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Unlocking the Potential of Sesame in Malawi:

Trends in Production, Productivity, and Export Markets.

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Unlocking the Potential of Sesame in Malawi: Trends in Production, Productivity, and Export Markets.

Moses M.N. CHITETE[#], Innocent PANGAPANGA-PHIRI[#], Horace PHIRI, Thabbie CHILONGO[#], Patrick KAWAYE-CHIMSEU[#], Joseph KANYAMUKA[#], and Chiyembekezo CHAFUWA[#]

[#] Centre for Agricultural Research and Development (CARD), Bunda College, Lilongwe University of Agriculture and Natural Resources (LUANAR), P.O. Box 219, Lilongwe, Malawi

This study analyzes trends in sesame production and export performance in Malawi from 2017 to 2023, with a focus on identifying growth patterns, export market dynamics, and opportunities for value addition. The results show a robust and consistent increase in sesame cultivation, with the area under production more than doubling from 9,924 hectares in 2017 to 20,602 hectares in 2023. Total output rose sharply by 212%, reaching 8,498 metric tons in 2023. Yield also improved steadily, reflecting better agronomic practices and input use, though productivity remains below the crop's potential under optimal conditions. Export performance also improved substantially. Malawi transitioned from irregular low-volume exports in the late 1990s to structured and diversified trade by 2023, reaching a record 5,359 tons. Major export destinations included the United Arab Emirates, Türkiye, China, and Tanzania, which together accounted for over 70% of all exports. Export values rose to nearly USD 5.9 million in 2023, although prices varied significantly across markets. The United Arab Emirates consistently offered the highest unit price, while regional markets such as Kenya offered far lower prices, pointing to uneven trade margins and quality differentials. Despite this progress, sesame exports remain dominated by raw seed, limiting value capture, industrial growth, and job creation. To address this, the study recommends investing in domestic agro-processing, promoting high-yielding varieties, improving export quality standards, and incentivizing private sector participation. With coordinated policy support and infrastructure investment, sesame can play a transformative role in rural livelihoods, agricultural diversification, and export-led growth under the Malawi 2063 development agenda

Keywords: Sesame, Production, Productivity, Export Markets, Transformation.

Introduction

Sesame (Sesamum indicum) remains one of the key ancient oilseeds with its economic growth potential consistently recognised globally (Dossa et al. 2017; Myint et al., 2020; Sanni et al., 2024. Sesame is also acknowledged for its unique features that enable it to thrive in semi-arid and low-input environments (Hussain et al., 2023; Lukurugu et al., 2023). According to Zenawi and Mizan (2019), sesame requires fewer inputs, such as fertilizers, compared to other crops. Its ability to grow well in semi-arid conditions is due to its resistance to water stress caused by dry spells or insufficient rainfall (Mawcha et al., 2021). Due to its promising economic potential and climatic resilience, sesame has attracted significant interest from both developing and developed countries for investment and consumption. Furthermore, sesame is praised for its nutritional benefits and nutraceutical components (Langyan et al., 2022; Nagendra Prasad et al., 2012; Namiki, 2007).

The crop has various uses in food, particularly its oilseed, which is used to produce high-quality cooking oil. Sesame oil, rich in polyunsaturated fatty acids including linolenic and oleic acids, offers important health benefits (Langyan et al., 2022; Oboulbiga et al., 2023; Wei et al., 2022). Oleic acid lowers LDL cholesterol and lessens the risk of heart disease, but linolenic acid is required for brain growth and function (Elleuch et al., 2011; Abbas et al., 2022). Teres et al. (2008) and Karacor & Cam (2015) added that oleic acid also enhances the smooth working of the heart, decreases blood pressure, and helps avoid blood clots. Sesame has a low content of saturated fatty acids, ranging from 8% to 11% for palmitic acid and 5% to 10% for stearic acid (Agidew et al., 2021). Sesame also contains over 14% protein, 14%–20% carbohydrates, vitamin E, and minerals such as potassium, phosphorus, calcium, and sodium (Sharma et al., 2021; Yaseen et al., 2021). Li et al. (2024), Wu (2007 and Mostashari and Mousavi Khaneghah (2024) also noted that the presence of an antioxidant (lignan) makes it regarded as a healthy dietary choice. Additionally, sesame is rich in natural compounds like phytosterols (3–8 mg/g), melatonin (0.04–298.62 ng/g), and tocopherols (530–1000 mg/kg).

It also contains considerable amounts of bioactive lignans, including sesamin, sesamol, sesamolin,and sesaminol. These components have been related to a number of health advantages, including antioxidant, anti-flammatory, cardiovascular, anticancer, and neuroprotective properties (Park et al.,2010; wu et al.,2019; Bosebabu et al.,2020; Maidalawieh et al.,2022; Subrahmaniyan et al.,2024). Globally, the annual production of sesame oil surpasses 200,000 metric tons, whereas global exports are projected to be approximately 30,000 metric tons each year (Kassie et al.,2023). The output of sesame has experienced substantial growth over the decades, increasing from 1.42 million metric tons in 1961 to an anticipated 6.67 million metric tons by 2024, with Asia and Africa representing most of the worldwide production (Sanni et al.,2024).

According to FAOSTAT data, approximately 95.6% of the global sesame yield is estimated to be derived from these two continents, with the remaining proportion contributed by the Americas and Europe. As indicated by Sanni et al. (2024), the foremost producers as of 2020 encompassed Sudan, Myanmar, Tanzania, India, Nigeria, China Mainland, Burkina Faso, Chad, Ethiopia, and South Sudan. The worldwide area designated for sesame cultivation is currently approximated at 13.97 million hectares, with Africa alone comprising 9.69 million hectares, equating to 69.4% of the total (Lukurugu et al., 2023). In 2020, global sesame production reached 6.8 million metric tons, of which 4.3 million metric tons, or 69.2%, were produced in Africa. Tanzania contributed 0.71 million metric tons, representing 16.6% of the global output (Hyera and Isango, 2024).

The increase in world sesame production is a clear manifestation of the growing importance of sesame for both its health benefits and economic benefits (Wacal et al., 2024; Wei et al., 2022). The rising demand for sesame in global markets presents an opportunity for Malawi to take advantage of the increase in demand by devising strategies to exploit the markets. Thus, going beyond exporting raw sesame to value addition becomes an important strategy to boost the sesame industry. In order to take advantage of the prevailing high demand for sesame at regional and global markets, it is necessary to conduct research related to low productivity, processing infrastructure, quality control, investment and financing, and export certifications in order to inform investment in the value chain. It should be put into context that the rising demand for sesame has mainly been attributed to the taste for several health and industrial uses. Changes in consumer preferences that dictate migration to healthier food have further contributed to the rise in sesame demand (Sulemana, 2021; Mahajan & Sadana, 2025).

Thus, in Africa, countries like Nigeria, Sudan, Ethiopia, and Tanzania have strategically expanded the sesame value chain, and they are among the leading sesame exporters worldwide (Haque et al., 2025). Although Malawi is not among the dominant sesame players in Africa, the production and the corresponding exports of sesame are picking up. This further shows the growing importance of sesame as a potential game changer for most farmers in Malawi. Sesame is commonly grown in Karonga, Lilongwe, Phalombe, Chikwawa, and Nsanje. Like other African countries, sesame production in Malawi is dominated by smallholder farmers who, in most cases, are largely disorganized.

Building on this background, sesame offers an opportunity for export diversification beyond traditional exports like tobacco, tea, cotton, groundnuts, soybeans, and maize. This presents smallholder farmers with a chance to boost their incomes and diversify their sources of revenue. Research has demonstrated that Sesame is a less input-intensive crop because its growth does not require heavy use of fertilizers and chemicals (Kumaraswamy et al., 2015; Islam et al., 2024; Kafando & Sakurai, 2025). According to Langham (2007) and Islam et al. (2016), Sesame is a rainfed crop that grows within 90 to 120 days, indicating that it can provide opportunities for harvesting early, intercropping with other crops. This makes sesame farmers have the impetus to respond swiftly to

changes in climatic conditions and market dynamics, hence promoting efficiency in land use and subsequent productivity.

Increasing sesame productivity among smallholder farmers in most countries in Africa, including Malawi, is not only important for boosting household income but also for strengthening its position to be able to compete in international markets. However, the sesame yields in most African countries remain as low as 300 to 400 kg/ha (Mushtaq et al., 2020; Mezgebo et al., 2021). In order to fill this yield gap adoption of high-yielding varieties and good agricultural practices becomes a key option. This can further be achieved through a better extension and improved input supply system. Higher productivity reduces high per-unit costs, hence boosting production, making Malawian sesame competitive in international markets. Research on Sesame development aligns directly with several pillars of Malawi 2063: Pillar 1: Agricultural Productivity and commercialization by improving yields and integrating farmers into high-value markets; Pillar 2: Industrialization, which can be achieved through the promotion of Agro processing and improving domestic manufacturing. Empowerment – by creating income opportunities for youth and women through enterprise development along the sesame value chain.

Despite the growing interest and recognition of sesame as a high-value export crop for Malawi, there remains limited empirical literature on market dynamics and trade performance. It should be emphasized that a number of studies that have been conducted in Malawi have focused on other oilseeds such as groundnuts and soybeans, leaving out sesame as a potential oilseed. The lack of research on sesame oilseed contributes to its thin representation in the value chain in national development planning and investment. This identified gap may create problems in adjusting to the international market changes, considering the volatility of the international commodity markets, the changing trading environment, and demand. Given the interaction of the rising global demand, national policy incentives, and agroecological conditions, for export development and industrialization, investment in sesame would therefore be one of the options that can speed up industrialization and subsequent economic development. Thus, gathering information on production, productivity, area, export growth, export destinations, and the consequences of exporting raw sesame may provide an opportunity for researchers and development partners to increase investment in the sesame value chain. In doing so, this study seeks to identify investment policy enablers that might increase sesame productivity, promote agro-processing, and enhance market access of sesame farmers and other actors along the value chain.

Methodology

Data

The study used both qualitative and quantitative approaches, considering both the literature review and secondary data. The study uses data on sesame production, productivity, areal expansion, and export performance in both Africa and the rest of the

world, where Malawi trades. In the same manner, secondary data on production, productivity, area, and exports across the world were collected from the FAOSTAT database, focusing on annual trends of the stated variables.

Revealed Comparative Advantage (RCA)

The RCA index (Balassa, 1965) is a widely accepted indicator for measuring a country's relative export strength in a given product compared to global or regional averages. It is simple, data-driven, and allows benchmarking of Malawi's oilseed exports against SADC partners. Values of RCA>1 indicate that Malawi has a comparative advantage in oilseeds, suggesting competitiveness and potential for scaling up exports. RCA < 1 signals weak performance and the need for strategic upgrading. The Balassa index of RCA is defined as:

$$RCA_{c,p,t} = \frac{X_{c,p,t}/X_{T,c,t}}{X_{p,W,t}/X_{T,W,t}}$$

Where: $RCA_{c,p,t}$= Revealed Comparative Advantage index for the country c in product $p$at time t; $X_{c,p,t}$= exports of product $p$by country $c$at time t; $X_{T,c,t}$= total exports of all products by country c at time t; $X_{p,W,t}$= world exports of product $p$at time t; and $X_{T,W,t}$= total world exports of all products at time t.

Results and Discussion

Trends in production, productivity, and area

The analysis of sesame production trends from 2017 to 2023 reveals a clear and consistent upward trajectory in the area cultivated, total production, and yield levels. Over these seven years, the area under sesame cultivation more than doubled, increasing from 9,924 hectares in 2017 to 20,602 hectares in 2023. This represents a total increase of 107.6%, with an annual average growth rate of approximately 12.6%. The significant expansion in cultivated area indicates a growing interest and investment in sesame farming among both smallholder and commercial producers. This trend may be attributed to several factors, including rising domestic and international demand for sesame, favorable government and donor support, and increasing awareness of sesame's agronomic and economic value. The crop's tolerance to drought and suitability for diverse agroecological zones in Malawi may also have contributed to this expansion.

In parallel with the expansion of land under cultivation, total sesame production rose markedly, more than tripling from 2,721 tons in 2017 to 8,498 tons in 2023. This represents a growth of 212.3% over the period, with an average annual growth rate of 21.2%. The production trend closely mirrors the increase in area harvested, which suggests that land expansion has been a key driver of output growth. However, the fact that production growth significantly outpaces area growth also points to notable gains in productivity. This improvement in output is likely due to a combination of expanded

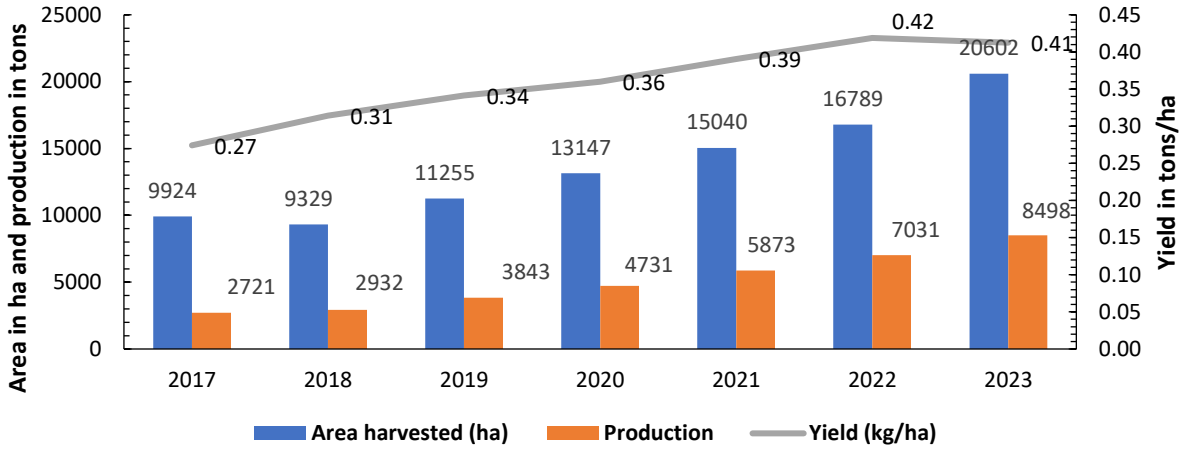
acreage, better access to production inputs, increased farmer knowledge through extension programs, and perhaps improved post-harvest management practices.

Encouragingly, sesame yield, a key indicator of productivity, improved steadily during the study period. Yields rose from 0.27 tons per hectare in 2017 to 0.42 tons per hectare in 2022, before experiencing a slight decline to 0.41 tons per hectare in 2023. This reflects a total increase of 51.9% over the seven years, translating to an average annual yield growth of 6.1%. The continuous yield improvement from 2017 to 2022 suggests that farmers are increasingly adopting good agronomic practices such as timely planting, appropriate spacing, and the use of improved seed varieties. The slight dip in yield in 2023 might be attributable to environmental shocks such as erratic rainfall, pest outbreaks, or input constraints, which underscores the vulnerability of productivity gains to climatic and market-related factors.

Despite this progress, it is worth noting that current yield levels remain below the potential productivity thresholds for sesame under optimal conditions, which often exceed 0.7 to 1.0 tons per hectare. This persistent yield gap signals the need for further investment in productivity-enhancing interventions. Key areas include the development and dissemination of high-yielding and drought-tolerant seed varieties, improved soil fertility management, mechanization of farm operations, and enhanced access to extension and advisory services. Additionally, strengthening farmer cooperatives and improving access to credit, inputs, and output markets could further accelerate yield growth.

In summary, the period between 2017 and 2023 witnessed remarkable and sustained growth in the sesame sub-sector (Figure 1). Cultivated area more than doubled, production more than tripled, and yields improved by over 50%, supported by both extensification and moderate intensification. While these trends reflect the sector's growing importance and potential, realizing greater productivity and value addition will require deliberate and sustained efforts. By bridging yield gaps, addressing market inefficiencies, and building resilience to climate risks, Malawi — or the context country — can unlock sesame's full potential as a strategic crop for income generation, export earnings, and rural transformation.

Figure 1. Trends for Area, Production, and Yield 2017 - 2023



Trends in Malawi's Sesame Exports (1997–2023)

Over the 27 years from 1997 to 2023, Malawi's sesame exports have transitioned from negligible levels to a steadily growing component of the country's agricultural trade. In the early years (1997–2007), exports were sparse and highly inconsistent, with only small volumes recorded. For instance, just 47 tons were exported to South Africa in 1997, and only 3 tons in 1998, split between South Africa and Zimbabwe. This initial period can be best described as a nascent phase of trade, likely characterized by informal or opportunistic exports with no strategic direction. However, from 2008 onwards, a modest revival is observable, with occasional shipments mainly to India, Mozambique, and South Africa. The year 2009 stands out within this transition, where Malawi exported 136 tons, suggesting a trial phase of formalizing sesame trade and possibly improved organization among smallholder producers and traders.

The period between 2014 and 2020 marks a clear acceleration in sesame exports. During these years, Malawi diversified its destination markets while significantly increasing its export volumes. Notably, exports to the United Arab Emirates (UAE) reached new heights, beginning with 361 tons in 2014 and growing to over 1,500 tons annually by 2020. Similarly, Türkiye and China (mainland) began featuring prominently as major importers. This expansion indicates a maturing value chain and growing international demand for Malawian sesame. By 2020, Malawi had exported a record 3,870 tons, with major shares going to China, Türkiye, and the UAE. Other emerging destinations included Tanzania, which accounted for 3,901 tons cumulatively over the period, positioning itself as both a consumer and a possible re-export hub within the region.

In the most recent years, from 2021 to 2023, Malawi's sesame exports have remained robust and continued to grow. The country exported 3,174 tons in 2021, followed by 3,072 tons in 2022, and a record high of 5,359 tons in 2023. This reflects the highest sustained levels of sesame exports in Malawi's history. By this stage, sesame had become a well-

established export crop, with high demand from the UAE (totalling 5,343 tons), Türkiye (2,854 tons), China mainland (3,940 tons), and Tanzania (3,901 tons). These four countries alone accounted for over 72% of all exports, underscoring the strategic importance of Middle Eastern and Asian markets for Malawi's sesame trade. India, while a historical importer, showed inconsistent volumes over the years, totaling only 215 tons. Similarly, minor one-off exports were recorded to countries like Japan, New Zealand, Viet Nam, and Zimbabwe, likely reflecting niche markets or trial shipments.

Market Diversification and Strategic Export Implications

The data highlight a significant evolution in Malawi's export geography. The country has moved from relying on neighboring regional markets such as South Africa and Mozambique in earlier years to establishing robust export relationships with Middle Eastern and Asian economies. This transition reflects increasing global demand for sesame, as well as improved capacity within Malawi to meet international quality and quantity requirements. The presence of Japan, Viet Nam, and New Zealand, albeit in smaller volumes, indicates Malawi's potential to penetrate high-end niche markets.

However, despite this positive trajectory, fluctuations in annual export volumes point to challenges within the sesame value chain (Figure 2). These include quality inconsistencies, limited access to storage and aggregation infrastructure, high post-harvest losses, and price volatility in global markets. Moreover, the country's heavy reliance on a few dominant markets may expose it to demand shocks or sudden shifts in trade policy from major importers. There is, therefore, a need for greater diversification and value addition to reduce vulnerability and enhance export resilience.

The shift in market destinations reveals an important trend: Malawi has moved away from depending solely on regional trade with neighboring countries like South Africa and Mozambique, toward establishing more stable and larger-scale export relationships with international markets. This could be attributed to factors such as improved production capacity, greater aggregation efforts by farmers and cooperatives, better market intelligence, and supportive trade facilitation via ports such as Nacala and Beira. Furthermore, entry into demanding markets like Türkiye and Japan suggests that Malawian sesame may increasingly meet international quality standards.

Despite these positive trends, the fluctuations in annual export volumes highlight the existence of some challenges. These may include quality inconsistencies, post-harvest losses, logistical bottlenecks, and price volatility, which remain common in underdeveloped value chains. Moreover, the strong reliance on a few key markets could pose risks in the event of sudden demand shifts or trade policy changes. To sustain and expand its export potential, Malawi will need to invest in upgrading the sesame value chain, including better agronomic support, post-harvest processing, certification systems, and targeted trade promotion efforts.

The growth trajectory of Malawi's sesame exports reflects a significant transformation from an underutilized crop to a viable commercial commodity with global relevance. The

export patterns demonstrate an increasing alignment with global demand trends, particularly from Middle Eastern and Asian markets. With appropriate policy support, infrastructure development, and private sector engagement, sesame has the potential to become one of Malawi's flagship export crops, contributing to rural livelihoods, foreign exchange earnings, and the broader goals of agricultural diversification and industrialization under the Malawi 2063 vision.

Figure 2. Trends in sesame exports from Malawi to the rest of the world

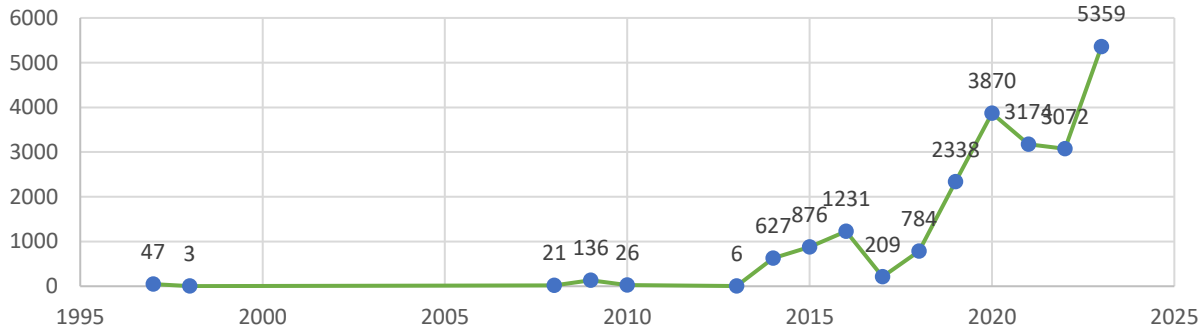


Table 1. Summary of Key Sesame Market Destinations and their Roles (1997–2023) from Malawi

Country	Total Export (tons)	Role
United Arab Emirates (UAE)	5,343	Dominant importer; consistent and growing demand since 2014
China (mainland)	3,940	Rapidly growing importer, especially strong from 2018 onwards
Tanzania	3,901	Major regional partner; likely re-exports or regional hub function
Türkiye	2,854	High-value buyer; surged significantly between 2020 and 2023
Mozambique	4,565	Significant trading partner post-2015; may serve as a regional conduit
India	215	Periodic importer with moderate peaks in select years (e.g., 2008, 2022)
Kenya	456	Notable recipient in 2014 and 2022; possible processor or re-exporter
South Africa	170	Early destination, especially pre-2014; declined in recent years
Japan	64	Niche but high-value market; one-off shipment in 2023
Viet Nam	120	Occasional buyer; may reflect testing or regional trading

New Zealand	5	Very small-scale, likely testing market or specialty buyer
Zimbabwe	1	Minor historical partner, only active in the late 1990s
China, Hong Kong SAR	572	Significant shipment in 2015–2016; possibly transshipment route

Source: FAOSTAT 2025

Revealed Comparative Advantage

The analysis of Malawi's revealed comparative advantage (RCA) for the sesame value chain demonstrates marked variation in competitiveness across export destinations (Figure 3). The RCA index, which measures the relative export performance of a commodity against global trade patterns, provides an indication of where a country holds a comparative advantage. An RCA value greater than one suggests that a product is more strongly represented in a country's export basket than in world trade, implying specialization and competitiveness in that commodity. The results presented in Figure 1 reveal that Malawi's sesame exports are highly concentrated in a few regional and Middle Eastern markets, while competitiveness remains weak in Asian and developed economies.

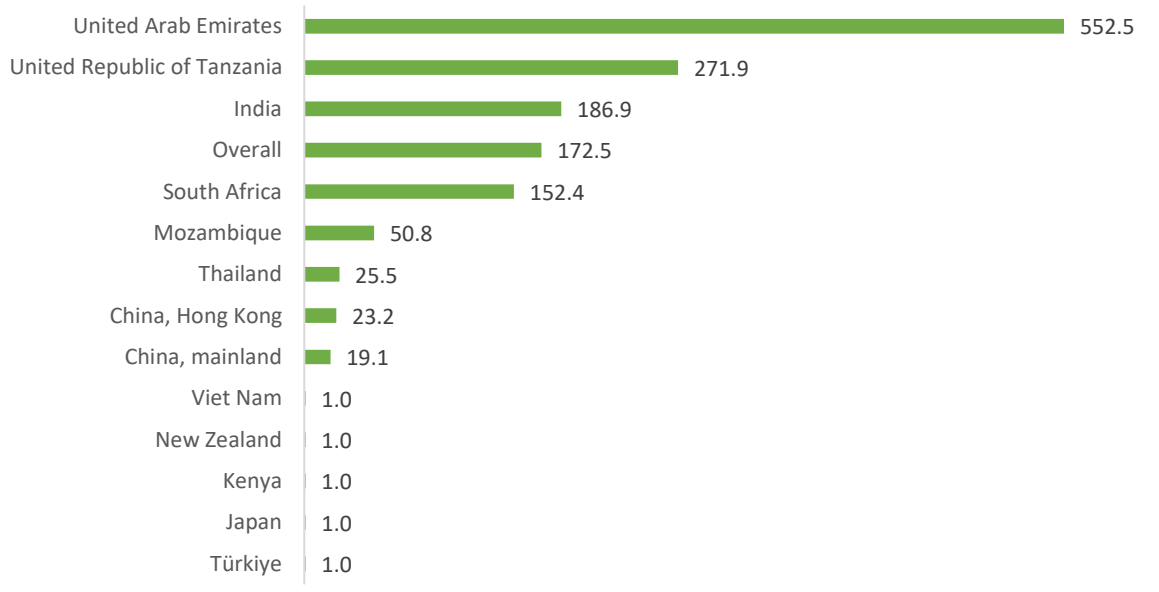
Malawi exhibits an exceptionally strong comparative advantage in exports of sesame to the United Arab Emirates (RCA = 552.5) and the United Republic of Tanzania (RCA = 271.9). These high values indicate that Malawi is highly specialized and competitive in these markets. The UAE serves as a major global re-export hub for oilseeds, and demand for sesame is driven by processing industries that produce tahini, confectionery products, and sesame oil. Malawi's strength in this market reflects its ability to supply high-quality white sesame varieties and to benefit from relatively low domestic production costs. Similarly, the strong RCA with Tanzania highlights the importance of regional market integration within the SADC and COMESA regions, facilitated by geographic proximity and established trade corridors such as the Mtwara Development Corridor. These patterns suggest that regional trade remains a critical pathway for smallholder sesame producers to access lucrative export opportunities.

Moderate levels of competitiveness are observed in emerging Asian and African markets, notably India (RCA = 186.9), South Africa (RCA = 152.4), and Mozambique (RCA = 50.8). India ranks among the world's largest importers and processors of sesame, and Malawi's comparative advantage in this market underscores its growing participation in global oilseed trade. However, the moderate RCA values also suggest that Malawi's exports remain less diversified and smaller in scale relative to leading suppliers such as Ethiopia, Sudan, and Nigeria. In South Africa and Mozambique, Malawi's sesame exports likely benefit from re-export trade and niche demand for natural sesame oil and food products. To consolidate these gains, policy interventions should focus on reducing transaction costs, improving quality standards, and expanding bilateral trade agreements that enhance access to regional processing industries.

Conversely, Malawi's competitiveness remains weak in major Asian and developed markets such as Thailand (RCA = 25.5), China (mainland = 19.1; Hong Kong = 23.2), Japan, New Zealand, Viet Nam, and Türkiye (all with RCA values near 1). These low indices reflect limited penetration into global value chains and stringent import requirements that restrict entry into higher-value markets. The underperformance in these destinations can be attributed to several structural constraints, including inconsistent supply volumes, high transport and logistics costs, and inadequate compliance with sanitary and phytosanitary standards. Expanding Malawi's sesame trade into these markets would require targeted investments in certification, traceability, and branding to meet the preferences of international buyers seeking organic and sustainably produced sesame products.

At an aggregate level, the overall RCA of 172.5 confirms that Malawi holds a strong revealed comparative advantage in sesame exports. This finding indicates that sesame production remains one of Malawi's most competitive agricultural enterprises, driven by smallholder participation and favorable agro-ecological conditions. However, the concentration of exports in a narrow set of destinations exposes the country to market vulnerability. A disruption in demand from key partners such as the UAE or Tanzania could significantly affect export earnings. To mitigate such risks, Malawi should pursue market diversification by exploring trade agreements within the African Continental Free Trade Area (AfCFTA) and by improving compliance with international quality and safety standards.

Figure 3. Revealed Caomparative Advantage for Sesame value chain



Implications of Raw Sesame Exports Without Value Addition in Malawi

Malawi's sesame exports over the past two decades have grown significantly, reaching over 5,000 metric tons annually in recent years. However, a key limitation in the current export structure is the overwhelming dominance of raw, unprocessed sesame exports. Despite increasing global demand for sesame-derived products, particularly cold-pressed sesame oil, tahini, and sesame-based condiments, Malawi remains largely absent from these higher-value segments of the market. This pattern reflects a missed opportunity for domestic value addition, industrial development, and job creation. In essence, Malawi is exporting both agricultural wealth and industrial potential to countries that further process sesame into high-value products, many of which are ironically re-imported at much higher prices.

The lack of processing infrastructure, investment in agro-industrial capabilities, and supportive policy mechanisms constrains the sector's contribution to economic transformation. For example, the country continues to import expensive edible oils, including sesame oil and blended cooking oils, some of which are produced from raw sesame exported from Malawi itself. This situation highlights a structural trade imbalance and undermines food sovereignty and agro-processing development. Studies such as Mather and Jayne (2015) and UNECA (2021) have documented similar patterns across Africa, where primary agricultural exports dominate, while value addition remains limited, contributing to persistent trade deficits and limited manufacturing growth.

Globally, sesame oil is a premium product, retailing at prices several times higher than raw seed on a per-unit basis. It is widely used in pharmaceuticals, cosmetics, gourmet food products, and the health food industry. According to FAO (2019), sesame oil exports globally are worth 3–5 times more than equivalent quantities of raw sesame. This premium reflects the higher returns available to countries that invest in agro-processing, packaging, branding, and export certification. For Malawi, the inability to capture this added value means the country is effectively subsidizing industrial jobs in Türkiye, India, and the UAE, which currently dominate global sesame processing and re-export.

Moreover, this export structure has implications for employment and inclusive growth. Sesame is primarily grown by smallholder farmers, many of whom remain vulnerable to low farm-gate prices due to the lack of competitive buyers and limited domestic processing demand. Malawi perpetuates a cycle where farmers are price takers in volatile global markets by failing to develop a domestic processing industry. In contrast, countries such as Ethiopia and Nigeria have begun investing in domestic oil pressing and semi-refining facilities, intending to enhance rural incomes, reduce edible oil imports, and expand agro-industrial exports.

From a policy standpoint, Malawi's heavy reliance on raw sesame exports also conflicts with key aspirations of Malawi 2063, particularly the pillars of industrialization, import substitution, and private sector-led growth. The National Export Strategy II and the National Agriculture Investment Plan (NAIP) both highlight the need to upgrade export

crops through value addition, yet practical implementation remains limited for sesame. Without deliberate interventions, such as incentives for domestic oil milling, public-private partnerships for processing clusters, and improved storage and quality grading systems, the country risks locking itself into a low-return, raw-material trap.

While the growth in sesame exports represents a positive trend for Malawi's trade and smallholder market integration, the lack of value addition significantly limits the sector's transformative potential. By exporting raw sesame and importing expensive processed oils and condiments, Malawi experiences both an economic leakage and a strategic development gap. To reverse this, coordinated investments in agro-processing infrastructure, enterprise development, and trade facilitation are essential. This would not only create jobs and raise farmer incomes but also enhance Malawi's trade competitiveness and food system resilience.

Export value and price analysis

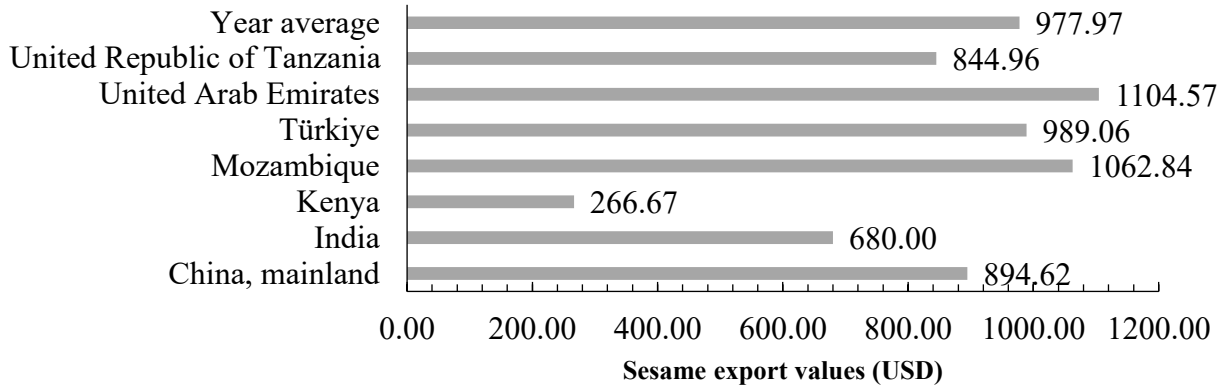
The horizontal bar chart presents the export values per ton of sesame from Malawi by market destination over the period 2018 to 2023, offering insight into price differentials across international buyers and highlighting where Malawi receives the highest returns for its sesame exports (Figure 4).

Across all markets, the average export price per ton over the period was USD 977.97. Several countries imported sesame from Malawi at prices above this average, while others imported at significantly lower rates. The United Arab Emirates (UAE) offered the highest price, averaging USD 1,104.57 per ton, which is nearly 13% higher than the overall average. This suggests a premium market, possibly due to demand for quality sesame or strong trade agreements. Following closely is Mozambique, with an average price of USD 1,062.84 per ton, about 8.7% above the overall average, indicating robust intra-regional trade relations and possibly lower logistical costs enhancing competitiveness.

Türkiye also imported Malawian sesame at a relatively high price, averaging USD 989.06 per ton, which is slightly 1.1% above the overall average, reflecting stable trade value. On the other hand, China (mainland) offered USD 894.62 per ton, which is 8.5% below the average, while the United Republic of Tanzania offered USD 844.96, or 13.6% lower than the average, pointing to relatively less favorable pricing structures in these regional and Asian markets.

Meanwhile, India imported sesame at USD 680.00 per ton, which is 30.5% lower than the average, suggesting a price-sensitive market or bulk low-value trade arrangements. Kenya recorded the lowest price, with only USD 266.67 per ton, representing a staggering 72.7% below the overall average. This extremely low unit value may imply unprocessed or low-quality sesame trade, informal trade flows, or weak negotiation margins in that bilateral exchange.

Figure 4. Sesame export values (USD) per ton by market destination from 2018 to 2023



Source: Authors Calculations based on FAOSTA data

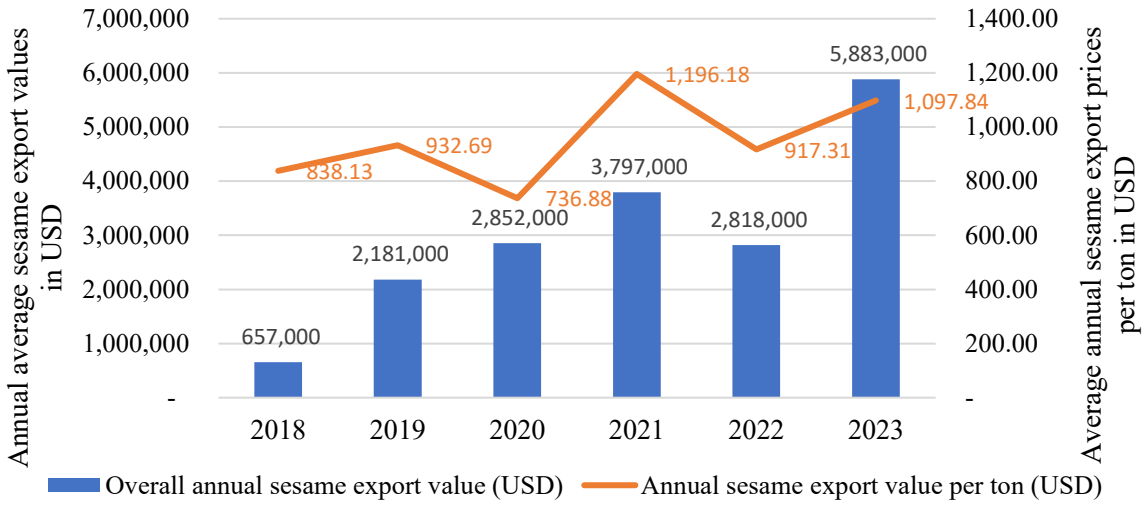
The chart (Figure 5) presents Malawi's annual sesame export values and average export prices per ton from 2018 to 2023, showing trends in the country's participation in the global sesame market. Both export values and prices have experienced fluctuations, reflecting changes in production volumes, market access, and global price dynamics. From 2018 to 2019, Malawi's sesame export value increased from USD 657,000 to USD 2,181,000, representing a remarkable 232% growth. This sharp rise suggests a major boost in either sesame production, aggregation efforts, or market expansion. In 2020, the export value continued to rise to USD 2,852,000, marking a 30.8% increase from the previous year. In 2021, export values grew further to USD 3,797,000, translating to a 33.1% increase. However, in 2022, there was a drop of 25.8%, as the value fell to USD 2,818,000, possibly due to supply constraints, logistical issues, and declining demand. By 2023, export performance rebounded significantly to USD 5,883,000, reflecting a 108.8% increase compared to 2022 and marking the highest export value in the period under review.

The export price per ton of sesame followed a more variable trend. Between 2018 and 2019, the average export price increased from USD 838.13 to USD 932.69, an 11.3% rise. However, in 2020, the price dropped sharply to USD 736.88, representing a 21% decline, despite a simultaneous increase in export value, indicating that larger volumes may have been exported at lower prices. In 2021, the price surged to USD 1,196.18, showing a strong 62.3% increase, which may reflect improved market access, product quality, or favorable international prices. This peak was followed by a decline in 2022 to USD 917.31, a 23.3% drop. Yet again, in 2023, the price rose to USD 1,097.84, which is a 19.7% increase from the previous year.

Generally, the results shows that export growth over the six-year period, with sesame export values increasing by nearly 796% from 2018 to 2023. The average price per ton also rose by 31% during the same period. While the export values generally show an

upward trend, the fluctuations in price suggest exposure to external market shocks or varying production quality. The significant jump in both export value and price in 2023 highlights a particularly successful year for Malawi's sesame trade, suggesting improved competitiveness or favorable global market conditions.

Figure 5. Overall annual sesame export value



Conclusion and Policy Implications

The analysis of sesame production and trade dynamics in Malawi from 2017 to 2023 highlights a significant transformation in the crop's economic relevance, both domestically and in international markets. The period witnessed a remarkable expansion in area under cultivation, a more than threefold increase in total production, and consistent improvements in yield, pointing to enhanced farmer participation, increased investment, and gradual gains in productivity. These positive developments underscore sesame's growing attractiveness as a commercial crop, supported by its adaptability to Malawi's agroecological conditions and increasing market opportunities.

Equally important is the evolution of Malawi's sesame export landscape, which has shifted from erratic and informal trade in the late 1990s to a more structured and diversified export regime. The emergence of high-demand markets in the Middle East and Asia,such as the UAE, Türkiye, China, and Tanzania, has provided Malawian producers with new, premium destinations for their output. The consistent upward trend in export volumes, coupled with a notable rebound in export values and average unit prices in 2023, illustrates the crop's rising competitiveness and global demand.

However, the analysis also reveals persistent limitations, chief among them the heavy reliance on raw sesame exports with limited domestic value addition. Despite the high

potential for industrial upgrading through oil extraction, sesame-based food products, and cosmetics, Malawi continues to export primary sesame while importing processed alternatives. This practice not only constrains economic returns but also undermines the goals of agricultural transformation, industrialization, and inclusive wealth creation outlined in Malawi 2063 and related policy frameworks. The disparities in export prices across markets further underscore the importance of quality differentiation, product branding, and strategic trade relationships. While premium markets such as the UAE and Türkiye offer prices above the average, other destinations like Kenya and India provide significantly lower returns, likely due to quality differences or informal trade mechanisms.

To unlock the full potential of the sesame value chain, targeted interventions are necessary. First, investment in value addition infrastructure, including oil extraction and processing plants, should be prioritized to move Malawi up the sesame value chain. Second, research and development should focus on high-yielding and drought-tolerant sesame varieties, while strengthening extension services to disseminate improved agronomic practices. Third, market access and trade facilitation should be enhanced through quality grading systems, export certification, and better port logistics. Finally, supportive policies and incentives are needed to attract private sector investment and build agro-industrial clusters around sesame production. With coordinated efforts across public and private sectors, sesame has the potential to become a flagship export commodity, contributing meaningfully to inclusive rural development, foreign exchange generation, and the broader goals of Malawi 2063.

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