰

District	2015	2016	2017
Balaka	1	1	1
Blantyre	2	2	1
Chikwawa	2	2	2
Chiradzulu	1	1	1
Chitipa	1	1	1
Kasungu	1	1	1
Mangochi	1	1	1
Mchinji	2	2	2
Mulanje	1	1	1
Mwanza	1	1	1
Nkhata Bay	1	1	1
Nkhatakota	1	1	1
Ntcheu	1	1	1
Ntchisi	1	1	1
Salima	3	3	3
Type Totals	20	20	19

¹³⁰ Source: Malawi Federation of Cooperatives 2022

6.1.1.2 Consumption and Market trends

218. According to an FAO report¹³¹ which analyzed several value chains, in 2019 the domestic demand for honey was estimated at 200 MT while the volume of domestic honey that was formally traded was around 80 MT, demonstrating a substantial gap between demand and supply.


219. Local honey is available at the informal and formal markets and is of variable quality, packaging and price. In formal retail, a few higher-end local brands, such as Kwithu Kitchen compete with cheaper imports from South Africa and elsewhere, mainly on quality and origin.

220. Honey is consumed widely in the country for its health benefits and medicinal properties, while other apiculture products such as wax and propolis are not yet developed commercially for the market.

6.1.1.3 Formal private sector presence in the value chain

221. While there are many producer cooperatives, there are relatively fewer enterprises that take the product to package and label it and put in on the market shelf. Two emerging local market leaders are Kwithu Kitchen and Honey Products Ltd. described in Table 6.

Table 8: Examples of Key Private Sector Market Players in the Honey VC in Malawi

Company name	Brief description
Kwithu Kitchen	<p>Kwithu Kitchen (KK) – founded in 2013 – is the first women-owned food processing cooperative in northern Malawi. KK grew out of the Kwithu Women's Group, a vibrant community-based organization located in Mzuzu, Malawi.</p> <p>In April 2020 KK began processing high-quality Malawian honey and immediately became the largest honey supplier in the country. Kwithu Kitchen's products are found in every major supermarket chain in the country (Shoprite, Sana and Chipiku Plus), in major hotel chains like the Sunbird Hotels, and in many restaurants and institutions.</p> <p>KK works with 900 SH (mainly women) and collected 40MT in 2021, expecting an 60MT production in 2022.</p> <p>(Photo credit: KK website)</p> 

¹³¹ FAO (2020); Support to the formulation of the GEF-7 Sustainable Forest Management Impact Program on Dryland Sustainable Landscapes: Malawi mission report: 16 – 27 February 2020

Honey Products Ltd



The business trains young people to own and operate business outlets located in specific geographical locations via a mini-franchise model. These mini-franchises provide beekeeping equipment and training to local smallholder beekeepers. The raw honey is collected, tested for quality and purchased by the mini-franchise holders. The honey is then transported to the factory for processing, where it is labelled with expiration dates and finally distributed to stores shelves in towns and cities.

HP Ltd is currently focused on selling beekeeping equipment and works with over 100 SH

6.1.1.4 Market challenges

- The professionalization and regulation of the industry is in its infancy and needs investment support to establish and grow as a market presence.
- The lack of product specific quality and certification procedures by Malawi Bureau of Standards (MBS) restricts access to formal and higher-value niche markets abroad.
- Certified formal producers face competition from uncertified product sold at lower prices.
- High costs of packaging (as well as no local availability of quality packaging) and labelling adds to the high price of local products, reducing their competitiveness against cheaper imports.

6.1.1.5 Market opportunities

- There is a clear demand that is yet to be met through increased production if production and post-harvest challenges can be addressed.
- Development of product specific standards can support the regional debut of local honey.
- Investment in the further professionalisation and development of the existing and new producer groups and cooperatives will give off-takers the opportunity to close the existing market demand gap.
- There is space for the development of other bee products and their marketing, such as wax and propolis both for domestic and eventually regional markets

6.2 Moringa

6.2.1.1 Overview

222. Moringa is one of the “superfoods” that has recently gained interest and commercial presence across the region. In Malawi the production and processing of moringa has not yet been established with some initial investments having stalled due to lack of financing and operations management hurdles. However, as the international market values moringa powder and oil, investment in the artisanal collection and processing is bound to gain momentum.

223. In the context of Malawi, moringa is regarded by Government and some donors, such as the Scottish Funding Council as an opportunity for income generation and nutrition improvements.

6.2.1.2 Consumption and Market trends

224. Moringa is locally consumed for medicinal purposes and as food and is available at open markets across the country in small volumes fresh and in powder form.




6.2.1.3 Formal private sector presence in the value chain

225. Moringa Miracles Ltd, which seized operations ran a 150HA plantation in Chkwawa and had established a relationship with 20,000 smallholder suppliers in order to fulfil purchase orders from the USA. The drying of moringa leaves is a sensitive process, which requires the leaves to be dried at a low enough temperature (between 45 – 50C) to preserve the nutritional value of the

leaves, but high enough to kill pathogens, as a result artisanal handling of the fresh leaves cannot be supported due to product contamination with bacteria and e-coli. The company had invested in the mechanization of the process, minimizing human handling. In addition, the international markets for this product, especially as food supplement (moringa oil is for cosmetic purposes) usually requires costly organic certification, which can be obtained through Eco-Cert in Germany or South Africa but needs investment and time to develop compliance capacity¹³².

226. Currently there are a handful of companies (Table 9) that are mostly in the initial stages of business establishment (startups). While one of them plans to work with farmers and purchase moringa from them to process into a range of products, the other currently operating company relies on production from its own estates where the entire handling process is closely scrutinised and controlled.

Table 9: Examples of moringa value chain players

Company name	Brief description
BERL-Bio-energy resources Ltd	<p>Providing contracts to the local community to sell BERL sunflower seed and moringa seed. Farmers will also be able to harvest and sell, or use, the nutritious leaves.</p> <p>BERL will provide seedlings and extension support to help farmer's grow.</p> <p>BERL buy moringa and sunflower seeds from the farmers to produce and sell moringa oil, sunflower oil and seed cake.</p>
Moringa Malawi¹³³	<p>Company has five Moringa Tree farms under their ownership and Management. Their moringa trees are on average over 10 years old and when demand increases the company will harvest seeds for propagation from the existing trees and plant the seed directly into the ground on site. (Photo credit: Moringa Malawi website)</p> <div style="text-align: right;">  <p>Moringa Powder</p>  <p>Moringa Seeds</p>  <p>Moringa Oil</p> </div>

6.2.1.4 Market challenges

- Local processing/handling is failing compliance with HACCP and other food safety requirements, under the Malawi Bureau of Standards, presenting difficulties for investors who process moringa as a food supplement
- Production of moringa oil needs to gain momentum and volume in order to establish export market linkages.

¹³² GEF 7 Project Document: Transforming landscapes and livelihoods: A cross-sector approach to accelerate restoration of Malawi's Miombo and Mopane woodlands for sustainable forest and biodiversity management GEF ID: 10254

¹³³ <http://www.moringamalawi.com>

6.2.1.5 Market opportunities

- To develop local moringa oil processing capacity that is supplied through a smallholder network of producers and can be linked to high-end export markets in the region and beyond.

7 Conclusions and implications for EbAM intervention design

7.1 Summary of key findings

227. The agrifood business environment in Malawi is characterised by a complex political economy and a challenging regulatory environment. Most of the agribusinesses remain small and as production is based on fragmented smallholder farming much of the supply to the market is done through informal channels and traditional trade structures.

228. Estate crops are mainly focused on cash crops, such as tea and coffee, with many of the tobacco producers now looking at alternatives such as soybean as a way forward. There appears to be limited interaction between estate and smallholder farming in terms of scope and outreach, apart from outgrowing schemes involving immediately neighboring communities.

229. At the same time, the development of commodity crops, such as soybean at a larger level of investment and processing is hindered by the disaggregation of supply, side-selling and unstable pricing, with smallholders offering the majority of the commodity but not the reliability and volume that processing capacities already on the ground could absorb.

230. On the whole, food processing as an industry offers a narrow range of products, however some examples of local SMEs are emerging that are supplied through smallholder organisations and produce products such as tomato paste, honey and soya-based foods.

231. The smallholder farming community remains largely only involved in production, with limited local value-addition investments and formal supply chain experience, offering an opportunity to focus on low-tech near-farm value-addition options.

232. Finally, smallholder engagement in the formal supply for export is relatively limited to examples such as macadamia, soya, tea and coffee, which offer important supplementary activity to households and a source of income diversification and economic risk mitigation, should other food crops fail.

233. From the consumer perspective - urban consumers shop in formal retail outlets which include both national and international (South African) supermarket chains and are largely stocked with fresh and processed imported foods. The fresh produce section is largely stocked with imports from South Africa and increasingly supplemented or replaced by produce coming out of the main horticulture investment by Inosselia Commercial Ltd. near Lilongwe. With the current deficit of foreign currency, import substitution is gaining importance.

234. At the same time, many urban consumers maintain their shopping patterns of traditional open-air markets for fresh produce, where domestic as well as imported produce is sold. Local vegetables are mostly produced in home gardens and when in season, the excess is sold via a traditional and informal chain of traders who offer the logistical services, and aggregation necessary to get the food from farm to market.

235. Finally, urban consumer awareness with regards to the quality and origin of food is increasingly becoming relevant to customer choices. The Government of Malawi, Ministry of Trade has launched a brand 'Buy Malawian' that draws attention to the domestic origin of products and has met with market success¹³⁴.



Buy Malawi Products
Let's Build Malawi Together

Figure 37: Buy Malawi Brand logo

¹³⁴ <https://buymalawi.mw>

236. Key stakeholders from the retail sector interviewed for this analysis (List of key informants) also claim that urban consumers are increasingly conscious of the use of chemicals on fresh products, as well as the benefits of traditional products, such as the local chicken variety for meat.

7.2 Potential lines of intervention

237. In terms of structuring the smallholder agri-food sector, market linkages can be developed along two commercialization pathways:

- Public Private Producer Partnerships (4P) and
- Micro Small and Medium Agribusiness development

238. Both commercialisation pathways would require significant institutional building support at farmer level, as well as business planning and management assistance and services.

239. The key competitive advantage and market differentiation of the products originating in EbAM managed farms is the 'nature positive' production system and its positive implications for human health and the environment communities live in.

240. Different products will require specific priority lines of interventions to consider, for example amongst others:

Vegetables:

241. The potential for stimulating the growth of EbA vegetable production is considerable due to the existing large demand for fresh vegetables and the growing urban retail focus on quality and food safety. Horticulture offers an opportunity for farmers to diversify into multiple crops for domestic markets which also contribute to improved diet diversification, nutrition and traditional cuisine.

242. The intervention should consider:

- Creation and expansion of supply chains led by formal retail and wholesale and the possibility of a **consumer awareness raising campaign with regards to 'chemical free' and 'environmentally friendly' produce** in order to stimulate demand.
- Food loss reduction options such as **improved post-harvest handling, storage and primary processing to extend shelf-life**;
- Support the technical development and **investment in local processing** that adds-value at near-farm level and increases variety of consumer products available, such as pickles, pastes, sauces, dried and fried vegetable etc.;
- Work with local retail and public initiatives on the transformation of domestic consumption patterns away from a maize-based and towards a more **diversified diet and improve understanding and knowledge of different vegetables, with emphasis on native varieties**.
- Stimulate **innovative and environmentally-sound local industry for vegetable packaging and crating** in order to reduce food losses, and resulting emissions, while also reducing use of plastics or other harmful materials.
- Support the **development of biological input suppliers** for horticulture growers.
- Support the **organisation of producers in conjunction with establishing formal and informal supply arrangements** with wholesalers/offtakers or directly to supermarkets based on the 'chemical free' nature of production.
- Work with MBS on the **implementation of the existing national Code of Practice for Organic farming** and its potential development into national standards.

Soya

- **Address low yields at farm** level through strengthening of support services such as technical extension.
- **Improve gender focus** of farm-level interventions to address female farmers specific support needs (that account for issues such as literacy, socio-cultural factors and time availability) and reflect the fact that women have an important role in production.

- Support the development of **value addition and processing** industries to target both animal feed and human food for the domestic and regional markets, through strengthening supply chain and horizontal integration dynamics.

Cowpea

- Collaborate with local processors on access to **know-how with regards to diversification of processing options** and food products derived from cowpea, such as cowpea flour used for fortification of other products.
- Support the **integration of cowpea into school diets** to improve nutrition and link farmers to public food procurement programs.

Macadamia

- Work with the existing sector Cooperatives **to strengthen agroforestry practices as part of EbA resilience and diversification**, and support efficiency improvements of supply chain structures in order to maximise income generation.

Coffee

- Work with existing processors on expanding **inclusive supply chains based on agroforestry** production systems.
- Support the coffee industry development and competitiveness through **‘nature positive’ coffee production and its market recognition through appropriate branding**.

Bambara

- An opportunity to **empower women and create a positive product marketing message**, through a thoughtful project design based on comprehensive and gender-sensitive needs assessment, monitoring and impact analysis.

Honey

- Improve the coordination and structuring of the value chain, by supporting already existing cooperatives and their linkage with local processors.
- Work with MBS on **standards and testing** for honey and the facilitation of formal retail entry for local producers.
- Work on **‘nature positive’ branding of local honey** and explore opportunities for export to high-end markets in the region, such as South Africa.

Moringa

- Support the organisation and **capacity-building of local EbA-production supply chain** for local processing start-up companies.

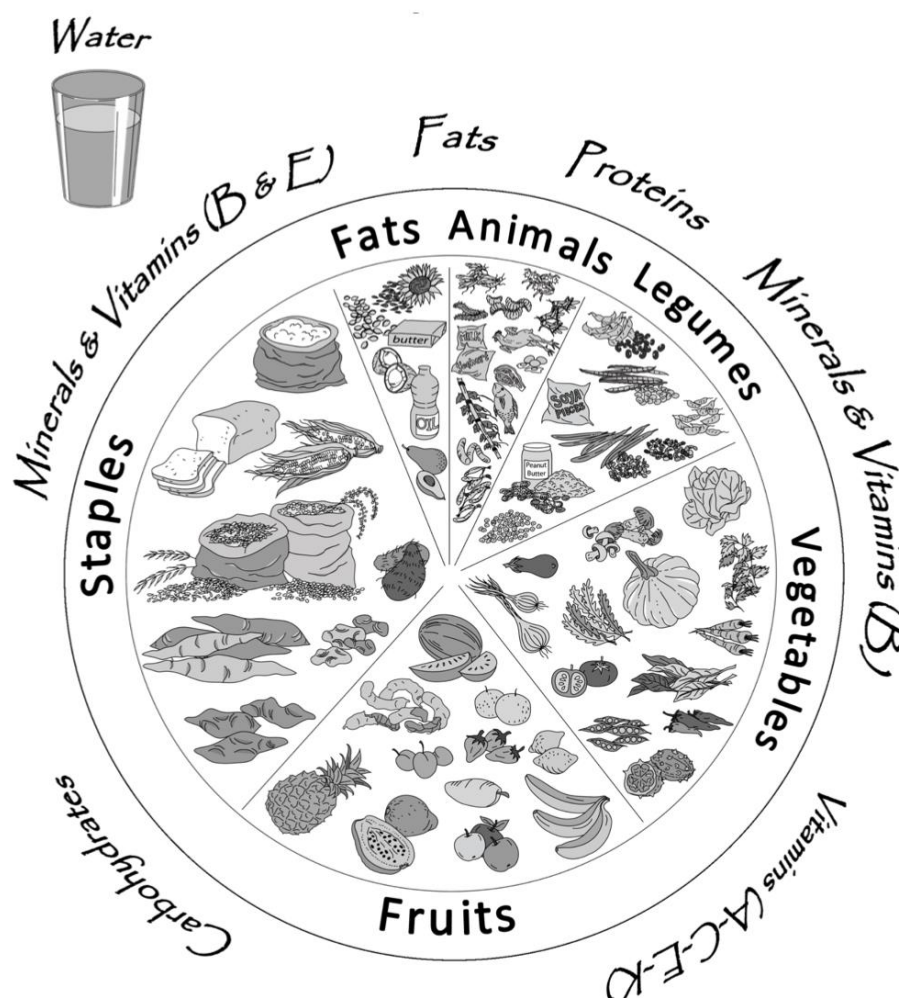
8 Examples of varieties of native vegetables listed in the Sustainable Nutrition Manual (WFP) updated in 2022

Updated 2022.07 (Orchids)

From the Sustainable Nutrition Manual (SNM) flyer series
Food, Water, Agriculture & Environment

Foods in Malawi

Extracted from SNM Part 3 Health Designs Appendix 1 & 2



Supported by
World Food Programme

3. VEGETABLES - 178 indigenous of 219 foods

Scientific Name	English	Chichewa	Edible Parts
3.2. Indigenous Vegetables – we need more information about			
66. <i>Abrus precatorius</i>	Crab's Eyes	Ntimbua	leaves
67. <i>Acacia macrothyrsa</i>		Nafungwe	leaves
68. <i>Achyranthes aspera</i>	Rough Chaff Flower	Ngwirisi ndi kakose	leaves
69. <i>Ailanthus Myianthus</i>		Nine	leaves
70. <i>Alternanthera sessilis</i>		Kandudwa	leaves
71. <i>Anthericum</i>		Kaluwatete	flowers
72. <i>Arachis hypogaea</i>	Groundnuts	Mtedza	leaves
73. <i>Area Leuctra</i>		Chidyonko	leaves
74. <i>Argemone mexicana</i>	Mexican Poppy	Doza	leaves
75. <i>Asparagus sp.</i>	Asparagus, Wild	Katsitsim-zukwa	shoots
76. <i>Astragalus atopilosulus</i>		Nachilare	leaves
77. <i>Asystasia gangetica</i>		Nasungwi	leaves
78. <i>Balanites aegyptiaca</i>	Desert Date		leaves flowers
79. <i>Boscia salicifolia</i>		Mtakataka	leaves
80. <i>Boscia senegalensis</i>	Aisen	Mpetu	leaves
81. <i>Byrsocarpus orientalis</i>		Ntandan-yerere	leaves
82. <i>Canna bidentata Bertol.</i>	Canna, Wild	Gontha	seed (spice)
83. <i>Canthium sp Canthium huilense</i>		Chisunkunthu	leaves
84. <i>Cardiospermum halicacabum</i>	Heart Seed	Msendechere	leaves
85. <i>Cassia mimosoides L.</i>	Tea senna	Ngwalang-walate	leaves shoots
86. <i>Celosia Argentea</i>	Cock's Comb	Ndangale	leaves shoots
87. <i>Celosia trigyna</i>		Kaphikaulesi	leaves shoots
88. <i>Ceratotheca sp.</i>		Tilingane	leaves
89. <i>Ceropegia papillata</i>		Fwafwalingo	leaves
90. <i>Ceropegia sp.</i>		Chang'ombe	leaves
91. <i>Cicer arietinum</i>	Chickpea	Nchana	leaves
92. <i>Cissus bucanii</i>		Namwali-cheche	leaves
93. <i>Cissus cornifolia</i>	Water Root	Mbulunbunji	leaves, fruit (young)
94. <i>Cissus integrifolia</i>		Mtambe	leaves
95. <i>Cissus jatrophaoides</i>		Mnuwake-munda	leaves
96. <i>Cissus rubiginosa</i>		Mpelesi	leaves
97. <i>Corchorus aestuans</i>		Chamalawi	leaves
98. <i>Corchorus olitorius</i>	Jute	Chilenzi	leaves, shoots
99. <i>Crassocephalum rubens</i>		Chinusi	leaves, shoots
100. <i>Crotalaria anthyllopsis</i>		Chiwasa	leaves
101. <i>Crotalaria cephalotes</i>		Chisunkhuthu	leaves
102. <i>Crotalaria natalitia</i>		Thusya	Lleaves, flowers

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Scientific Name	English	Chichewa	Edible Parts
103. <i>Crotalaria sp.</i>		Bwayaya, Mdyakanjobvu, Kapuka, Chimphako	leaves
104. <i>Cucumis hirsutus</i>		Mkuwikuwi	leaves
105. <i>Cucumis metuliferus</i>		Kangam-khwani	leaves
106. <i>Cynanchum schistoglossum</i>		Mpuludwa	leaves
107. <i>Dolichos b Buchananii</i>	Bully Beef Plant	Nthupa	flowers
108. <i>Dolichos sp.</i>		Chiluwe cha chitimbwisi	flowers
109. <i>Dolichos sp.</i>		Chitimbwisi	leaves
110. <i>Dombeya tanganyikensis</i>		Mnyangale	shoots, stems
111. <i>Ectadiopsis oblongifolia</i>		Bwazi	leaves
112. <i>Emilia coccinea</i>		Chinguwo	leaves
113. <i>Ensete ventricosum</i>	False Banana	Chizuzu	shoots, stems, flowers, corm, rhizome
114. <i>Fagara sp</i>	Fagara	Mlunguchulu	leaves
115. <i>Ficus sp.4</i>	Fig, Wild	Nkhuvu	leaves
116. <i>Ficus sur</i>	Fig, Cape	Mkuyu-pasi	leaves
117. <i>Ficus sycomorus</i>	Fig, Sycamore	Chikujumba	leaves
118. <i>Glycine wightii</i>		Yembe	leaves
119. <i>Gnidia chrysantha</i>		Kazinda	leaves
120. <i>Hibiscus articulatus</i>		Chamakande	leaves
121. <i>Hibiscus cannabinus</i>	Hemp, Bombay	Sonkhwe	leaves, flowers
122. <i>Hibiscus diversifolius</i>		Chatata Katham-phwi?	flowers
123. <i>Hibiscus esculentus</i>	Okra	Chithanda	leaves
124. <i>Hibiscus physaloides</i>		Thelele thengo	flowers
125. <i>Hibiscus rosa-sinensis</i>	Rose of China	Losi	leaves flowers
126. <i>Hibiscus sp.</i>		Chimkakala	leaves
127. <i>Hyphaene species</i>	Palm, Doum	Mgwalangwa	seed sprout
128. <i>Ipomoea eriocarpa</i>		Kholowa thengo	leaves
129. <i>Ipomoea sp.</i>		Chikalan-dembe	leaves
130. <i>Jussiaea abyssinica</i>			leaves
131. <i>Justicia sp.</i>		Kalokola, Kangena, Kanyelenyezi	leaves, shoots, flowers
132. <i>Kaempferia aethiopica</i>		Manjanu	roots
133. <i>Lagenaria sphaerica</i>		Chipuzi	leaves
134. <i>Lightfootia sp.2</i>		Chisiso	leaves
135. <i>Lupinus</i>		Kantedza	leaves
136. <i>Melochia corchorifolia</i>		Chipondavu	leaves
137. <i>Momordica charantia</i>	Gourd, Bitter Leaves	Karela	leaves
138. <i>Momordica foelida</i>		Tungwi	shoots
139. <i>Morus nigra</i>	Mulberry, purple	Mapulesi	leaves
140. <i>Nesaea sp.</i>		Kwete	leaves
141. <i>Nidorella resdifolia</i>		Sungubuwa	leaves
142. <i>Nymphaea caerulea</i>	Water Lily	Chikolwa	flowers
143. <i>Ormocarpum</i>		Phuluphulu	leaves
144. <i>Oxygonum sinuatum</i>		Kalasaweni	leaves

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Scientific Name	English	Chichewa	Edible Parts
145. <i>Pavonia urens</i>		Chatata, Thoni	flowers
146. <i>Pentanisia schweinfurthii</i>	Forget-me-not, Rhodesian	Ngulungundi	leaves
147. <i>Pentarrhinum insipidum</i>		Chindewe	leaves, fruit
148. <i>Pentarrhinum sp.</i>		Kafungo	leaves
149. <i>Polygonum plebeium</i>		Kasabwe	leaves
150. <i>Polygonum salicifolium</i>		Nsendeka	leaves
151. <i>Polygonum setosulum</i>		Chikungu ufa	leaves
152. <i>Psychotria eminiiana</i>		Chisunkunthu	leaves
153. <i>Ranunculus multifidus</i>	Buttercup	Khobedi	leaves
154. <i>Rumex bequaertii</i>	? Sorrel, Dock	Gakazea	leaves
155. <i>Salvadora persica</i>	Toothbrush Tree	Mswache	leaves
156. <i>Secamone sp.</i>		Bwazi	leaves
157. <i>Securidaca longepedunculata</i>	Tree Violet	Bwazi	leaves
158. <i>Sida alba</i>			leaves
159. <i>Smithia elliotii</i>		Kadzulo	leaves
160. <i>Solanum sp. 12</i>		Malanza	leaves
161. <i>Sonchus oleraceus</i>	Sow Thistle	Chinguwo	leaves
162. <i>Sphenostylis marginate</i>		Nkhunga Mlali	leaves, flowers
163. <i>Sterculia appendiculata</i>		Njale	leaves
164. <i>Sterculia sp.2</i>		Chiwawani	leaves
165. <i>Talinum caffrum</i>		Mlelamvula	leaves
166. <i>Thunbergia lancifolia</i>		Mwanaluni	leaves
167. <i>Thunbergia oblongifolia</i>		Mwanakazi	leaves
168. <i>Trichodesma zeylanicum</i>		Dungum-wamba	leaves
169. <i>Tulbaghia cameronii</i>		Katsopi	leaves, flowers
170. <i>Tylosema fassoglensis</i>		Mphand-wapansi	pod
171. <i>Urena lobata</i>	Bun Ochra	Msapatonje	flowers
172. <i>Vernonia sp.</i>		Dambwe	leaves
173. <i>Vigna reticulata</i>		Chamaweya	leaves
174. <i>Vigna sp.6</i>		Mtamba thengo	leaves
175. <i>Viola abyssinica</i>		Katongolola	leaves
176. <i>Wormskioldia longepedunculata</i>	Pimpernel, Rhodesian	Katambala	leaves
177. <i>Zornia pratensi</i>		Kandudwa	leaves
3.3. Introduced Vegetables			
178. <i>Allium cepa</i>	Onion / Shallot	Anyezi	roots, shoots
179. <i>Allium porum</i>	Leek		roots, shoots
180. <i>Allium sativum</i>	Garlic	Adyo	roots, shoots
181. <i>Allium schoenoprasum</i>	Chives / Garlic chives		leaves, shoots
182. <i>Annona sp.</i>	Custard Apple	Mphosa	Leaves, flowers
183. <i>Asparagus officinalis</i>	Asparagus	Katsitsimzu-kwa	shoots
184. <i>Bixa orellana</i>	Annatto	Kari	dye (red powder around seed)

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185. <i>Brassica chinensis</i>	Chinese Cabbage	Chinesi	leaves
186. <i>Brassica juncea</i>	Mustard, Indian	Mpiru	leaves, shoots, flowers
187. <i>Brassica napus var. oleifera</i>	Rape	Mpiru wotuwa	leaves
188. <i>Brassica oleracea var. acephala</i>	Kale	Kale	leaves
189. <i>Cajanus cajan</i>	Pea, Pigeon	Nandolo	leaves, pods (young)
190. <i>Canavalia ensiformis</i>	Bean, Jack	Kalongdoda ?	pod
191. <i>Capsicum annum</i>	Chillies	Tsobola	fruit
192. <i>Carica papaya</i>	Pawpaw	Papaya	fruit (young), leaves, shoots, flowers
193. <i>Cicer arietinum</i>	Chickpea	Nchana	pod (young)
194. <i>Coriandrum sativum</i>	Cilantro Coriander	Masala	leaves, seed (spice)
195. <i>Cucumis sativus</i>	Cucumber	Minkhaka	fruit
196. <i>Curcuma domestica</i>	Tumeric	Manjanu Kari	roots
197. <i>Cymbopogon citratus</i>	Lemon Grass		leaves, shoots
198. <i>Foeniculum vulgare</i>	Fennel		leaves, bulbs
199. <i>Lactuca sativa</i>	Lettuce	Letesi	leaves
200. <i>Lens culinaris</i>	Lentil	Masar	pod (young)
201. <i>Lycopersicon esculentum</i>	Tomato	Matimati	fruit
202. <i>Ipomoea batatas</i>	Sweet Potato	Kholowa	leaves
203. <i>Mangifera indica</i>	Mango Leaves	Mango Khungu Osakwima	leaves, shoots, skin (young)
204. <i>Manihot esculenta</i>	Cassava	Chigwada	leaves
205. <i>Manihot spp</i>	Cassava, Tree	Chigwada	leaves
206. <i>Mentha sp.</i>	Mint		leaves
207. <i>Moringa oleifera</i>	Horse Radish Tree	Chamwamba, Masamba, Maluwa, Sangowa	pod, leaves, flowers
208. <i>Origanum majorana</i>	Marjoram		leaves
209. <i>Phaseolus aconitifolia</i>	Bean, Tepary		leaves, pod (young)
210. <i>Phaseolus spp</i>	Bean, Common Leaves	Khwanya	leaves
211. <i>Phaseolus vulgaris</i>	Bean, French pod	Mbwanda	pod (young)
212. <i>Phaseolus vulgaris</i>	Bean, French leaves	Mbwanda	leaves
213. <i>Sesamum indicum</i>	Sesame	Chitowe	leaves, shoots
214. <i>Solanum melongena / aethiopicum</i>	Eggplant, Foreign	Mabilingani	fruit
215. <i>Spinacia oleracea</i>	Spinach	Spinichi	leaves
216. <i>Trigonella foenum-graecum</i>	Fenugreek	Methi	leaves, shoots
217. <i>Vigna radiata</i>	Bean, Mung	Mphodza	pod
218. <i>Zea mays</i>	Maize, Green	Dowe	grain immature
219. <i>Zingiber officinale</i>	Ginger		

9 List of key informants¹³⁵

Company / Organisation
SeedCo
Malawi Investment and Trade Centre
NASFAM
International Potato Centre (CIP)
Farmers Union of Malawi
Nutcellers Ltd
Thanthwe Farm
TRADE
Agricultural Suppliers and Services Ltd
Satemwa Tea&Coffee
Kwithu Kitchens
Chipiku Plus Supermarkets
Let's Buy Malawi Brand
Malawi Bureau of Standards
Shoprite Blantyre Branch
Moringa Miracles
Malawi Federation of Cooperatives
UBALE Project

¹³⁵ This portion has been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.

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