FEASIBILITY STUDY

SEPTEMBER 2, 2024

RESEARCHED BY VIRANSH THE FINE- TUNE SOLUTION

Study for Tanzania oil industry

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Chapter 1: Snapshot/ Executive Summary

Name of company: Project NALA undertaken by ABC("CVL")

Nature and Concept of Business:

Main Value Chain: Multi Seed Edible Oil Upscale Project

Incidental Value Chain: Laundry Soap, Detergent Powder, Animal Feed Production, Acid oil, Liquid Lecithin, pharma grade Glycerin

Capacity of operating plant:

Particulars	Capacity
Oil mill and seed preparatory	500 TPD
Solvent extraction plant	400 TPD
Continuous refinery for Sunflower, CPO Palm, and soyabean	200 TPD
Animal feed production	400 TPD
Acid oil plant	10 TPD
Liquid lecithin plant	10TPD
Laundry soap plant which will be based on by-products from refinery	4 MT/ HR
Spray dry detergent powder plant	4 MT/ HR
Pharma grade glycerine plant (Splitting)	2 MT/ HR
Oil filling station and packing section	200 TPD

Company Overview: CVL is presently carrying manufacture and distribution of Refined Sunflower Oil having annual production capacity of 30TPD. The existing facility is strategically located within Dodoma city and its proximity to all those regions which are prominent in Sunflower cultivation.

CVL is 100% subsidiary of MAC Group Ltd, a well-established group that has diversified its business into different business sectors, like: Financial, Manufacturing, Agriculture, Mining and Real estate. For more information, please visit: www.mactz.co.tz

Project Highlights:

Proposed location of plant: Plot no: 1105, 1106, 1107, 1108, Nala industrial estate, Dodoma, Tanzania	**Project cost:** USD 64.02 Millions
Sources of fund: 15% equity and 85% debt	**Raw Material Requirement**: SF seed/Cake, Soyabean Seed, Cotton Seed, CPO, & Others
Fuel Supply & Source: Coal, Diesel (Locally sourced)	**Water Supply & Source:** Borewell & DUWASA
Total Power Requirement: Installed Power 4400 KW	**Project timeline:** Turnkey EPC 24 months

Business Goals, values and Vision:

Quality Product: To ensure manufacture of edible oils that meet all quality standards and accomplish customer satisfaction.

Sustainability: Reducing environmental effect by using sustainable techniques in raw material procurement and production procedures.

Market Expansion: Growing market share and reaching new geographies regions to broaden consumer base.

Innovation: Continues & tireless research and development to improve quality and introduce new products.

Customer satisfaction: To keep customers happy by providing them with consistently high-quality products and service.

Profitability: Improving profitability by volume growth, pricing strategy, and cost efficiencies.

Mission Statement:

To generate value for our stakeholders by producing and marketing of multi-seed edible oils in sustainable manner and always checking the quality of our products.

Vision Statement:

To become the internationally recognized producer and distributor of multi-seed edible oils cost-effectively by investing in a new technology and following the highest quality-control guidelines.

Product Description and Differentiation:

The Company Shall manufacture edible oil mainly using sunflower, soyabean seeds and crude palm oil as the primary raw materials.

The company wish to stand out in the well-established market of Tanzania and East Africa's edible oil manufacturing and distribution by adopting under mentioned strategies:

Quality Differentiation:

- Product Performance: The edible oil will provide superior taste, nutritional value, and cooking performance.
- Conformance: The Company will adhere to high-quality standards and certifications (e.g., ISO, GMP, HACCP/HALAL, FSSAI certifications).
- Reliability: It will consistently deliver high-quality products to build trust with consumers.

Design Differentiation:

- Aesthetics: It will use eye-catching packaging designs that shall appeal to the target market.
- Functionality: Keeping the customer convenance in mind, it will provide packaging options like easy-pour spouts or resealable containers.
- Ergonomics: The output volume will be designed in such a way that will ease to handle and store the entire production line.

Price Differentiation:

- Pricing: To position the product in the market, it will offer unique benefits with competitive pricing.
- Value Pricing: It will offer right value for money for quality products to attract cost-conscious consumers.

Branding and Marketing:

- Storytelling: The company will share the story behind the brand, such as sourcing from sustainable farms or traditional extraction methods.
- Health Benefits: It will also highlight the health benefits that the product will offer such as being rich in omega-3 fatty acids, additional Vitamins, and free from trans fats & cholesterol.

Innovation:

- Sustainability: It will focus on eco-friendly practices and packaging to attract environmentally conscious consumers.

Target Market:

The company is poised to capture the East African and SADC market. After a successful product launch in Tanzania, it will expand its reach to the global market, offering products at premium prices. The company plans to engage distributors and wholesalers for effective product distribution.

KEY PERSONNEL:

It includes the following personnel

Chapter 2: Introduction

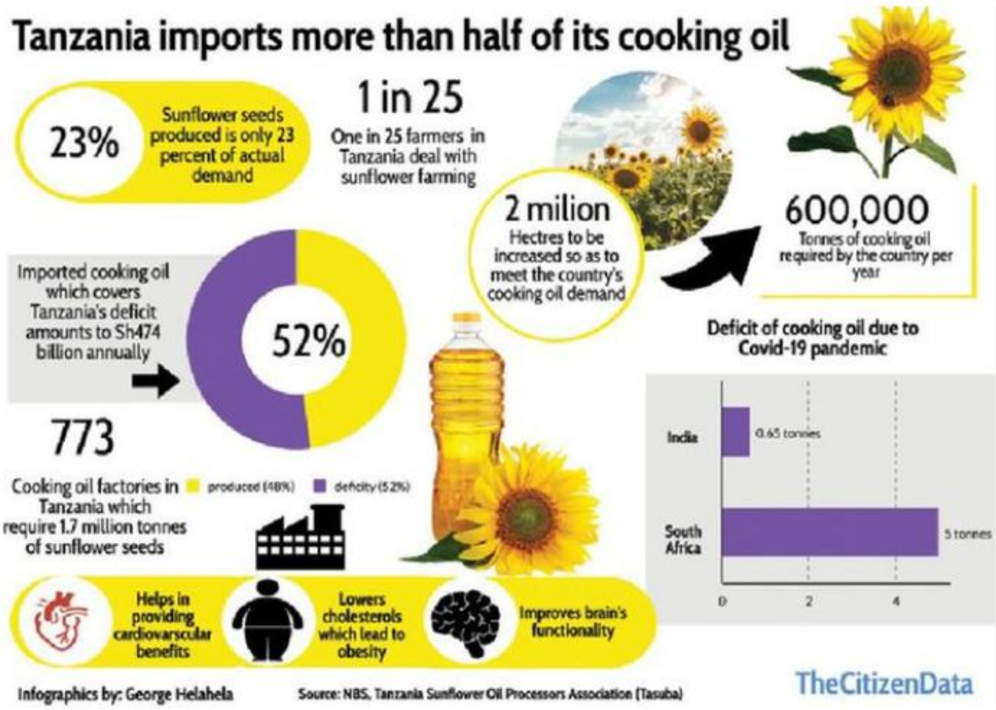
Brief Description of the Proposed Project: The company has come forward to expand its production capacity by setting up up a Multi seed edible oil manufacturing plant in Dodoma, Tanzania. It will process raw materials like seeds of various kinds such as sunflowers, soyabean etc. after considering the consumer preferences, market needs and potential market gaps.

It will set-up its integrated manufacturing plant in 30 acres of earmarked project site located in Dodoma, Tanzania. The project site is located very close to the Dodoma - Singida national highway, which is the key corridor of sunflower seed sourcing.

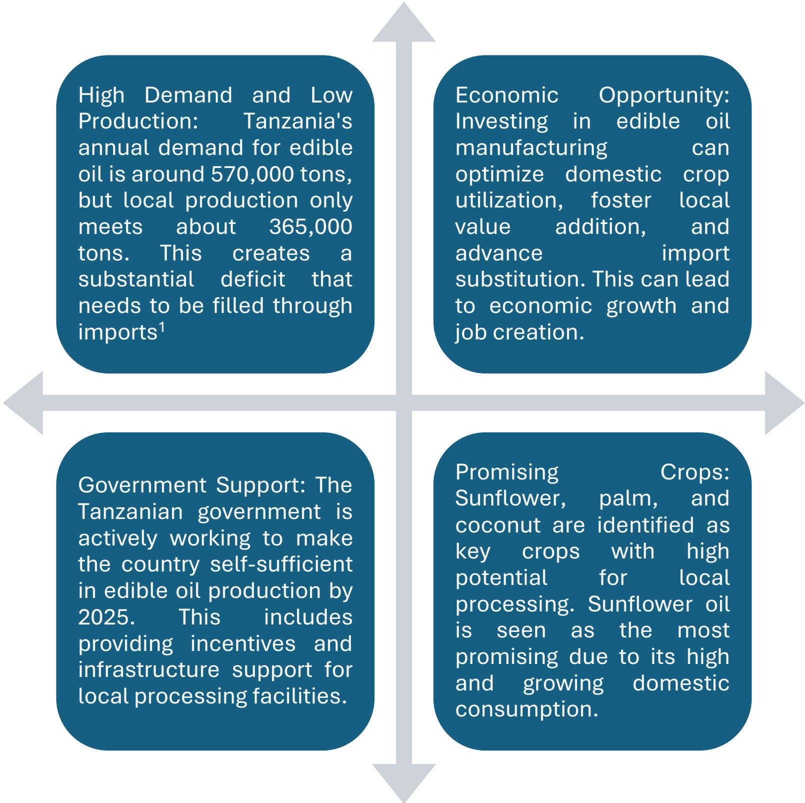
As the primary product is manufactured, the by-products generated will be effectively utilized to produce glycerine, detergents, and animal feed.

Need for the Project and its importance to the Region

Tanzania is facing a huge deficit in the production of edible oil. The country depends on importation to meet the growing demand of consumable oil. For the fiscal year ending in July 2023, the import bill for edible oil was approximately USD 170.4 million[3].The East African nation imports 55.4 percent of its total edible oil requirements despite having a vast and promising production potential in sunflower palm oil and sub-sectors[1].



The need for edible oil manufacturing in Tanzania is significant due to several factors:



Conclusion:

The commissioning of this project shall benefit the community in multiple ways.

SOCIAL IMPACT

Setting up an edible oil business can be a transformative initiative with far-reaching benefits for key social groups, particularly farmers, women, and youth. This business has a multi-layered impact, offering opportunities across the agricultural, manufacturing, and distribution value chains. Here's how it supports these groups:

1. Empowering Farmers

- Income Diversification and Stability: Higher Value for Crops: Farmers growing oilseeds like sunflower, Soyabean, Cotton or any other can benefit from selling their crops at better prices by being part of the value chain.
- Market Access: Through contract farming or cooperative models tied to edible oil businesses, farmers can secure better market access, reducing their dependency on middlemen.
- Crop Rotation and Sustainability: Multi-seed farming enables crop rotation, which improves soil health and yields, leading to more sustainable agricultural practices.

- Capacity Building:Skill Development: Farmers can receive training on better cultivation practices for oilseeds, improving yield and quality.
- Technology Access: With support from the edible oil industry, farmers can adopt modern farming equipment and techniques, such as organic farming or improved technology
-

2. Women Empowerment

- Entrepreneurship and Job Creation: Business Ownership: Women can own and operate small-to medium-scale oil processing units, creating income-generating opportunities. This includes roles in sourcing, processing, packaging, and marketing.

- Employment Opportunities: Women can be employed in various stages of the edible oil business, from working in oil mills to handling quality control and sales.
- Access to Finance and Training: Many women entrepreneurs face financial barriers. With targeted microfinance programs and training on business management, women can enter and succeed in the edible oil industry.
- Leadership and Social Empowerment: Community Impact: Women-led businesses tend to reinvest profits into their communities, improving education, healthcare, and nutrition.
- Breaking Gender Norms: Engaging women in this industry can challenge traditional gender roles, promoting gender equality and increased participation in decision-making within families and communities.

3. Youth Empowerment

- Entrepreneurship and Innovation: Start-ups and New Ventures: Youth can leverage their energy and creativity to set up supportive businesses to industry by helping them in product distribution, advertising for sales & marketing, IT and many other value-added business services
- Tech Integration: Young entrepreneurs can innovate by adopting digital marketing, e-commerce, and automation tools to streamline operations and increase business efficiency.
- Job Creation: Edible businesses can generate employment opportunities for other young people in areas like farming, production, logistics, and marketing.

- Skill Development and Future Growth: Training and Education: Setting up support business provides a platform for youth to gain valuable skills in agribusiness, processing technologies, and entrepreneurship.
- Sustainability Focus: With growing awareness of environmental issues, youth can drive sustainability by promoting eco-friendly practices like organic farming and waste reduction, making their businesses more future-ready.

4. Environmental Sustainability

Environmental sustainability in the edible oil industry is crucial to address its significant impacts, such as deforestation, water usage, and greenhouse gas emissions. Key strategies for improving sustainability include:

- Land Use and Deforestation: Adopt sustainable certification schemes (e.g., RSPO), use degraded lands, and promote agroforestry to reduce deforestation and habitat loss.
- Water and Pollution: Implement water recycling, wastewater treatment, and efficient water use to minimize environmental damage.
- Greenhouse Gas Emissions: Reduce emissions by preserving carbon-rich ecosystems, capturing methane from waste, and improving energy efficiency.
- Waste Management: Promote circular economy practices by repurposing waste into bioenergy or fertilizers, and enhancing composting efforts.
- Biodiversity Protection: Protect high conservation value areas and establish wildlife corridors to maintain biodiversity.
- Certification and Consumer Awareness: Encourage the use of certified sustainable oils (RSPO, RTRS), and improve traceability to ensure responsible sourcing.
- Labor and Social Practices: Ensure fair labor standards and community engagement to foster social sustainability.

5. Local Employment Generation

Edible oil manufacturing, particularly sunflower oil, has significant potential for employment generation in Tanzania. The sector is a priority for the Tanzanian government, aiming to reduce dependency on imports and boost local production. Tanzania is the forth largest sunflower seed producer in the world.

In 2023, Tanzania's edible oil manufacturing sector has shown significant potential for employment generation. The government and stakeholders have been working on several initiatives to boost domestic production and reduce reliance on imports.

Key Points:

Conclusion:

An edible oil business setup can create a positive ripple effect across rural and urban communities by empowering farmers, women, and youth. For farmers, it offers a stable and profitable market for their oilseeds and supports sustainable farming. Women benefit from economic independence, leadership opportunities, and the breaking of gender barriers. Youth gain avenues for entrepreneurship, innovation, and job creation. With the right support access to finance, training, and infrastructure these groups can thrive, contributing to overall economic development and social empowerment.

By integrating these practices, the edible oil industry can reduce its environmental footprint while supporting long-term ecological and economic sustainability.

Description of the Edible Oil Industry in Tanzania

The edible oil industry in Tanzania has been experiencing steady growth and development. Since 2019, the country's edible oils supply has seen a modest yearly increase of 0.4%. In the global ranking for 2023, Tanzania holds the 49th position. Tanzania's edible oils production is projected to reach approximately 391,000 metric tons by 2028, up from an estimated 380,000 metric tons in 2023. This reflects an average annual growth rate of 0.5%[4].

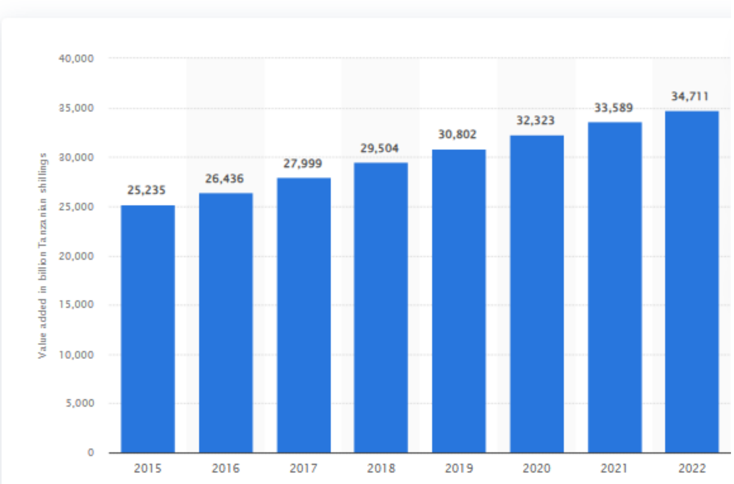
Revenue in the Edible Oils market of Tanzania amounts to US$318.50m in 2024. The market is expected to grow annually by 9.87% (CAGR 2024-2029)[5].

Agriculture Statistics

Agriculture is the major backbone of the country's economy. Hence, structural measures are taken to boost agricultural production in the country with the support of public-private partnerships. The Agriculture in Tanzania Market size is estimated at USD 17.44 billion in 2024, and is expected to reach USD 22.93 billion by 2029, growing at a CAGR of 5.63% during the forecast period (2024-2029)[6].

Also, Agriculture contributed roughly 33.3 trillion Tanzanian shillings (TZS), around 13.13 billion U.S. dollars, to Tanzania's Gross Domestic Product (GDP) in 2023. Compared to the previous year, the sector's value increased slightly by 3.3 percent[7].

(in billion Tanzanian shillings)



Tanzania is on the path towards agricultural transformation, with increased use of modern inputs, labor productivity and crop production, deepening of linkages between farm sector and urban markets, and high surplus production of food crops.

Chapter 3: Market study

East African Market Outlook

- **Regional Market Analysis**

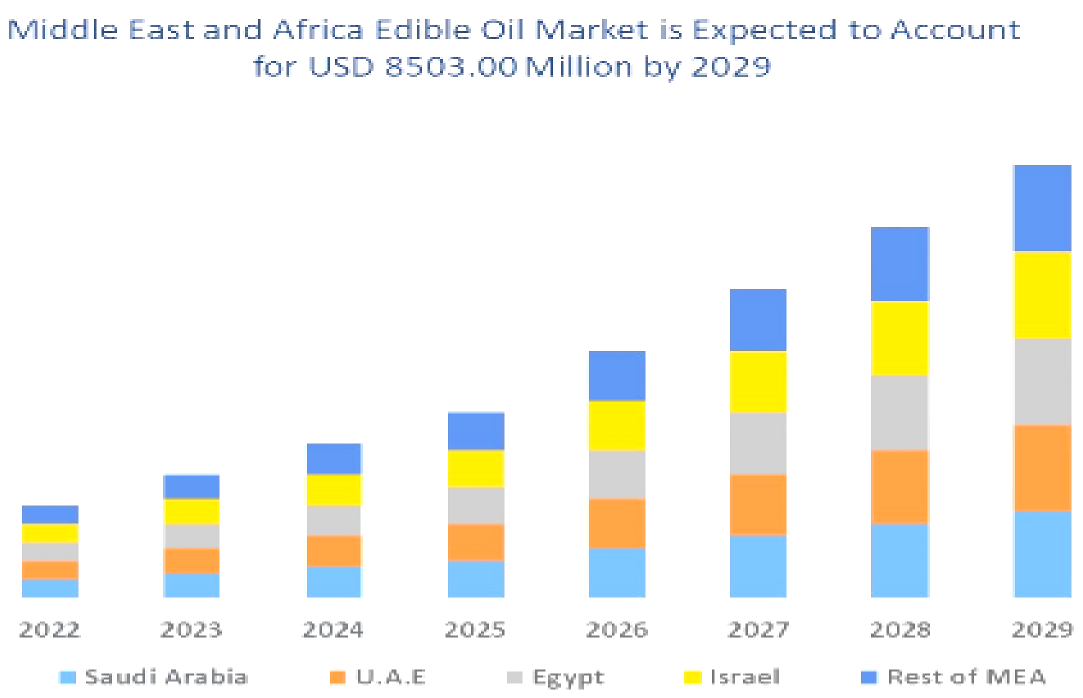
The market for edible oils in the Middle East and Africa is expanding significantly, driven by factors such as an expanding population, shifting lifestyles, greater health consciousness, and rising demand for convenience meals. Government policies and activities aimed at promoting healthy eating and limiting the use of harmful cooking oils also have an impact on the market.

The market for edible oils in the Middle East and Africa is predicted to grow favourably because of rising oilseed production. Growing oilseed crops, especially canola, sunflower, and soybeans, is becoming more common in the area.

Revenue in the Edible Oils market amounts to US$11.95bn in 2024. The market is expected to grow annually by 10.20% (CAGR 2024-2029)[8].

DRIVERS OF THE MARKET

- Market Value and Growth: The edible fats and oils sector in East Africa is part of a larger food and beverage industry valued at around USD 2 billion. The market is expected to grow at a compound annual growth rate (CAGR) of 4.4% by 2024[9].
- Local Production: Domestic players dominate the market due to their proximity and ability to meet consumer demand quickly and at competitive prices. This local advantage will help prospective start-ups to acquire a strong market presence.
- Sustainability and Innovation: There is a growing emphasis on sustainability in packaging and production. Companies are investing in innovative packaging solutions to reduce costs and improve efficiency.
- Regulatory Environment: The East African Community (EAC) is working towards adopting harmonized standards for edible oils, which will help streamline regulations and improve market access.
- Future Projections: The Middle East and Africa edible oil market is projected to grow significantly, with an estimated value of USD 8,503 million by 2029, growing at a CAGR of 7.40%[10].



- **Consumption trends in East Africa**

The consumption of edible oils in East Africa is experiencing notable growth. Here are some key trends:

1. Health Consciousness: There is an increasing shift towards healthier lifestyles, which is influencing the demand for healthier edible oil options. Consumers are becoming more aware of the health benefits associated with different types of oils.

2. Population and Lifestyle Changes: The expanding population and changing lifestyles are driving the demand for convenience foods, which in turn boosts the consumption of edible oils.

3. Oilseed Production: The region is seeing a rise in the production of oilseed crops such as canola, sunflower, and soybeans, which supports the local edible oil industry.

- ### Major Players in the Market and Market Shares

Bidco Oil and Soap Ltd: Bidco Africa is East Africa's leading manufacturer of Fast-Moving Consumer Goods (FMCG). Started in 1985 as a soap manufacturing plant in Nairobi, Bidco has continuously grown over the years to be the home of some of East Africa's most loved brands across the edible oils & fats, Hygiene and Personal care and most recently Food and Beverage brands.

Market share: They commanded about 60% of the cooking fat market and 54% of the cooking oil market[11].

Menengai Oil Refineries Ltd.: Menengai is one of the leading providers for quality home care products in East Africa; inclusive of cooking oil, fats, soaps, detergents, baking powder and skin care products.

MeTL Group: MeTL Group's subsidiary, East Coast Oils and Fats is a state-of-the-art facility composed of a refinery, a dry-fractionation plant, and soap, cooking fat, and margarine manufacturing units. It is the largest plant of its kind on the African continent and boasts an installed production capacity of over 750,000 metric tons per annum.

Market share**:** MeTL Group, through East Coast Oils and Fats, boasts 60% of the total market share in edible oil sales from the plant's 45,000 metric tons production monthly[12].

Mikoani edible oils and detergents: In 2006, the Azania group came together to build what is Tanzania's most iconic manufacturer of edible oil and soaps company, fondly known as "MIKOANI EDIBLE OILS DETERGENTS". It is now one of the largest manufacturers of high-quality edible vegetable oils and fats, laundry and dish soaps in the African continent.

Mt. Meru: Meru is a business conglomerate in Africa, headquartered in Dubai, UAE, with operations in the Downstream Petroleum Business, Manufacturing of Edible Oils, LPG, Lubricants, Infrastructure (Real Estate), and Logistics.

Market share: Their edible oil division, Mount Meru Millers, is particularly prominent in Zambia, where they hold about 45% of the market share for edible oils[28].

Wilmar: Wilmar International Limited, founded in 1991 and headquartered in Singapore, is today Asia's leading agribusiness group. Wilmar is ranked amongst the largest listed companies by market capitalization on the Singapore Exchange.

Prevailing output prices and outlook

Particulars	Prevailing retail price range
Sunflower oil	US$2.7 – US$3.35 per kg
Soyabean oil	US$3.04 – US$3.21 per kg
Palm oil	US$1.64 – US$2 per kg

Future outlook:

In the Middle East and Africa, the market for edible oils is rapidly growing. The market is impacted by government initiatives and legislation that support a healthy diet and discourage the use of dangerous cooking oils. Additionally, technical improvements have led to the development of novel processing techniques and methods for producing edible oils that are healthier and more sustainable. Due to increased oilseed production, the Middle East and Africa's edible oil market is expected to rise favourably. Growing oilseed crops is growing more popular in the region, particularly canola, sunflower, and soybeans.

Demand

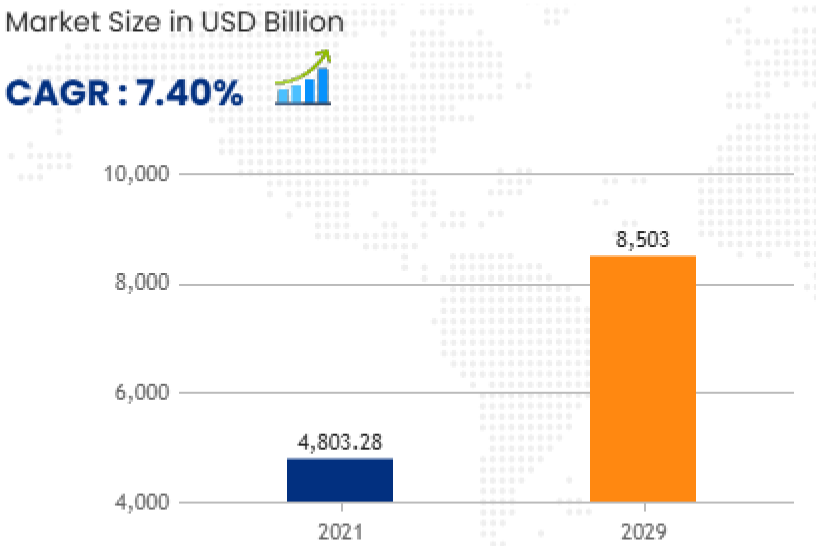
Country Wise Historic & Current Demand of OUTPUTS for the target countries

Historic demand for edible oil

The region primarily relied on imports to meet its edible oil needs due to limited local production capacity. Countries like Tanzania and Uganda faced significant supply gaps, often importing large quantities of edible oils from countries like Malaysia, India, and Indonesia. Shortage of edible oil has pushed retail prices from $1.3 to $2.8 per litre[13].

The Ministry of Agriculture increased the allocation for extension services to $5 million in the 2021/2022 budget to strengthen agricultural production, with a focus on oil seed crops. The Sunflower Oil Processors Association said it is facing a shortage of 1.4 million tonnes to effectively meet the gap for edible oil in Tanzania[13].

CURRENT DEMAND OF EDIBLE OIL AND OUTPUT FORECAST



As predicted in the above graph, it can be clearly understood that there is a huge scope of growth in the edible oil manufacturing industry in the region. Edible oil has made a significant place in the food and beverage sector around the world. It is being consumed everyday by millions of people in restaurants, cafeterias, and hotels, among others. Manufacturers are working on developing these oils to offer healthier options to the consumers.

Governments, too, play a role, steering initiatives and regulations towards promoting healthy eating habits, steering away from the realms of less healthy cooking oils. Governments in various African countries are undertaking initiatives to boost demand for fats and oils. In January 2023, Ethiopia's Ministry of Finance bought over 4.3 palm cooking oils from the Golden Africa Company in Djibouti[14]. They did this to make sure people could get cooking oils at prices that everyone can afford.

The below table provides an insightful overview of the leading oil-producing countries in Africa, categorized by oil type.

Oil Type	1st Largest Producer	Share of Total Volume	2nd Largest Producer	Additional Notes
Palm Oil	Nigeria	41%	Cote d'Ivoire	Nigeria's production is threefold that of Cote d'Ivoire. DRC holds 9.6% share.
Soybean Oil	Egypt	54%	South Africa	Egypt's production is threefold that of South Africa. Nigeria holds 9.5% share.
Groundnut Oil	South Africa	40%	Nigeria	South Africa's production is threefold that of Nigeria. Sudan holds 6.7% share.
Sesame Oil	Nigeria, Uganda, Mozambique	Combined 54%	Tanzania, South Sudan, Sudan, Chad	Tanzania, South Sudan, Sudan, and Chad together account for 39%.
Rapeseed Oil	South Africa	60%	Ethiopia	South Africa's production is threefold that of Ethiopia. Algeria holds 12% share

Seasonality

The seasonality of edible oils in East Africa is as follows

Oilseed Crops: The primary oilseeds grown in East Africa include sunflower, soybean, and palm. Each of these crops has specific growing seasons:

Sunflower: Typically planted during the rainy season, which varies by region but generally falls between March and May, with harvesting occurring around August to October.

Soybean: Planted at the onset of the rainy season, usually around March to April, and harvested in July to August.

Palm Oil: Grown year-round in tropical regions, but peak production often aligns with the rainy season, enhancing fruit yield.

The rainy seasons are crucial for the growth of oilseed crops. Variations in rainfall patterns can significantly impact the yield and availability of edible oils. For instance, a delay in the rainy season can lead to a delay in planting and harvesting, affecting the supply chain.

Supply

Country Wise East African OUTPUTS manufacturing facilities with capacities

There are several notable edible oil manufacturing facilities in East Africa, and these are:

1. Golden Africa Djibouti: This facility is one of the largest in the Horn of Africa, with a daily production capacity of 1,000 metric tons of finished products. They produce and pack various types of edible oils, including palm oil and sunflower oil.

2. Midroc Investment Group in Ethiopia: This group has significantly invested in Ethiopia's edible oil processing capacity. They operate 26 medium and large factories, along with about 720 small processors.

3. MeTL Group's East Coast Oils and Fats in Tanzania: This state-of-the-art facility includes a refinery, dry-fractionation plant, and units for manufacturing soap, cooking fat, and margarine. It has an installed production capacity of over 750,000 metric tons per annum.

These facilities play a crucial role in meeting the region's demand for edible oils and contribute significantly to the local economies.

Output Imports /Exports

Imports of edible oils from East Africa

The East African Community (EAC) consumed approximately 2.4 million metric tons (MTs) of palm oil in 2022[15].

Kenya imports a significant amount of palm oil, primarily from Malaysia.

Edible oils account for over Ksh160 billion ($1.07 billion) of Kenya's import bill[15].

Production impacts

Without reciprocity, the increased tariff on edible oils results in value added for the EAC economic bloc

283.9 Million USD	**311.4** Million USD
Simulation 1	Simulation 2

The big winners of rising tariffs on imported edible oils to 35% are Kenya and Tanzania with value added

Simulation 1

139.6 Million USD	**115.7** Million USD
Kenya	Tanzania

Simulation 2

152.7 Million USD	**124.2** Million USD
Kenya	Tanzania

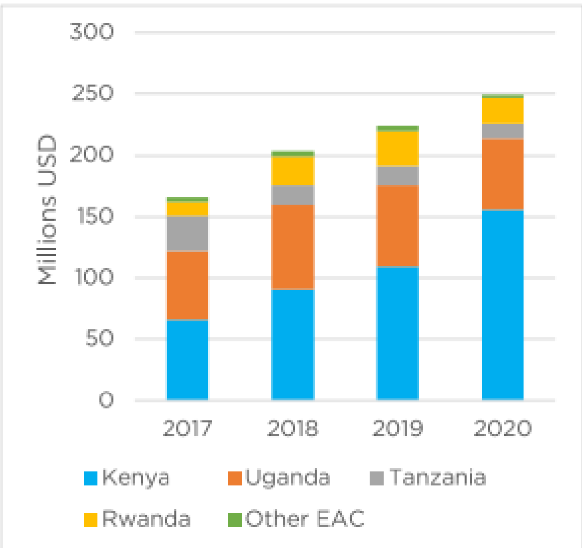
Exports of edible oils from East Africa

- Export revenues for edible oils are expected to increase in Kenya and Uganda by $24.5 million and $19.2 million respectively[16].
- Tanzania, however, is predicted to see a decrease in export revenues by $11.5 million.

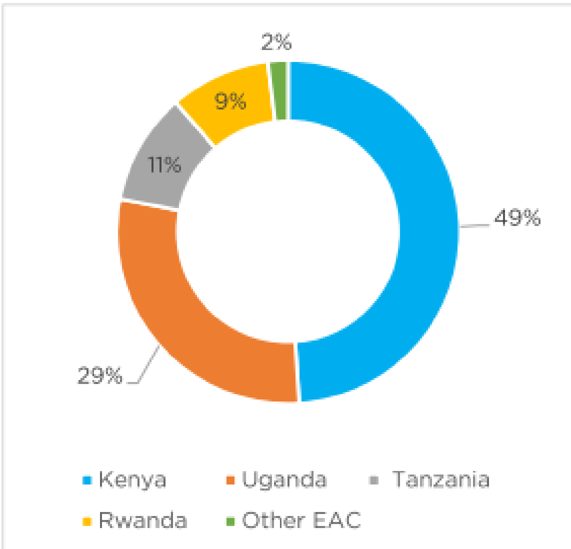
Market Trends

- The Middle East and Africa edible oil market is projected to grow at a CAGR of 7.40%, reaching $8503.00 million by 2029.
- The EAC region is working on policies to protect its domestic edible oil industry from international competition.

Panel 2A: Export trends



Panel 2B: Average export share

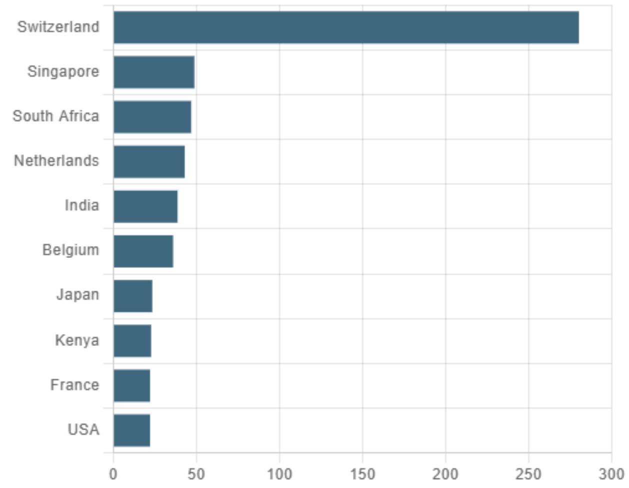


Tanzania Edible Oil, Detergents, Animal feed Market Outlook

Edible oil Country Market Analysis

For Tanzania Exporters of Edible Oil, Switzerland seems to be the most attractive market (in 2028) in terms of export potential followed by Singapore, South Africa, Netherlands and India. However, in terms of total import demand across all countries, China occupies the top position. Hence considering overall import demand, China leads the importing demand but considering Tanzania as a partner, Switzerland provide high unmet demand potential as Compared to others for 2028.

Tanzania Export Potential Assessment For Edible Oil Market (Values in USD Thousand)



The edible oil market in Tanzania is quite dynamic and growing. Here are some key points:

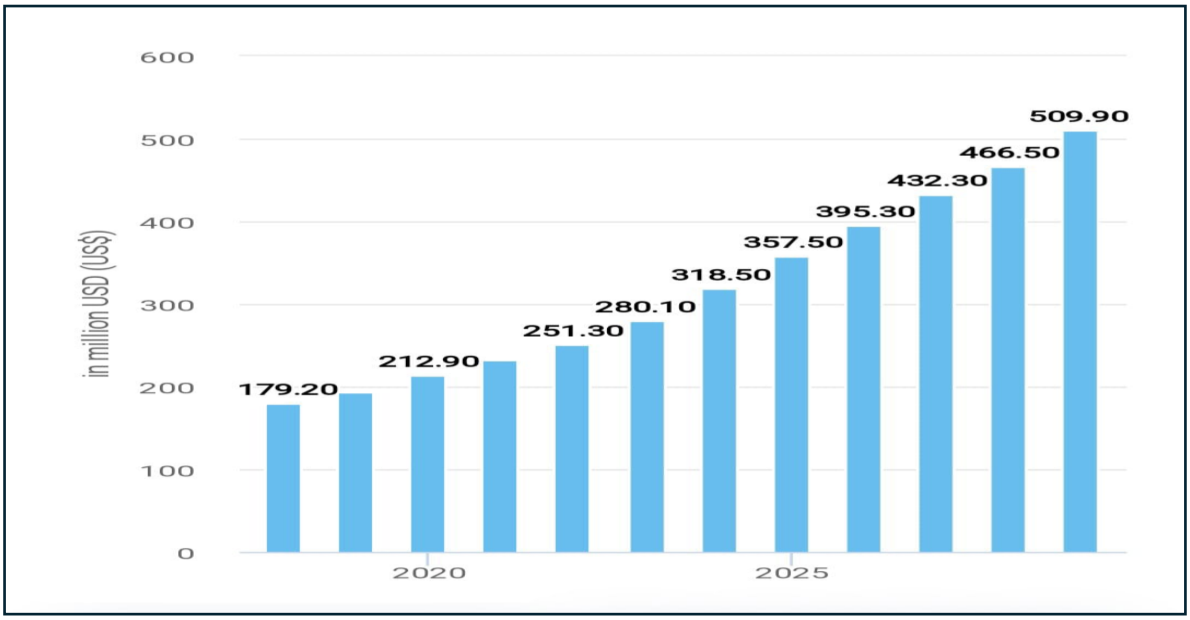
1. Market Size and Growth: The market is expected to generate around $318.50 million in revenue in 2024, with an annual growth rate of 9.87% from 2024 to 2029[18].

2. Key Products: Sunflower oil is particularly significant due to high domestic consumption and production. Palm oil also has a large potential for import replacement given the high local demand.

3. Production and Demand: Tanzania produces about 205,000 tonnes of cooking oil annually, but the demand is around 570,000 tonnes. This gap is filled by imports from countries like Malaysia, India, Singapore, and Indonesia.

4. Investment Opportunities: There are promising opportunities in the sunflower, palm, and soybean oil value chains. The government is focusing on scaling up local production and value addition.

Revenue forecast



Revenue in the Edible Oils market of Tanzania amounts to US$318.50m in 2024. The market is expected to grow annually by 9.87% (CAGR 2024-2029).

Consumption trends in Tanzania

Overview of the consumption trends for edible oils, detergents, and animal feed in Tanzania:

- **Edible Oils**

Market Growth: The edible oils market in Tanzania is projected to grow at an annual rate of 9.87% from 2024 to 2029.

Local Production: Despite a large and growing market, local supply is insufficient, leading to significant imports, especially of palm oil.

Sunflower Oil: Sunflower oil is the most produced edible oil locally, but it still meets only 30% of the demand.

- **Detergents**

Market Dynamics: The detergent market in Tanzania is influenced by urbanization and increasing awareness of hygiene. However, specific growth rates and detailed consumption data are less readily available compared to edible oils and animal feed.

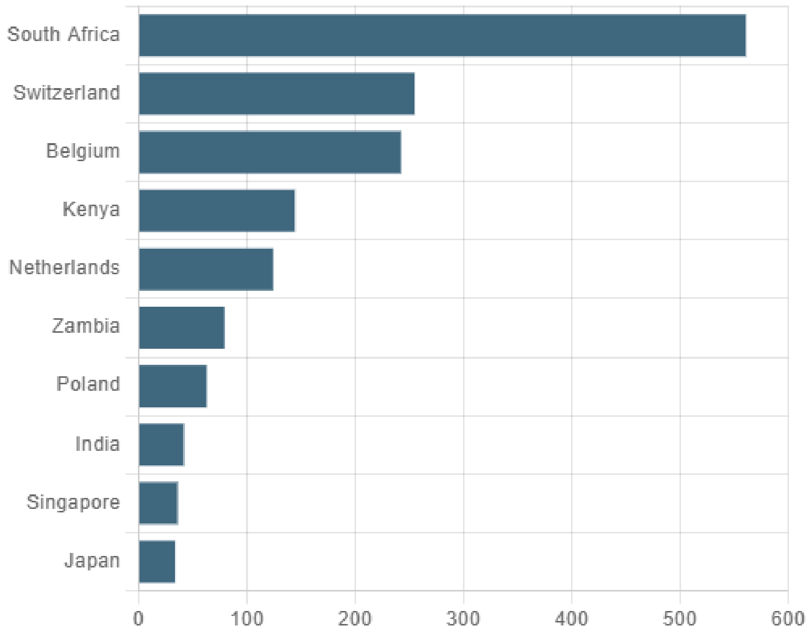
The soap and detergents market in Tanzania is projected to grow at a CAGR of 6.6% during the forecast period 2020-2026. This growth can be attributed to increased urbanization, improved living standards, an expanding middle class population, and rising consumer awareness about hygiene products. Moreover, government initiatives such as tax breaks for small businesses are likely to further fuel demand for soaps and detergents in Tanzania.

- **Animal Feed**

Demand Drivers: The demand for animal feed is driven by the growth in livestock farming and poultry production. This sector is crucial for supporting the agricultural economy and ensuring food security.

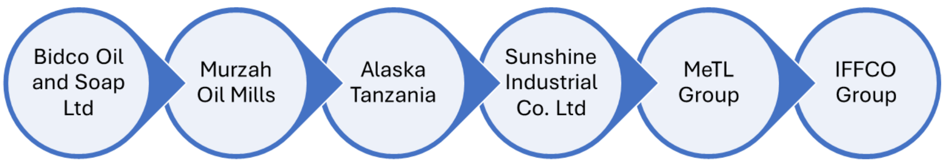
For Tanzania Exporters of Animal Feed, South Africa seems to be the most attractive market (in 2028) in terms of export potential followed by Switzerland, Belgium, Kenya and Netherlands. However, in terms of total import demand across all countries, Germany occupies the top position. Hence considering overall import demand, Germany leads the importing demand but considering Tanzania as a partner, South Africa provide high unmet demand potential as Compared to others for 2028[19].

Tanzania Export Potential Assessment For Animal Feed Market (Values in USD Thousand)



Major players in the market and market shares

In Tanzania, the edible oil sector is quite significant, with several key players dominating the market. Some of the major companies include:



The detergent market in Tanzania is growing, driven by increased urbanization, improved living standards, and rising consumer awareness about hygiene products. Some of the major players in this market include:

1. Unilever- Known for its popular brands like Omo and Sunlight.
2. Procter & Gamble - With well-known brands such as Ariel and Tide.
3. Bidco Africa - A significant player in the East African market, offering products like Powerboy.
4. Nirma - An Indian company that has a presence in Tanzania with its affordable detergent products.

In Tanzania, the animal feed industry has seen significant growth and development. Some of the major players in this sector include:

- Said Salim Bakhresa & Co. Ltd: A prominent name in the Tanzanian market, known for its diverse range of products, including animal feed.
- Mount Meru Millers Ltd: Another key player, contributing significantly to the animal feed market with a variety of feed products.
- Eden Farm: While primarily a large fish farming operation, Eden Farm also produces home-mixed feeds.

Prevailing Edible Oil Prices and Future Outlook

Quick Facts

- Imports: US$83.19 million (2018)
- Annual Demand: 570,000 tonnes
- Annual Supply: 180,000 tonnes
- Demand forecast: 700,000 tonnes (2030)

Available opportunities

- Large scale farming of oil seeds to address supply gap.
- Establishment of oil seeds processing facilities.
- Establishment of refineries.

As of now, the price of edible oil in Tanzania varies depending on the type and packaging. For instance, the price per litre ranges between Sh7,000 and Sh7,500. This is a decrease from previous prices, which were between Sh8,000 and Sh9,000 per litre[20].

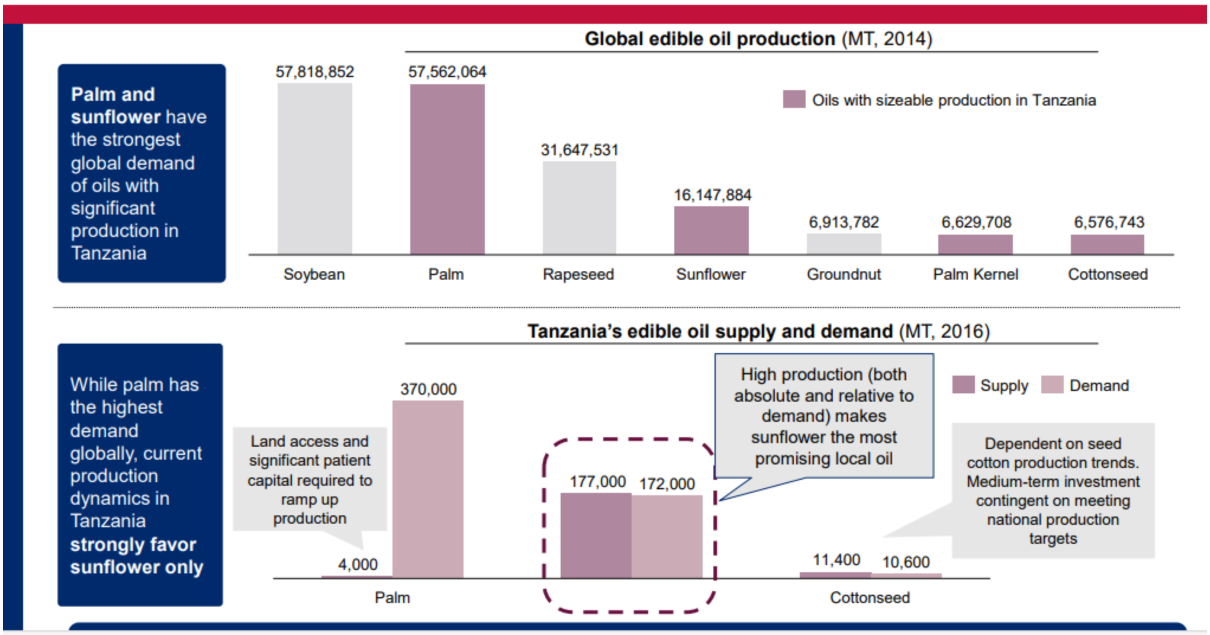
Future Outlook:

The increasing demand for trans-fat-free oils is notably driving the edible oil market growth, although factors such as distribution challenges may impede the market growth. The Edible Oils Market in Tanzania is projected to grow by **5.96%** (2024-2029) resulting in a market volume of US$1.87m in 2029[21].

Demand

Historic & Current Demand of Edible Oil in Tanzania

Despite strong growth in sunflower seed production, the level of edible oil processing in Tanzania is low compared to prevailing demand (est. at 300,000 – 400,000 tons a year). Much of the demand gap is currently met by imported edible oil (60% across all edible oils, 55-70% for sunflower oil) (Salisali, 2017). The GoT wants to reduce Tanzania's dependence on imported edible oil by boosting domestic oil seed production and downstream oil processing capacity.



The demand for edible oil in Tanzania is expected to grow significantly in the coming years.

1. Current Demand and Supply: Tanzania currently imports over 60% of its edible oil, primarily palm oil, due to a shortfall in local production. This import dependency costs the country around **USD 250 million annually.**

2. Sunflower Oil Potential: Sunflower oil is the most promising locally produced edible oil, comprising 83% of the total edible oils produced in Tanzania. However, it only meets **about 30% of the domestic demand**. Increasing local production and reducing costs could help meet the growing demand.

3. Investment Opportunities: There is a significant opportunity for investment in the local edible oil sector, particularly in refining sunflower oil. Investors would need substantial start-up capital and a strong distribution network.

4. Technological Advancements: Technological progress in oilseed crop production could boost local production and reduce import dependency. This would have positive multiplier effects on the economy.

5. Market Dynamics: The edible oil market in Tanzania is influenced by various factors, including consumer preferences, cost differentials between local and imported oils, and the potential for local value addition.

Focusing on increasing local production, particularly of sunflower oil, and attracting investments in refining and distribution could help Tanzania meet its future edible oil demand more sustainably.

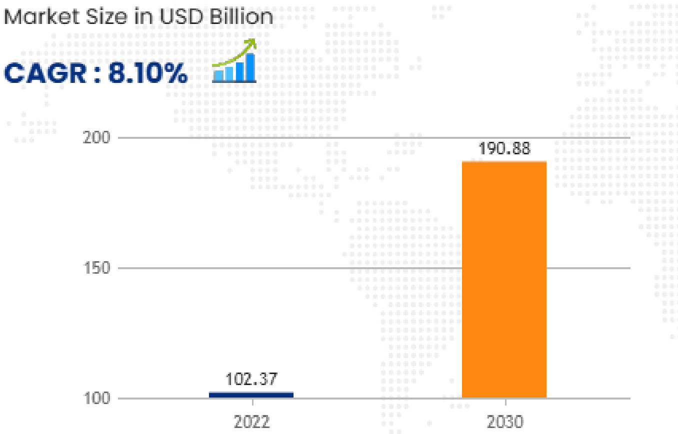
Edible oil Demand Forecast post-2020

5-year growth

The global edible oil market is estimated to grow at a CAGR of 3.57% from a market value of USD96.878 billion in 2019 to attain a market value of USD119.571 billion by the end of 2025. Developing regions of the world are predicted to contribute to increasing the market growth for vegetable oil during the forecast period. In China, the consumption of vegetable oil is predicted to be around 30 kg per capita, and for Brazil, it is estimated to be around 24 kg per capita. For developing nations, the per capita consumption of vegetable oil is assumed to reach 27 kg with a growth rate of 0.4% per annum[22].

10-year growth

Edible oils market is expected to reach USD 190.88 billion by 2030, which is USD 102.37 billion in 2022, registering a CAGR of 8.10% during the forecast period of 2023 to 2030[23].



Seasonality

EDIBLE OIL

1. Sunflower Oil: Sunflower is the dominant crop for edible oil production in Tanzania, contributing about 90% of the locally produced edible oil[1]. The sunflower growing season typically aligns with the rainy season, which runs from November to April. Harvesting usually occurs from May to August.

2. Palm Oil: Palm oil production is less significant compared to sunflower oil but has potential for growth. Palm trees can produce fruit year-round, but peak production often coincides with the rainy season.

3. Soyabean oil: The seasonality of soybean oil in Tanzania is closely tied to the soybean harvest periods. Soybeans are typically planted during the rainy season, which starts around November and lasts until April. The harvest usually occurs from May to August. This means that the production and availability of soybean oil are higher shortly after the harvest season.

In Tanzania, the production of edible oils is influenced by the growing seasons of various oil crops. Here are some key points about the seasonality of edible oils in Tanzania:

ANIMAL FEED

In Tanzania, the availability of animal feed is highly seasonal, influenced by variations in rainfall, temperature, and humidity.

1. Wet Season: During the wet season, fodder is usually abundant, often exceeding the needs of livestock. This period is crucial for farmers to harvest and store feed for the drier months.

2. Dry Season: In contrast, the dry season poses significant challenges. Fodder becomes scarce, and the quality of available feed often declines. This scarcity can lead to reduced livestock productivity and health issues.

3. Feed Resources: The primary sources of animal feed include natural forages, crop residues, and industrial by-products. The availability of these resources fluctuates with the seasons, impacting the overall feed supply.

4. Government Initiatives: The Tanzanian government has been working to improve feed availability through investments in infrastructure, technology, and training programs. These efforts aim to enhance forage production and ensure a more stable feed supply throughout the year.

DETERGENTS

The demand for detergents in Tanzania shows some seasonal variations, influenced by factors such as weather, cultural practices, and economic activities.

1. Rainy Season: During the rainy season, which typically occurs from March to May and again from October to December, there is often an increase in the use of detergents. This is because clothes and other fabrics tend to get dirtier due to mud and rain, leading to more frequent washing.

2. Dry Season: In the dry season, from June to September, the demand for detergents might slightly decrease as there is less dirt and mud. However, the hot weather can lead to more sweating, which still necessitates regular washing.

3. Festive Seasons: During festive periods such as Christmas and New Year, there is usually a spike in detergent sales as people clean their homes and clothes more thoroughly in preparation for celebrations.

4. Agricultural Cycles: In rural areas, the agricultural calendar can also impact detergent use. For instance, during planting and harvesting seasons, there might be an increased need for detergents due to the dirt and grime associated with farming activities.

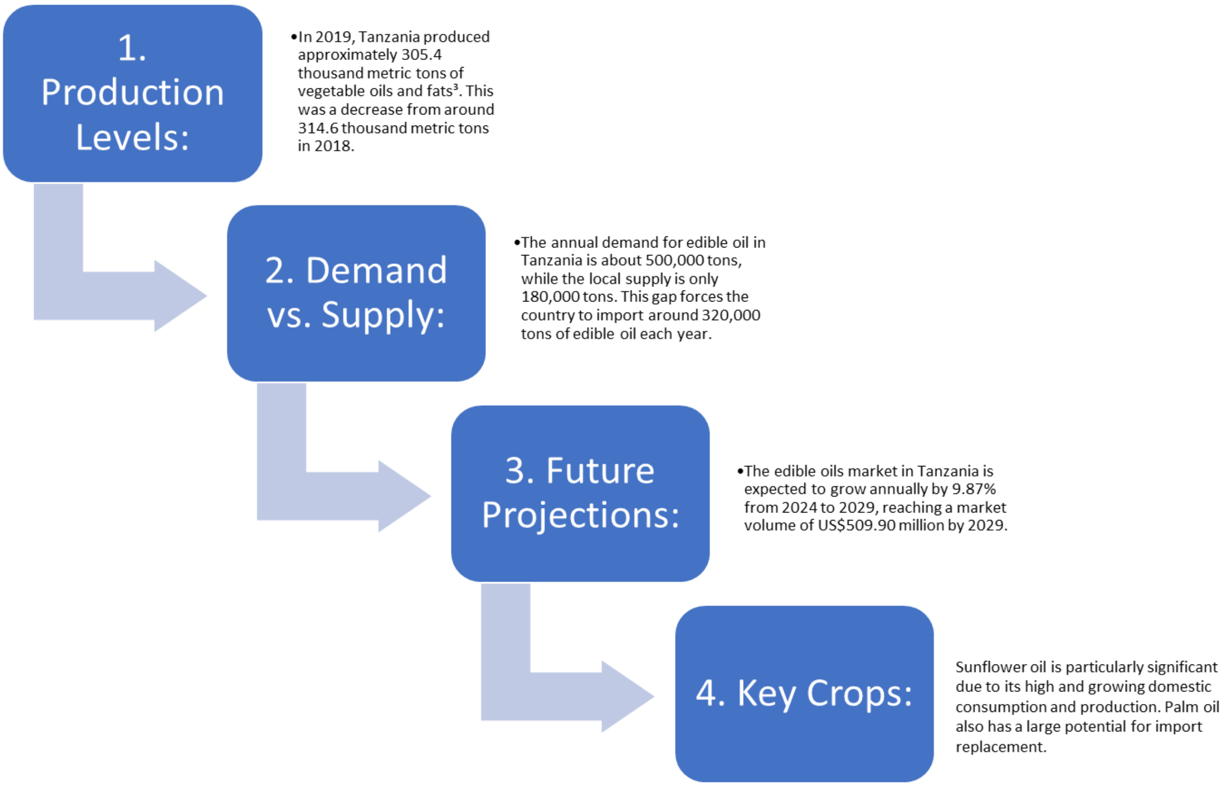
Supply

Tanzania Edible oil manufacturing facilities with capacities

S.No.	Name	Location	Status	Brand	Capacity MT/Day	Yearly Capacity
1	Wilmar	Dar Es Salaam	Working	Sundrop	400	1,16,800
2	Afrisian Ginning Limited	Kibaha	New project	Pera	300	87,600
3	METL, East coast oils and Fats limited	Dar Es Salaam	Working	Safi	200	58,400
4	Mount Meru Millers Limited	Singida	Working	Singida, Nanas	200	58,400
5	Mainland Group Agro process	Dodoma	New project	Sunflower	100	29,200
6	Murzah Wilmar east Africa limited	Dar Es Salaam	Working	Korie	100	29,200
7	Qstek farming limited	Singida	Working	Best	50	14,600
8	Sunshine industrial limited	Dodoma	Working	Sunbelt	50	14,600
9	Cemex Ventures Limited	Dodoma	New project	Golden harvest	30	2,580

Historical Actual Edible Oil Production/Sales

The edible oil industry in Tanzania has seen significant fluctuations over the years. Here are some key points:



Edible oil Imports /exports

Tanzania's edible oil sector is quite dynamic. Here are some key points:

1. Imports: Tanzania imports over 60% of its cooking oil, primarily palm oil, costing around USD 250 million annually. This makes it one of the highest foreign exchange transactions by value in the country[24].

2. Exports: While Tanzania imports a significant amount of palm oil, it has a growing refined sunflower oil industry that can potentially reduce these imports.

3. Market Growth: The edible oils market in Tanzania is projected to grow significantly, with an expected annual growth rate of 9.87% from 2024 to 2029.

4. Local Production: The sector needs more investment to fill the supply gap, which currently stands at 320,000 tonnes.

Tanzania OUTPUTS Market Outlook

OUTPUTS Country Market Analysis

The edible oil market in Tanzania is experiencing significant growth. Here are some key insights:

1. Market Size and Growth: The edible oils market in Tanzania is expected to generate around USD 318.50 million in revenue in 2024, with an annual growth rate of 9.87% from 2024 to 2029.

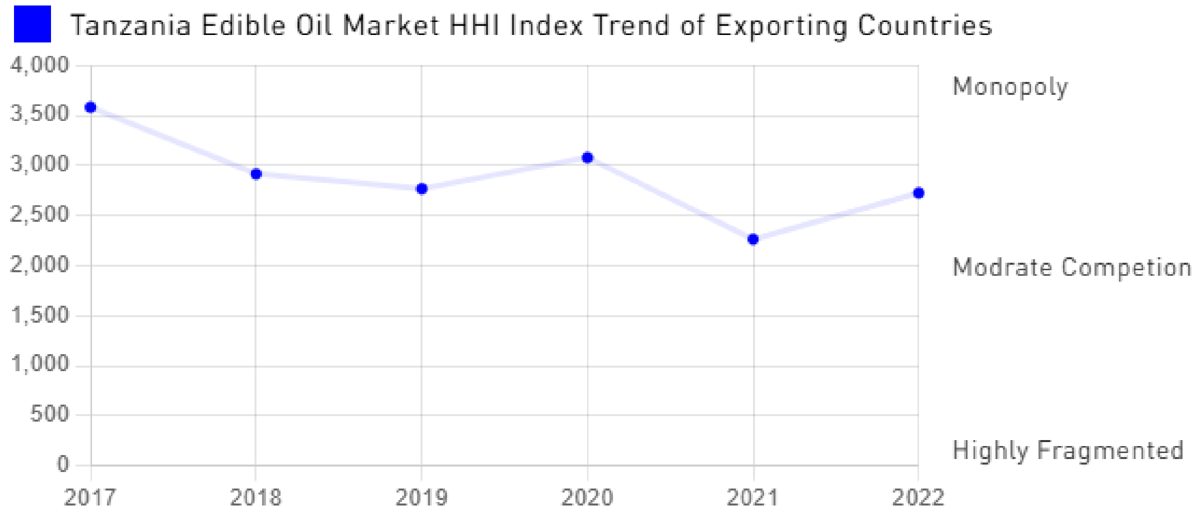
2. Types of Edible Oils: The market includes various types of oils such as palm oil, soybean oil, mustard oil, and sunflower oil. Palm oil is particularly significant due to its widespread use.

3. Supply and Demand: Despite the growing demand, local production is not sufficient to meet the needs. Tanzania imports over 60% of its cooking oil, costing around USD 250 million annually.

4. Market Structure: The market is becoming more competitive, with a Herfindahl-Hirschman Index (HHI) of 2726 in 2023, indicating a moderate level of market concentration.

5. Packaging and Distribution: Edible oils are available in various packaging types such as pouches, jars, cans, and bottles. Distribution channels include supermarkets, hypermarkets, convenience stores, and online platforms.

6. Challenges: The sector faces challenges such as dependency on imports and the need for increased local production to reduce foreign exchange expenditure.



Consumption Trends in Tanzania

The consumption of edible oils in Tanzania is experiencing notable growth. Here are some key trends:

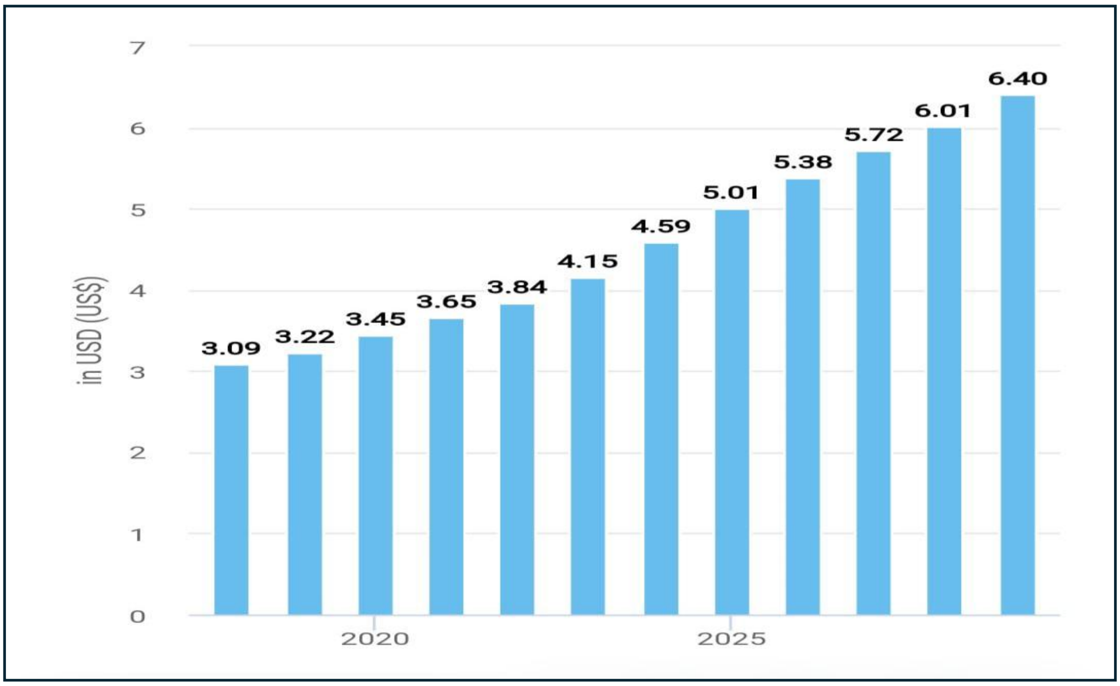
1. Market Growth: The edible oils market in Tanzania is projected to reach a revenue of approximately $318.50 million in 2024, with an annual growth rate of 9.87% from 2024 to 2029.

2. Types of Edible Oils: The primary types of edible oils consumed include sunflower oil, palm oil, soybean oil, mustard oil, and groundnut oil[2]. Sunflower oil is particularly popular due to its local production.

3. Demand Increase: The demand for edible oils is expected to rise from 500,000 tonnes to 700,000 tonnes by 2030. This increase is driven by population growth and changing dietary habits.

4. Packaging and Distribution: Edible oils are commonly packaged in pouches, jars, cans, and bottles. Distribution channels include supermarkets, hypermarkets, convenience stores, and online platforms.

5. Revenue Per Capita: The average revenue per capita in the edible oils market is expected to be around $4.59 in 2024.



These trends indicate a robust and growing market for edible oils in Tanzania, driven by both local production and increasing consumer demand.

Raw Material for OUTPUTS

Multi oil seeds (Source, Availability, Price, Growth Rates)

SUNFLOWER SEEDS

Sunflower seeds are widely available in Tanzania, especially in regions like Dodoma, Singida, Iringa, Manyara, and Rukwa. The country has a significant sunflower farming sector, with around 6% of its agricultural land dedicated to sunflower production.

There are initiatives to increase the availability of improved and hybrid sunflower seed varieties to help smallholder farmers boost their yields. Organizations like One Acre Fund and Farm Africa are actively working to provide farmers with better access to these seeds.

PRICE: The retail price range for Tanzania sunflower seeds is between US$ 0.49 and US$ 1.18 per kilogram or between US$ 0.22 and US$ 0.53 per pound (lb).

AVERAGE OIL CONTENT : 35 %

GROWTH: After five years of growth, production of sunflower seed decreased by -2% to 1.1M tons in 2022. The total output volume increased at an average annual rate of +2.1% from 2017 to 2022; the trend pattern remained consistent, with only minor fluctuations being recorded in certain years. The growth pace was the most rapid in 2021 when the production volume increased by 4.2%[25].

Tanzania's drive to industrialize its sunflower sector has stumbled for the 2023/2024 growing season on a deal to bulk-source high-yield seeds for the country's one million sunflower farmers.

COTTON SEEDS

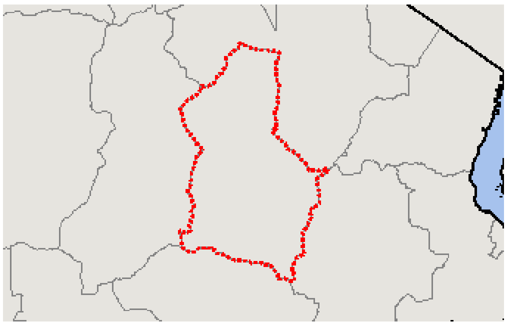
SOURCE AND AVAILABILITY: Cotton seeds are readily available in Tanzania, primarily sourced from major cotton-growing regions such as Shinyanga, Tabora, and Mwanza. The country currently cultivates approximately 300,000 hectares of cotton, supporting a robust supply chain for both local use and export.

PRICE: Recent market analyses indicate that cotton seed prices fluctuate between TZS 800 to TZS 1,200 per kilogram, influenced by seasonal harvests and global market demand for cotton products.

GROWTH RATES: The average yield for cotton in Tanzania is around 600 kg per hectare. However, ongoing initiatives by the Tanzania Cotton Board and various agricultural organizations aim to increase this yield to approximately 1,000 kg per hectare through improved seed varieties and enhanced farming practices.

MARKET POTENTIAL: With a growing demand for vegetable oils in Tanzania and the surrounding regions, incorporating cotton seeds into oil manufacturing can enhance profitability and sustainability. The local market for edible oils is expanding, presenting significant opportunities for new entrants in the oil production sector.

SOYBEAN SEEDS



Dodoma
(15% of total soybean production)

Local Production: Tanzania produces a significant number of soybeans, with primary production areas including Mara, Dodoma, and Mbeya.

Soybean seeds are available in Tanzania, and there are several initiatives to support their distribution and cultivation:

1.Government Initiatives: The Tanzanian government has allocated funds to expand soybean cultivation areas and ensure farmers have access to high-quality seeds. This includes subsidies to make seeds more affordable for smallholder farmers.

2. Research and Development: Institutions like the Tanzania Agricultural Research Institute (TARI) are developing high-yielding, disease-resistant soybean varieties. These efforts aim to improve the availability and quality of soybean seeds.

3. Collaborative Efforts: The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) is working with various sectors to create a sustainable soybean value chain. This includes ensuring the availability of high-quality seeds and supporting farmers with efficient processing techniques.

PRICE: The average price of soybean seeds in Tanzania varies. As of July 2024, the retail price range for soybean seeds is between US$ 0.69 and US$ 1.62 per kilogram1. This translates to approximately TZS 1,642.63 to TZS 3,855.61 per kilogram in Tanzanian shillings.

AVERAGE OIL CONTENT : 18.5 %

GROWTH: Soybean production in Tanzania has been showing a steady growth trend. Over the past decade, the production volume increased from 8,100 metric tons in 2012 to 25,900 metric tons in 2022. This represents an average annual growth rate of about 12.5%.

Tanzanian soybean production is expected to reach 32,310 metric tons by 2026, growing at an average rate of 4.5% per year. The government has been actively supporting this growth through various initiatives, including expanding cultivation areas, enhancing research and development, and improving farmer training and market infrastructure.

Forecast of Raw Material Prices – OUTPUTS

Sunflower seeds

Although the industry is still developing, Tanzania has the potential to be a competitive supplier of sunflower seeds. The Tanzanian government is making significant investments in education and developing hybrid seeds to raise the caliber of the crop.

Sunflower Seed

HS Code: 1206 - Sunflower seeds; whether or not broken | **FAO Code:** 0267 - Sunflower seed

Market: Tanzania

Share in Export 2023	Share in Import 2023	Share in Production 2022	Export Volume 2023	Import Volume 2023	Production Volume 2022
0.00% Rank 48	0.02% Rank 63	2.12% Rank 12	1Y	392.82K KG 1Y -90.14%	1.15B KG 1Y +2.68%

Soyabean seeds

The soybean seed market in Tanzania is expected to grow steadily from 2024 to 2030. Factors such as increasing demand for soybeans in food and feed industries, as well as government initiatives to boost agricultural productivity, are driving this growth.

Soybean

HS Code: 1201 - Soya beans, whether or not broken | **FAO Code:** 0236 - Soya beans

Market: Tanzania

Share in Export 2023	Share in Import 2023	Share in Production 2022	Export Volume 2023	Import Volume 2023	Production Volume 2022
0.06% Rank 21	0.01% Rank 48	0.01% Rank 52	101.29M KG 1Y +122.59%	34.24M KG 1Y +381.54%	41.07M KG 1Y -45.24%

The market is currently moving towards a more concentrated state, with fewer players dominating the market. This trend might influence the prices of soybean seeds, potentially leading to higher rates due to reduced competition.

Cotton seeds

The cotton seed market in Tanzania is projected to experience steady growth from 2024 to 2030. This growth is driven by several key factors:

Cotton Seed

HS Code: 120721 - Oil seeds; cotton seeds, seed, whether or not broken | **FAO Code:** 0329 - Cotton seed

Market: Tanzania

Share in Export 2023	Share in Import 2023	Export Volume 2023	Import Volume 2023
0.85% Rank 14	0.01% Rank 41	1.03M KG 1Y -41.37%	30.19K KG 1Y -35.13%

Detergent

The detergent market in Tanzania is expected to see significant growth in the coming years:

1. Overall Market Growth: The soap and detergents market in Tanzania is projected to grow at a compound annual growth rate (CAGR) of 6.6% from 2020 to 2026. This growth is driven by increased urbanization, improved living standards, and a rising middle-class population.

2. Dishwashing Detergents: Specifically, the dishwashing detergents market is expected to grow at a CAGR of 6.56% from 2024 to 2029, reaching a market volume of approximately USD 124.70 million by 2029.

3. Market Drivers: Factors such as rising consumer awareness about hygiene products, the growing use of laundry machines, and the introduction of new product variants are contributing to this growth.

4. Competitive Landscape: The market is becoming increasingly competitive, with companies expanding their distribution networks and launching innovative promotional campaigns to reach more consumers.

Chapter 4: Sales Plan

Existing Marketing & distribution Network in Tanzania

Tanzania's marketing and distribution network is quite diverse and involves several key components:

1. Ports and Entry Points: The primary entry point for imports is the port of Dar es Salaam, which is the busiest port in the country. Other significant ports include Tanga, Mtwara, and Zanzibar.

2. Transportation: Goods are mainly transported via road networks, but there are ongoing efforts to enhance the railway sector through the standard gauge railway project.

3. Distribution Channels: Goods are typically distributed through wholesalers and retailers. Wholesalers import goods in bulk and distribute them to retailers, who then sell them in smaller quantities.

4. Retail Sector: The retail sector in Tanzania is evolving, with a mix of traditional small stores, street vendors, and unregulated markets. There has been growth in formal wholesale and retail sectors in major towns and cities, catering mainly to expatriates and middle-class communities.

5. Agents and Distributors: Using local agents and distributors is highly recommended for foreign companies looking to enter the Tanzanian market. These agents have the local knowledge and experience needed to navigate the market effectively.

Other channels include:

- Franchising
- Direct marketing
- Joint ventures/ Licensing
- Express delivery

Primary Market Opportunities - Tanzania

Sunflower oil

Tanzania's sunflower oil sector presents several promising opportunities:

1. Growing Demand: With a population of over 43 million, Tanzania's demand for edible oil is substantial and growing. This creates a significant market for sunflower oil, which is a key vegetable oil produced in the country.

2. Government Support: The Tanzanian government has implemented policies to boost the sunflower oil sector, including tax incentives and trade reforms. These measures aim to reduce reliance on imported vegetable oil and encourage domestic production.

3. Industrial Potential: The sector is seen as a driver for industrialization and job creation. Investments in processing capacity and improved seed varieties have increased production. This industrial growth can lead to increased tax revenue and foreign exchange savings.

4. Sustainability: Sunflower oil production is environmentally sustainable and supports small farmers, particularly in the Central Corridor where the crop thrives.

Soyabean oil

Tanzania presents several promising opportunities for the soybean oil market:

1. Expansion of Cultivation Areas: The Tanzanian government is investing in expanding soybean cultivation areas to meet rising domestic and international demand. This includes identifying new regions suitable for soybean farming.

2. Research and Development: Significant funds are allocated for R&D to develop high-yielding, disease-resistant soybean varieties. This research aims to improve cultivation practices and maximize yields.

3. Farmer Training and Extension Services: Extensive training programs are being implemented to help farmers adopt modern soybean farming techniques. This includes efficient use of inputs and sustainable farming methods.

4. Access to Quality Inputs: Efforts are being made to ensure farmers have access to high-quality seeds and other essential inputs. Subsidies are provided to make these inputs more affordable for smallholder farmers.

5. Market Development and Value Addition: Investments in market infrastructure, such as storage facilities and processing centers, are being made to enhance market access. This includes establishing soybean processing facilities to convert raw soybeans into high-value products like soybean oil.

6. Import Reduction and Export Opportunities: By boosting local production, Tanzania aims to reduce its dependence on soybean oil imports and explore export opportunities.

Secondary Market Opportunities – East Africa

Sunflower oil

The sunflower oil market in East Africa presents several secondary market opportunities, driven by various factors:

1. Growing Demand for Edible Oils: With increasing health consciousness, there's a shift towards healthier cooking oils like sunflower oil, which is rich in vitamin E and low in saturated fats.

2. Expanding Food Industry: The food service sector, including restaurants and hotels, is growing in East Africa, boosting the demand for sunflower oil for cooking and food preparation.

3. Cosmetic and Pharmaceutical Uses: Sunflower oil is also used in cosmetics and pharmaceuticals due to its beneficial properties for skin and health.

4. Export Potential: East Africa can leverage its agricultural capabilities to produce sunflower oil for export, especially to regions with high demand.

5. Fortification Trends: There's a trend towards fortifying sunflower oil with additional nutrients, catering to the health and wellness market.

Soyabean oil

The soybean oil market in East Africa presents several secondary market opportunities, driven by various factors:

1. Growing Demand for Edible Oils: With the increasing population and rising disposable incomes, there is a growing demand for edible oils, including soybean oil, in East African countries like Kenya, Tanzania, and Uganda.

2. Industrial Applications: Soybean oil is not only used for cooking but also in the production of biodiesel, cosmetics, and other industrial products. This diversification opens additional market opportunities.

3. Health Awareness: There is a rising awareness about the health benefits of soybean oil, which is rich in polyunsaturated fats and omega-3 fatty acids. This trend is driving consumer preference towards healthier cooking oils.

4. Government Initiatives: Various East African governments are promoting agricultural development and self-sufficiency, which includes the cultivation and processing of soybeans. This support can enhance local production and reduce dependency on imports.

5. Export Potential: East Africa can also serve as a hub for exporting soybean oil to neighboring regions and countries, leveraging its strategic location.

Product Packaging (OUTPUTS)

Outputs which are sunflower oil and soyabean oil will be packed in

- **PET (Polyethylene Terephthalate) bottles of 1 liter, 3 liter and 5 liters**

  PET is a popular choice for product packaging due to its durability, lightweight nature, and recyclability.

- **Jerry cans of 3 liter and 5 liters**

  Modern jerry cans are typically made from high-density polyethylene (HDPE) or other durable plastics. Many jerry cans come with features such as:

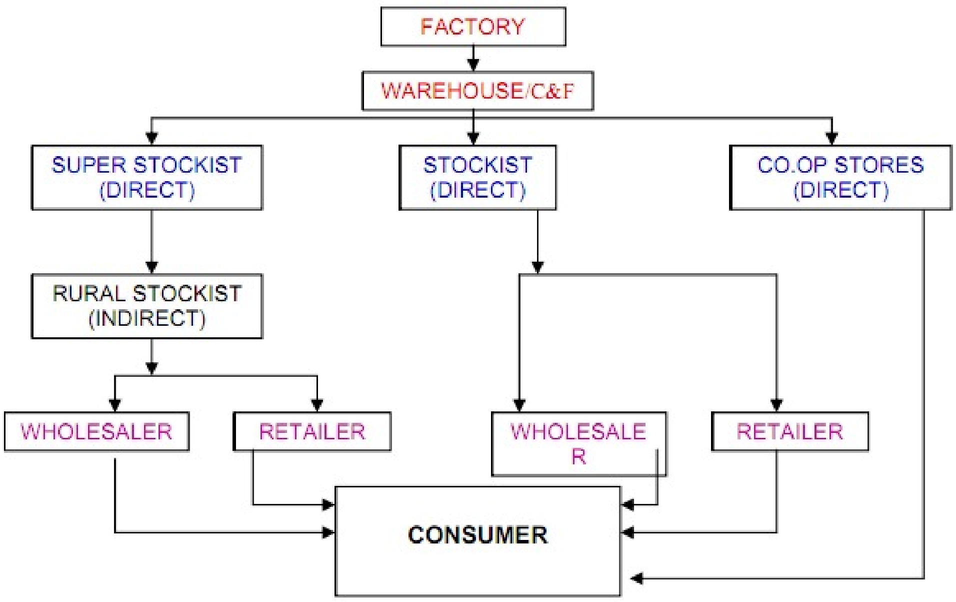
  - Tight-head design: Ensures no leakage and maintains the integrity of the contents.
  - Ergonomic handles: For easy carrying and pouring.
  - Stackability: Designed to be stackable for efficient storage and transportation

- **Bucket 10 liter and 20 liters**

Packaging / Bagging Industry of Tanzania

From 2020 to 2026, Tanzania's packaging bag market is projected to expand at a compound annual growth rate (CAGR) of 6.5%[27]. This development has mostly been driven by the rising demand for packaging materials, particularly plastic and paper bags. Businesses in Tanzania are also needed to invest more in suitable packaging solutions due to the expanding e-commerce sector. Government campaigns like the prohibition on single-use plastics have also pushed companies to transition to more environmentally friendly options like cotton and jute bags, which are gradually gaining favor with customers. Furthermore, it is anticipated that a rise in foreign investments would open new markets for regional companies that provide specialized packaging materials with eye-catching designs that appeal to a variety of consumer demographics.

Distribution and Delivery Strategy



Utilization of Existing Port facilities at Dar

The factory site is located 475 km from the Dar es Salaam Port, which translates to an 8-9 hour journey by road. This makes the port facilities accessible for all import and export of materials via road transport. Additionally, with the launch of a 541-km railway on August 1, 2024, connecting Dodoma and Dar es Salaam, there will be an enhanced option for improved connectivity in the future.

Promotional Strategy

The company will create a successful promotional strategy for edible oil business involves several key steps. Here are some effective strategies to consider:

1.Identification of Target Audience

- The company will conduct market research to understand customers' preferences, needs, and buying behaviors. It will also focus on creating buyer personas to tailor marketing efforts effectively.

2. Develop a Unique Selling Proposition (USP)

- The company will highlight its USP which will set it apart from competitors. This could be health benefits, organic certification, or unique flavors.

3. Leverage Content Marketing

- It will start a blog on the company's website and share informative articles related to the products, such as recipes, health benefits, and cooking tips.

- It will use social media platforms to share engaging content, including short recipe videos and customer testimonials.

4. Utilize Digital Advertising

- As the business will kick start, it will invest in Google Ads and social media advertising to reach a broader audience.

- It will approach targeted ads to reach specific demographics interested in healthy cooking and organic products.

5. Engage with Customers

- The staff will encourage customers to share reviews and user-generated content on social media.

- It will offer discounts, loyalty programs, or subscription boxes to retain customers.

6. Participate in Events

-The marketing team will attend food expos, farmers' markets, and culinary events to showcase the products and will connect with potential customers.

7. Optimize Packaging

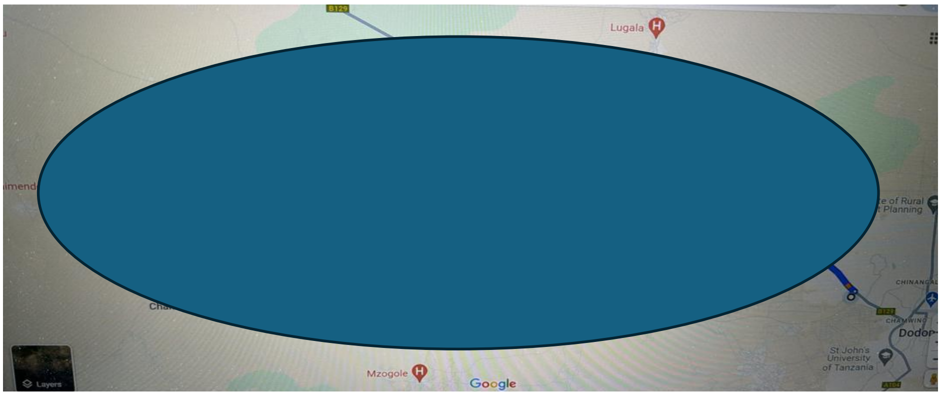
- Design attractive and informative packaging that highlights the benefits of processed edible oil.

- The company will make sure that packaging is eco-friendly to appeal to environmentally conscious consumers.

Chapter 5: Factory Description

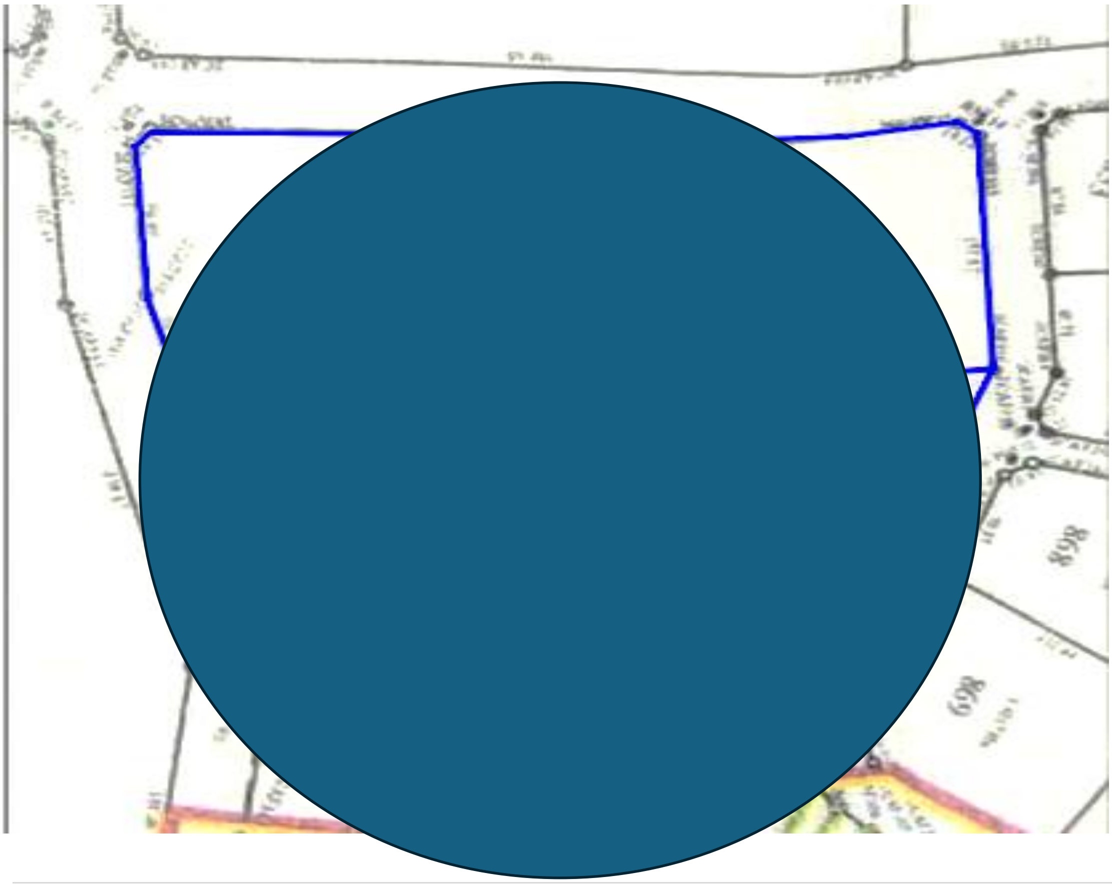
Location of Project

GENERAL LOCATION

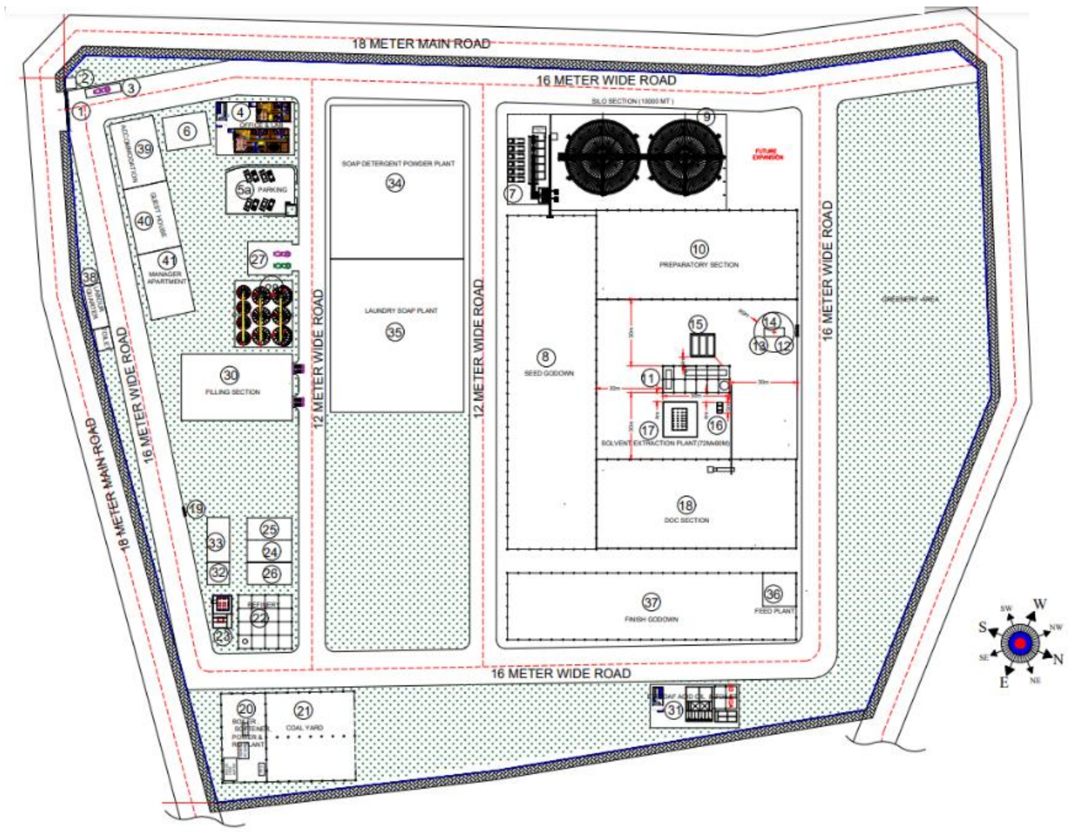


SPECIFIC LOCATION

Plot no 1105,1106,1107,1108



PROJECT BOUNDARY



Product storages

The company will prefer one or more of the following infrastructure facilities to cure storage of its processed edible oil and these are:

1. Processing Plants: The start-up may facilitate the location of processing plants which are well equipped to handle the extraction and initial processing of oil from seeds like sunflower, palm, and soybean. They often include storage tanks for crude oil before refining.

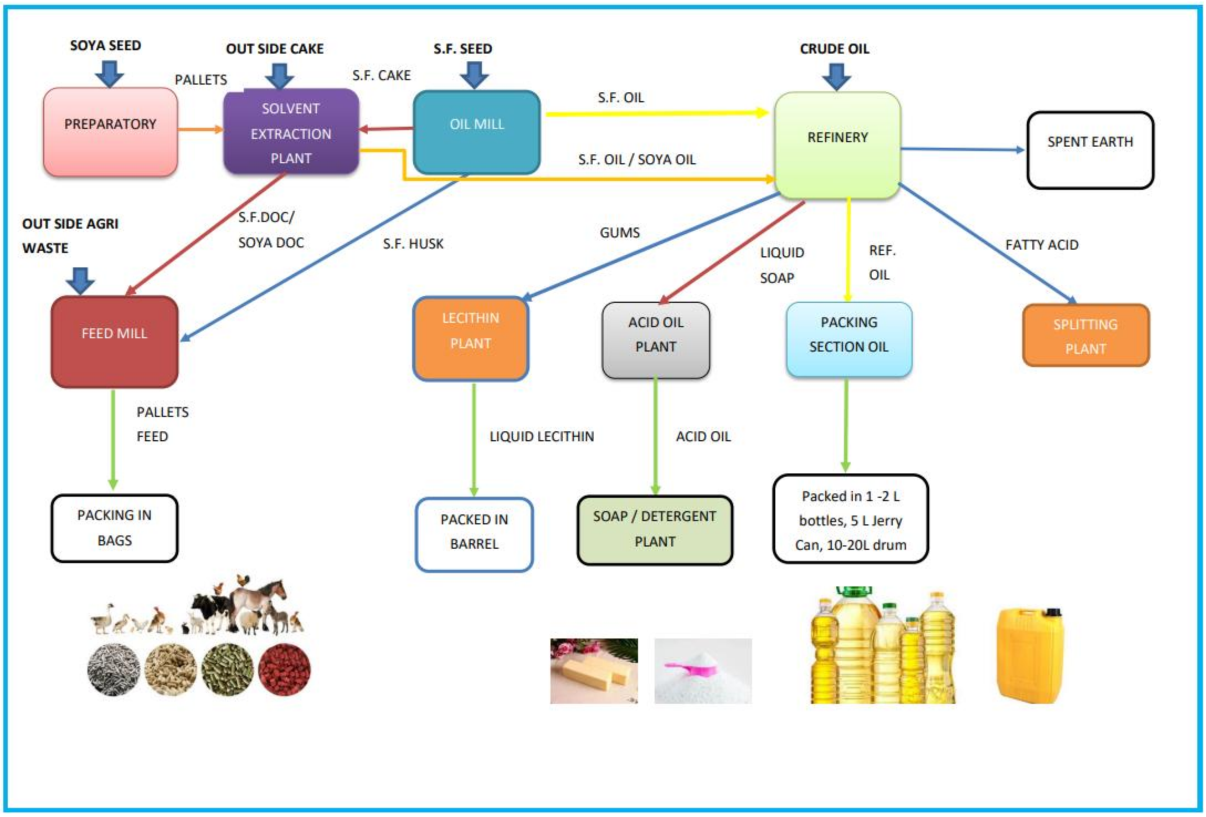
2. Warehouses: The company will build large warehouses which are used to store both raw materials (like oil seeds) and finished products. These warehouses are crucial for maintaining the supply chain.

3. Ports and Berthing Facilities: The company will plan with ports like Dar es Salaam, Tanga, and Mtwara which have berthing facilities for handling imported edible oils.

4. Public Sector Infrastructure: The government allocates land and provides infrastructure such as roads, power, and water utilities to support the installation of processing facilities. The company may approach this scheme in initial phase of project.

These facilities ensure that the edible oil industry in Tanzania can meet both domestic demand and export requirements.

Production Process Description



Process Flow Diagram

Oil Mill – Process Description

A sunflower oil mill processes sunflower seeds into edible oil. The process involves several key steps, each critical to the quality and efficiency of the final product. Here is a brief description of the typical process**:**

1. **Seed Cleaning**: Sunflower seeds are cleaned to remove impurities like dirt, stones, and other foreign materials. This is done using magnetic separators, destoners, and vibrating screens.
2. **Seed Dehulling**: The cleaned seeds are dehulled to remove the outer shell (hull). This can be done mechanically or by using a combination of mechanical and pneumatic separation. The hulls are often used as a biomass fuel or for animal feed.
3. **Seed Conditioning**: The dehulled seeds are conditioned by heating to the appropriate temperature and moisture content. This makes the oil extraction process more efficient. The seeds are usually heated to around 80-95°C depending on incoming moisture and fibre present.
4. **Mechanical Pressing**: The conditioned seeds are mechanically pressed to extract crude sunflower oil. The pressing can be done using screw presses or expellers, which squeeze the

oil from the seeds. The remaining solid material, known as sunflower cake or meal, can be used as animal feed.

5. **Oil Settling and Filtration**: The crude oil extracted from the seeds contains impurities and particulate matter. It is allowed to settle, and then filtered to remove these impurities.

6. **Oil Refining:** The filtered crude oil undergoes refining to improve its quality and make it suitable for consumption. Current its again trending expeller oil bottling as organic containing natural minerals and vitamins which gets drastically reduced once its refined by treating with chemicals and high temp. to achieve high self-life.

Solvent Extraction Plant – Process Description

Solvent extraction is a common method used to extract oil from edible seeds such as soybean and cottonseed. The process is highly efficient and can yield a high percentage of oil from these seeds. Here is a detailed description of the solvent extraction process for edible seeds like soybean and cottonseed:

1. Preparation of Seeds

- Cleaning: Seeds are cleaned to remove impurities such as dirt, stones, and plant material.
- Conditioning: The seeds are conditioned by heating and adding moisture to make them pliable and to facilitate oil extraction.
- Crushing and Flaking: Seeds are crushed into small pieces and then flaked to increase the surface area for better solvent penetration.

2. Extraction

- Solvent Addition: The prepared seed flakes are placed in an extractor and flooded with a solvent, typically hexane, which dissolves the oil contained in the seeds.
- Mixing and Contacting: The mixture of seeds and solvent is agitated to ensure thorough contact, allowing the solvent to extract the oil efficiently.
- Percolation/Immersion: The solvent is percolated through the seed flakes or the flakes are immersed in the solvent to ensure maximum oil extraction.

3. Separation of Oil and Solvent

- Separation: After sufficient contact time, the oil-laden solvent (miscella) is separated from the seed flakes. This can be done using various types of extractors, such as continuous screw extractors or batch extractors.
- Desolventizing of Meal: The spent seed flakes, now devoid of most of their oil, are desolventized to remove the residual solvent. This is typically done using steam in a desolventizer-toaster, where the solvent is evaporated and recovered.

4. Oil Refining

- **Miscella Distillation:** The miscella is distilled to separate the oil from the solvent. The solvent is recovered and reused in the extraction process, while the crude oil is collected for further refining.
- **Degumming**: The crude oil undergoes a degumming process to remove phospholipids and other impurities.

- **Neutralization:** Free fatty acids are removed from the oil by neutralization with an alkali.
- Bleaching: The oil is bleached to remove color pigments and other impurities.
- **Deodorization**: The final step involves deodorization to remove any residual odors, producing a bland, odorless oil suitable for consumption.

5. Final Product

- **Edible Oil:** The refined oil is then packaged and ready for consumption or further processing into various food products.
- **By-Products:** The meal, now free of oil, is often used as a high-protein animal feed or for other industrial applications.

Refining Process Description

Refining edible crude oils can be done using physical or chemical methods. Both methods aim to remove impurities and improve the quality of the oil for consumption. Here's a brief description of each method:

Physical Refining:

1. **Degumming:**
    - Objective: Remove phospholipids and other impurities.
    - Process: Water or acid is added to the crude oil, causing the impurities to hydrate and separate. The mixture is then centrifuged to remove the hydrated impurities.
2. **Bleaching:**
    - Objective: Remove pigments, oxidation products, and other impurities.
    - Process: Bleaching earth (clay) or activated carbon is added to the oil, which adsorbs the unwanted compounds. The mixture is then filtered to remove the bleaching agent and impurities.
3. **Deodorization**:
    - Objective: Remove free fatty acids and volatile compounds that cause undesirable odors and flavors.
    - Process: The oil is subjected to steam distillation under vacuum. High temperatures help strip away free fatty acids and volatile compounds, leaving the oil neutral in flavor and odor.

Chemical Refining:

1. **Degumming**:
    - Objective: Remove phospholipids and other impurities.
    - Process: Water or acid is added to the crude oil, causing the impurities to hydrate and separate. The mixture is then centrifuged to remove the hydrated impurities.

2. **Neutralization:**
    - Objective: Remove free fatty acids to reduce acidity.
    - Process: An alkaline solution, typically caustic soda (sodium hydroxide), is added to the oil. The free fatty acids react with the alkali to form soap, which is then separated by centrifugation.
3. **Washing**:
    - Objective: Remove residual soap and alkali.
    - Process: The neutralized oil is washed with hot water and centrifuged again to remove any remaining soap and alkali.
4. **Bleaching:**
    - Objective: Remove pigments, oxidation products, and other impurities.
    - Process: Bleaching earth (clay) or activated carbon is added to the oil, which adsorbs the unwanted compounds. The mixture is then filtered to remove the bleaching agent and impurities.
5. **Deodorization**:
    - Objective: Remove volatile compounds that cause undesirable odors and flavors.
    - Process: The oil is subjected to steam distillation under vacuum. High temperatures help strip away volatile compounds, leaving the oil neutral in flavor and odor.

Application to Various Edible Oils:

- **Sunflower Oil:** Both physical and chemical refining can be used to produce high-quality oil suitable for cooking and food processing.
- **Soybean Oil:** Chemical refining is more common due to the high content of free fatty acids.
- **Palm Oil:** Both methods are used, with physical refining preferred for its efficiency and lower environmental impact.
- **Canola Oil:** Typically refined chemically to remove sulfur compounds and other impurities.

Both refining methods ensure that the final edible oils are safe, stable, and have a pleasant taste and appearance for consumer use.

Liquid lecithin is a natural emulsifier derived from plant sources such as soybeans, sunflower seeds, or canola. It is a versatile substance commonly used in the food, pharmaceutical, and cosmetic industries. Here's a brief description:

Animal Feed Plant – Process Description

The process of producing animal feed in a plant involves several stages to ensure that the feed is nutritionally balanced, safe, and of high quality. Here’s a brief overview of the typical process in an animal feed plant:

1**. Ingredient Receiving and Storage**: Raw materials such as grains, protein sources (Soybean meal, Sunflower Meal & Husk, others), vitamins, and minerals are delivered to the plant. They are inspected for quality, weighed, and stored in silos or warehouses.

2. **Grinding**: Raw materials are ground using hammer mills or roller mills to achieve the desired particle size for better mixing and digestion

3. **Batching and Mixing**: The ground ingredients are weighed according to specific formulations and mixed thoroughly in a mixer to achieve a homogenous blend.

4. **Conditioning:** The mixed feed is conditioned by adding steam and heat. This process softens the material and partially cooks it, enhancing pellet binding and nutrient availability.

5**. Pelleting**: The conditioned feed is passed through a pellet mill where it is forced through a die, forming pellets of a specific size and shape. The heat generated in this process also helps to kill any harmful microorganisms.

6. Cooling: The hot, moist pellets are cooled using a counterflow cooler to prevent mold growth and spoilage, and to harden the pellets for durability.

7. Screening: The cooled pellets are screened to separate fines (small particles) and broken pellets from the finished product. These fines can be recycled back into the pelleting process.

8. Coating (Optional): The pellets may be sprayed with fats, oils, vitamins, or enzymes to enhance their nutritional profile and palatability.

9. Packaging and Storage: The finished pellets are weighed and packaged into bags or bulk containers. The packaged feed is then stored in a warehouse, ready for distribution to farmers or retail outlets.

10. Quality Control: Samples of the feed are regularly tested for nutrient composition, moisture content, pellet durability, and contamination (e.g., mycotoxins, pathogens). Any feed that does not meet the standards is reprocessed or discarded.

The animal feed production process ensures that the feed is nutritionally balanced, safe, and meets the dietary needs of various livestock. Each step, from ingredient receiving to packaging, is carefully controlled and monitored to maintain high quality and safety standards.

Liquid Lecithin Process:

1. **Composition:**
    - Phospholipids: Main active components, crucial for emulsification.
    - Fatty Acids: Provide texture and stability.
    - Triglycerides: Contribute to the overall fatty content.
    - Carbohydrates and Water: Present in minor amounts.
2. **Production:**
    - Extraction: Lecithin is extracted from oilseeds (like soybeans) during the oil refining process.
    - Purification: The crude lecithin is purified and standardized to achieve the desired quality and consistency.

3. **Properties:**
    - Emulsifying: Stabilizes mixtures of oil and water, preventing separation.
    - Hydrophilic and Lipophilic: Attracts both water and fat, making it versatile in different formulations.
    - Viscosity: Liquid lecithin has a syrupy consistency, which makes it easy to incorporate into various products.
4. **Applications**:
    - Food Industry: Used in baked goods, chocolates, margarine, and dressings to improve texture, extend shelf life, and stabilize emulsions.
    - Pharmaceuticals: Acts as a carrier for drug delivery and a stabilizer in formulations.
    - Cosmetics: Used in creams, lotions, and other personal care products to improve texture and moisture retention.
    - Animal Feed: Enhances nutrient absorption and feed quality.

Benefits:

- Natural Origin: Derived from non-GMO plant sources.
- Versatility: Applicable in multiple industries for various purposes.
- Stabilizing Agent: Enhances the stability and quality of products.

Liquid lecithin's multifunctional properties make it an essential ingredient in many commercial products, ensuring consistency and quality in diverse applications.

The acid oil process is a method used to recover oils and fats from soapstock, a by-product of the chemical refining of edible oils. Here is a brief description of the acid oil process:

Acid Oil Process:

- **Collection of Soap stock:** Soap stock is the by-product formed during the neutralization step in the chemical refining of edible oils. It consists of water, free fatty acids (FFAs), soaps, and impurities.
- **Acidification**: Soap stock is treated with a strong acid, typically sulfuric acid, to convert soaps back into free fatty acids. The mixture is heated to facilitate the reaction.
- **Separation**: After acidification, the mixture is allowed to settle. The heavier aqueous phase, containing water and impurities, is separated from the lighter acid oil phase.
- **Washing:** The acid oil is washed with hot water to remove any remaining acid and soluble impurities. The wash water is then separated from the oil.
- **Dehydration**: The washed acid oil is heated under vacuum or with a drying agent to remove any remaining water.

Final Product:

- **Acid Oil**: A dark-colored, high-free-fatty-acid oil used in various industrial applications, such as animal feed, soap manufacturing, and biodiesel production.

Applications:

- Animal Feed: Used as an energy source in animal feed formulations.
- Soap Manufacturing: A raw material for producing soaps and detergents.
- Biodiesel Production: Can be used as a feedstock for biodiesel manufacturing.

The acid oil process is an efficient way to valorize soap stock, turning a waste by-product into valuable materials for various industrial uses.

Glycerine Process Description

The production of pharma grade glycerine involves a series of refining steps, including distillation, bleaching, ion exchange, and filtration, to achieve high purity. Each step is carefully controlled and monitored to ensure the glycerine meets the stringent requirements for pharmaceutical applications.

1**. Crude Glycerine Pre-Treatment:** Crude glycerine is filtered to remove solid particles and undergoes initial purification steps to reduce the content of methanol, salts, and other impurities.

2. **Distillation**: The pre-treated glycerine is subjected to vacuum distillation. This process uses reduced pressure to lower the boiling points, allowing glycerine to vaporize and condense separately from impurities.

3. **Bleaching**: The distilled glycerine is treated with activated carbon or other bleaching agents to remove color bodies and other trace impurities, resulting in a clear, colorless product.

4. **Ion Exchange:** The glycerine is passed through ion exchange resins that remove remaining ionic contaminants, including salts and heavy metals, enhancing the purity.

5. **Final Filtration**: The glycerine undergoes fine filtration to remove any residual particulate matter, ensuring the final product is free of visible impurities.

6. **Quality Control:** Samples of the final glycerine product are tested for purity, color, odor, and compliance with pharmaceutical-grade specifications. Tests include determining the glycerine content, checking for the presence of impurities, and confirming compliance with regulatory standards.

7. **Packaging:** The purified glycerine is packaged in sterile, airtight containers to prevent contamination and preserve quality. Packaging is done in a controlled environment to ensure product integrity.

Laundry Soap Plant Process

A laundry soap plant typically follows these key steps to produce soap bars or powders for laundry use:

1. Raw Material Preparation

- Fatty Acids/Oils: Animal fats (tallow) or vegetable oils (coconut oil, palm oil) are the primary raw materials.
- Alkali: Sodium hydroxide (caustic soda) is used for saponification.

2. Saponification

- Batch Process: In a saponification kettle, fats/oils are mixed with a solution of sodium hydroxide. The mixture is heated and stirred, causing a chemical reaction that forms soap and glycerin.
- Continuous Process: In a continuous saponification reactor, the fats/oils and sodium hydroxide solution are continuously fed into the reactor, where they react to form soap.

3. Glycerin Separation

- Graining: Salt is added to the soap mixture to separate glycerin from the soap. The glycerin is then removed from the bottom of the kettle.
- Washing: The soap is washed with water to remove any remaining glycerin and impurities.

4. Soap Purification

- Boiling and Settling: The soap is boiled and allowed to settle, which helps remove any remaining impurities.
- Neutralization: Any excess alkali is neutralized with an acid, such as citric acid.

5. Drying

- Vacuum Drying: The soap is dried under vacuum to remove excess water, resulting in soap noodles or chips.
- Drum Drying: Alternatively, the soap can be dried using a drum dryer.

6. Mixing and Additives

- Fragrances and Colorants: Perfumes, colorants, and other additives (e.g., whitening agents, enzymes) are mixed into the dried soap noodles.
- Blending: The soap mixture is thoroughly blended to ensure even distribution of additives.

7. Milling and Refining

- Milling: The soap mixture is passed through rolling mills to achieve a uniform texture.
- Refining: The soap is refined to improve its smoothness and consistency.

8. Extrusion and Stamping

- Extrusion: The soap mixture is extruded into a continuous bar or ribbon.
- Cutting: The extruded soap is cut into individual bars.
- Stamping: The bars are stamped with branding or other markings.

9. Drying and Curing

- Drying: The stamped soap bars are air-dried or passed through drying tunnels.
- Curing: The soap is allowed to cure for a specified period to ensure hardness and stability.

10. Packaging

- Wrapping: The cured soap bars are wrapped in packaging material.
- Boxing: Wrapped soap bars are packed into boxes for distribution.

11. Quality Control

- Testing: Finished soap bars undergo quality control tests to ensure they meet specifications for pH, moisture content, and performance.
- Inspection: Visual and functional inspections are performed to ensure consistency and quality.

By following these steps, a laundry soap plant can produce high-quality soap bars or powders suitable for household or industrial laundry applications.

Detergent Plant Process

A detergent plant produces cleaning agents such as powder, liquid, or tablet detergents. The process typically involves the following steps:

1. Raw Material Preparation

- Surfactants: Primary cleaning agents like anionic, nonionic, or cationic surfactants.
- Builders: Compounds like phosphates, silicates, carbonates to enhance cleaning performance.
- Additives: Enzymes, fragrances, colorants, and fillers to improve effectiveness and appeal.

2. Mixing

- Slurry Preparation: Ingredients are mixed with water to form a slurry. The proportions depend on the formulation.
- Agitation: Continuous agitation ensures homogeneity of the mixture.

3. Spray Drying (for Powder Detergent)

- Spray Drying Tower: The slurry is pumped into the top of a spray drying tower and atomized into fine droplets.
- Drying: Hot air is blown into the tower, drying the droplets into powder particles as they fall to the bottom.

4. Post-Additives Mixing (for Powder Detergent)

- Blending: Additional ingredients, like enzymes and fragrances, are mixed into the dried powder to avoid degradation during the drying process.
- Aging: The powder is aged to allow the additives to fully integrate.

5. Liquid Detergent Production

- Batch Mixing: Ingredients are mixed in large batches with water in mixing tanks. This includes surfactants, builders, and additives.

- Heating and Agitation: The mixture is heated and continuously stirred to ensure even distribution and proper reaction of ingredients.

6. Formulation Adjustments

- pH Adjustment: The pH of the mixture is adjusted to the desired level using acids or alkalis.
- Viscosity Control: Thickeners or thinners are added to achieve the desired viscosity, especially for liquid detergents.

7. Homogenization (for Liquid Detergents)

- High-Shear Mixing: Ensures a uniform and stable mixture, preventing separation of ingredients over time.

8. Drying and Granulation (for Tablets or Granules)

- Granulation: The slurry or mixture is granulated into the desired particle size.
- Drying: The granules are dried to the required moisture content.

9. Cooling and Screening

- Cooling: The detergent product is cooled to ambient temperature.
- Screening: Sieving to ensure uniform particle size and to remove oversized particles or fines.

10. Packaging

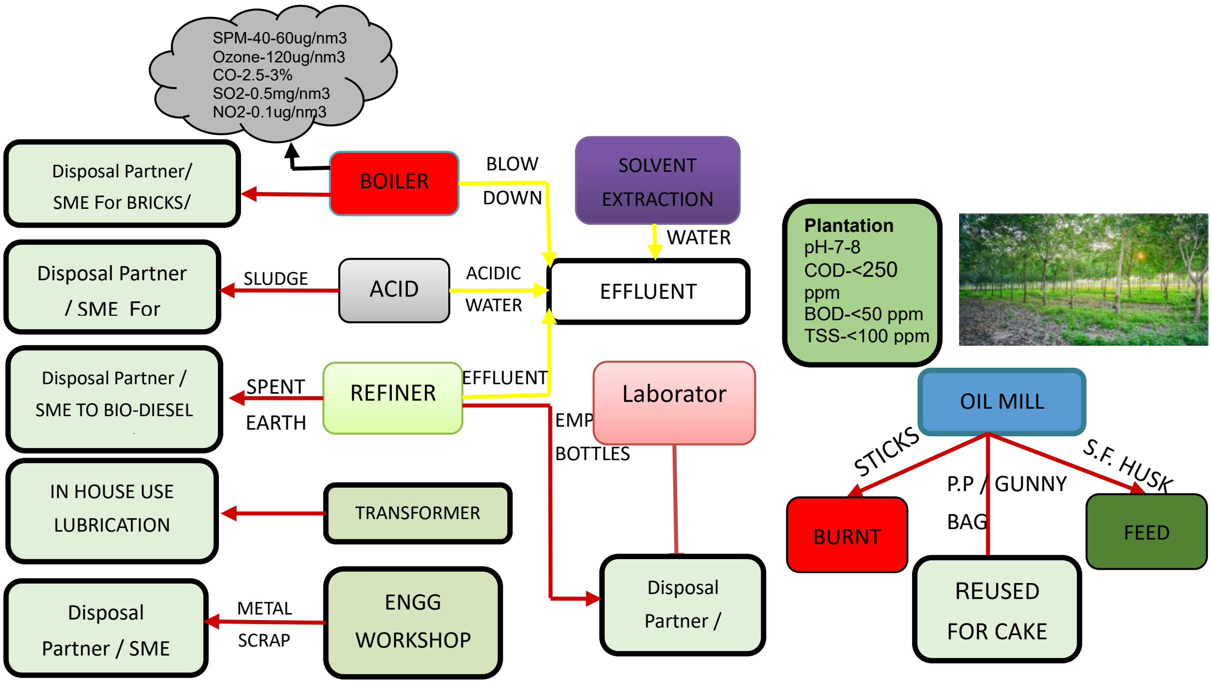
- Filling: The final product is filled into containers, such as bags, boxes, or bottles.
- Sealing: Containers are sealed to protect the product from moisture and contamination.
- Labeling: Packaging is labeled with product information, usage instructions, and branding.

11. Quality Control

- Testing: The detergent is tested for parameters like active ingredient concentration, pH, moisture content, and cleaning performance.
- Inspection: Visual inspections and functional tests are performed to ensure consistency and quality.

By following these steps, a detergent plant can produce a variety of cleaning agents that meet market demands and quality standards.

WASTE MANAGEMENT SYSTEM



LIST OF MAIN MACHINERY

OIL MILL
Crackers
Cooker
Expellers
Filter
Dehuller

PREPARATORY
Breakers
Cooker
Flaker
Expander
Pallet cooler

SOLVENT EXTRACTION
Extractor
De-solventiser cum Toaster
Economiser
Stripper
Evaporator
Condensers
Vacuum Ejectors

REFINERY
Separators
Hydration Tank
Vacuum Drier
Bleacher
Pressure Leaf Filter
Plate heat Exchangers
Aerator
Super Heater
Deodoriser
Scrubber
Cooling tower

FEED MILL
Hoppers
Hammer mill
Material weigher
Pallet machine
Pallet Cooler

UTILITIES
Compressors
Power House/DG
Fire Hydrant system
R.O. / D.M. Plant
Laboratory

LECITHIN PLANT
Storage tanks
Evaporator
Cooler
Heater

ETP
Oil collection traps
Aerator
chemical dosing tank
Sludge drying beds
settling tanks
filters

Filling & BM Section
PET Inj. Moulding
Bottle and jar m/c
Pet blow moulding
0.5 to 1 ltr Bottle m/c
3 to 5 Ltrs m/c
Jerry Can Filling M/c

BOILER
Refractory
F.D. System
I.D. system
Air pre heater
Chimney
Feed Water Tank

GENERAL
Conveyors
Elevators
Pumps
Gear boxes
Motors
MCC/LDB/PDB
Process Tanks

SOAP PLANT
Reactor
Steam injector
SIMPLEX PLODDER
Soap Milling Machine
Packing

DETERGENT PLANT
Spray Dryer
Granulator
Extruder
Milling machine
Packing

Storage Silo/Tanks

SWOT Analysis

S — STRENGTHS

1. **Elevated Need:** As a necessary ingredient for meal preparation and cooking, edible oils provide a steady supply.
2. **Diverse Product Range:** Various client tastes are catered to by the capacity to manufacture several types of oils, such as sunflower, soybean, and palm.
3. **Nutritional value:** Edible oils are a vital component of a well-rounded diet due to their high content of vitamins and important fatty acids.
4**. Technology Progress:** State-of-the-art methods of processing increase productivity and quality of output.

W — WEAKNESSES

1. **Dependency on Raw Materials**: Agribusiness circumstances and market swings can have an impact on the availability and cost of raw materials, such as oilseeds.
2 **.High Competition:** There are several businesses fighting for market share in this fragmented and fiercely competitive industry.
3**. Environmental Concerns:** The production process may have a major negative influence on the environment, such as water use and deforestation.

O — OPPORTUNITIES

1.**Health Trends:** Growing customer knowledge of the advantages of certain oils might stimulate demand for healthier alternatives, including avocado or olive oil.
2.**Emerging Markets:** By entering these areas, which have expanding populations and rising disposable incomes, new growth opportunities may arise.
Sustainability Initiatives: Using transparent supply chains and eco-friendly methods can draw in customers who care about the environment.

T — THREATS

1.**Price Volatility:** Changes in raw material costs might influence profitability.
2.**Regulatory Shifts:** Modifications to environmental and food safety laws may have an impact on prices and production methods.
3.**Market Saturation:** In established markets, development potential may be constrained by intense rivalry and market saturation.

Chapter 6: "Detailed Seed & Oil Study in Tanzania"

ABSTRACT

Tanzania`s edible oil sub-sector is highly in need of investors to fill the supply gap that currently stands at 320,000 tons so as to slash the import bill that amounted to USD 162.5 million in 2023. The country`s annual demand for edible oil is 570,000 Tons and annual supply is 180,000 Tons leaving the country with no choice but to import the remaining 320,000 Tons. The demand forecast shows an increase from 570,000 tons to 700,000 tons of edible oil by 2030; and, Tanzania guarantees the market growth for investors in the foreseeable future.

Oilseeds are produced in almost all regions in Tanzania. The major crop for edible oil production in Tanzania is the sunflower because it can be grown in most parts of the country as it is drought resistant, less susceptible to diseases and cheaper to cultivate compared to other oilseeds crops.

Tanzania's edible oils sector has received government and media attention in recent years due to its promising potential. According to the Ministry of Agriculture, the country produced 2.1 million tonnes of edible oil in 2023, representing a 25% increase in production from the previous year. Multiple factors were at play in the increase; however, the primary reason was the various reforms to increase competitiveness and to improve the business environment.

To support the production of sunflower oil, the government has introduced VAT exemptions on importation of agricultural processing equipment and sunflower seed cake, while increasing import tariffs on crude and refined palm oil from 10 to 25% and from 25 to 35% respectively, to further boost the competitiveness of locally produced sunflower oil. To improve the production, the government has also emphasized the use of hybrid sunflower seeds, starting with imports but increasingly shifting the focus to domestic breeding.

The Government of Tanzania is strongly promoting double refined cooking oil, as laid down in its sunflower sector development strategy (2016-2020). There is also a market shift to double refined oil, which is bio fortified with nutrients and vitamins, as a result of improved purchase power by (urban) customers and increasing awareness by customers of its assumed health benefits. Moreover, there is potential of exporting double refined oil that is meeting all the health, safety and traceability standards and requirements, thus ensuring lucrative market for investors.

PRE-FEASIBILITY REPORT FOR ESTABLISHING A 500 MT PER DAY OIL MILL IN DODOMA REGION, TANZANIA

1.0 INTRODUCTION:

CEMEX Ventures Tanzania Ltd wish to establish a 500 MT per day edible oil processing plant to be built in Dodoma region, Tanzania. The plant is expected to use different types of oil seeds as raw material, and use modern technology for extracting oil from the seeds in order to increase efficiency. This report is a precursor for the feasibility study for establishing the above-named project. The report presents information on Statutory compliance, Production and yield data, Import and export data, Sales and Marketing for seed & crude oil, major vendors of seed & crude oil including local farmers supplying various seeds and local small scale crude oil producers, Seed quality and Seasonal variation data interms of the impact of seasonal factors such as planting and harvesting seasons on supply levels.

Setting up a 500MT per day oil mill will need at least 150,000MT of raw materials. According to the Ministry of Agriculture, the country produced 2.1 million tonnes of oil seeds in 2023. Since the factory will use different types of oil seeds as raw materials, the issue of insufficient raw materials will be mitigated.

The main objective of these information is to assess critical elements for the proposed project. The data will help in evaluating the basic conceptual, economic, and financial viability of the proposed project. The information will help in determining the most promising option and discard unattractive project ideas, thus saving time and money by narrowing down options during project development.

2.0 EXECUTIVE SUMMARY:

Tanzania`s edible oil sector stands at Tshs.676.2 billion (USD Mil 294.0) with players like Bidco Oil and Soap Ltd, Murzah Oil Mills, Alaska Tanzania, Kahama Oil Mills Ltd and Mount Meru Millers Ltd. The sector is highly in need of investors to fill the supply gap that currently stands at 320,000 tonnes so as to slash the import bill that has increased from USD Mil 126.1 in 2019 to USD mil 162.5 in the fiscal year ending October 2023 (BoT, 2023). The country`s annual demand for edible oil is 500,000 tonnes and annual supply is 180,000 tonnes leaving the country with no choice but to import the remaining 320,000 tonnes (MoA, 2023).

The demand forecast shows an increase from 500,000 tonnes to 700,000 tonnes of edible oil by 2030 and Tanzania guarantees the market growth for investors in the foreseeable future (TIC, 2023). More than 60% of edible oils come from palm oil with sunflower oils accounting for less than 40%. The production of oilseeds mainly focuses on groundnuts (40%), sunflower (36%), sesame (15%), cotton (8%), and palm oil (1%). Oilseeds are produced in almost all regions of Tanzania.

Sesame has the highest oil content among the major oil crops, up to 45~57%, which is why it has been known as the "Queen of Oil" since ancient times (Sandeep et al., 2014). Sunflower seed contains 35–42% oil and is naturally rich in linoleic acid and it can yield 40% to 50% oil by conventional hexane solvent extraction, while ground nuts contain 40 – 48% followed by Common Varieties of Soybean Bossier (Oil: 30-40%) and Uyole soya (1-4) having 35-40% oil content. Palm oil content is approximately 30-35 percent. On average, Tanzania imported approximately 463,000 MT of edible oils in the period 2013-2021. The quantity of imported edible oils increased from 501,000 MT in 2013 to a peak of 542,000 MT in 2016, after which the imported quantity decreased gradually to 402,000 MT in 2021 (MoA, 2023).

As per the Volza's Tanzania Seed oil Buyer's directory, the largest Seed oil Importer and Buyer in Tanzania is Mount Meru Millers Ltd, followed by Atrium International Limited and Sunil Ashokumar Lalji. Tanzania imports most of its seed oil from India, Turkey and United Arab Emirates.

Tanzania exports of oil seed, oleagic fruits, grain, seed, fruits was USD 391.49 million during 2023, according to the United Nations COMTRADE database on international trade. Vegetable oil made up the greatest proportion of exports in this category (COMTRADE, 2023). Production of edible oils is challenged by various constraints, including the small scale of farms active in the sector, poor farming practices, lack of quality processing facilities and outdated technology. Inadequate access to finance for farmers has resulted in shortages of cooking oils and consequent inflation of retail prices.

Import and export of seed and crude oil are subject to different procedures as per different acts and regulations. The East African Community Customs Management Act (EACCMA) 2004, The standards (imports registration and batch certification) regulations, 2021, EAC common external tariff on goods from non-EAC countries, and other policy recommendations are used to regulate the edible oil subsector. In order to encourage export of locally produced goods from Tanzania all exports are zero rated under the VAT law.

Tanzania's edible oils sector has received government and media attention in recent years due to its promising potential. According to the Ministry of Agriculture, the country produced 2.1 million tonnes of edible oil in 2023, representing a 25% increase in production from the previous year. Multiple factors were at play in the increase; however, the primary reason was the various reforms to increase competitiveness and to improve the business environment.

Cooperative organizations provide operational, technical, financial and support services to agricultural supply chain actors. These include provision of agricultural inputs and loans to farmers, production, processing, transportation, storage and marketing of agricultural products. Continuous update of their technologies for processing, production, packaging, storage, marketing and other operations is crucial (Katundu, 2018). Some smallholder farmers and farmer organisations (FOs) have been receiving seeds on credit during planting seasons through contractual arrangements with off-takers and processors.

Asoko (2024) has mapped 22 leading companies in Tanzania's edible oil sector. The majority of the leading companies are involved in sunflower seed growing and processing, reflecting the overall sector structure. Nearly 70% of the companies produce sunflower seed oil, four of which also produce edible oils from other sources such as baobab, soyabean, sesame seed, cotton seed and palm oil. Of the leading firms, 23% are headquartered in Dar es Salaam; Shinyanga, in the north of the country hosts 18%; and Dodoma, the capital of Tanzania is home to 14% of company HQs. The remaining are spread across seven further regions.

System Assessments conducted by Farm Africa and Faida-Mali through the Agriculture Markets Development Trust (AMDT) facilitation show that, sunflower production is highest in Dodoma region, followed by Singida and Manyara. There are hundreds of SME sunflower seed processors with installed capacity ranging from 4.5 to 18 MT per day (24 hours). However, most of them are not processing more than 1 to 2 MT daily, due to limited raw materials, often caused by inadequate working capital.

The Government of Tanzania is strongly promoting double refined cooking oil, as laid down in its Sunflower Sector Development Strategy (2016 - 2020) and there are various (local) Government programmes that are providing financial support (eg ASDP II) to those engaging in this value adding industry. Also, its regulatory bodies like the Tanzania Bureau of Standards (TBS) are in the forefront of enforcing this policy. Increases in rainfall causes nutrient leaching, washing away of the topsoil and water logging, pests, disease outbreaks and infrastructure damage that would result into low crop yields and disruption of oil seeds supply chain. Rainfall can all affect the amount of water available for drinking, irrigation, and industry. Annual and seasonal temperature and precipitation patterns also determine the types of animals and plants (including crops) that can survive in particular locations (Kahimba, et al, 2015).

3.0 DATA SOURCES AND METHODOLOGY:

Both primary and secondary data were used in preparing this report. Primary data was collected through direct observations and personal interview to relevant authorities. On the other hand, secondary data was collected from government publications, websites, books, journal articles, internal records etc.

Data were collected through key informant interviews and documentary reviews and direct observations. Quantitative and qualitative data were analysed by using descriptive statistics and content analysis respectively.

• Final Invoice

• Agent's Authorization Letter from the importer

• Import permits from Ministry of Agriculture (MoA), Tanzania Medicines and Medical Devices Authority (TMDA), Tanzania Bureau of Standards (TBS), Tanzania Shipping Agencies Corporation (TASAC), etc.

• Exemption documents (If applicable)

• Packing List

• Transport documents i.e., Bill of Lading/Airway Bill/Road Consignment note.

• Cross Border Declaration of Currency and Bearer Negotiable Instruments

• Summary of SEED Import procedures (African Seed Trade Association AFSTA)

4.0 MAIN FINDINGS

4.1. Statutory Compliance to import & export of seed & crude oil

Import and export of seed and crude oil are subject to different procedures as per different acts and regulations. Imports to Tanzania are subjected to different stages whereby the importer is advised to make declaration through his Clearing and Forwarding Agent by lodging documents at least 7 days before arrival of the vessel. Import procedures must be followed to clear goods as per the East African Community Customs Management Act (EACCMA) 2004. The importer is required to appoint a Licensed Clearing and Forwarding Agent (CFA) to clear goods. The documentation process is done online through Tanzania Customs Integrated System (TANCIS) for imports and exports and can be completed before arrival of the goods. Customs agents lodge the documents in the clearance system, i.e. TANCIS Mainland and Zanzibar, attaching all other relevant import supporting documents. The Agents are urged to lodge such documents at least 7 days before arrival of the goods. Import Documents include:

There are usually 10 Steps involved in the procedure and approximately 16 documents are required from 7 organizations. The steps and procedures involved are summarized in table 4.1a below.

Step	Procedure
1	Register as a seed dealer and obtain a certificate of registration
2	File a Notice to Import (SR 12) to Obtain a Seed Import Permit
3	Obtain Plant Import Permit
4	Apply for a seed export certificate
5	Obtain a phytosanitary certificate
6	Obtain fumigation certificate
7	Obtain a Tanzania Energy Import Permit
8	Pay taxes (Railway Development tax at 1.5% and Custom Processing at 0.6%)
9	Physical Verification
10	Consignment is released

Table 4.1b. Steps and Procedures involved in Export of seed and crude oil

Step	Procedure
1	Register as a seed/crude oil dealer and obtain a certificate of registration

2	Receive Import Permit from country of origin
3	Apply for seed/crude oil export permit.
4	Obtain Phytosanitary Certificate
5	Send document to country of import
6	Prepare transportation manifest (Bill of Lading/Airway Bill/Road Consignment note).
7	Forward documents to clearing agents
8	Clearing and release of consignment

• Tanzania Official Seed Certification Institute (TOSCI)

• Tanzania Plant Health and Pesticides Authority (TPHPA)

• Tanzania Atomic Energy Commission (TAEC)

• Weight and Measures Agency (WMA)

• Tanzania Bureau of Standards (TBS)

• Tanzania Revenue Authority (TRA)

• National Security

• Tanzania Chambers of Commerce

• Importing Country Revenue Authority

The following bodies/agencies are involved in facilitating these procedures: -

4.2 Type of taxes or import duty and their rates for import of both seed and crude oil

As part of the East African Customs Union, Tanzania imposes the EAC common external tariff on goods from non-EAC countries. The tariffs range from 0 percent for raw materials to 10 percent for industrial used goods and 25 percent for consumer goods. As of January 1, 2010, there are no tariffs on EAC-origin goods from countries within the union. However, on occasion disputes have occurred between

- **Increased the import duty on crude and refined edible oils from 10 to 25% and from 25 to 35%, respectively for crude and refined palm oil.**
- **VAT exemption on agricultural processing equipment which specifically covers solvent extraction and refining equipment, and;**
- **VAT exemption of sunflower seedcake export.**

Tanzania and other EAC members and temporary bans or tariffs have been imposed.

Plant import permit is issued by the Ministry of Agriculture allowing the import of plant and plant materials into Tanzania. It ascertains that the consignment has met the requirements outlined on the permit as per the type of species. The permit is issued per consignment. The permit is associated with a 5 USD fee per permit and 18% VAT.

There are also laws involved in the implementation of the import and export procedures. These laws are listed in the table below: -

Table 4.2. Laws involved in Import and Export of Oil Seed and Crude oil No.

S.No.	**Law**
1	Plant Protection Regulation, 1998 Schedule16 (Sections 48, 49, 64)
2	The Plant Health Act, 2020 (Sections 21, 22)
3	The Plant Protection Act, 1997 (Sections 8, 42).

4.3 The duty drawback provisions which was paid on import at the time of export of finished goods

Import duty charged on imported inputs used for producing goods for export and goods sold to foreign institutions like United Nations in Tanzania, is refunded. The aim of this scheme is to maximize production and minimize the cost of production for local industries and enable them to compete in the world market.

The Commissioner may grant duty relief on import at the time of export of finished goods as per the East African Community Customs Management Regulations, 2010, CAP 189 (b).

(a) the suspension system, under which the import duty payable is suspended at importation; or

(b) the drawback system, where the import duty is paid on importation and reclaimed on subsequent exportation of the processed goods (TRA, 2018).

4.4 Local taxes for local purchase of seed & crude oil

Produce cess is a levy charged by Local Government Authorities (LGAs) to traders on the value of marketed agricultural production. Since 2017, produce cess was limited to a maximum of 3% for all crops but the rate still varies across districts and across crops within the district. Although it constitutes a significant source of revenue for many LGAs, this tax restricts an increase in production by farmers, and thus improvement of their livelihoods (Ricome, et al, 2020).

4.5 Tax rates on profit for manufacturing & trading of seed & crude or refined goods

The standard corporate tax rate for companies (including seed oil companies) is 30%. When you register a company, after a year of operations here are the issues to cover up with the Government in Tanzania. Corporate Income Tax: 30%, -VAT: 18%, PAYE: 30%, Skills Dev Levy: 4.5% of workers salaries, Withholding Tax: 5-15%, Local Gov Tax, Stamp duty, Licence fee, Import & excise duty.

4.6 Changes on custom duty on import of seed & crude oil during the last five years

In July 2012, section 56 was amended to tax transactions involving disposals of overseas entities with direct or indirect interest in Tanzanian entities resulting in a change in control of more than 50% in a period of three consecutive years

The Finance Act, 2022 introduced amendments to Section 56 (2)(x) to provide tax relief to taxpayers to tide over the Covid-19 health crisis during the financial year 2019-20 and subsequent years. As per the amendment, the amount received from the employer or any well-wisher for COVID-19 treatment is tax-free. Once the provisions of section 56 are invoked, the Tanzanian entity is deemed to realise its assets and liabilities on the date of change of control, and such entity is treated as disposing all of its assets and liabilities owned by it immediately before the change. Such sale is deemed to take place at market value (TRA, 2022).

4.7 Tax benefits on export

In order to encourage export of locally produced goods from Tanzania all exports are zero rated under the VAT law. Goods are regarded as exported out of the country if they are made available at an address outside Tanzania.

VAT refunds are made either within 30 days or 6 months from the due date depending on the type of taxpayer. Regular repayment traders like exporters can claim their VAT refunds within 30 days. An authorized auditor must certify a VAT claim. It is important to note that, for a VAT registered trader to be able to deduct or claim the input tax, he must be in possession of physicalised receipts or customs receipts. Under the VAT law, there are certain goods and services which are exempted from VAT. Such goods or services are like food crops and livestock supplies, equipment used for storage, transportation, and distribution of natural gas, health supplies and hospital equipment, education services, financial and insurance services, transportation of persons, sale or lease of an interest in land and tourist services such as guide services, game driving, water safaris, animal or bird watching, park fees and tourist charter services.

All factories registered to manufacture goods under bond for export purpose are exempted from import duty and other taxes on inputs used to manufacture those goods (TRA, 2024).

4.8 Regulators which governs the pricing of oil seeds and crude oil products

The system of comprehensive price controls in Tanzania was established under the Regulation of Prices Act of 1973. The Act established the National Price Commission (NPC) and endowed it with statutory powers to fix and review ceiling prices of selected manufactured goods sold in mainland Tanzania. Other bodies include the Fair Competition Commission (FCC) under the Fair Competition Act 2003 (Cap 285). The Fair Competition Commission (FCC) was established by virtue of section 62(1) of the Fair Competition Act, No.8 of 2003 (FCA) with the aim of promoting and protecting effective competition in trade and commerce and protecting consumer from unfair and misleading market conduct. The ultimate goal is to increase efficiency in the production, distribution and supply of goods and services. Establishment of FCC is a significant step in Tanzania effort to establish a market economy.

5.0 PRODUCTION AND YIELD OF OIL SEED

5.1 Varieties & quantity of seed produced in different regions of Tanzania

Important oilseeds in Tanzania in terms of cultivated area are: groundnuts, sunflower and sesame, other crops that augment domestic supply of edible oil are cotton seeds and palm oil. Sunflower is the primary source of edible oil generating approximately 40% of domestic requirements.

Table 5.1 provides a summary of the annual quantity of oil seeds produced in Tanzania for the past 6 years.

Table 5.1. Tanzania: Production Trend of Oil Crops (Tons) 2018 - 2023

Crop	2017/18	2018/19	2019/20	2020/2021	2021/2022	2022/2023
Sunflower	543,261	561,297	649,437.30	504,422	425,653.10	1,132,298.34

Sesame	133,704	227,821	228,919.80	236,162	79,170.43	266,994
G' nuts	370,356	376,520	631,465.23	895,219	936,799	586,216.09
Palm oil	40,500	42,176	42,386.90	58,791	60,789.90	62,125.00
Soyabean	21,321	22,953	31,460	44,106	5,152.29	-
Coconut		192,238.90	201,538.50		95,465.20	
Total	**1,109,142.00**	**1,230,767.00**	**1,583,669.23**	**1,905,416.90**	**1,709,103.22**	**2,143,098.63**

5.1.1 Sunflower

The production of sunflower in Tanzania was 504,422 tons in 2020, out of which 503,032 tons was produced by smallholder farmers and 1,390 tons were produced by large scale farms. The production of sunflower by smallholder farmers was reported in Mainland Tanzania only (NBS, 2022). Dodoma region had the highest production of 202,528 tons (40.3 percent), followed by Singida (67,706 tons 13.5 percent) and Manyara (57,722 tons; 11.5 percent), while Lindi region had the least production (123 tons; 0.02 percent).

There are three types of commonly used sunflower seeds open-pollinated varieties (OPV), Improved seed and recycled. Each variety has its own unique levels of monounsaturated, saturated, and polyunsaturated fats. The oil content of sunflower seeds is about 45%-54% (calculated as 50%), and the oil content of edible sunflower seeds is about 22%-35% (calculated as 30%). Among them, oil sunflower seeds are usually the main raw material to extract sunflower oil. Traditional sunflower seeds yield 40% to 50% oil by conventional hexane solvent extraction. Regular or conventional SSO is a linoleic acid-rich oil containing virtually no linolenic, about 20% oleic, 6% palmitic, and 5% stearic acid.

Table 5.2. Sunflower varieties by Oil content & quantity of seed produced in selected regions of Tanzania in 2020

Sunflower Varieties	**Dodoma**		**Singida**		**Manyara**		**Lindi**	
Qty (MT)	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty (MT)**	**Oil Content %**	
Record OPV	17,215	28	5,755	28	4,906	28	10	28
Super Sun 66	6,076	45	2,031	45	1,732	45	4	45
Recycled	179,237	22	59,920	22	51,054	22	109	22
Total	**202,528**		**67,706**		**57,722**		**123**	

5.1.2 Sesame

Sesame production in Tanzania has been rising steadily. In 2022, approximately 705,000 tons of sesame seeds were produced in Tanzania. Since 2014, Tanzania's sesame seed production has risen by 4.7% year on year. Tanzania producing 0.71 million tons, account for 16.6% of total global sesame production (FAO, 2022). After Sudan (1,525,104 tons) and Myanmar (740,000 tons), Tanzania was the third-largest producer of sesame seeds in the world, and it was the second-largest producer in Africa.

With the proportion of the nation's total sesame output in brackets, the top producing regions in Tanzania are Lindi (20.9%), Songwe (18.3%), Dodoma (17.1%), Ruvuma (10.3%), and Mtwara (8.1%). The remaining major producing areas are Singida (5.2%), Morogoro (5.1%), Pwani (4.5%), Katavi (2.4%), and Rukwa (1.3%) (NBS, 2021). The preponderance of sesame seeds farmed by smallholder farmers in Tanzania is white, however there are a few brown and black seeds that are less common. White sesame seeds are favoured types due to their resilience and/or tolerance to adverse weather conditions, and they can be cultivated with little attention (Modor Intelligence, 2020). Tanzania traditionally grows sesame as its primary oilseed crop for export.

The top five cultivars that the majority of sesame growers use are Blue (30%), Lindi 2002 (26.7%), Morada (21.2%), Manyoya (8.8%), and Naliendele 1992 (3.8%). Only three of the top five favourite varieties were improved: Blue and Manyoya were local varieties, followed by Lindi 2002, Naliendele 1992, and Morada, an old improved variety. Sesame has the highest oil content among the major oil crops, up to 45~57%, which is why it has been known as the "Queen of Oil" since ancient times (Tridge, 2024). Sesame oil is reported to contain 80% unsaturated fatty acids and a small amount of saturated fatty acids

Table 5.3 Sesame varieties by Oil content & quantity of seed produced in selected regions of Tanzania in 2020

Sesame Variety	**Lindi**		**Songwe**		**Dodoma**		**Ruvuma**		**Mtwara**	
Qty (MT)	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty (MT)**	**Oil Content %**	
Blue	44,203	48	38,704	48	36,166	48	21,784	48	17,131	48
Lindi 2002	39,341	50	34,446	50	32,187	50	19,387	50	15,246	50
Morada	31,237	52	27,351	52	25,557	52	15,393	52	12,105	52
Others	32,564		28,514		26,645		16,051		12,623	
Total	**147,345**		**129,015**		**120,555**		**72,615**		**57,105**	

5.1.3 Groundnuts

Tanzania is the second largest producer of groundnuts in East Africa, following Sudan, with an annual production of roughly 700,000 MT. The country had approximately 990,000 hectares under peanut (groundnuts) cultivation in 2019. The production of peanut (groundnuts) in Tanzania was 631,465 tonnes in 2019 and peaked to 936,799 tons in 2022 (MoA, 2023).

Groundnuts output in Tanzania indicated slight growth, which was largely conditioned by a slight increase of the harvested area and a relatively flat trend pattern in yield figures. Over the period under review, the total production indicated a buoyant increase from 2017 to 2022 (Indexbox, 2024).

The major groundnut production regions in Tanzania are Mtwara, Songwe, Dodoma, Shinyanga, Geita, Singida, Kigoma and Tabora. Likewise, groundnut is largely produced in Mwanza, Simiyu, Kagera. Mbeya, Katavi, Rukwa and Manyara regions. The production of groundnuts in Tanzania in 2020 was 621,697 tons, out of which 621,665 tons produced by smallholder farmers and 32 tons produced by large scale farms (NBS, 2021). Out of the total production of groundnuts by smallholder farmers, 620,975 tons were produced in Mainland Tanzania and 690 tons in Tanzania Zanzibar. In Mainland Tanzania, Dodoma region had the highest production (176,287 tons; 28.4 percent), followed by Tabora (97,677 tons; 15.7 percent) and Geita (50,062 tons; 8.1 percent), while, Mara region had a least production (605 tons; 0.1 percent).

The important varieties of groundnuts in Tanzania are Pendo 1998 (90 – 100 days), Narinut 2015 (110-115 days), Mtwaranut 2016 (110-115 days), Tanzanut 2016 (110-115 days), Mnanje 2009 (110-120 days), Nachigwea 2009 (110-120 days), Masasi 2009 (110-120 days), Kuchele 2015 (110-120 days), Naliendele 2016 (110-115 days), and Nachi 2015. Pendo 1998 and Mnanje 2009 are highly adopted by the farmers. The principal raw material required for the production of groundnut oil is groundnut seed. And you can procure this locally. The seed gives 45-58% oil, 42-55% meal.

Table 5.4. Groundnut varieties by Oil content & quantity of seed produced in selected regions of Tanzania in 2020

Groundnuts Variety	**Dodoma**		**Tabora**		**Geita**		**Mara**	
	Qty (MT)	**Oil Content %**	**Qty** (MT)	**Oil Content %**	**Qty (MT)**	**Oil Content %**	**Qty** (MT)	**Oil Content %**
Mnanje 2009	27,299	56	15,126	56	7,752	56	94	56
Pendo 1998	86,029	54	47,666	54	24,430	54	295	54
Others	62,959		34,885		17,880		216	
Total	**176,287**		**97,677**		**50,062**		**605**	

5.1.4 Palm Oil

The production of oil palm seeds in Tanzania was 24,696 tons, out of which 24,640 tons produced by smallholder farmers and 56 tons produced by large scale farms. The production of oil palm seeds by smallholder farmers, was reported in Mainland Tanzania only (NBS, 2021). From the total production produced by smallholder farmers, Kigoma Region had the highest production of 17,987 tons (72.9 percent), followed by Mbeya (5,013 tons; 20.3 percent) and Pwani (1,262 tons; 5.1 percent). with Kigoma producing about 61.4%, Mbeya 35.7% and Pwani 0.9% as per 2017/18 agricultural season data (NBS, 2021). In Kigoma there are over 30,000 smallholder subsistence palm oil farmers. Meanwhile, the country imports over 500,000 MT of palm oil per annum. Thus, palm oil value chain development offers great potential for both import substitution and poverty alleviation.

The oil palm produces bunches containing many fruits with the fleshy mesocarp enclosing a kernel that is covered by a very hard shell. Palm oil which is obtained from the mesocarp of the palm fruit, is composed of 50% saturated fatty acids, 40% monounsaturated fatty acids and 10% polyunsaturated fatty acids. The saturated fat components are trace amounts of lauric and myristic acids, and a large amount of palmitic acid 44%. FAO considers palm oil (coming from the pulp) and palm kernels to be primary products. The oil extraction rate from a bunch varies from 17 to 27% for palm oil, and from 4 to 10% for palm kernels or 'Misse'. Studies conducted in Kigoma region on oil palm farming and palm oil production have tapped more on the existence and inception rate of local Dura variety and improved Tenera variety. So far, none of them has looked into the production systems that rise from the adoption of these varieties.

Table 5.5. Palm oil varieties by Oil content & quantity of seed produced in selected regions of Tanzania in 2022

Palm Oil Variety	Kigoma		Mbeya		Pwani	
	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %
Dura	15,289	50.0	4,261	50.0	1,073	50.0
Tenera	2,518	43.6	702	43.6	177	43.6
Picifera	180	44.0	50	44.0	12	44.0
Total	**17,987**		**5,013**		**1,262**	

5.1.5 Soybean

According to the Ministry of Agriculture, over the past decade, soybean production in Tanzania has shown steady growth, with the production volume rising from 8,100 MT in 2012 to 25,900 MT in 2022. The report linker, which is a trade-based statistics database, estimated that the production of soybean in Tanzania to is reach 32,310 MT by 2026, growing at an average rate of 4.5% year on year. Much of the demand for animal feed is currently met by imports of meal or cake from India and from neighbouring Zambia, Malawi and Uganda.

Main regions growing soybean are Ruvuma, Mbeya, Rukwa, Iringa and Morogoro. Others are Dodoma, Tanga, Lindi, Kagera, Mara, Kigoma, Kilimanjaro, Arusha and Manyara. Common Varieties are Bossier (Oil: 30-40%), Uyole soya 1 (Oil 35-40%), Uyole soya 2 (Oil: 35-40%), Uyole soya 3 (Oil: 35-40%), Uyole soya 4 (Oil: 35-40%), Ezumu Tumu, Delma Hermon, Duiker and Kaleya.

Table 5.6. Soybean varieties by Oil content & quantity of seed produced in selected regions of Tanzania in 2022

Soya Oil Variety	Ruvuma		Mbeya		Rukwa		Iringa		Morogoro	
	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %	Qty (MT)	Oil Content %
Bossier	1,036	35	770	35	570	35	466	35	310	35
Uyole soya	3,108	40	2,330	40	1,709	40	1,399	40	932	40
Others	1,036	35	785	35	570	35	466	35	312	35
Total	**5,180**		**3,885**		**2,849**		**2,331**		**1,554**	

5.2. Seed season and harvesting/ cultivating pattern

Determination of. the effective crop growing season is important for rainfed agriculture. The late planting, occurrence of dry spells within a growing season and early cessation of rainfall reduces the length of the season which in turn reduces crop Yields. These are the contributing factors of crop failure and thus affect oil seed production in the country (Yonah et al, 2006).

Most parts of Tanzania experiences unimodal rainfall. The characteristics of rainfall such as onset and cessation dates, dry and wet spell lengths, frequency and number of rainy days can be used to determine the nature of growing season; length of growing season, end of season and its geographic variation both latitudinally and longitudinally. This justifies the assessment of the crop growing season under unimodal rainfall regime by this category in order to adapt agricultural practices which result in increased oil seed productivity.

In Tanzania the growing season starts in the first week of December in most of the regions except in Kigoma where the season starts earlier in the second week of November. The growing season ends in April in most of the years. Similarly, the length of the season usually ranges between 131 and 150 days in Mbeya and Songea in the south and Kigoma to the west. In Dodoma and Iringa, the growing season is as short as 93 to 97 days. These results form a good basis for explaining the characteristics of the growing season in the country.

5.3 Effects of weather patterns (rainfall & temperature) on oil seed production

Climate change is real and inevitable, incessantly threatening the terrestrial ecosystem and global food security. Although the impacts of climate change on crop yield and the environment have received much attention in recent years, there are few studies on its implications for the production of high-quality seeds that provide the basic input for food production (Maity et al, 2003).

Seeds are the primary planting material for crop cultivation and carry most new agricultural technologies to the field. Climatic abnormalities occurring at harvest and during the post-harvest stages may not always severely impact seed yield but can reduce the morphological, physiological and biochemical quality, ultimately reducing the field performance and planting value of the seed lot. These impacts can potentially reduce the quantity and quality of seeds produced. Immediate attention and action are required to understand and mitigate the detrimental impacts of climate change on the production and supply of high-quality seeds.

6.0 IMPORT AND EXPORT OF OIL SEEDS AND CRUDE OIL

6.1 Total imports of seed and crude oil for the last five years

Tanzania Imports of Oil seed, oleagic fruits, grain, seed, fruits was USD 26.91 Million during 2023, according to the United Nations COMTRADE database on international trade (Table 6.1).

Table 6.1. Tanzania Imports of Oil seed, oleagic fruits, grain, seed, fruits

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Value in USD million	22.3	18.7	23.4	20.0	29.6

2028, with an expected volume growth of 7.6% in 2025. On average, each person in Tanzania is projected to consume 0.87 kg of edible oils in 2024.

Tanzania imports most of its Seed oil from India, Turkey and United Arab Emirates. Palm oil accounted 72 percent of the imports, followed by Sunflower and Olive oils (Table 6.2).

Table 6.2. Share of imported edible oils in Tanzania from 2018 – 2020 (Metric Tons)

Description	**2018**	**2019**	**2020**	**Total**	**%**
Palm oil	665	770	639	2,074	72.1
Sunflower, safflower, cotton seed	144	141	120	405	14.1
Olive oil	126	124	103	353	12.3
Soybean oil	5	13	17	35	1.2
Groundnuts oil	8	0	1	9	0.3
Total	**948**	**1048**	**880**	**2,876**	**100.0**

The top three sources of import countries for palm oils are Indonesia, Malaysia, and the United States of America (US), while for Sunflower oils they are Antigua and Barbuda, Argentina and Ukraine, and for soya-bean oils they are Argentina, United States of America and Uganda.

As per the Volza's Tanzania Seed oil Buyer's directory, the largest Seed oil Importer and Buyer in Tanzania is Mount Meru Millers Ltd, it accounted for maximum share with 577 shipments followed by Atrium International Limited with 63 and Sunil Ashokumar Lalji at 3rd spot with 56 shipments.

The revenue in the Edible Oils market in Tanzania is projected to reach USD 318.50 million in 2024 (Statista, 2024). The market is expected to grow annually by 10.01% (CAGR 2024-2028). When considering the total population figures, per person revenues in Tanzania are estimated to be USD 4.59 in 2024. It's worth noting that Tanzania's annual demand for edible oil stands at 500,000 tons, while the country can only supply 180,000 tons domestically. As a result, Tanzania imports approximately 320,000 tons of edible oil each year, highlighting significant opportunities for import substitution.

6.2. Total Exports of oil seed, oleagic fruits, grain, seed, fruits.

Tanzania exports of oil seed, oleagic fruits, grain, seed, fruits was USD 391.49 Million during 2023 (Table 6.3). Of these seed oils exported were valued at USD 16.7 million.

Table 6.3. Tanzania Total Exports of Oil seed, oleagic fruits, grain, seed, fruits

Year	2019	2020	2021	2022	2023
Value in USD million	199	199	269	230	391

The main destinations of Tanzania exports on seed oils were Switzerland (USD 13.4M), Rwanda (USD 1.62M), Democratic Republic of the Congo (USD 509,000), Netherlands (USD 203,000), and Kenya (USD 177,000).

The country's edible oil export is minimal at USD 16.7 million meaning Tanzania had a negative trade balance of USD 119 million in 2019 (Table 6.3). Vegetable oil made up the greatest proportion of exports in this category, bringing in USD 4 million. Production of edible oils is challenged by various constraints, including the small scale of farms active in the sector, poor farming practices, lack of quality processing facilities and outdated technology. Inadequate access to finance for farmers has resulted in shortages of cooking oils and consequent inflation of retail prices. The TIC is working to overcome these challenges by securing investments into the edible oil processing segment. Recognising Tanzania's potential for edible oil production, plans have been made to revamp crop production, with the government setting aside USD 4.3 million to boost cultivation of oil palm. As part of a general plan to strengthen the sector, measures are being taken to improve the accessibility of farm inputs and undertake capacity building for farmers to enable better farm management (MoA, 2023).

6.3 Total import of refined oil for the last five years

Tanzania imports 320,000 tons of edible oil per year. Tanzania's annual demand for edible oil stands at 500,000 tons, whereas the country can supply only 180,000 tons, forcing it to import at least 320,000 tons each year, signaling major opportunities for import substitution. Demand for edible oil could increase from the current 500,000 tonnes per year to 700,000 tonnes by 2030 (TIC, 2023).

The deficit is imported from Malaysia, India, Singapore and Indonesia at a cost of USD 204.7 million per year. Shortage of edible oil has pushed up retail prices per litre.

Table 6.4. Quantity and Prices of imported edible oils (USD/MT), 2023

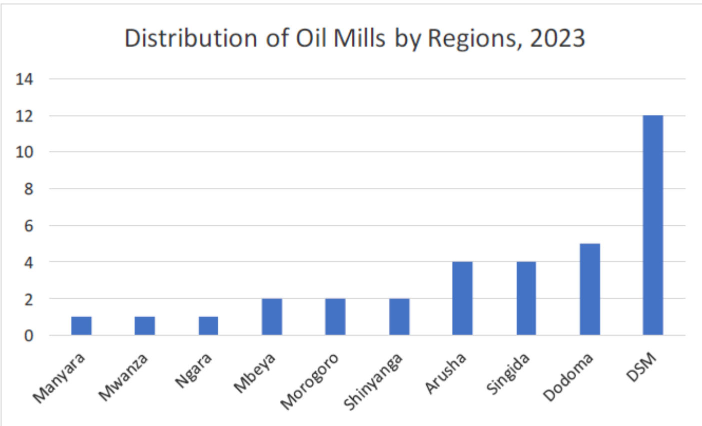
Product Name	Quantity in MT	Price USD Per MT
Refined Soybean Oil	2,679	22,880
Refined Palm Oil	160,757	1,006
Refined Olive Oil	26,792	6,950
Refined Sunflower Oil	31,258	820
Refined Ground-nut oil	670	3,000

6.4 Buyers of seed & crude oil

The buyers of seed and crude oil in Tanzania are diverse depending on the type of oil industry. For Sunflower oil which has high and growing domestic consumption and production in Tanzania buyers include local consumers, retailers, and food processing companies. For Soybean oil since the industry is rapidly growing (currently used for animal feed), and there's potential for local processing to oil, buyers may include local processors, exporters, and animal feed manufacturers.

Likewise, Palm oil having a large potential for import replacement due to high domestic consumption and high import levels (97%), buyers could be local consumers, food manufacturers, and retailers. Groundnut oil has high demand, and there's significant smallholder participation in nut farming. Buyers may include local consumers, processors, and exporters. For Sesame oil there is limited domestic oil production, but seed production is growing. Buyers could be local processors and exporters, likewise for Cottonseed oil opportunities are currently limited (tied to cotton lint industry), and buyers might include textile companies and local consumers.

Fig. 1. Distribution of Edible oil Processing Mill by Region, 2023



Source: Generated from TanzaniaInvest data, 2024.

Tanzania Investment data indicates that nearly 35% of the companies involved in processing edible oil produce sunflower seed oil, although some produce edible oils from other sources such as baobab, soyabean, sesame seed, cotton seed and palm oil (TanzaniaInvest,2024). Of the leading firms, 35% are headquartered in Dar es Salaam; followed by Dodoma (15%), Singida & Arusha (12%). The remaining are spread across seven further regions (Annex II). The underdeveloped status of the sector is reflected in the revenues of the leading players, with half of the 34 firms covered earning under USD 1 million annually.

6.5 Current market demand for sunflower & Soya seeds domestically and internationally

The demand for sunflower seeds in Tanzania has been growing, particularly for cooking oil production. Tanzania is one of the top ten sunflower oilseed producers globally, with an annual output of around 350,000 tons of sunflower oilseeds. The country mainly relies on small-scale farmers for sunflower cultivation (UNIDO, 2023).

Sunflowers are grown across various regions, but production is concentrated in the Central Corridor and the Southern Highlands (Farm Africa, 2023). The fastest-growing export markets for Tanzanian sunflower seeds between 2021 and 2022 were Uganda, the United States, and Burundi. In 2022, Tanzania imported USD 5.55 million worth of sunflower seeds, making it the 65th largest importer globally (OEC, 2024).

The global sunflower seed market has been witnessing growth due to increasing awareness among consumers about the health benefits of sunflower seeds. Health-conscious consumers are driving the demand for healthy snacks, which includes sunflower seeds. The versatility and nutritional benefits of sunflower seeds encourage food manufacturers to experiment with various applications, further benefiting the market. By 2032, the sunflower seed market is projected to reach around USD 75.9 billion, expanding at a 9.4% CAGR between 2024 and 2032 due to growing demand for healthy snacks, expanding application in the food industry and shift in agricultural practices (GMI, 2023).

The market demand for soybean seeds in Tanzania has been on the rise. Soya farmers are experiencing expanded market opportunities due to growing demand for soybeans both locally and in export markets (The Citizen, 2021). Eastern Africa Grain Council reports that the demand for soybeans is increasing daily, prompting calls for increased production by mobilizing farmers. Tanzania exports soybeans to various countries. Notably, the fastest-growing export markets between 2021 and 2022 were China, Rwanda, and the Democratic Republic of the Congo. In 2022, Tanzania imported soybeans worth USD 14.3 million, making it the 68th largest importer globally (OEC, 2024).

In 2022, Tanzania produced approximately 41.07 million kilograms of soybeans, ranking 52nd globally in terms of production volume (Tridge, 2024). The Tanzania Soybean Market registered a growth of 2.96% in value shipments in 2022 compared to 2021, with a 25.94% compound annual growth rate (CAGR) from 2017 to 2022. However, Tanzania's competitiveness in the soybean market has decreased slightly (6WResearch, 2024). The Tanzanian government is actively promoting soybean production, seed multiplication, and policies related to non-GMO and organic food exports5. In summary, the demand for soybean seeds in Tanzania is robust, driven by both local consumption and export opportunities. Farmers are encouraged to capitalize on this trend by increasing production.

6.6 Future forecast for refined oil demand and supply for next five years

Tanzania currently has an annual demand for edible oil of 500,000 tonnes (TIC, 2023). However, the country can only supply 180,000 tonnes domestically, leading to a significant gap. To meet this shortfall, Tanzania imports approximately 320,000 tonnes of edible oil annually.

By 2030, the demand for edible oil in Tanzania is expected to increase from 500,000 tonnes to 700,000 tonnes (TIC, 2023). Investors can anticipate a growing market for edible oil in Tanzania due to this increasing demand. In 2024, the revenue in Tanzania's edible oils market is estimated to be USD 318.50 million. The market is projected to grow annually by 10.01% (CAGR 2024-2028) (Statista, 2024). The volume of edible oil is expected to reach 75.29 million kg by 2028, with a volume growth of 7.6% in 2025. The average volume per person is estimated to be 0.87 kg in 2024 (Statista, 2024).

In summary, Tanzania's edible oil market presents opportunities for investors, especially given the rising demand. However, addressing the supply gap remains crucial for sustainable growth.

7.0 PURCHASE OF OILSEEDS AND CRUDE OIL

7.1 Major vendors of seed & crude oil, region & product wise quantity and purchase price.

The edible oil market in Tanzania has been growing steadily. The revenue in the edible oils market in Tanzania is projected to reach USD 318.50 million by 2024. This market is expected to grow annually by 10.01% from 2024 to 2028 (Statista, 2024).

The volume of edible oils is expected to amount to 75.29 million kg by 2028. In 2025, the market is expected to show a volume growth of 7.6%. On average, each person in Tanzania is expected to consume 0.87 kg of edible oils in 2024 (Statista, 2024).

Some notable players in the Tanzanian edible oil sector include Bidco Oil and Soap Ltd, Murzah Oil Mills, and Mount Meru Ltd **(Annex 1).** Tanzania's market size is smaller but still significant. Consumption of edible oils in Tanzania is expected to reach 624,000 metric tons by 2026, up from 575,000 metric tons in 20213. Overall, the edible oil sector in Tanzania is promising, with room for growth and untapped potential.

7.2 Local seed millers' region wise and type of products being sold with its selling rate

Tanzania has several local oil seed millers producing edible oils. Approximately 1 million smallholder farmers grow sunflowers in Tanzania. The sector's growth benefits both farmers and small and medium enterprises involved in crude sunflower oil processing (Dalberg, 2024). Over 21 medium-to-large-scale sunflower oil-processing factories operate in Tanzania, attracting investors from the edible oil processing industry (Tanzania Invest, 2024). The notable ones are attached as **Annex II**.

7.3 Cooperatives Involvement in Managing the purchase of seeds and reselling to the market

Agricultural cooperatives play a crucial role in Tanzania, as well as globally, when it comes to managing the purchase of seeds and reselling them in the market.

Cooperatives provide cost-effective access to essential resources such as seeds, fertilizers, and equipment. This accessibility reduces the financial burden on individual farmers and promotes sustainable farming practices. Cooperatives also mitigate risks by diversifying production and sharing risks, cooperatives help members manage unpredictable factors like weather, pests, and market fluctuations (Katundu, 2018). Agricultural cooperatives allow farmers to pool their produce, negotiate better prices with buyers, and access wider markets. By working together, they improve their overall market position and enhance their bargaining power. Cooperatives serve as knowledge-sharing hubs, offering training, information, and best practices to enhance farmers' skills and overall productivity ((TAD, 2023).

These organizations operate democratically, with each member having an equal say in decision-making. They strengthen rural communities, support sustainable practices, and contribute to the economic well-being of small-scale and family farmers. In Tanzania, agricultural cooperatives have a significant impact on improving livelihoods and ensuring food security (TAD, 2023).

8.0 OIL SEEDS QUALITY ASSURANCE

Seed quality is the possession of seed with required genetic and physical purity that is accompanied with physiological soundness and health status.

8.1 Government Measures to ensure the quality of sunflower seeds produced

The Tanzanian government has implemented several measures to enhance the quality of sunflower seeds produced in the country. Key initiatives include Contract Farming, Reducing Taxes for Processors, Support for Farmers and Processors, Import Tariffs for Certified Seeds and control of Genetically Modified Organisms (GMOs).

8.1.1 Contract Farming

Strengthening the contract farming business model allows small farmers to participate in sunflower production. This approach ensures consistent quality and facilitates mass production at lower costs (Africa Press, 2021).

8.1.2 Reducing Taxes for Processors

By reducing taxes for sunflower seed processors, the government encourages investment in processing facilities. This helps maintain seed quality during the production-to-processing transition.

8.1.3 Support for Farmers and Processors

The government provides support to both farmers and processors to improve the quality of their produce and products. This includes training, technical assistance, and access to resources.

8.1.4 Import Tariffs for Certified Seeds

To promote high-quality seeds, the government reduces tariffs for importing basic seeds and improved certified seeds. This encourages the use of better-quality planting material.

8.1.5 Control of Genetically Modified Organisms (GMOs)

The government has stepped up measures to control Genetically Modified Organisms (GMOs). All imported seeds are now inspected at the Tanzania Agricultural Research Institute (TARI) to ensure compliance with regulations (Africa Press, 2021). These efforts collectively contribute to enhancing sunflower seed quality in Tanzania.

8.2 Government support to farmers in maintaining seed quality throughout the production process

Government support for maintaining seed quality is crucial to ensure farmers have access to high-quality seeds. The Tanzanian government employs several strategies to enhance seed quality and support farmers throughout the production process.

8.2.1 Certified Seed Production and Distribution:

The Tanzania Seed Company (TANSEED) operationalizes laws related to certified seed production, processing, marketing, and distribution (Access to Seed Index, 2024). The Tanzania Official Seed Certification Institute (TOSCI) is responsible for certifying and promoting quality agricultural seeds produced or imported into the country for sale (Feed the Future, 2023).

8.2.2 Policy Reforms and Implementation:

The “Scaling Seed Systems in Tanzania” project, implemented by the Alliance for a Green Revolution in Africa (AGRA, 2021), aims to improve seed quality and access. The project partners with local organizations to enhance policy and regulatory environments for seed agribusinesses. It also focuses on creating an Information and Communication Technology (ICT) platform to streamline seed distribution and increase efficiency (Feed the Future, 2023).

8.2.3 Research and Awareness:

AGRA conducts research to identify barriers to implementing seed policies and regulations within local government authorities. Farmer awareness and knowledge about using quality seeds are scaled out to promote better practices2.

8.2.4 Collaboration with USAID and CGIAR:

USAID and CGIAR support the Tanzanian government in operationalizing the Seed Sector Development Strategy. They aim to catalyse investment in seed and fertilizer industries through joint initiatives like the Fertilizer and Seed Security Initiative (FSSI) (CGIAR, 2024). These efforts collectively contribute to maintaining seed quality and improving agricultural productivity in Tanzania.

9.0 SEASONAL VARIATIONS

Seasonal factors, such as planting and harvesting seasons, significantly influence oil seed supply levels in Tanzania (Africa Business, 2023). The timing of planting and harvesting directly impacts oil seed supply levels in ways as described below: -

9.1 Time of Planting:

When planting is delayed, it affects the entire growth cycle of a plant. Late-planted sunflower may experience reduced yield due to shorter growing seasons and potential exposure to adverse weather conditions (Dalberg, 2024).

Delayed planting may increase risk for damage, as additional delays in plant growth, flowering, seed set, filling, etc. decreasing the time the plants to complete the activities to make seeds. During planting seasons, there is a surge in demand for seeds as farmers prepare their fields. This increased demand can lead to shortages if the supply chain is not well-coordinated. Ensuring timely access to quality seeds and addressing storage challenges are essential for sustainable production.

9.2 Time of Harvesting

Late harvesting of sunflower can have both positive and negative effects on production in Tanzania. Positive effects include increased size of seeds which in turn will have higher oil content (ITC, 2016). This is beneficial for oil extraction and can improve the overall profitability of sunflower production.

Negative effects include seed shattering (falling to ground) resulting in yield losses. Late-harvested sunflower fields are more attractive to birds, which can feed on the seeds. This can lead to significant losses if not managed properly. Delayed harvesting increases the risk of adverse weather conditions (such as heavy rains or storms) affecting the crop. Wet conditions can lead to mould growth and seed deterioration.

Economically, if sunflower is harvested late, storage costs may increase due to the need to store the crop for a longer period, also late-harvested sunflower may face challenges in terms of market timing. If the crop is not sold promptly, market prices may fluctuate, affecting overall profitability.

Remember that the optimal harvest time depends on various factors, including local climate, seed maturity, and market conditions. Farmers should consider these factors when deciding when to harvest sunflower to achieve the best results

10.0 CONCLUSION AND RECOMMENDATIONS

10.1 CONCLUSION

Tanzania's edible oil industry holds significant potential for industrial development as there is abundant oil seeds: Sunflower grows well in all regions of Tanzania, even in areas with low rainfall. This widespread adaptability has attracted investors, resulting in over 22 medium-to-large-scale sunflower oil-processing factories in the country.

Tanzania's minimum national demand for edible oil is expected to be around 700,000 tons per year by 2030. However, the actual national demand is likely much higher. As the population grows, so does the demand for vegetable oil, including sunflower oil.

Improved seed adoption has driven increased sunflower oil production in Tanzania. The country is already one of the largest sunflower producers in Africa. Sunflower processors have invested in more than 50,000 metric tons of processing capacity, leading to higher demand from farmers.

To encourage domestic investment, the Tanzanian government has provided a VAT exemption on agricultural processing equipment, including the solvent extraction and refining equipment necessary for competitive sunflower oil production.

In summary, investing in edible oil milling in Tanzania can be a lucrative opportunity due to its enormous potential, favourable climate conditions, and growing demand for edible oils. However, investors should carefully consider factors such as market dynamics, infrastructure, and policy support when making investment decisions.

10.2 RECOMMENDATIONS

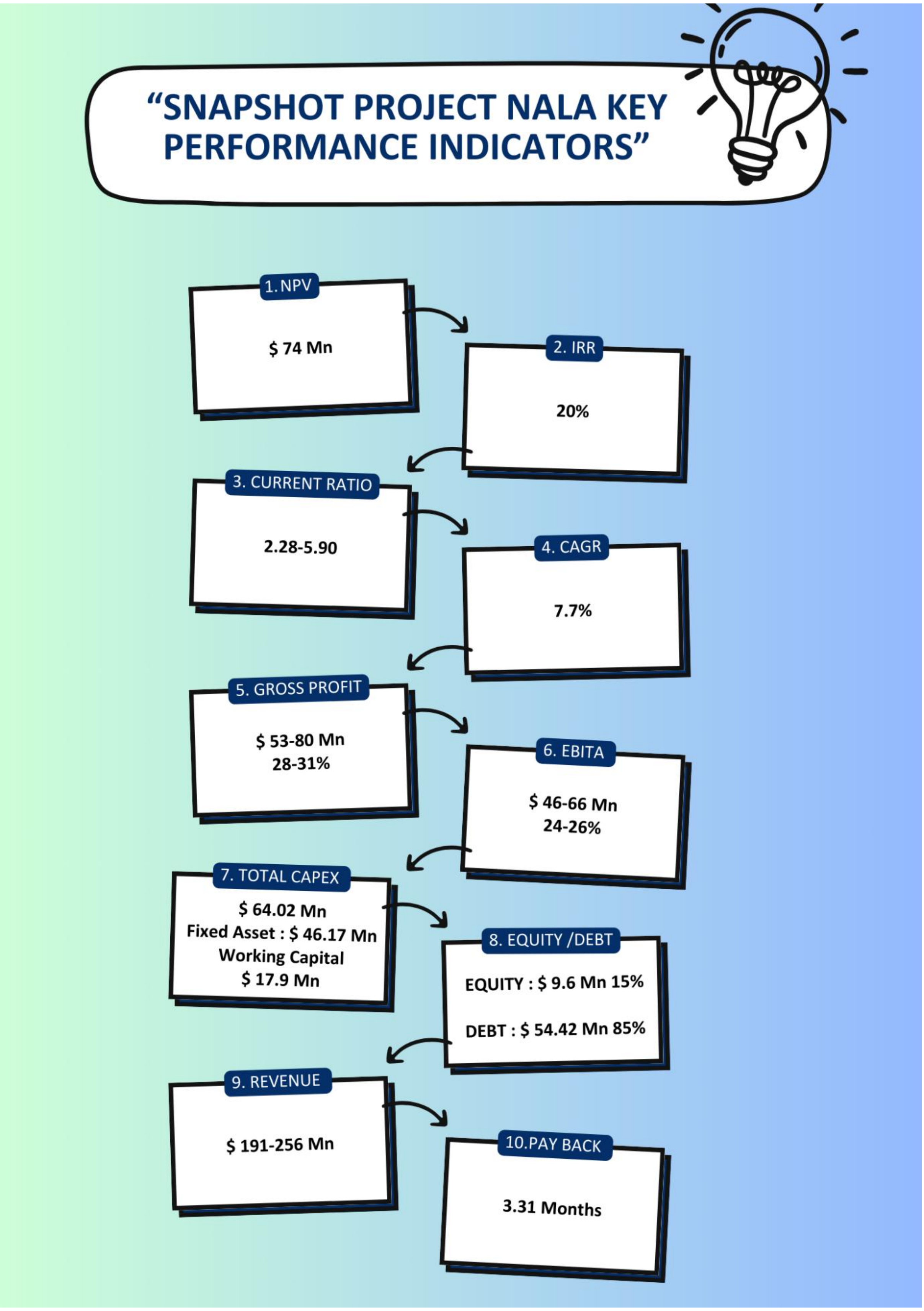
Tanzania has favourable agro-climatic conditions for sunflower cultivation. The crop grows well in all regions, even in areas with low rainfall. Additionally, sunflower is already grown by small farmers, making it a pro-poor and welfare-friendly option.

With a population of about 61 million people, Tanzania's minimum national demand for edible oil is expected to be around 700,000 tons per year, the demand for vegetable oil continues to rise, creating a market for edible oils.

Investors can set up edible oil-processing factories in Tanzania as currently, there are only over 22 medium to large-scale sunflower oil-processing factories in the country. Micro- and small-scale oil producers in Dodoma have been advised to form clusters and invest in common facilities for storage, cleaning, and refining sunflower seeds. Joint marketing actions can enhance productivity and competitiveness.

Sunflower oil is a key raw material for processing cholesterol-free edible cooking oil. As health-conscious consumers seek healthier alternatives, sunflower oil becomes an attractive choice. Also prevailing Government policies and initiatives to support the sunflower sector. In summary, an investor interested in sunflower oil extraction should explore Tanzania's favourable conditions, growing demand, and government support. Establishing processing facilities and leveraging existing clusters can lead to a successful venture in this sector.

Chapter 7: “Project NALA, Financial Projections

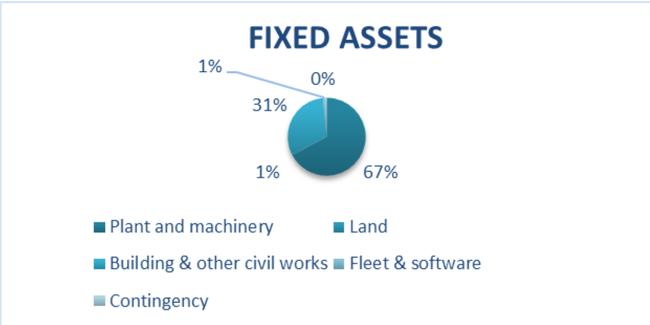


Data Backed Assumptions

S.No.	Assumption	Data	Source
1	Inflation rate	3.80%	https://www.bing.com/search?q=inflation+rate+in+tanzania+2023&qs=UT&pq=inflation+rate+in+tanzania&sk=UT2&sc=8-26&cvid=96BF2D4102B244BFB7C9CD2A2BB6D993&FORM=QBRE&sp=3&ghc=1&lq=0
2	GDP growth rate	5.30%	Tanzania Economic Outlook | African Development Bank Group (afdb.org)
3	Amortization of start-up costs (years)	7.00	
4	Income tax rate applicable on earnings before taxes	30%	Tanzania Corporate Tax Rate (tradingeconomics.com)
5	Number of months in a year	12	
6	Purchase of seed on cash basis		
7	Loan utilization and investment 50% in Year 0"A" & 100% in Year 0"B"		

Project Investments

Particulars	Amount (in USD Mn)	
Fixed Assets		
Plant and machinery	$	30.92
Land	$	0.23
Building & other civil works	$	14.27
Fleet & software	$	0.50
Contingency	$	0.20
Total Fixed Assets	$	46.12
Working capital	$	17.90
Total	**$**	**64.02**



Particulars	Amount	
Funding		
Equity	$	9.60
Debt	$	54.42
Total	**$**	**64.02**

Basic Assumptions

For oil mill + SEP

		Sunflower	Cotton	Soyabean	CPO	Total
Seeds crushed per day	MT	500	500	400	500	
Plant operating days in a month		25	25	25	25	
Plant operating months in a year		6	2	2	2	
Annual Capacity of plant refined oil	MT	30,000	10,000	10,000		50000
Total seeds crushed in a year	**MT**	**75,000**	**25,000**	**20,000**		**1,20,000**
Total crude oil to be generated in a year	**MT**	**28,500**	**9,500**	**9,500**		47500
Crude oil generated in-house		25,500	4,750	3,600		33850
Seed cake generated in-house		57,000	21,750	16,200		94950
Crude Oil Purchased from outside		3,000				3000
Selling price of refined oil	TSH per Kg	6,522				

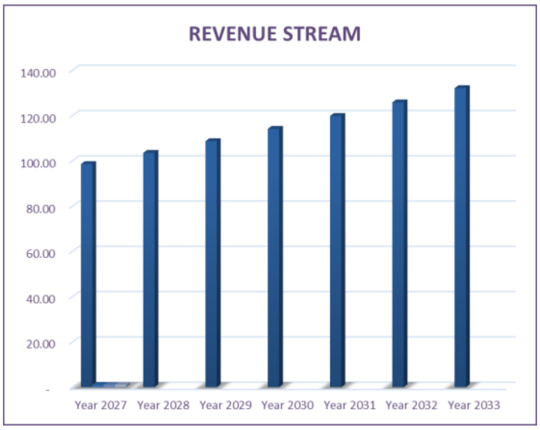
Exchang rate						
1 USD	TSH	2,800.00	2,800.00	2,800.00	2,800.00	
1 MT	kg	1,000.00	1,000.00	1,000.00	1,000.00	
Purchase price of crude oil	TSH per kg	3,395			2,520	
Purchase price of seeds	TSH per kg	1,600	920	1,650		
Purchase price of seed cake	TSH per kg	500	500	900		
Crude oil extracted from seeds		22%	12%	0%		
Seed cake extracted from crushed seeds		76%	87%	81%		
Crude oil from seed cake		12%	7%	18%		
Unseen loss		5%	5%	5%	5%	
Debtors Ist yr	of edible oilrevenue	20%	20%	20%	20%	
Debtors 2nd yr	Of total Revenue					15%
Debtors 3rd yr onwards	Of total Revenue					20%
Salary increment per year						5%
Yearly increment in other costs and revenues						5%
Interest rate on loan (others)						8%
Interest rate on loan (AFDB)						3%
Interest on overdraft facility						8%
City service levy						0.3%
AFDB						0.33
Line of credit through AFDB						0.52
Coal price (with Delivery)	USD	96	96	96	96	
Consumption of coal	KG/MT	55	55	55	55	
Consumption of diesel	Ltrs per month	15	15	15	15	
Diesel Rate	TSH Per Litre	3,200	3,200	3,200	3,200	

For solvent extraction (sunflower)	**Sunflower**	
Crushed seeds remains	400	MT
Seed cake purchased from outside	3,000	MT
Crude oil generated from seed cake	7,200	MT

Profit And Loss Statement

(Amount in USD Millions)

	Particulars	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	Year 2033
	Revenue streams							
	Primary product							
	Edible oil	98.59	103.52	108.70	114.13	119.84	125.83	132.12
	By-products							
	Laundry soap	18.75	19.74	20.79	21.89	23.05	24.27	25.56
	Detergent plant	29.40	30.96	32.60	34.33	36.15	38.06	40.08
	Other byproducts	21.34	22.15	22.99	23.86	24.77	25.71	26.69
	Feed mill	23.21	24.44	25.74	27.10	28.54	30.05	31.64
	Total Revenue	191.29	200.81	210.81	221.31	232.34	243.92	256.09
Less:	**Direct Operating Costs**							
	Total purchase cost of seeds	60.18	62.47	64.84	67.30	69.86	72.52	75.27
	Total purchase cost of seed cake	3.86	4.00	4.16	4.31	4.48	4.65	4.82
	Total purchase cost of crude oil	15.07	15.65	16.24	16.86	17.50	18.16	18.86
	Total raw material of laundry soap	16.07	16.68	17.32	17.97	18.66	19.37	20.10
	Total raw material of detergent plant	24.11	25.02	25.97	26.96	27.99	29.05	30.15
	Total cost of production of Feed mill	10.40	11.20	12.07	13.01	14.01	15.10	16.27
	Total Packaging cost	6.76	7.02	7.29	7.56	7.85	8.15	8.46
	SALARY							
	Factory department	0.14	0.15	0.15	0.16	0.17	0.18	0.19
	Electricity and power	0.49	0.51	0.54	0.56	0.59	0.62	0.65
	Payment Processing Fees	0.19	0.20	0.21	0.22	0.23	0.24	0.26
	Customer access & services	0.96	1.00	1.05	1.11	1.16	1.22	1.28
	FUEL OIL AND LUBRICANTS							
	Coal	0.15	0.16	0.17	0.17	0.18	0.19	0.20
	Diesel	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	Total Costs	**138.38**	**144.08**	**150.02**	**156.22**	**162.70**	**169.46**	**176.52**
	Gross Profit	**52.90**	**56.73**	**60.79**	**65.09**	**69.65**	**74.47**	**79.57**
	Gross Profit %	27.66%	28.25%	28.84%	29.41%	29.98%	30.53%	31.07%
	Indirect Operating Costs							
	Office Maintenance services	1.53	1.61	1.69	1.77	1.86	1.95	2.05
	Repair and maintenance	0.96	2.01	2.95	3.32	3.72	4.39	5.12
	Land rent	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	Provident fund of employees	0.02	0.03	0.03	0.03	0.03	0.03	0.03
	SALARY							
	Admin department	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	Selling department	0.00	0.01	0.01	0.01	0.01	0.01	0.01
	Consumables expenses	1.15	1.21	1.27	1.33	1.40	1.46	1.54
	Telephone expenses	0.20	0.21	0.22	0.23	0.24	0.26	0.27
	Stationery expenses	0.05	0.05	0.05	0.05	0.05	0.06	0.06
	SMS/E-mail/Internet services	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	Conveyance	1.50	1.58	1.65	1.74	1.82	1.91	2.01
	Office expenses	0.50	0.53	0.55	0.58	0.61	0.64	0.67
	Vehicle Insurance	0.50	0.53	0.55	0.58	0.61	0.64	0.67
	Professional fees	0.06	0.06	0.07	0.07	0.07	0.08	0.08
	Website maintenance	0.16	0.17	0.18	0.19	0.19	0.20	0.21
	Promotions & Advertisements	0.25	0.26	0.28	0.29	0.30	0.32	0.34
	Total expenses	**6.94**	**8.29**	**9.54**	**10.24**	**10.98**	**12.02**	**13.13**
	Earning before interest and taxes	**45.96**	**48.44**	**51.25**	**54.85**	**58.66**	**62.45**	**66.44**
		24.03%	**24.12%**	**24.31%**	**24.78%**	**25.25%**	**25.60%**	**25.94%**
	Interest on loan borrowed	1.84	1.61	1.36	1.09	0.81	0.63	0.55
	Interest on Overdraft	1.40	0.80					
	Depriciation on plant and machinery	4.00	3.00	3.00	3.00	2.00	2.00	2.00
	Depriciation on building	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Depreiciation on fleet and software	0.13	0.13	0.13	0.13	-	-	-
	Earning before taxes	**37.60**	**41.91**	**45.77**	**49.64**	**54.86**	**58.82**	**62.89**
Less:	Taxes	11.28	12.57	13.73	14.89	16.46	17.65	18.87
	City service levy	0.57	0.60	0.63	0.66	0.70	0.73	0.77
	Net Profit	**25.74**	**28.74**	**31.41**	**34.08**	**37.70**	**40.44**	**43.26**
	Net Profit %	13.46%	14.31%	14.90%	15.40%	16.23%	16.58%	16.89%



Cash Flow Statement

(Amount in USD Millions)

	Particulars	Year 0 "A"	Year 0 "B"	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	Year 2033
	Cash at the start of year		(1.04)	(3.68)	(17.77)	(10.40)	8.98	38.78	70.64	104.90
Add:	**Cash Inflows**									
	Revenues			191.29	200.81	210.81	221.31	232.34	243.92	256.09
	Capital Introduced	4.80	3.88							
	Long term Loan	18.26	18.26							
	Total Inflow	**23.06**	**22.14**	**191.29**	**200.81**	**210.81**	**221.31**	**232.34**	**243.92**	**256.09**
	Cash Outflows									
	Direct Operating Expenses			138.38	144.08	150.02	156.22	162.70	169.46	176.52
	Indirect Operating Expenses			6.94	8.29	9.54	10.24	10.98	12.02	13.13
	Interest on loan borrowed	0.92	1.84	3.24	2.41	1.36	1.09	0.81	0.63	0.55
	Taxes			11.28	12.57	13.73	14.89	16.46	17.65	18.87
	City service levy			0.57	0.60	0.63	0.66	0.70	0.73	0.77
	Loan repayment			4.43	4.67	4.92	5.18	5.47	5.64	5.73
	Changes in Investment	23.18	22.95							
	Change in working capital			40.53	20.82	11.23	3.23	3.38	3.53	3.69
Less:	**Total Cash outflow**	**24.10**	**24.79**	**205.38**	**193.44**	**191.42**	**191.52**	**200.48**	**209.66**	**219.25**
	Changes in Cash during the year	(1.04)	(2.65)	(14.09)	7.37	19.39	29.79	31.86	34.27	36.84
	Closing Cash Balance	**(1.04)**	**(3.68)**	**(17.77)**	**(10.40)**	**8.98**	**38.78**	**70.64**	**104.90**	**141.74**

Balance Sheet

(Amount in USD Millions)

	Particulars	Year 0 "A"	Year 0 "B"	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	Year 2033
	Assets									
	Fixed Assets									
	Tangible Assets									
	Plant and machinery	15.46	30.92	30.92	26.92	23.92	20.92	17.92	15.92	13.92
Less:	Depreciation			4.00	3.00	3.00	3.00	2.00	2.00	2.00
	Balance	15.46	30.92	26.92	23.92	20.92	17.92	15.92	13.92	11.92
	Land	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
	Depreciation			-	-	-	-	-	-	-
Less:	Balance	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
	Building	7.14	14.27	14.27	13.27	12.27	11.27	10.27	9.27	8.27
	Depreciation			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Less:	Balance	7.14	14.27	13.27	12.27	11.27	10.27	9.27	8.27	7.27
	Fleet and software	0.25	0.50	0.50	0.38	0.25	0.13	-	-	-
	Depreciation			0.13	0.13	0.13	0.13	-	-	-
Less:	Balance	0.25	0.50	0.38	0.25	0.13	-	-	-	-
	Contingency	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
	Total Fixed Assets	**23.18**	**46.12**	**41.00**	**36.87**	**32.75**	**28.62**	**25.62**	**22.62**	**19.62**
	Current Assets									
	Cash Balance			-	-	8.98	38.78	70.64	104.90	141.74
	Debtors	-	-	19.72	30.12	40.16	42.16	44.26	46.47	48.78
	Closing stock of raw material			20.81	31.23	32.42	33.65	34.93	36.26	37.64
	Total Current Assets	**-**	**-**	**40.53**	**61.35**	**81.57**	**114.59**	**149.83**	**187.63**	**228.16**
	Total Assets	**23.18**	**46.12**	**81.53**	**98.22**	**114.31**	**143.21**	**175.45**	**210.25**	**247.78**
	Liabilities & Capital									
	Long Term Liabilities	18.26	36.52	32.09	27.42	22.50	17.32	11.86	6.21	0.49
	Overdraft	(1.04)	(3.68)	17.77	10.40	-	-	-	-	-
	Total Liabilities	**19.29**	**40.20**	**49.86**	**37.82**	**22.50**	**17.32**	**11.86**	**6.21**	**0.49**
	Paid In Capital	4.80	8.68	8.68	8.68	8.68	8.68	8.68	8.68	8.68
	Retained Earnings	-	(0.92)	(2.76)	22.98	51.72	83.13	117.21	154.91	195.36
	Earnings	(0.92)	(1.84)	25.74	28.74	31.41	34.08	37.70	40.44	43.26
	Total Capital	**3.88**	**5.92**	**31.66**	**60.40**	**91.81**	**125.89**	**163.59**	**204.04**	**247.29**
	Total Liabilities & Capital	**23.18**	**46.12**	**81.53**	**98.22**	**114.31**	**143.21**	**175.45**	**210.25**	**247.78**

Ratio Analysis

Amount in USD Millions

Particulars	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	Year 2033
Cash Flows	25.74	28.74	31.41	34.08	37.70	40.44	43.26
EBIT	45.96	48.44	51.25	54.85	58.66	62.45	66.44
Net Income	25.74	28.74	31.41	34.08	37.70	40.44	43.26
Interest expense	3.24	2.41	1.36	1.09	0.81	0.63	0.55
Share holders equity	31.66	60.40	91.81	125.89	163.59	204.04	247.29
Total Debt	49.86	37.82	22.50	17.32	11.86	6.21	0.49
Current Assets	40.53	61.35	81.57	114.59	149.83	187.63	228.16
Current Liability	17.77	10.40	-	-	-	-	-
Total Assets	81.53	98.22	114.31	143.21	175.45	210.25	247.78
Interest Coverage Ratio	14.18	20.14	37.81	50.37	72.83	99.58	121.72
Debt to Equity ratio	1.57	0.63	0.25	0.14	0.07	0.03	0.00
Debt Ratio	0.61	0.39	0.20	0.12	0.07	0.03	
Debt Service Coverage ratio	0.92	1.28	2.28	3.17			
Return on asset ratio	0.32	0.29	0.27	0.24	0.21	0.19	0.17
Solvency Ratio	62%	87%	158%	221%			
Gross Profit Ratios	28%	28%	29%	29%	30%	31%	31%
Net Profit Ratio	13%	14%	15%	15%	16%	17%	17%
Current Ratio	2.28	5.90	-	-	-	-	-

CAGR on Revenue	**4.26%**
CAGR on Net Income	**7.70%**

IRR

(Amount in USD Millions)

Years	Cash Flows	Discounting Factor	Net Present Value
0	$ (64.02)	1.000	$ (64.02)
1	$ (17.77)	0.870	$ (15.46)
2	$ (10.40)	0.756	$ (7.87)
3	$ 8.98	0.658	$ 5.91
4	$ 38.78	0.572	$ 22.17
5	$ 70.64	0.497	$ 35.12
6	$ 104.90	0.432	$ 45.35
7	$ 141.74	0.376	$ 53.29
Net present value of cashflows	**$ 272.85**		**$ 74.50**

Discounting factor (WACC)	15%
IRR	**20.38%**

Payback Period

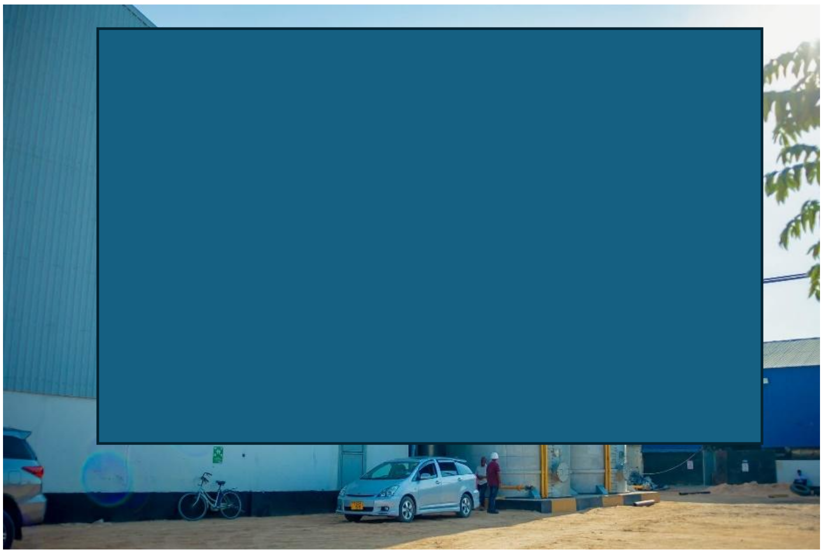
Free cash flows	Year o	Year 2027	Year 2028	Year 2029	Year 2030	Year 2031	Year 2032	Year 2033
Closing cash balance	(0.00)	(17.77)	7.37	1.61	37.17	33.47	71.43	70.31
Free cash flows from business operations		**(17.77)**	**(10.40)**	**(8.79)**	**28.38**	**61.85**	**133.28**	**203.59**

Payback period **3.31 Years**

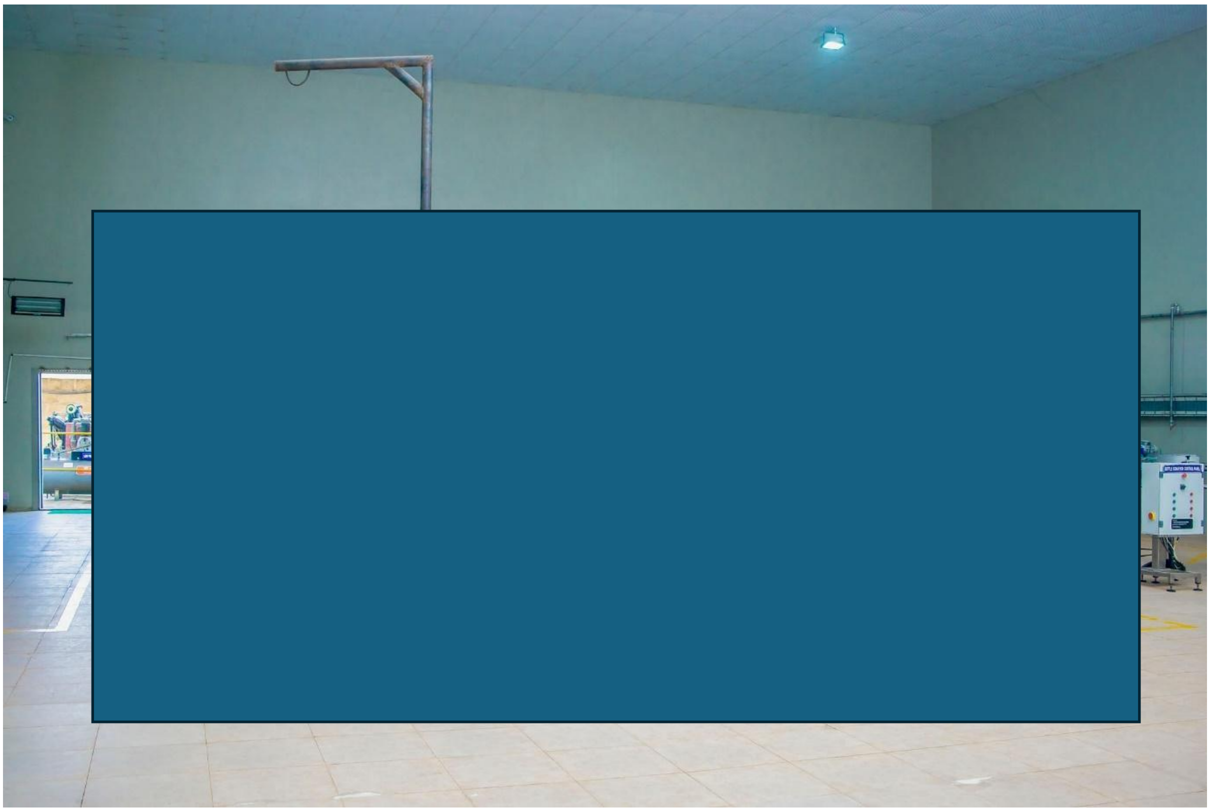
Some Glimpse of Our Existing Venture

Existing Venture Products with different entity

Our Manufacturing plants and processing unit




FILLING & CAPPING STATION



Conclusion

Based on the business feasibility study conducted in Tanzania, it is evident that the oil industry is experiencing significant growth. The market study highlights rising demand, creating a favourable environment for new entrants. Given these positive market trends, the business is viable and offers strong potential for returns. With proper execution and strategic planning, this venture can capitalize on the growing demand, making it a sustainable and profitable endeavour.

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