

UNITED REPUBLIC OF TANZANIA SUNFLOWER SECTOR DEVELOPMENT STRATEGY

2016-2020



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SUNFLOWER SECTOR
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This sector development strategy was developed on the basis of the process, methodology and technical assistance of the International Trade Centre (ITC) within the framework of its Trade Development Strategy programme.

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The formulation of the Strategy was led by the Ministry of Industry, Trade and Investment with the technical assistance of the International Trade Centre. This document represents the ambitions of both private and public sector stakeholders for the development of their sector. Stakeholders' commitment and comprehensive collaboration have helped build consensus around a common vision that reflects the challenges and opportunities of this sector.

The document benefited particularly from the inputs and guidance provided by the members of the sector team.

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FOREWORD FROM HON. CHARLES J. MWIJAGE (MP), MINISTER FOR INDUSTRY, TRADE AND INVESTMENT



The United Republic of Tanzania now ranks one of the ten largest sunflower producing countries in the world with a production share of 2.4%. The importance of the sunflower sector is vital for the development of the Tanzanian people since it is potentially capable of providing a significant share of the edible oil in the country. At the moment, Tanzania is importing the major part of its edible oil. With the growth of the sunflower industry, we should be able to reduce our dependency on imported edible oil. In addition to the importance of the sector for national consumers, Tanzania is also well positioned to benefit from positive international trends in the sunflower oil sector. There is a global demand for healthier oil that Tanzania can satisfy with the exports of its products.

The Government acknowledges that there are still a number of challenges yet to be addressed for ensuring the sunflower industry can reach its full potential. A particular focus will be given to addressing the accessibility to high quality certified sunflower seeds, development of public and private partnership for increased production, enhancing business environment, as well as ensuring compliance and adherence to internationally recognised food safety requirements.

This strategy represents the ambitions of key public and private stakeholders of the sunflower sector, whom have

worked to reach a common agreement on the priorities to be implemented. The ambitions of the strategy, which the Government fully supports, are first to increase sunflower production and productivity through the adoption of modern production techniques. Secondly, serious measures must be taken to modernise the sunflower industry through strengthening the coordination, institutional capacity and skills across the value chain. Thirdly, the quality sunflower products produced must be improved to comply with both national and international standards. Another undertaking is the stimulation of growth in the sunflower industry through the implementation of coherent and supportive policies that are in line with the national development objectives. Indeed, this Strategy is instrumental to the sector that the Integrated Industrial Development Strategy (IIDS), the SIDP-1996 as well as the FYDP II are all finding way of fulfilment. Finally, there will be needed a timely and appropriate provision of market entry support for effective market development.

The Government in collaboration with the Private Sector, will ensure the successful implementation of this strategy for the benefit of the whole economy. The Government of the United Republic of Tanzania continues to appreciate the support of the Government of UK through the Supporting India's Trade and Investment for Africa (SITA) Project which supported development of this Strategy.

A handwritten signature in blue ink, appearing to read 'mwijage', written in a cursive style.

FOREWORD FROM
HON. MWIGULU LAMECK
NCHEMBA MADELU (MP)
MINISTER FOR AGRICULTURE,
LIVESTOCK AND FISHERIES



Sunflower is among the five major oilseed crops in Tanzania. Others are sesame, groundnuts, palm and cotton oil. It is a very important crop to the livelihood of Tanzanians along the entire value chain. Current raw sunflower seed production is 3 million tons per annum, but the country has the potential to increase production to 10 million tones per annum.

Sunflower thrives in a wide range of agro-ecological conditions. Major sunflower producing regions are Singida, Dodoma, Manyara, Arusha, Tabora, Iringa, Njombe, Rukwa, Mbeya, Morogoro, Ruvuma, Kigoma and Katavi. Despite its importance, actors along the value chain face a number of challenges, resulting in low productivity of only an average on 1.2 tons/ha due to low yielding seeds, poor control of insect, pest, disease and vermin control, limited access to financial services, limited access to market information and high post harvest losses.

The Government recognizes the importance to the sunflower sub-sector and has been taking a number of efforts to improve productivity, such as through investing production of improved seed varieties. Through the implementation of this National Sunflower Oil Sector Development Strategy, the government aims to further intensify its support to this sector. I take this opportunity to congratulate all stakeholders who were involved in the preparation of this strategy and pledge to support its implementation.

A handwritten signature in black ink, appearing to read 'Mwigulu Lameck Nchemba Madelu'. The signature is fluid and cursive, written over a light background.

FOREWORD FROM MR. RINGO KOFIA IRINGO MBORO TANZANIA SUNFLOWER PROCESSORS ASSOCIATION (TASUPA)



Tanzania Sunflower Processors Association (TASUPA) is deeply appreciating all the stakeholders who with good intension, contributed their inputs during documentation of The Sunflower Strategy of Tanzania. This was made possible after eight months of consultation meetings and workshops of both the core team and stakeholders.

The Sunflower Strategy of Tanzania, is a five years road map of what should have to be done, with specific goals and interventions. Both public and private sector are guided on how and what steps and action to take in developing sunflower sub sector, in this five years strategy.

Meeting the goals of income growth, increased food security and improved social well being in Tanzania remains a major commitment of our government as it is for many regional and international development partners. Various strategies and programmes to improve the present economic and social indicators are being implemented.

National efforts to promote social and economic development have been hampered by a number of internal and external challenges.

To cope with its development challenges, Tanzania need to consider innovative initiatives that not only prioritize the achievement of food security and social inclusiveness, but also promote economic growth and integration into regional and global market that will lead to sustained poverty reduction.

With increasing demand of edible oil in the local, regional and global markets, sunflower which seems potentially to grow everywhere in Tanzania, can now emerge as a sustainably edible oil cash crop which can play a big role in rural poverty alleviation and economic development. A number of downstream supports purposedfor agribusiness and agro-industries capital outlays, covering items such as cold and dry storage and ware houses, establishment of contract farming, rural and wholesale market facilities, processing technologies, mechanization, improved sunflower seeds breeding and distribution and other power source and equipments. These are investments that will have to be made primarily by private sector players. The public sector and the existing development partners will thus be challenged to create and maintain the conditions whereby investment in agribusiness and agro-industries can be forthcoming.

In fact, while the economic value of edible oil in our economic development and its impact to our forex reserves has been widely contented in this strategy; policy makers and development planners have to increasingly recognizing the needs to focus more attention to agribusiness and agro-industries especially in sunflower subsector. In our Ministry of Agriculture, Livestock and Fishery, they have highlighted the key role of sunflower as a cash crop, its value chain, commercial farming and value addition in contributing to economic development.

It's a time now agriculture and agro-processing linked together to overcome our challenges and develop our economy.

A handwritten signature in black ink, appearing to be 'R. K. M.', written in a cursive style.

ACRONYMS

ACT	Agricultural Council of Tanzania	PMO-RALG	Prime Minister's Office–Regional Administration and Local Government
AMCOs	Agriculture Marketing Cooperatives	R&D	Research and Development
AMDT	Agricultural Markets Development Trust	SACCOS	Savings and Credit Cooperative Societies
ANSAF	Agricultural Non-State Actors Forum	SADC	Southern African Development Community
ARI	Agricultural Research Institute	SAGCOT	Southern Agricultural Growth Corridor of Tanzania
ASA	Agricultural Seed Agency	SIDO	Small Industries Development Organization
CAMARTEC	Centre for Agricultural Mechanization and Rural Technology	SITA	Supporting Indian Trade and Investment in Africa
CEZOSOPA	Central Zone Sunflower Oil Processors Association	SMEs	Small and Medium-Sized Enterprises
COPB	Cereals and Other Produce Board	SNV	Netherlands Development Organization
COSTECH	Commission for Science and Technology	SUA	Sokoine University of Agriculture
CSR	Corporate Social Responsibility	TADB	Tanzania Agricultural Development Bank
CTI	Confederation of Tanzania Industries	TANADA	Tanzania National Agro-Dealers Association
EAC	East African Community	TANEXA	Tanzania Exporters Association
EAGC	East Africa Grain Council	TanTrade	Tanzania Trade Development Authority
EAS	East African Standard	TASTA	Tanzania Seed Trade Association
EPZA	Export Processing Zones Authority	TASUPA	Tanzania Sunflower Producers Association
EU	European Union	TBS	Tanzania Bureau of Standards
FAO	Food and Agriculture Organization of the United Nations	TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
GAP	Good Agricultural Practices	TEMDO	Tanzania Engineering and Manufacturing Design Organization
GMP	Good Manufacturing Practices	TEOSA	Tanzania Edible Oil Seeds Association
HACCP	Hazard Analysis and Critical Control Points	TFDA	Tanzania Food and Drugs Authority
ICS	International Classification for Standards	TFRA	Tanzania Fertilizer Regulatory Authority
ITC	International Trade Centre	TIC	Tanzania Investment Centre
LGA	Local Government Authority	TIRDO	Tanzania Industrial Research and Development Organization
LIC	Local Investment Centre	TIUMP	Tanzania Industrial Upgrading and Modernization Project
MALF	Ministry of Agriculture, Livestock and Fisheries	TOSCI	Tanzania Official Seed Certification Institute
MATI	Ministry of Agriculture Training Institute	TPSF	Tanzania Private Sector Foundation
MITI	Ministry of Industry, Trade and Investment	TZS	Tanzanian Standard
MoF	Ministry of Finance	UNIDO	United Nations Industrial Development Organization
MoU	Memorandum of Understanding	VAT	Value Added Tax
MVIWATA	Mtandao wa Vikundi vya Wak (National Networks of Farmers' Groups in Tanzania)		
NDC	National Development Corporation		
PoA	Plan of Action		

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Photo: (CC BY-NC-ND 2.0) IFPRI -IMAGES, *The manager at an edible oil processing factory poses for a photo next to his prized Sunflower. Dodoma, Tanzania.jpg*



Photo: (CC BY-SA 2.0) (CC BY-NC-SA 2.0) Daniel Kulinski, *Seeds factory.jpg*

EXECUTIVE SUMMARY

Global markets for sunflower products

The sunflower value chain encompasses sunflower seeds, oil and cake. The global production of sunflower seed has doubled in the past 20 years, driven by improved yields and expanded acreage. The bulk of sunflower seed produced is used to make sunflower oil, with only 5% of the crop consumed as seeds in bakery, snack food and bird feed applications. Sunflowers were first commercially produced in the Russian Federation and today the largest producers are the Russian Federation (25%), Ukraine (22%) and the European Union (EU) (22%). African countries account for 5.5% of the world's production, with strong growth experienced in the past decade (2005–2014) in the United Republic of Tanzania, Uganda and South Africa.

All sunflower products have experienced rapid, double-digit annual growth in exports over the last decade, although cake has experienced the most buoyant growth, at 22% a year since 2005, in comparison to 15% for the sector as a whole. Sunflower oil is the most traded of the products, accounting for two-thirds of the value and the volume of sunflower products traded.

Sunflower oil imports have had the fastest growth over the last decade, compared with competing edible oils. The growth in demand for sunflower oil can be attributed to growing consumer awareness and interest in its healthy profile in comparison to other oils and fats.

The EU is a crucial market, as a major producer and importer of both seeds and oil, as well as an exporter of oil and processed products. It is also the largest market for sunflower oilseed cake, accounting for 25% of world production and 45% of demand for world production in 2013. However, the overall outlook for oilseed cake demand is not as positive as for seeds and oil, as growth in livestock production is likely to slow, according to the projections of the Food and Agriculture Organization of the United Nations (FAO).¹

1. Food and Agriculture Organization of the United Nations (2015) (a). *Food Outlook: Biannual Report on Global Food Markets*.

The United Republic of Tanzania's performance

The United Republic of Tanzania has a large, national demand for edible oil. The Rural Livelihood Development Company estimated a minimum national demand of around 330,000 tons of edible oil per annum in 2010, a figure that was expected to increase as consumption rose by 3% annually. Currently more than half of the edible oil consumed is imported. Current data shows that local production of both factory and small-scale extracted oils contributes to about 40% of the national edible oil requirement.

The cost of producing sunflower oil in the United Republic of Tanzania is lower than for other oilseed crops (sesame, groundnuts). Additionally, there is an active local market demand for sunflower oil for domestic use as well as demand for the by-product: seed cake for livestock feeding. Due to its economic potential, national production of sunflower has been increasing over the years.

Production of sunflower seeds reached close to 1 million tons in 2013, according to the FAO, and 3 million tons according to official statistics from the Ministry of Agriculture, Livestock and Fisheries (MALF). Yields have increased dramatically over the last decade and are now seven times the level they were at a decade ago.

Overall, for all sunflower products (seeds, oil and cake), the United Republic of Tanzania has experienced a major surge in exports, moving from US\$ 1 million to over US\$ 70 million within a decade. India is its main export market and absorbs over 80% of its exports. Despite the world market for sunflower products experiencing extraordinary growth of 15% over the last decade, the United Republic of Tanzania managed to outperform the world market by reaching 50% average annual growth, albeit from a low base. During the past decade, the United Republic of Tanzania's market share in world trade rose from 0.04% in 2005 to 0.24% in 2010, and 0.49% by 2014.

The analysis of the production and export data reveals a number of key underlying trends. These include:

- Fast growth, particular for sunflower cake;
- Outperformance of world markets in all sunflower products;
- Strong concentration of exports in the Indian market at the expense of regional markets, indicating opportunities for diversification;
- A need to increase intensification of refined oil exports.

Performance issues

A review of the literature and extensive stakeholder consultations revealed a number of constraints in the sunflower sector, which affects its long-term performance. Box 1 below shows the key performance issues identified as challenges. In order to ensure the Strategy is efficient and specific, only the most critical bottlenecks will be addressed.



Photo: (CC BY-NC-ND 2.0) espie (on and off), *sunflower seeds.jpg*

Box 1: Performance issues in the value chain

Supply side	Business environment	Market development
<ul style="list-style-type: none"> • Availability and accessibility of high-quality certified sunflower seeds • Availability of agricultural inputs, including fertilizers and pesticides • Management capacities of farmers' associations to sustainably increase sunflower production • Adoption of Good Agricultural Practices (GAP) • Access to finance and use of insurance across the value chain • Postharvest losses 	<ul style="list-style-type: none"> • Coordination of the sector • Trust and transparency between producers and processors • Complex and discriminatory application of taxes • Capacity of key support institutions in the sector 	<ul style="list-style-type: none"> • Compliance and adherence to internationally recognized food safety and quality standards • Promotion and branding of sunflower products • Targeted market development interventions • Industry clustering to promote collective production and marketing of sunflower products

Summary of identified market opportunities

A number of markets have been identified as revealing a strong potential for the United Republic of Tanzanian sunflower products. These are listed in box 2 below.

Box 2: Identified market opportunities for Tanzanian sunflower products

Market	Product	Time frame	Chances of success
Domestic	Food-safe, refined, consumer packed sunflower oil for cooking	Immediate	High, increasing with the degree that constraints are addressed. Customers awareness
Regional	Food-safe, refined, consumer packed sunflower oil for cooking	Immediate	High, increasing with the degree that constraints are addressed. Customer awareness
India	Bulk, food-safe, crude sunflower oil	Immediate start to five years	High, but dependent on branding and marketing
Domestic	Cake by-product	Immediate	Good, but dependent on domestic livestock market
India, Thailand, United Arab Emirates	Cake by-product for animal feed sector	Immediate	Good
China	Consumer packed, food-safe, healthy branded refined sunflower oil	1–3 years	Moderate to high
EU	Conventional, food-safe, bulk sunflower oil, linked to social impact and Corporate Social Responsibility (CSR) projects	3–5 years	Moderate
EU	Bird feed seed in bulk	1–3 years	Good
EU, Middle East	Confectionary grade, food-safe, direct consumption sunflower seeds	3–5 years	Low
EU, Middle East	Specialist, cold pressed, food-safe, (organic) sunflower oils	3–5 years	High, if a certified supply chain can be built

Vision and strategic objectives of the Strategy

To achieve the development of the sunflower sector in the United Republic of Tanzania, this strategy has defined the following future vision.

“ A leading and dynamic sector in Africa that sustainably supplies value added sunflower products. ”

Strategic objectives of the Strategy

To achieve the development of the sunflower sector in the United Republic of Tanzania, five strategic objectives have been identified to enhance its competitiveness and organization.

The **first strategic objective** seeks to increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand. The Strategy will achieve this by:

- Increasing the availability and accessibility of certified sunflower seeds;
- Improving the availability, distribution and accessibility of fertilizers and pesticides;
- Strengthening and facilitating the development of small, medium and large-scale agribusiness services;
- Increasing the capacity of farmers and farmers' associations to produce quality sunflower seeds/grains;
- Improving access to finance and insurance along the value chain;
- Encouraging the modernization of technologies in the sector.

The **second strategic objective** is to modernize the sunflower industry through strengthening the coordination, institutional capacity and skills across the value chain. This will be achieved by:

- Improving transparency and trust across the value chain, particularly through the development of a code of conduct on best practices;
- Promoting contract farming in the local sunflower industry;
- Strengthening coordination across the sunflower industry, in particular through the Tanzania Edible Oil Seeds Association (TEOSA) and Tanzania Sunflower Processors Association (TASUPA);
- Strengthening the capacity of the key organizations in the sector;

- Promoting the use of locally produced sunflower products;
- Planning and providing for training to improve business management skills across the sunflower value chain;
- Improving the quality and increasing the availability of storage facilities at both the village and district levels.

The **third strategic objective** is aimed at improving the quality of sunflower products to comply with both national and international standards, by:

- Implementing price differentials based on quality;
- Promoting GAP and climate adaptation techniques in local sunflower production;
- Ensuring compliance with and adherence to internationally recognized food safety and quality measures, particularly through the harmonization of standards and enhanced enforcement capacity;
- Promoting the development of organic sunflower production to respond to market demand.

The **fourth strategic objective** is aimed at stimulating growth in the sunflower industry through the implementation of coherent and supportive policies in line with national development objectives. This will be achieved by:

- Reviewing any policy constraints or issues that affect the sunflower industry, including assessing the impact of any tariffs and levies;
- Improving the accuracy of data collection and data harmonization for more effective planning and policy implementation.

The **fifth strategic objective** is to provide timely and appropriate market entry support for effective market development by:

- Implementing targeted market development interventions in the national and select regional and international markets;



Photo: (CC BY 2.0) DFID - UK Department for International Development, *A sunnier outlook- sunflowers oiling the local economy.jpg*

- Promoting sunflower oil as a healthy product for national consumption;
- Strengthening the capacity of TEOSA to support market development;
- Increasing the promotion and consistent branding of the sunflower sector;
- Promoting the collective marketing of sunflower products through a clustering approach in the industry.
- Improved quality of inputs (seeds, agribusiness services and policy framework);
- Increased research and development (R&D) and professional skills development;
- Improved overall coordination and governance;
- Enhanced forward planning and trading capacities;
- Increased market development;
- Investment attraction.

Future enhanced value chain

The Strategy addresses transformations across the value chain in order to unlock the potential of the sunflower sector in the United Republic of Tanzania. The future value chain of the sector is driven by its market development objectives – which can lead to value chain enhancements – as well as through the investment focus areas. Improvements in value creation, value addition, value retention and capitalization of opportunities are fostered through targeted efforts detailed in the Plan of Action (PoA) of the Strategy that seek to overcome the critical constraints identified in the sector. The future value chain will be characterized by:

The way forward

A key success criterion for the Strategy is the United Republic of Tanzania's ability to coordinate activities, monitor progress and mobilize resources for its implementation. It is recommended that the country establishes a public–private committee to act in an advisory capacity to the Government and the private sector over issues related to or affecting the sunflower sector and its Strategy.

The formal dialogue platform will require a high level of involvement by trade support network members (public and private), as their role is crucial and will impact the effectiveness with which the Strategy is implemented. Likewise, the ability of the private sector to provide inputs to the Strategy implementation process will significantly influence the success of the Strategy.

WHERE ARE WE NOW: CAPTURING GROWTH IN GLOBAL MARKET TRENDS

Sunflower sector products encompass sunflower seeds, oil and cake. Sunflower oil is by far the most traded commodity in the sunflower product group, with a global export value exceeding US\$10 billion in 2014, representing around 15 million tons. The global export values of sunflower seeds and cakes were US\$3 billion and US\$2 billion in 2014, respectively, representing nearly 5 million tons and 2.6 million tons. All sunflower products have experienced rapid, double-digit annual growth over the last decade, although cakes have experienced the most buoyant growth at 22% a year since 2005. Overall, sunflower products as a whole grew at 15% per year, over double the rate of the average world growth for all other products (6.5% a year).

Sunflower oil imports have had the fastest growth over the last decade compared with competing edible oils. The growth in demand for sunflower oil can be partly attributed to growing consumer awareness and interest in its healthy nutritional values. This has resulted in a significant rise in the unit value of sunflower oil, which rose from between US\$700 and US\$900 per ton a decade ago, to between US\$1,000 and US\$1,200 per ton in 2014. The major increase in demand from India and China, the two largest import markets in the world, also contributed to the increase in unit value. The following section provides a brief overview of the global sunflower market.

GLOBAL MARKET TRENDS: SUNFLOWER, A GROWING INDUSTRY

The sunflower industry is dominated by a few large global players, including the United States of America, Brazil, Ukraine and the Russian Federation. African countries are relatively small producers with generally a net trade deficit in sunflower trade.

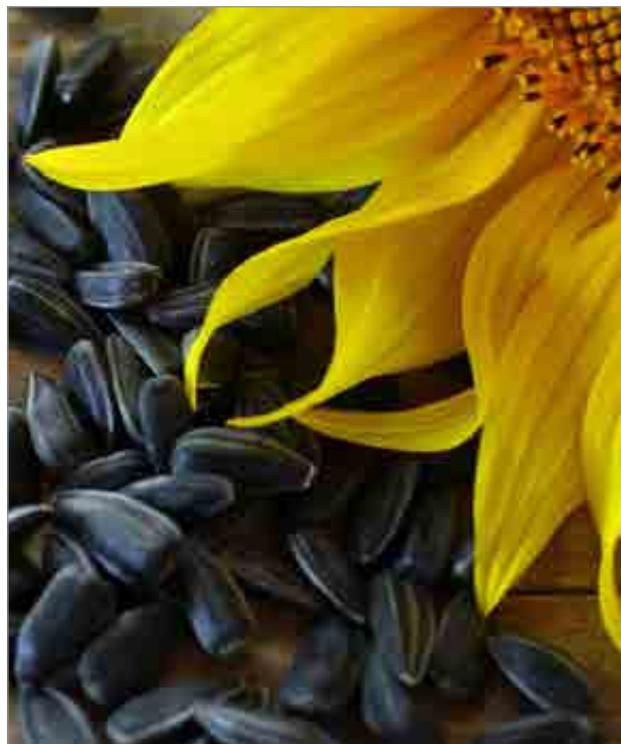


Photo: (CCBY2.0)www.tOrange.bizValdemarFishmen,sunflower-seeds.jpg

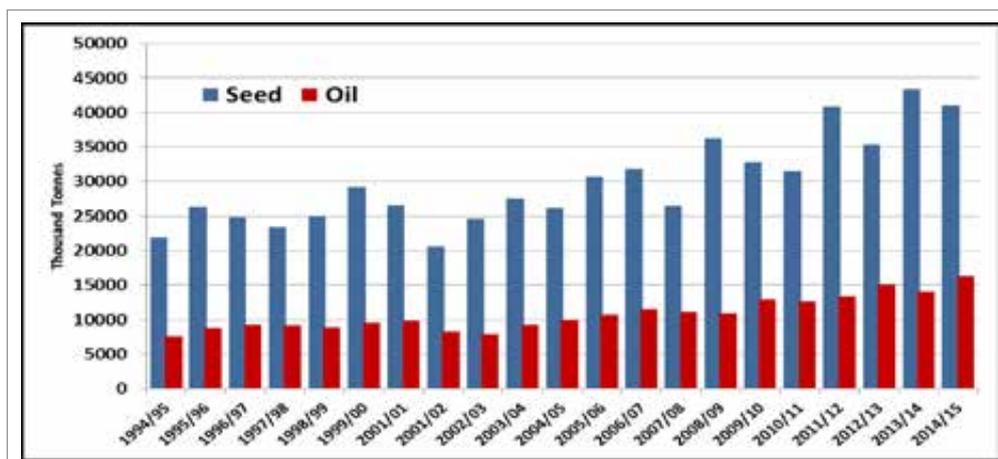
THE SUNFLOWER INDUSTRY

The global production of sunflower seeds has doubled in the past 20 years (see figure 2), driven by improved yields and expanded acreage. The FAO estimates production in the 2014/15 season at 41 million tons, which, while down 5% on the record production of 2013/14, was still the second-highest producing harvest in history.² The FAO estimates 40 million tons of sunflower seeds will be produced in the 2015/16 season.

2. Food and Agriculture Organization of the United Nations (2015) (a). *Food Outlook: Biannual Report on Global Food Markets*.

The bulk of sunflower seeds produced are used to make sunflower oil, with only approximately 5% of the crop consumed as seeds in bakery, snack food and bird feed applications. A brief explanation of the different sunflower products is given in box 3.

Figure 2: World sunflower seed and oil production 1994/95–2014/15 (thousands of tons)



Sources: FAO; Oil World

Box 3: Oilseeds, confectionary seeds and oilcake

Sunflower seeds for crushing are generally recognizable by their black colour, while seeds used for direct consumption are specific varieties often referred to as confectionary seeds, which are generally striped in appearance and larger in size, with lower oil content. Sunflower oil crushing produces oil, a meal or cake which is primarily used for animal feed, and hulls which are used as either animal feed or biofuel.

Oil is produced using expeller machines, which produce the cake as a by-product with 15%–20% oil, which can be further extracted by the use of a solvent extraction process. The meal or cake is well suited for use as animal feed for ruminants, and in some cases for pigs and poultry. Sunflower seeds and their oil are good sources of fat, protein, fibre and vitamins, as well as certain minerals. The oil content of the seed before hulling ranges from 28% to 42% and is well known for its high linoleic content, which provides low levels of saturated fats, a clear amber colour, long shelf life, a pleasant cooking odour and low refining losses. There are a number of varieties produced with a high oleic content, which is most notable where monounsaturated fat exceeds 80%.

The main use of sunflower seed is to produce edible oil. Sunflower oil is a healthy vegetable oil that contributes to the maintenance of normal blood cholesterol.*

* http://www.fediol.be/data/1327055786Fiche%20sunf_20_01.pdf

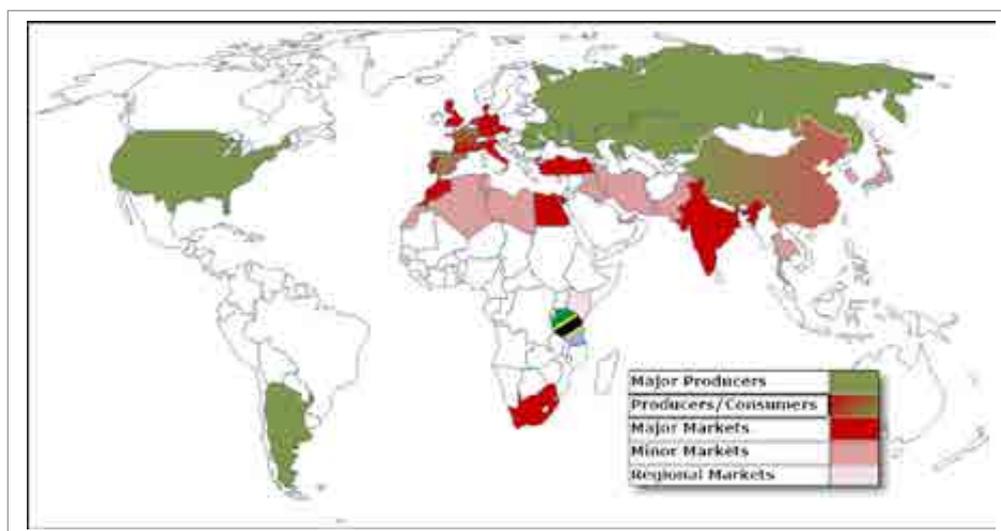
GLOBAL PRODUCTION

The largest global producers of sunflower are the Russian Federation (25% in 2014), Ukraine (22%), and the EU (22%). China (6%), Argentina (5%), Turkey (4%) and the United States (2.4%) are also notable producers. The majority of production is concentrated in these long-standing producing countries and is characterized by large, mechanized farms with easy access to inputs and funding.

African countries account for 5.5% of the world's production of sunflower oil.³ There has been particularly strong growth in production experienced in the past 10 years in the United Republic of Tanzania, Uganda and South Africa. African production, in contrast to the major producing countries, relies on smallholder farmers who have limited access to quality inputs, certified seeds and financial services, leading to lower yields and quality of production. African producers focus almost exclusively on sunflower seed for crushing.

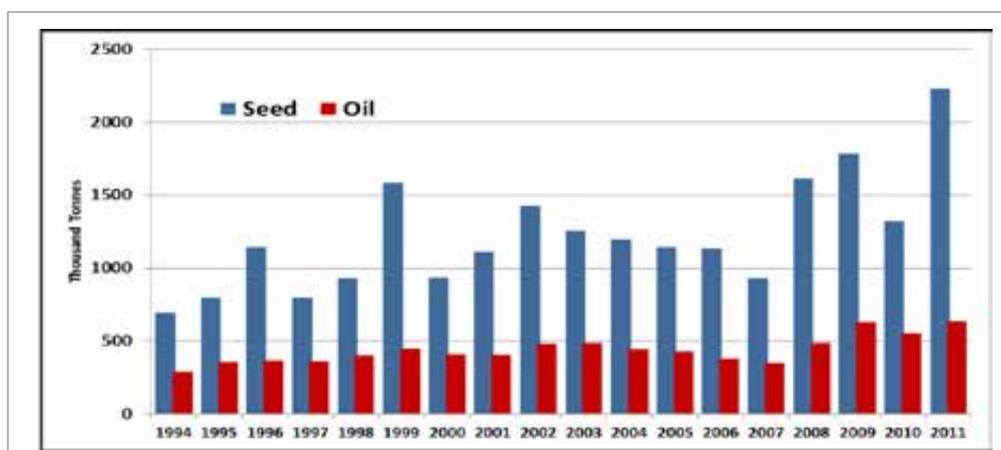
3. Food and Agriculture Organization of the United Nations (2015). Statistics database. Available from http://faostat3.fao.org/download/T*/E. Accessed 5 December 2015.

Figure 3: Global sunflower industry



Source: ITC compilation based on FAOstats and UNComtrade data

Figure 4: African sunflower seed and oil production 1994–2011 (thousands of tons)

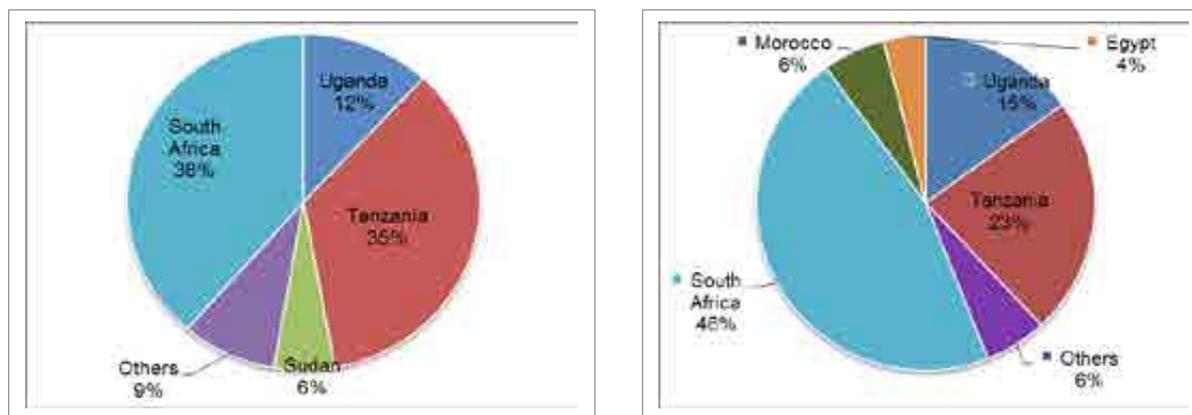


Sources: FAO; Oil World (2015).

According to FAO statistics, African production of sunflower oil is estimated at 650,000 tons for 2015. South Africa, which is the largest seed producer and also imports seeds for crushing to supplement domestic production, represents 46% of African sunflower oil production. In North Africa, Egypt and Morocco also import seeds for

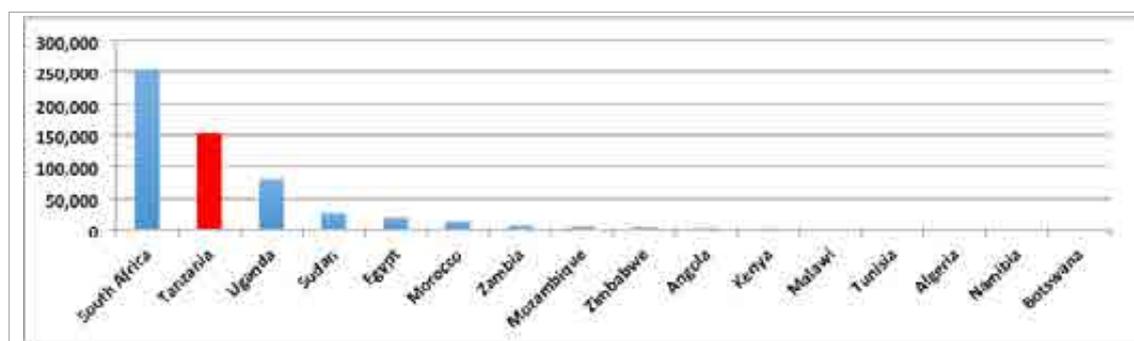
crushing and produce respectively 4% and 6% of African sunflower oil. The United Republic of Tanzania, with a 23% oil production share, and Uganda with a 15% share, are both vegetable oil deficit countries and produce oil mostly for domestic consumption, with low levels of export.

Figure 5: African sunflower seed (left) and oil (right) production (2014)



Source: Food and Agriculture Organization of the United Nations (2015).

Figure 6: African sunflower oil production (2014) (tons)



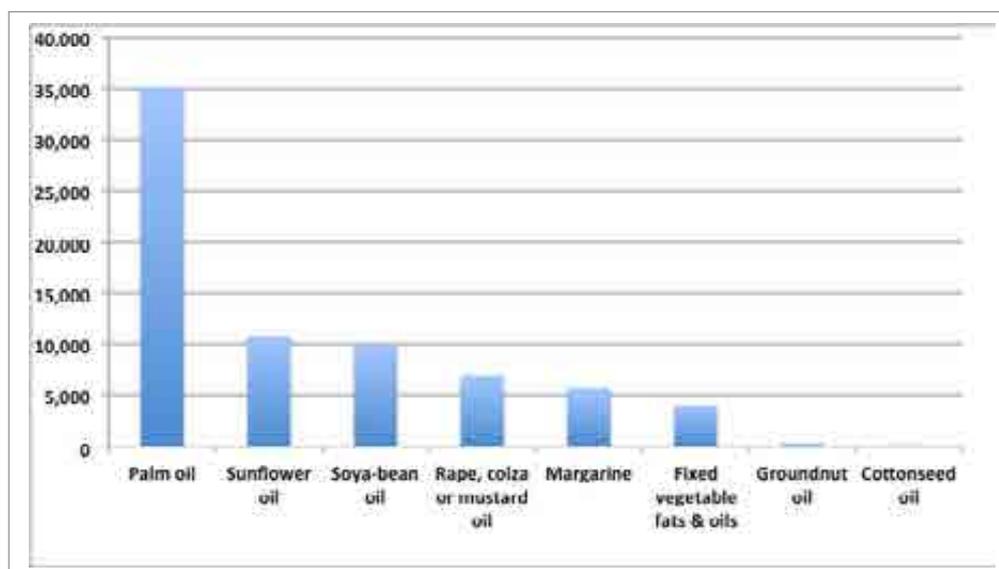
Source: Food and Agriculture Organization of the United Nations (2015).

GLOBAL MARKETS

The fast growth in production has been matched by a large increase in sunflower oil consumption. This is part of a growing global trend away from the consumption of hard fats and saturated oils, and towards lighter vegetable oils. In recent years the use of cheaper oils – such as palm oil for biodiesel – and concerns about the environmental impact of the cultivation of palm oil have also influenced consumer choice in favour of sunflower oil.

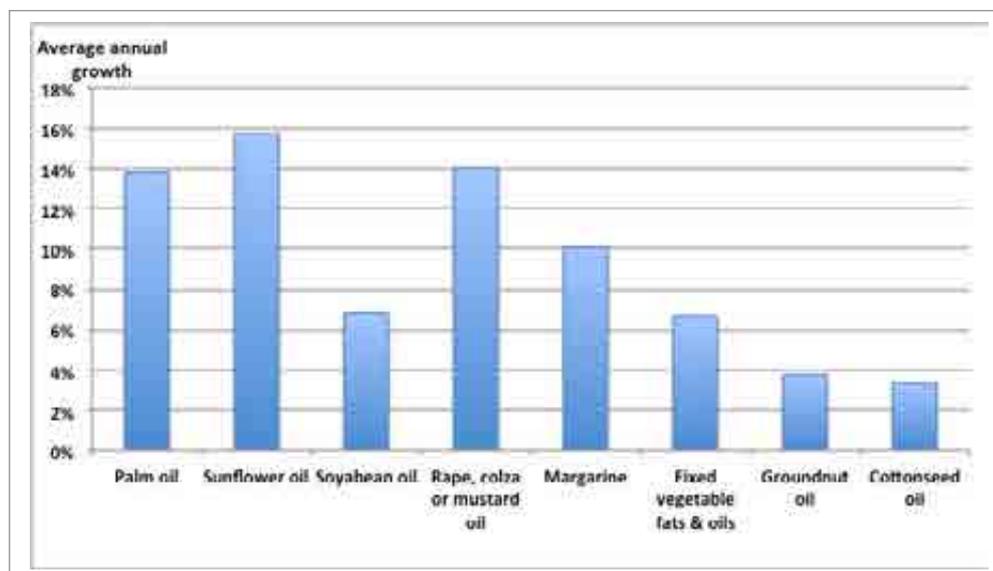
Growth in the production of sunflower oil has slowed in the past two years because of lower yields and consequently higher prices. Palm oil has taken a higher share of overall vegetable oil market growth as increased production in Indonesia and Malaysia lowered prices and encouraged a switch away from lighter oils such as sunflower, cotton and rapeseed. In the 2014/15 season, lower soybean prices, following record production in the United States and South America, have also encouraged consumers to switch to soybean oil. The underlying upward trend for sunflower oil remains strong, although continued strong pressure from lower palm and soybean oil prices seems likely to continue, as long as Chinese demand remains weak.

Figure 7: Value of major edible oil exports, 2014 (US\$ millions)



Source: ITC calculations based on United Nations Comtrade data.

Figure 8: Vegetable oils and fats average annual growth in exports, 2005–2014



Source: ITC calculations based on United Nations Comtrade data.

Global exports of palm oil reached US\$35 billion in 2014, three times the size of the sunflower oil trade. The growth of palm oil has been slightly lower than for sunflower oil, at 14% against 16% per annum. Other kinds of vegetable oils increased at 10% or less per annum.

World trade, broken down by product type, reveals the structure of the sunflower products world. Unrefined (crude) oil exports reached US\$6.3 billion, which represents 40% of all exported sunflower products. Exports of crude sunflower oil have increased by 15% on average on

a yearly basis over the last decade (2005–2014). Refined sunflower oil accounts for a further 25% of total exports. Refined sunflower oil exports increased by 16% on average yearly over the last decade.

The increase in sunflower oil trade in recent years has primarily been driven by imports in the major Asian markets, in particular India and China. The largest market – the EU

– has not only maintained growth in imports, but also in its production, a trend which is expected to continue in the near future.

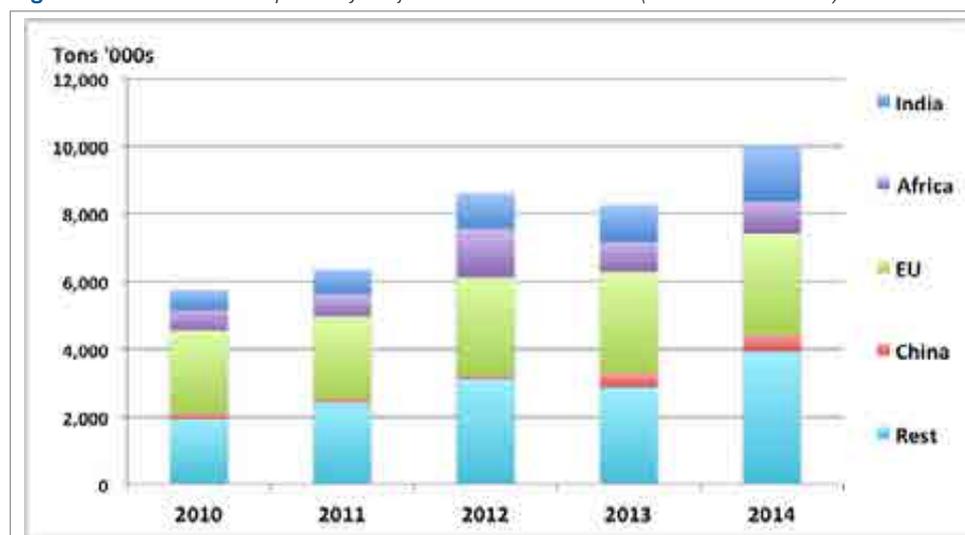
The major import markets for sunflower oil are the EU, India and Africa, with China growing rapidly. The share of the EU in total world imports has remained quite stable, while that of India has increased significantly since 2010.

Table 1: World exports of sunflower products 2005–2014 (US\$ millions)

Product code	Product label	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sunflower total		4 461	5 346	6 997	10 645	8 866	9 809	14 601	16 541	16 099	15 394
151211	Sunflower seed or safflower oil, crude	1 683	2 217	3 059	4 761	3 630	3 985	6 141	7 503	6 331	6 277
151219	Sunflower seed or safflower oil and their fractions, refined	1 165	1 456	1 613	2 648	2 135	2 395	3 548	3 648	3 756	3 649
120600	Sunflower seeds, whether or not broken	1 278	1 301	1 728	2 446	2 324	2 530	3 784	3 564	4 174	3 434
230630	Sunflower seed, oilcake & other solid residues whether or not ground / pellet	335	372	597	790	778	899	1 128	1 826	1 838	2 034

Source: ITC calculations based on Comtrade data.

Figure 9: Sunflower oil imports by major markets 2010–2014 (thousands of tons)



Source: ITC calculations based on United Nations Comtrade data.

The EU is a crucial market, as a major producer and importer of both seeds and oil, as well as an exporter of oil and processed products. It is also the largest market for sunflower oilseed cake, with a production of 3.3 million tons (25% of world production) and usage of 5.9 million tons (45% of world production) in 2013.⁴ However, the overall outlook for oilseed cake demand is not as positive as for seeds and oil, as growth in livestock production is likely to slow, according to FAO projections.

India and China have become important import markets. India, in particular, has seen a sharp growth in sunflower oil imports in recent years, thanks to static production and fast-growing consumption. The oilseed situation has changed dramatically from 2010, when domestic production supplied almost 50% of India's vegetable oil needs, to 2015 when the Indian Government's forecasts indicate that domestic production will only meet 30% of consumption. In the past decade, vegetable oil consumption has doubled, with many middle class Indian homes shifting to imported oils such as soy and sunflower.

India's import Customs duty on vegetable oils has increased from 15% in 2014 to 20% in 2015 on refined oils, and from 7.5% to 12% on crude oils.⁵ This measure has been taken to protect the Indian oilseed farmer at a time when international prices of palm and soy have fallen sharply, as well as to reduce dependence on imported vegetable oils. Although Indian imports of sunflower are not likely to exceed 2013 figure due to renewed competition from palm oil, India will remain an important market for sunflower oil. It is estimated that Indian sunflower oil imports for 2015 will reach 1.45 million tons, down 4% in the face of competition from low-priced palm and soybean oils.⁶ However, growth in imports is likely to return in the future, given growing affluence and the ban on genetically modified oil, which will limit the expansion of soybean oil imports.

According to figures 10 and 11, EU imports have been showing positive growth in recent years, both in sunflower seeds and oils. Seed imports accounted for 3 million tons in 2014, showing an average growth of 6% per annum in the period 2010–2014. In addition, it should be noted that 5.5% of these seed imports were from developing countries in 2014. EU imports of sunflower oil grew to 2.9 million tons in 2014, with an average growth rate of 4.5% per annum in the period 2010–2014. In 2014, 984,000 tons of oil was imported from developing countries.

4. Fediol (2016). Annual statistics. Available from <http://www.fediol.be/web/annual%20statistics/1011306087/list1187970189/f1.html>.

5. India, Central Board of Excise and Customs (2016). Tariff 2015/16. Available from <http://www.cbec.gov.in/htdocs-cbec/customs/cs-tariff2015-16/cst2015-16-idx>.

6. Rajendra Jadhav (2015). Drought to lift India's palm oil imports to record – veteran trader. Reuters, 28 September. Available from <http://www.reuters.com/article/india-palmoil-imports-idUSL3N11Y1XC20150928>.



Photo: (CC BY-NC-SA 2.0) Edgar Barany C, *Sunflowers / Girasoles.jpg*

Figure 10: EU imports and exports of sunflower seeds 2010–2014 (thousands of tons)

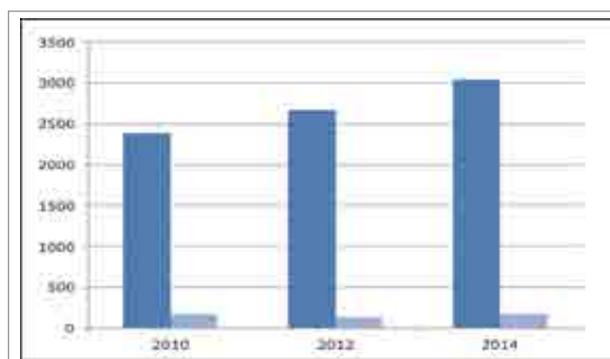
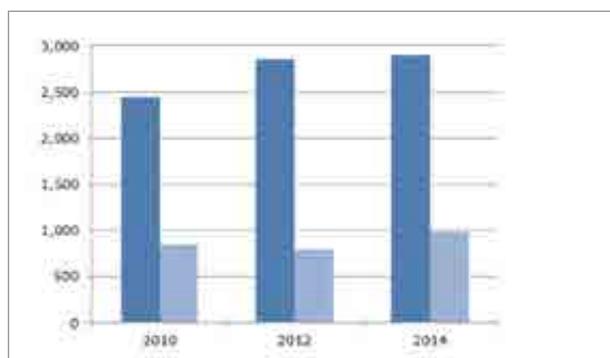


Figure 11: EU exports of sunflower oil 2010–2014 (thousands of tons)



Source: ITC calculations based on United Nations Comtrade data.

THE UNITED REPUBLIC OF TANZANIA'S SUNFLOWER SECTOR

Sunflower seeds were originally introduced into the United Republic of Tanzania by missionaries during the colonial era. While production previously focused on domestic consumption, the trend has changed over the last two decades and sunflower has become an important commercial crop. A key reason for its rapid expansion with producers is its adaptability to a wide range of environments. The crop is most popular in the Eastern, Central, Northern and Southern Highlands of the country. Additionally, the cost of producing sunflower oil is lower than for other oilseeds (sesame, groundnuts).⁷ There is also an active local market demand for sunflower oil for domestic use and demand for the by-product: seed cake for livestock feeding.

In 2013, the United Republic of Tanzania was ranked the tenth-largest global sunflower producing country in the world with a production share of 2.4%,⁸ and one of the largest sub-Saharan African producer countries of sunflower after South Africa. Between 2010 and 2013, Tanzanian production of sunflower seeds increased by more than 300%,⁹ enabling the sector to satisfy a larger share of national edible oil demand.

With a population of 49.3 million people, the United Republic of Tanzania has a large national demand for edible oil, and the Rural Livelihood Development Company¹⁰ estimated a minimum national demand of around 330,000 tons of edible oil per annum in 2010, a figure that was expected to increase by 3% annually. Currently more than half of the edible oil consumed in the country is imported. Therefore, one reason for encouraging the greater production and processing of Tanzanian sunflower oil is its potential for import substitution. In addition, it is healthier than other types of oil, for example palm and groundnut oils, as it is low in saturated fat and high in polyunsaturated fat.¹¹ Sunflower is gaining popularity and current data show that local production of both factory and artisanal extracted oils contributes to about 40% of the national edible oil requirement, with imported oils accounting for the remaining portion.¹²

PRODUCT MAP

The product map in figure 12 presents the sunflower products currently produced and exported by the United Republic of Tanzania.

7. Southern Agricultural Growth Corridor of Tanzania (2011). *SAGCOT Investment Blueprint Appendix IV: Value Chain and Market Analysis*.

8. Food and Agriculture Organization of the United Nations (2015). Statistics database. Available from http://faostat3.fao.org/download/T/*/E. Accessed 5 December 2015.

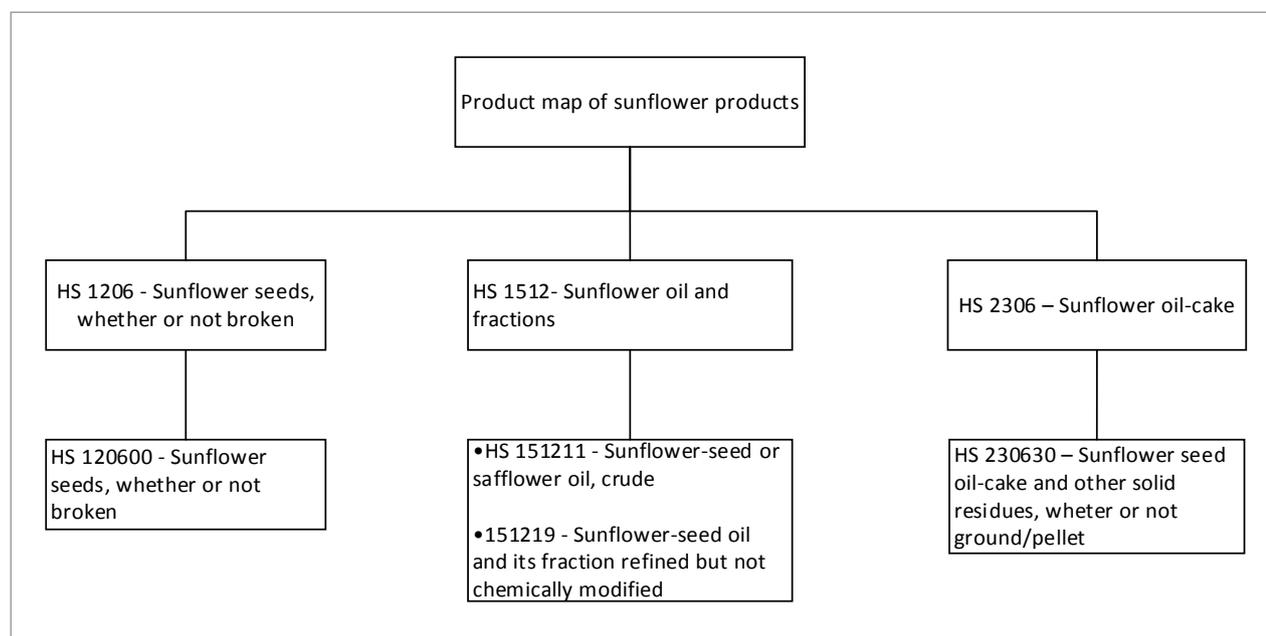
9. United Republic of Tanzania, Ministry of Agriculture, Livestock and Fisheries (2013); Food and Agriculture Organization of the United Nations (2015). Statistics database. Available from http://faostat3.fao.org/download/T/*/E. Accessed 5 December 2015.

10. United Republic of Tanzania, Tabora Municipal Council (2012). *Investment Opportunity in Tabora, Western Tanzania: Sunflower and Groundnut Oil Production*. Available from http://www.finnpartnership.fi/_kehitysmatietao_/1395/TABORA%20EDIBLE%20OIL%20PRODUCTION.pdf.

11. United Republic of Tanzania, Tabora Municipal Council (2013). *Investment Opportunity in Tabora, Western Tanzania: Sunflower Production and Processing*. Available from <http://mci.ei.columbia.edu/files/2013/10/FINAL-SUNFLOWER-PRODUCTION-AND-PROCESSING.pdf>.

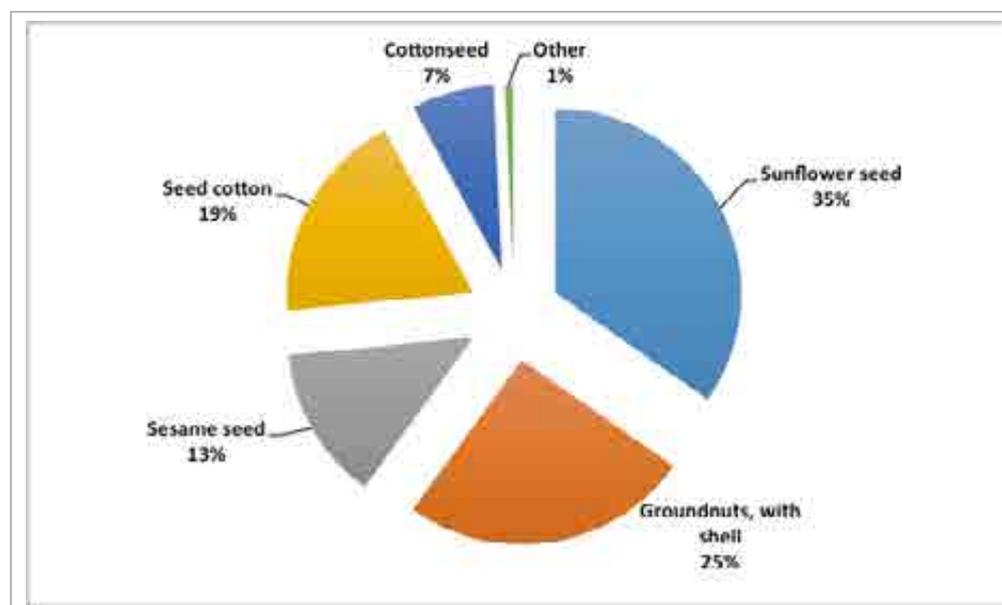
12. Ilonga Agricultural Research Institute (2008). From <http://info.worldbank.org/etools/docs/library/243551/TZAGRIBUSSINNOV.pdf>

Figure 12: Product map of sunflower products



Source: ITC based on United Nations Comtrade data.

Figure 13: Oilseed production in the United Republic of Tanzania, 2014



Source: Food and Agriculture Organization of the United Nations (2015).

TANZANIAN PRODUCTION OF SUNFLOWER PRODUCTS

Oilseed production in the United Republic of Tanzania mainly focuses on sunflower (35%), groundnut (25%), sesame (13%) and cotton (19%) (see figure 13). During the past decade, oil crop production, as well as the area harvested, has continued to grow (see figure 15).¹³

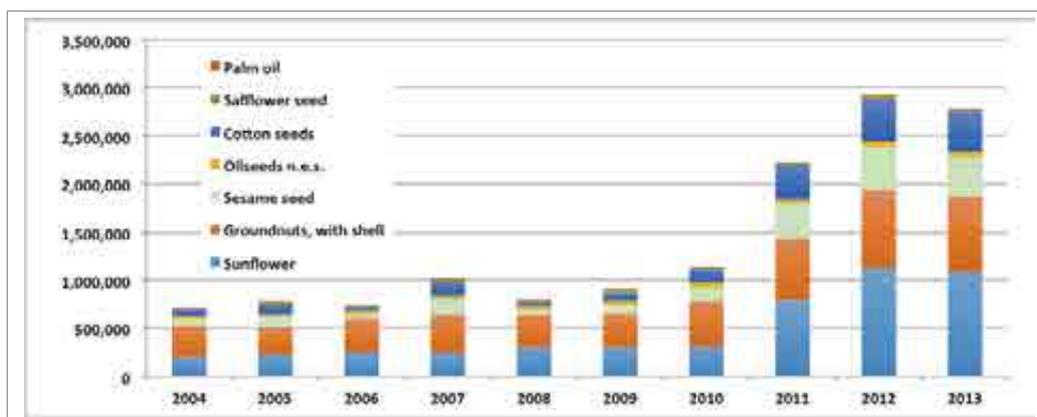
13. There are significant variations between production figures between the FAO, trade sources and official sources in the United Republic of Tanzania. This report uses FAO figures, based on an analysis of crop area planted and yields. The Strategy recognizes the weaknesses in data and proposes a number of measures to improve statistics of the sector.

Production of sunflower seeds reached close to 1 million tons in 2013, according to FAO statistics. Official statistics from MALF estimate that the level of production is closer to 3 million tons.¹⁴ Yields have increased dramatically over the last decade and are now seven times the level they were at a decade ago.

The amount of sunflower oil produced in the United Republic of Tanzania reached just over 163,000 tons in 2012, up from 52,000 tons a decade earlier.

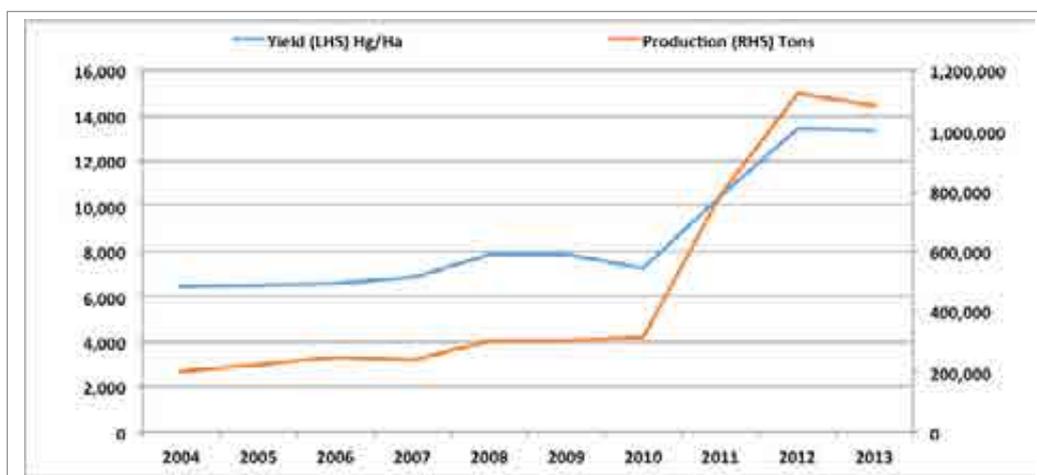
14. See previous footnote.

Figure 14: Tanzanian oil crop production by type, 2004–2013 (tons)



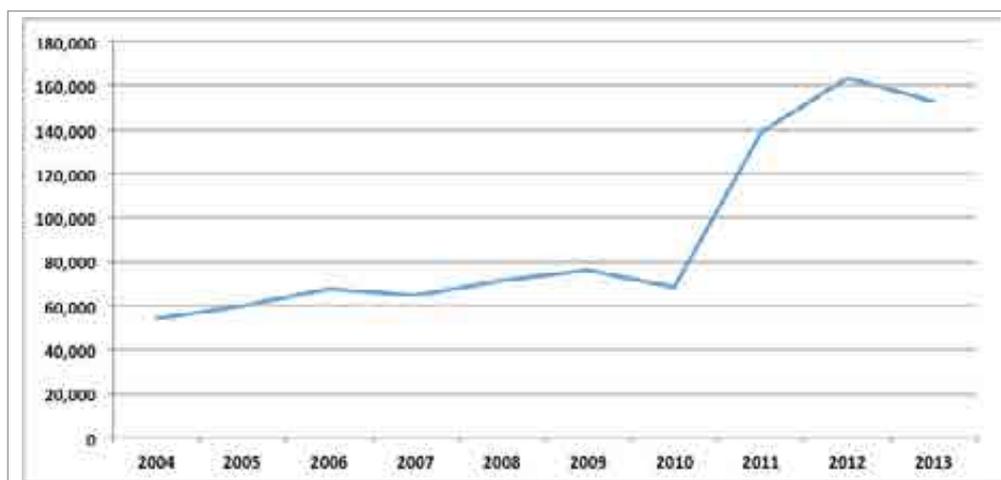
Source: Food and Agriculture Organization of the United Nations (2015).

Figure 15: Tanzanian sunflower seed production, 2004–2013



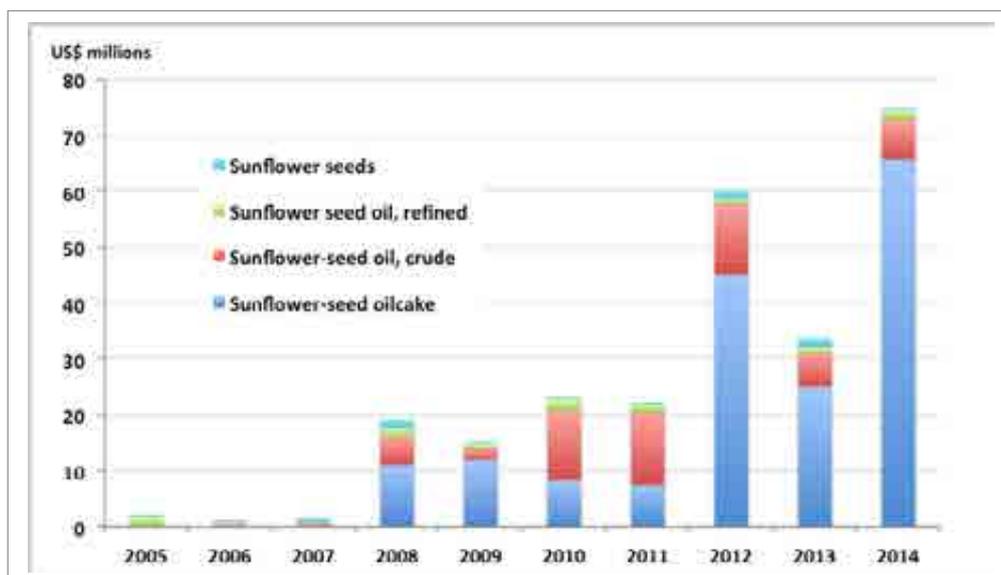
Source: Food and Agriculture Organization of the United Nations (2015).

Figure 16: Tanzanian sunflower oil production 2004–2013 (tons)



Source: FAO stats..

Figure 17: Tanzanian sunflower sector export products, 2004–2013 (US\$ millions)



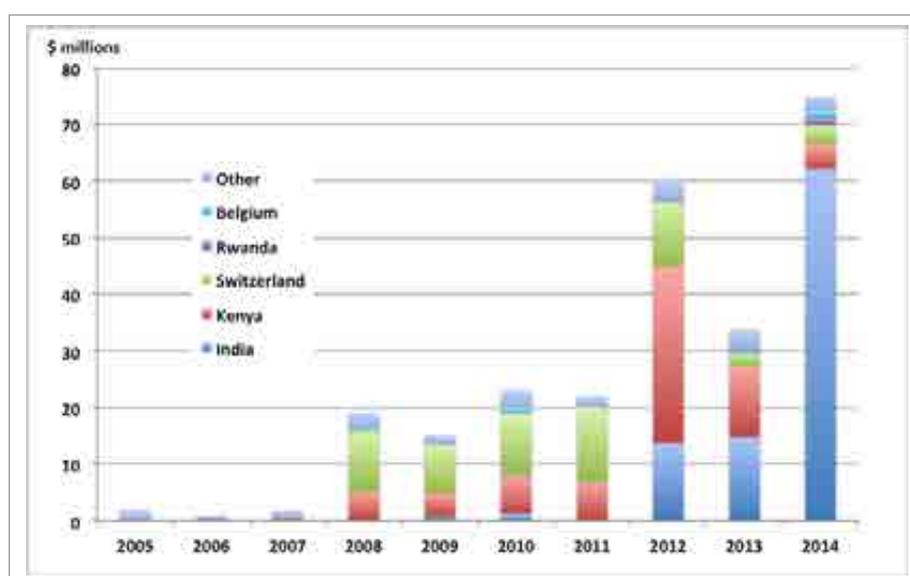
Source: ITC based on United Nations Comtrade data.

The United Republic of Tanzania is only the ninety-first exporter of sunflower oil in the world, having exported only US\$ 13 million, or 13,000 tons, in 2013. However, it is a significant exporter of sunflower products in general, owing to its substantial exports of sunflower cakes. An overview of the export performance of the Tanzanian sunflower sector is presented in the following section.

TANZANIAN SUNFLOWER PRODUCTS' EXPORT PERFORMANCE

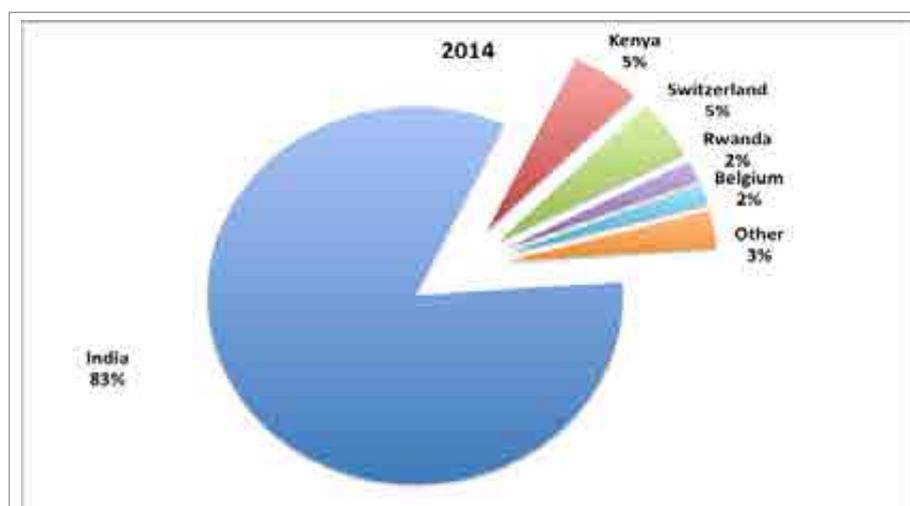
Overall, for all sunflower products (seeds, oil and cake), the United Republic of Tanzania has experienced a major surge in exports, moving from US\$ 1 million to over US\$ 70 million within a decade. As indicated earlier, the growth is mainly due to cake. India is its main export market and absorbs over 80% of its exports.

Figure 18: Tanzanian sunflower product export destinations and values, 2005–2014 (US\$ millions)



Source: ITC based on United Nations Comtrade data.

Figure 19: Tanzanian sunflower export destinations, share of total, 2014



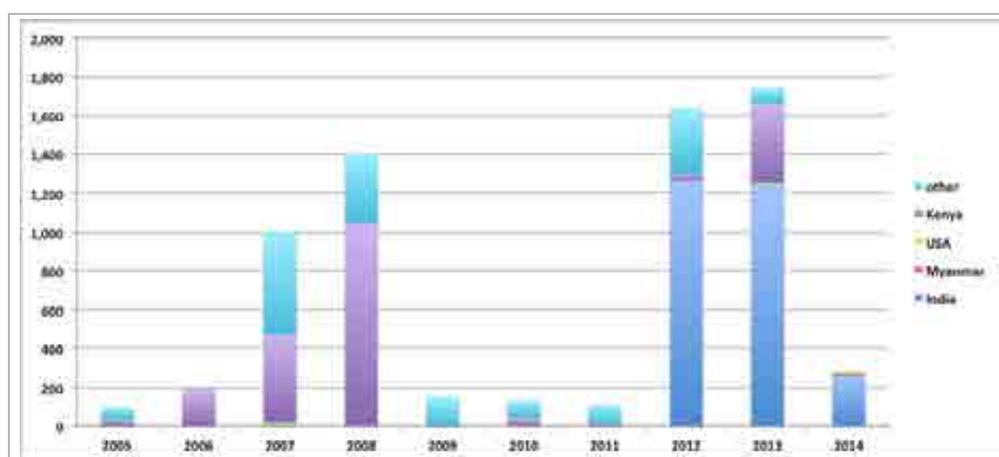
Source: ITC based on United Nations Comtrade data.

The United Republic of Tanzania's exports of sunflower seeds for crushing are extremely low and dropped dramatically in 2014, to around US\$0.2 million, from close to US\$1.8 million one year earlier. The majority of seed exports are destined for India. Prior to 2009, Kenya was a major market for seeds, accounting for three-quarters of Tanzanian exports.

Refined sunflower oil exports are also quite limited, amounting to less than US\$2 million in 2014. The majority of refined oil is destined for the Democratic Republic of the Congo and Rwanda. According to the trade data, the markets fluctuate quite widely from one year to the next.

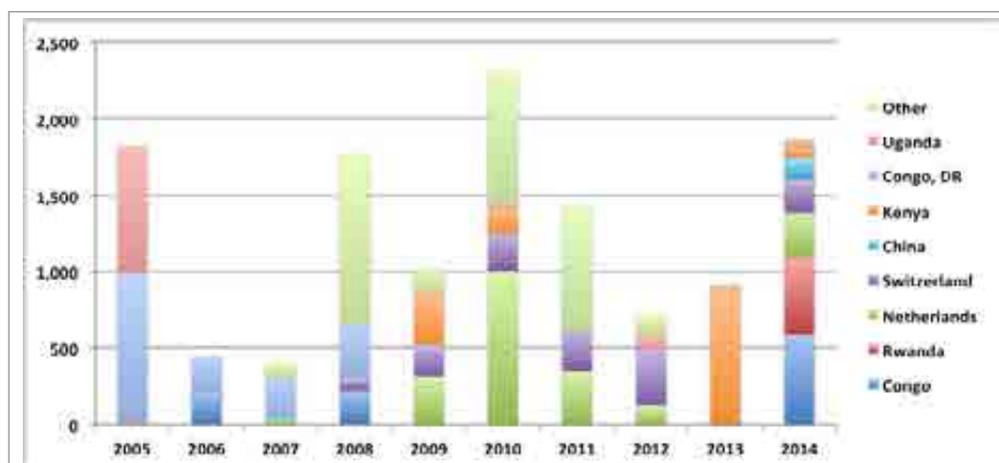
The United Republic of Tanzania's exports of sunflower crude oil reached US\$6 million in 2014, down from double that amount a few years earlier. Its major export markets are Switzerland and Belgium.

Figure 20: Tanzanian sunflower seed exports, 2005–2014 (US\$ thousands)



Source: ITC based on United Nations Comtrade data; HS120600.

Figure 21: Tanzanian refined sunflower oil exports, 2005–2014 (US\$ thousands)



Source: ITC based on United Nations Comtrade data; HS 151219.

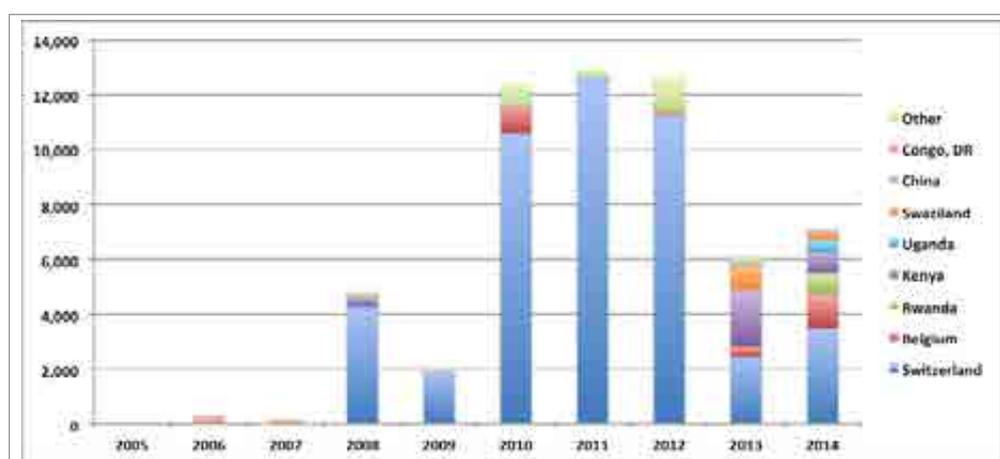
The United Republic of Tanzania's most important sunflower export product in value is oilcake, which reached US\$65 million in 2014, up from US\$25 million a year earlier. Close to 95% of these exports are destined for India, followed by Kenya. Cake exports only began in 2008, and at that time, Pakistan and Kenya were its major markets.

While the world market for sunflower products experienced extraordinary growth of 15% over the last decade, the United Republic of Tanzania managed to outperform the world market by reaching 50% average annual growth, albeit from a low base. During the past decade, the Tanzanian market share in world trade rose from 0.04%

in 2005 to 0.24% in 2010, and 0.49% by 2014. The normalized revealed comparative advantage for sunflower is close to 1 (moved from close to 0.2 between 2002 and 2006 and close to 0.8 between 2010 and 2014), which indicates that the United Republic of Tanzania does not yet have a comparative advantage in the sunflower sector.

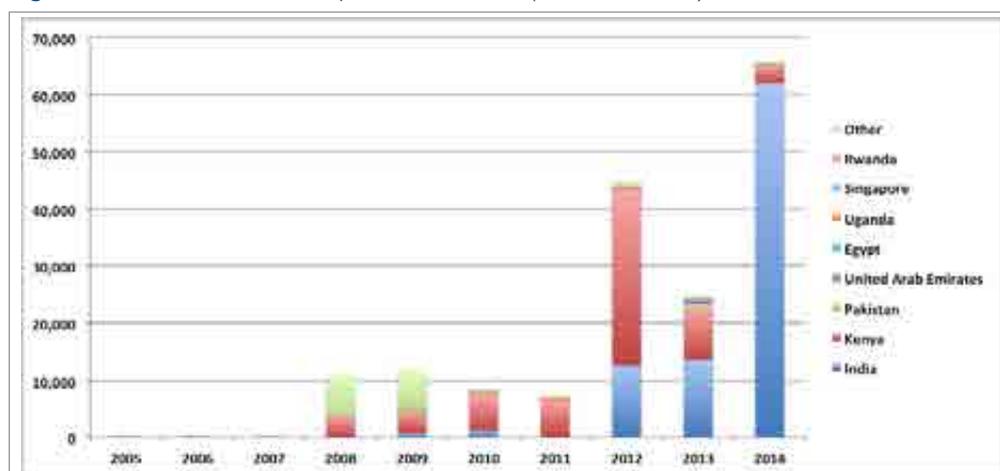
Export growth in the sunflower sector has been achieved through the ad hoc trading of new products (cake in particular) to new markets (India in particular), which was the greatest contributing factor to export growth. The United Republic of Tanzania's move into new products and markets indicates that it has diversified (see figure 25).

Figure 22: Tanzanian crude sunflower oil exports, 2009–2014 (US\$ thousands)



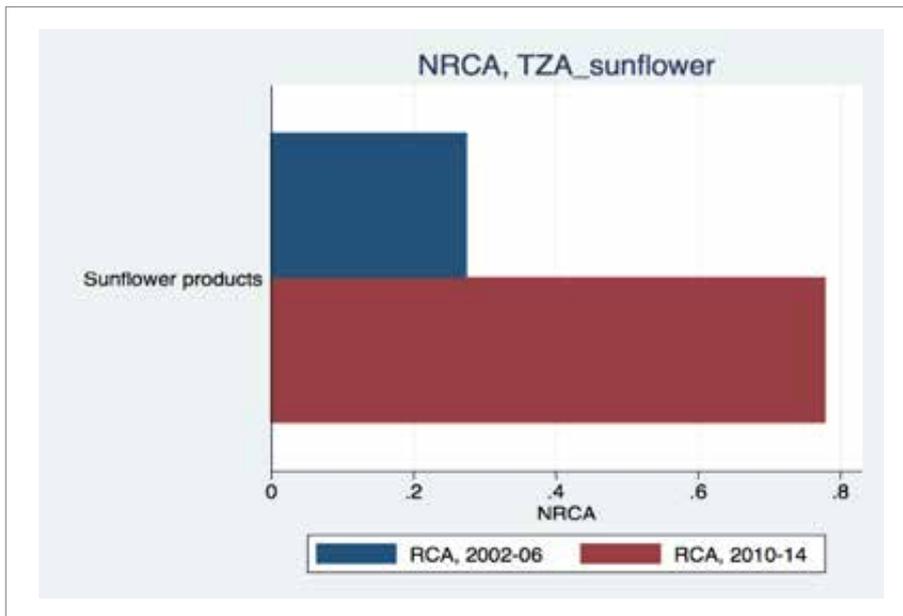
Source: ITC based on United Nations Comtrade data; HS 151211.

Figure 23: Tanzanian oilcake exports, 2005–2014 (US\$ thousands)



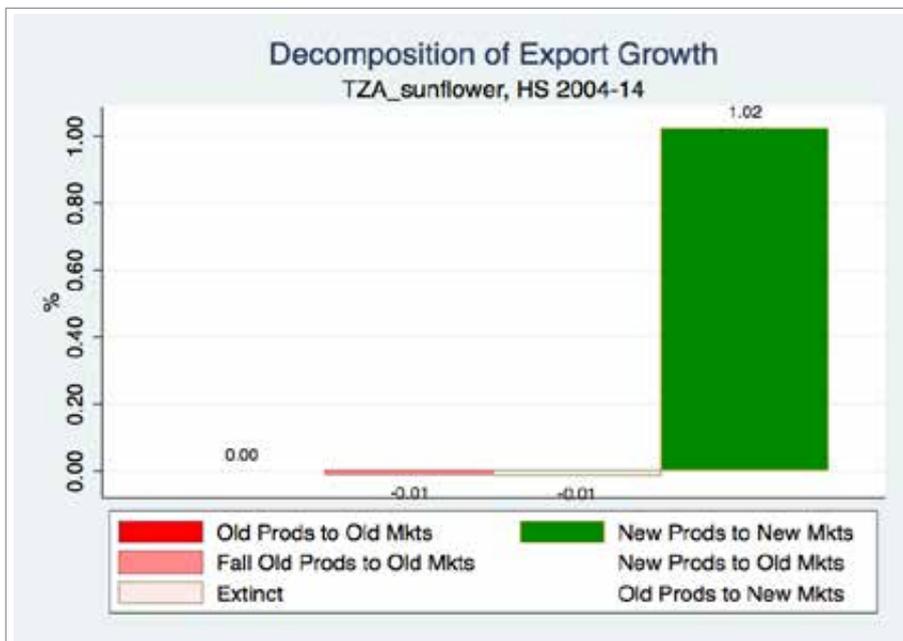
Source: ITC based on United Nations Comtrade data; HS230630.

Figure 24: The United Republic of Tanzania's revealed comparative advantage



Source: ITC calculations based on United Nations Comtrade data.

Figure 25: Decomposition of export growth for sunflower



Source: ITC calculations based on United Nations Comtrade data.

The analysis of the production and export data reveals a number of key underlying trends. These include:

- Fast growth, particularly for sunflower cake;
- Outperformance of world markets in all sunflower products;
- Strong concentration of exports in the Indian market at the expense of regional markets, indicating opportunities for diversification;
- A need to intensify production of refined sunflower oil for mainly domestic consumption;
- A need to intensify exports of sunflower cake as a by-product of sunflower processing.

The performance analysis points to a number of opportunities for increasing exports which need to be addressed throughout the value chain. The value chain analysis allows us to identify areas where there are constraints affecting overall performance. The next section undertakes a description of the value chain and its various stages, before exploring some of the critical constraints for the sector's development in the medium-to-long term.

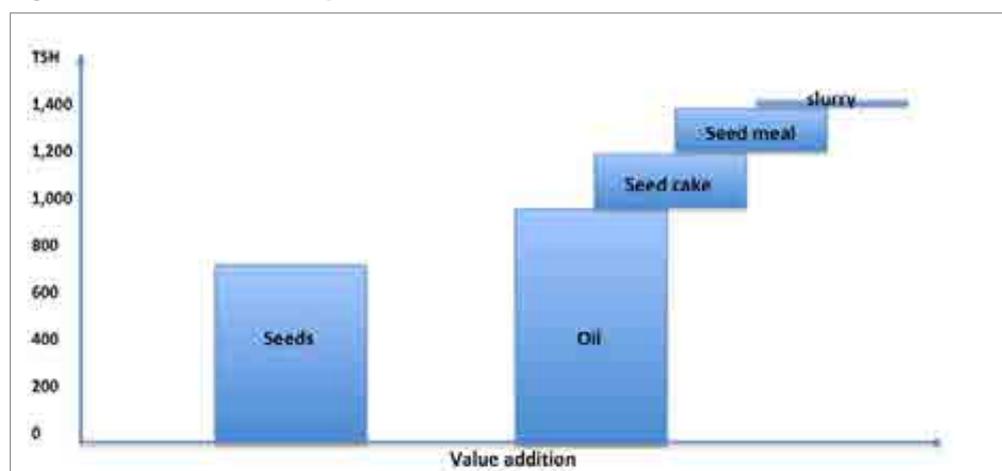
THE UNITED REPUBLIC OF TANZANIA'S SUNFLOWER VALUE CHAIN

A description of the different stages of the value chain is presented in this section. It is important to note that the increase in value is quite significant from production to the wholesale price of sunflower oil and its by-products. The increase in value generated by refineries is approximately double that of the seeds themselves.



Photo: (CC BY-NC-ND 2.0) Daisuke Tomiyasu, *Sunflower.jpg*

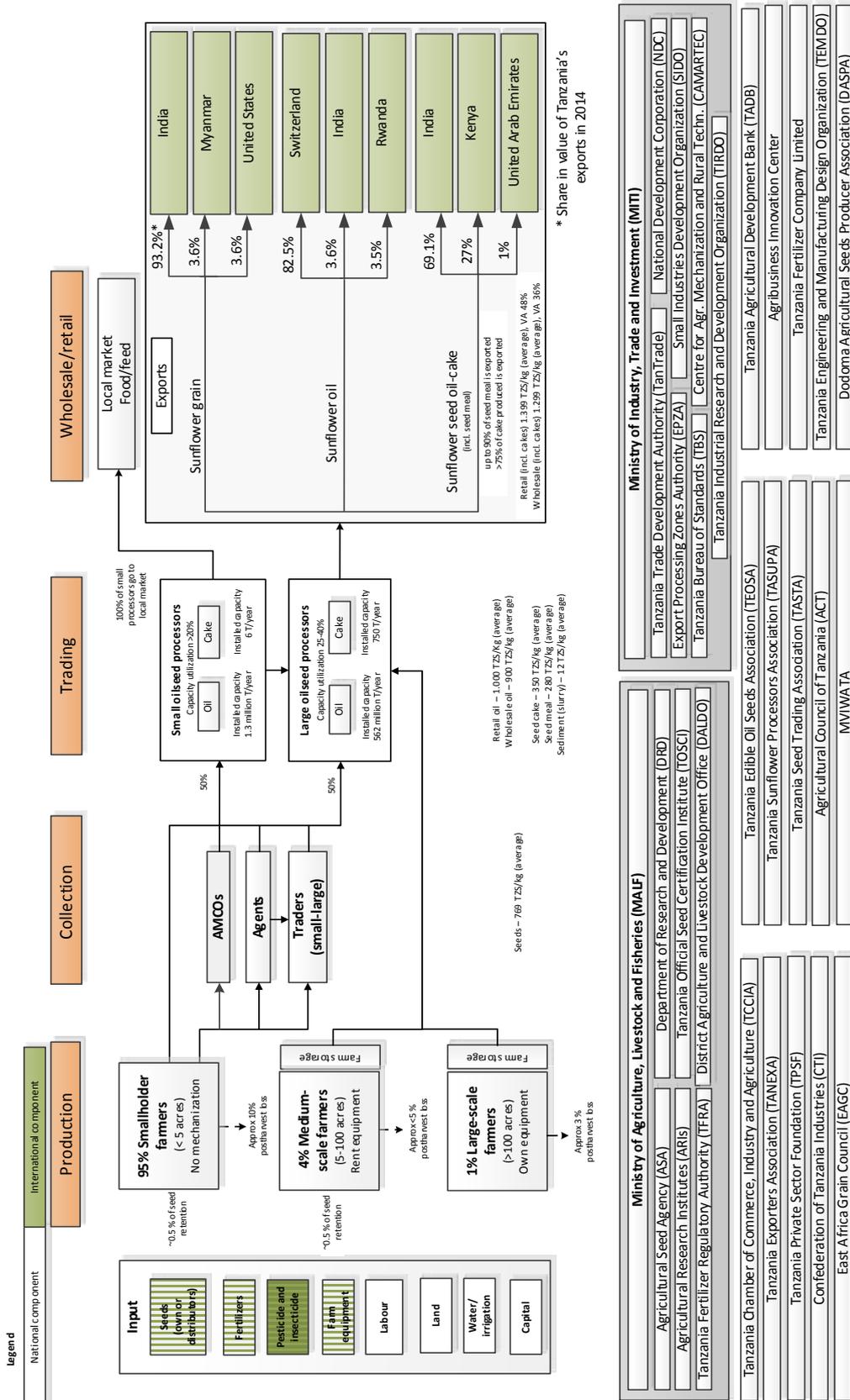
Figure 26: Value addition along the value chain



Source: Core team calculations.

Note: Estimations made on the basis of wholesale prices for 65 kg bags for grains and 20 litre packages for oil.

Figure 27: Current sunflower sector value chain



Inputs

Reliable supply and quality of inputs are essential for the efficient production of quality sunflower seeds.

Key inputs for production include seeds (quality and an availability of sufficient volume), tools and farm equipment, fertilizer, pesticides and insecticides, labour, land, water and irrigation, as well as capital. As will be described later in this document, there are key challenges to access inputs at the village and district level.

The majority of farmers use either their own, often recycled, traditional seed varieties, or else seeds distributed by the Agricultural Seed Agency (ASA), traders, cooperatives, private seeds companies, the District Agricultural and Livestock Development Office, and non-governmental organizations.

Oil mills and refineries also require key inputs such as machines, technology, processing chemicals, trained labour, qualified management staff and working capital. These inputs are relatively easily available to Tanzanian processors even if there are certain challenges in accessing chemicals and modern machines.

Production

Sunflower seed is fast becoming a popular cash crop in the United Republic of Tanzania. Its production is dominated by smallholder farmers, who account for 95% of the producers. They are characterized by their small plots of land of less than five acres, and most often lack mechanized farming techniques.

Medium-scale farmers with 5–100 acres of land make up 4% of the sector and usually rely on rented farming equipment, such as tractors for ploughing. Only 1% of Tanzanian sunflower producers can be classified as large-scale farmers. These are the only ones who also own their own mechanized equipment and tools, and manage more than 100 acres of land.

In much of the country, particularly among smallholder farmers, sunflower seeds are often grown as an intercrop with maize, sorghum and cowpeas (among others), as opposed to being cultivated alone, which is the case for the large-scale growers. Sunflower production mostly relies on family labour, particularly in the case of the smallholder farmer. Hired labour is mostly used in large-scale operations.

Harvest and postharvest

Harvesting is primarily performed manually for smallholder farmers, usually between May and September, depending on the region. Once harvested by smallholder farmers, the crop is sold to local traders, both small and large, at the farm or local market; to the Agriculture Marketing Cooperatives (AMCOs) and to agents operating on behalf of local processors; or it is sold directly to smaller processors. The medium- and larger-scale farmers usually harvest mechanically and sell their seeds directly to large oilseed processors, skipping the middlemen altogether.

Correct postharvest handling and appropriate storage facilities are necessary to maintain quality and minimize losses of harvested seeds. Smallholder farmers rarely have adequate storage facilities. The difficulty of adequately storing sunflower seeds puts pressure on these farmers to sell their crop rapidly after harvest.

Nevertheless, losses are inevitable and smallholder farmers experience the highest percentage of postharvest losses, with approximately 10% postharvest losses, an amount that shrinks to around 5% for medium-scale farmers and to around 3% for larger-scale producers.

Processing and refining

Processors obtain the seed via traders and cooperatives or directly from the farmers themselves, depending on volume of production and logistics requirements. The availability of crushing equipment is considered adequate in the United Republic of Tanzania, with easy access to Chinese or Indian technology. There are various types of processing in the United Republic of Tanzania. A processor can only crush the seeds without refining; crush and complete first refining; or crush and complete first and second refining. A processor can also only provide the crushing service (toll processing), with the oil and cake handed back to the trader or farmer who will sell it directly.

It is estimated that the smaller oil processors currently use just above 20% of their capacity, while the large oilseed processors are using between 25% and 40% of their installed capacity. In table 2 below, you can see the current processing capacity of some of the main processors in the country.

Table 2: Current Tanzanian sunflower processing capacity

Company Name	Location	Current daily processing capacity (tons)	Current seed crushing capacity (tons /120 days)	Current oil extracting capacity (tons/120 days)	Current seed cake production (tons/120 days)
Jackma Enterprises	Dodoma	29	3 480	974,4	2 046,24
Uncle Milo Co. Ltd	Dodoma	62	7 440	2 083,2	4 374,72
Nyemo Investment Co. Ltd	Dodoma	10	1 200	336	705,6
Three Sisters Co. Ltd	Dodoma	6,4	768	215,04	451,584
Magin Co. Ltd	Kondoa	24	2 880	806,4	1 693,44
Sunshine Co. Ltd	Dodoma	300	36 000	10 080	21 168
Mount Meru Millers	Arusha & Singida	1 200	144 000	50 393	99 658
Murzah Oil Mills Ltd	Dar es Salaam	300	36 000	10080	21 168
Others		37,4	4 469	1 498	3 089
Total production		1 968,8	23 6237	76 466,04	154 354,584

Source: Core team estimates based on data collection and estimations.

Wholesale / retail

Smaller processors normally sell their product locally, whether wholesale or retail at the local market level. In some cases they sell oil to larger processors. It is estimated that locally produced sunflower oil is able to satisfy approximately 40% of the local demand for edible sunflower oil. It is important to note that there are no purely sunflower millers. Instead, they process and market locally produced oilseeds as available (sunflower, groundnuts, etc.).

The market for the higher-quality, branded products of the large mills are mainly urban and export-oriented. The key inputs for the distribution of sunflower oil by the larger mills are mostly available in the United Republic of Tanzania, albeit that many – such as packaging materials – are imported.

Exports

Tanzanian exports of sunflower products remain low but have been expanding in recent years. In 2014, the country exported 93.2% of its sunflower seeds to India, while a further 3.6% was sent to Myanmar and the United States. Switzerland accounted for 82.5% of oil exports, while India and Rwanda accounted for 3.6% and 3.5% respectively. India was the largest market for oilseed cake, with 69.1% of the share, while Kenya and the United Arab Emirates accounted for 27% and just 1%, respectively.

STRATEGIES, POLICIES AND LAWS GOVERNING THE SUNFLOWER SECTOR

In order to promote the development of the sector, a number of policies have been formulated and implemented, and regulations have been enacted. The Ministry of Agriculture, Livestock and Fisheries plays a critical role in developing upstream market conditions, while the Ministry of Industry, Trade and Investment (MITI) plays an equally critical role in the development of downstream industries. This section provides an overview of the key policies in place which support the sector.

STRATEGIES AND POLICIES

The **Agriculture and Livestock Policy** of 1997 has the objective of improving food security and alleviating poverty, while promoting integrated and sustainable use and management of natural resources such as land, soil, water and vegetation. This policy was created in order to ensure better use of the available land for agriculture, while taking into account the need to provide for positive livelihood outcomes for rural communities. The policy also aims to assure basic food security for the country, as well as increased output and quality of food commodities; and better living standards in rural areas through increased income generation from agricultural production, processing and marketing.

The **Agriculture Sector Development Strategy** is the main tool the Government uses to coordinate and monitor agricultural development and to incorporate national reforms. It aims to achieve a sustained annual agricultural growth rate of 5%, mainly through a transformation from subsistence to commercial agriculture. The transformation is to be led by the private sector, which will be facilitated by an improved enabling policy environment and more public expenditure. District-level involvement will be central in the identification, management and implementation of projects through the preparation of beneficiary-driven District Agricultural Development Plans. The Agriculture Sector Development Plan is the programme framework for developing the agricultural sector and operationalizing the Agriculture Sector Development Strategy.

The **National Horticulture Development Strategy** provides a roadmap for transforming the sector through seven pillars of strategic initiatives, which include the promotion of horticulture; expanding long-term financing and investment; addressing land, policy and infrastructure bottlenecks; expanding the production base and improving quality; strengthening industry linkages; and mobilizing human resources. The strategy has been developed with inputs from the entire horticulture sector, both public and private, and has been developed in line with the objectives of other related initiatives.

The **Kilimo Kwanza** initiative was announced in 2009 by the Government to modernize the Tanzanian agricultural sector. The initiative is driven by the private sector and aims to modernize agriculture through better access to fertilizer, tractors, power tillers, seeds and other agricultural inputs; better access to markets, extension services and payments systems; improved supply chain management; and access to training for farmers, among others.

The **National Export Strategy** was approved in 2009 and implemented for a period of five years, which has now expired. Agriculture was one of the priority areas and horticulture was listed as one of two key subsectors, along with food and commodity crops. The strategy aim was to have modernized, commercialized, competitive and effective agriculture and cooperative systems in place. Agricultural support initiatives included better access to finance; access to and appropriate use of seeds, fertilizers and pesticides for increased yields and crop output; increased use of farm implements and available labour; the reduction of pre- and post-harvest losses; GAP training; the promotion of agro-processing; and the establishment of sectoral associations, of which the oilseed sector was given a particular mention.

The **National Development Vision 2025** aims to transform the country's economy from a low productivity agricultural economy to a semi-industrialized one, led by modernized and highly productive agricultural activities which are effectively integrated and supported by the necessary

industrial and service activities in rural and urban areas. Among the aims is the creation of the United Republic of Tanzania as an active and competitive player in regional and world markets, with the capacity to articulate and promote national interests and to adjust quickly to regional and global market shifts.

MKUKUTA, the United Republic of Tanzania's **National Development Plan**, in line with the Millennium Development Goals, sets out key deliverables that are to be achieved via three main clusters, namely economic growth and the reduction of income poverty; improved social services and well-being; and good governance and national unity. Under the first cluster of MKUKUTA, the broad outcome is to achieve high and sustainable pro-poor growth with the three specific goals of: creating an enabling environment for high and sustainable growth; promoting sustainable, broad-based pro-poor growth; and reducing income poverty and attaining overall food security.

LAWS AND ACTS

The **Seeds Act** of 2003, amended in 2007, governs seed production and certification in the United Republic of Tanzania. It controls and regulates all standards related to agricultural seeds, and established the National Seeds Committee, which has the responsibility of acting as a stakeholder forum that can advise the Government on all matters relating to the development of the Tanzanian seed industry. The Act protects the interests of both the seed buyer and producer by requiring that the seed is properly labelled and meets minimum standards of quality, and by establishing clear regulations and procedures that level the playing field between seed producers and traders to curb the proliferation of counterfeit seeds on the market.

The **Fertilizers Act** of 2009 was introduced to regulate the manufacturing, importation, exportation, sale and use of agricultural fertilizers. The Act established the Tanzania Fertilizer Regulatory Authority (TFRA) and introduced registration and licences for all involved in the fertilizer or fertilizer supplements sector.

The **Produce Export Act** provides for the grading, inspection, regulation and preparation of produce to be exported from the United Republic of Tanzania. The law defines produce to mean any article produced or derived from farming, agricultural operation or stock-keeping. It restricts importation of products regulated under the Act, except through designated points of entry, and subject to inspection or grading in the manner provided for under the inspection rules.

The **Tanzania Food, Drugs and Cosmetics Act** was enacted to regulate food and other manufactured or imported products. The Act establishes the Tanzania Food

and Drugs Authority (TFDA) as the executive agency for controlling the quality and safety of food, drugs, poisons and cosmetics; and regulating the importation, manufacturing, labelling, storage, promotion and general distribution of these items. Regulation is mainly through a system of permits and licences issued by this body.

The **Atomic Energy Act** of 2003 established the Tanzania Atomic Energy Commission and provided for its functions in relation to the control of the use of ionizing and non-ionizing radiation sources, the promotion of safe and peaceful uses of atomic energy and nuclear technology, and to repeal the Protection From Radiation Act of 1983. Under this Act, all food imports and exports in the United Republic of Tanzania must be tested for radiation by the Commission and obtain a **radioactivity analysis certificate**, which must demonstrate that the goods are radiation-free for their successful import or export.

The Government introduced the **Cooperatives Society Act** in 2003, which was amended in 2013 to establish the Tanzania Cooperatives Development Commission. The Act supports the formation, constitution, registration and operation of cooperative societies and promotes cooperative development.

STANDARDS AND REGULATIONS

The **Tanzania Bureau of Standards (TBS)** has issued several standards and specifications that are important for the sunflower sector. TBS standards are applicable to a product which has an impact on the national economy, or health and safety of the environment.

The most important for the sector is **TZS 50:2011**, which is the **Specification Standard for Sunflower Seed Oil**. TZS 50:2011 is the Tanzanian Standard that prescribes the requirements and the methods of sampling and testing for edible sunflower oil obtained from seeds of *Helianthus annuus* and intended for human consumption. The standard does not apply to sunflower oil which must be subjected to further processing in order to render it suitable for human consumption. The TBS standard on sunflower oil specifies the following.

- **Raw sunflower oil** – This is oil obtained by a process of mechanical expression and/or solvent extraction. The oil should be pure and not contain any particles, sediments, foreign matter or contamination.
- **Refined sunflower oil** – This oil has been obtained by expression and/or extraction and in addition it has been neutralized with alkali, washed with water, dried, bleached with bleaching earth or activated carbon, and deodorized with steam. No other chemical agent is allowed in this process except citric acid.
- Sunflower oil for edible purpose shall contain antioxidants and antioxidant synergists in specified levels.

Other related standards, which are also harmonized at the regional level through the East African Community (EAC), include, but are not limited to, the following.

- **TZS 54:2010**: Animal and vegetable fats and oils – sampling (EAS 291:2002)
This standard describes methods of sampling crude or processed animal and vegetable fats and oils, whatever the origin and whether liquid or solid. It also describes the apparatus used for this process.
 - **EAS 299:2002**: Edible sunflower oil — specification
This East African Standard prescribes the specification and test methods for edible sunflower oil intended for human consumption. The standard does not apply to sunflower oil, which must be subject to further processing in order to render it suitable for human consumption.
- **TZS 1322:2010**: Oils and fats –sampling and test methods – purity tests
This standard lays down the requirements for packaging and labelling of foods. (ICS: 67.020)
- **TZS 1336:2010**: Animal and vegetable fats and oils – determination of insoluble impurities content (EAS 312:2002)
This standard specifies a method for the determination of the insoluble impurities content of animal and vegetable fats and oils. If it is not desired to include soaps (particularly calcium soaps) or oxidized fatty acids in the insoluble impurities content; it is necessary to use a different solvent and procedure. In this case the method should be the subject of agreement between the parties concerned.
- **TZS 538:1999**: Packaging and labelling of foods
This standard lays down the requirements for packaging and labelling of foods. (ICS: 67.020)

KEY INSTITUTIONS SUPPORTING THE SECTOR VALUE CHAIN

Trade and investment support institutions assist with the development of the sunflower sector's value chain. They are determined by their functions and roles and can be classified by four main categories: policy support, trade support services, business services and civil society network. The main institutions presented below will contribute to the future growth of the sunflower sector.

Box 4: Key trade and investment support institutions supporting the sunflower sector

Policy support	<ul style="list-style-type: none"> • MALF: <ul style="list-style-type: none"> – ASA – Agricultural Research Institutes (ARIs) – Tanzania Official Seed Certification Institute (TOSCI) – Ministry of Agriculture Training Institutes (MATIs) • MITI: <ul style="list-style-type: none"> – Tanzania Trade Development Authority (TanTrade) – Tanzania Industrial Research and Development Organization (TIRDO) – Tanzania Engineering and Manufacturing Design Organization (TEMDO) – National Development Corporation (NDC) – TBS – Export Processing Zones Authority (EPZA) – Small Industries Development Organization (SIDO) – Centre for Agricultural Mechanization and Rural Technology (CAMARTEC) – Weights & Measures Agency • Ministry of Communication, Science and Technology <ul style="list-style-type: none"> – Commission for Science and Technology (COSTECH) • Prime Minister's Office–Regional Administration and Local Government (PMO–RALG) <ul style="list-style-type: none"> – Local Government Authorities (LGAs)
Trade support	<ul style="list-style-type: none"> • Tanzania Investment Centre (TIC) • Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) • Tanzania Fertilizer Company Limited • TFDA • TFRA • Confederation of Tanzania Industries (CTI) • Tanzania Private Sector Foundation (TPSF) • Tanzania Exporters Association (TANEXA) • TEOSA • TASUPA • Tanzania Seed Trade Association (TASTA) • East Africa Grain Council (EAGC) • Tanganyika Farmers' Association
Business services	<ul style="list-style-type: none"> • Economic and Social Research Foundation • Agribusiness Innovation Centre • Tanzania Agricultural Development Bank (TADB) • AMCOs • Southern Agricultural Growth Corridor of Tanzania (SAGCOT)
Civil society	<ul style="list-style-type: none"> • Mtandao wa Vikundi vya Wak (National Networks of Farmers' Groups in Tanzania) (MVIWATA) • Agricultural Council of Tanzania (ACT)

POLICY SUPPORT NETWORK

MALF provides policy guidance and services with the aim of creating a modernized, commercialized and effective agriculture and cooperative system in the country. The Ministry aims to provide a conducive policy environment to stakeholders, as well as build the capacity of LGAs. They also work to facilitate the contributions of the private sector towards a sustainable, productive agricultural sector.

- **ASA** is a semi-autonomous body that was launched under the Ministry of Agriculture, Livestock and Fisheries in June 2006. The Agency took over the responsibilities that were performed by the Seed Unit of the Ministry. ASA was created with the aim of ensuring the availability of high-quality agricultural seeds for farmers at affordable prices.
- **ARIs** are public institutions primarily undertaking agricultural R&D under the Ministry of Agriculture, Livestock and Fisheries. ARIs are present across different regions and aim to deliver demand-driven agricultural technologies, information services and knowledge to farmers and other stakeholders for increased agricultural productivity, profitability, competitiveness and the sustainable use of natural resources.
- **TOSCI** is a government institute, established under the Ministry of Agriculture, Livestock and Fisheries in 2003. TOSCI resulted from government reform as a follow-up to the Tanzania Official Seed Certification Agency. TOSCI is responsible for the certification and promotion of quality agricultural seeds, produced or imported into the country for sale. It is also entrusted with safeguarding the farming community from procuring poor quality or fake seeds from farm input vendors.
- **MATIs** have several locations across the country and offer short- and long-term training programmes. They aim to train confident and competent agricultural field staff, youth for self-employment, and farmers, through the creation of conducive learning environments. MATIs offer demand-driven training programmes and have the overall goal of transforming the country from subsistence agricultural production to commercial production through the adoption of modern practices by farmers by 2025.

MITI facilitates regional and international trade, and develops the marketing of industry and trade. This Ministry aims to promote the United Republic of Tanzania's investment opportunities in industrial development and other key sectors by facilitating and maintaining trade relations with foreign countries and formulating a relevant policy framework.

- Working under MITI, **TanTrade** provides trade information and consultancy services aimed at establishing global business partnerships. TanTrade organizes

international and specialized trade fairs, solo exhibitions, and product and market research; and facilitates trade missions, buyer–seller meetings and contact marketing programmes.

- **TIRDO** is a multidisciplinary R&D organization established in 1979. Its mandate is to assist the Tanzanian industrial sector by providing technical expertise and support services to upgrade their technology base. Specific R&D is being conducted in postharvest technologies, along with research and the development of technical expertise to improve agro-processing through the application of Hazard Analysis and Critical Control Points (HACCP) and Good Manufacturing Practices (GMP).
- **TEMDO** is an applied engineering R&D institution that operates under MITI. The main objective of TEMDO is to design, adapt and develop machinery and equipment, and to promote their commercial manufacture and use. TEMDO is responsible for transferring this technology to manufacturing small and medium-sized enterprises (SMEs), and also offers consulting services and training to industries.
- **NDC** is an economic development organization that initiates, develops and guides the implementation of economically viable projects undertaken in partnership with the private sector.
- Operating under MITI, **TBS** formulates and publishes standards, and undertakes quality control, testing, calibration and training. TBS was established in 1975 and became operational in 1976. Its main duties involve enacting, formulating and implementing the national standards that various sectors of the economy should abide by. TBS sets a number of standards for the sunflower sector and is in charge of their enforcement.
- **EPZA** and **SIDO** also fall under MITI. EPZA coordinates and facilitates the processing of products intended for export, promotes investment and establishes links between local economies and the international market. The priorities of EPZA are to attract and encourage the transfer of new technology and investment in export-led industrialization. SIDO specifically focuses on the development of the small industry sector, working on a wide range of tasks from policy formulation to establishing SMEs in rural and urban areas.
- **CAMARTEC** also operates under MITI and aims to develop and disseminate improved technologies for agricultural and rural development. CAMARTEC produces and disseminates agricultural implements such as harrow planters, nut shells, oil press machines, wheelbarrows, pulling and oxen carts, water harvesting tanks and brick making tools.
- The **Weights and Measures Agency** operates under MITI with the main responsibility of consumer protection through ensuring that measuring systems result in fair trade transactions. Certification is done by way of inspection, calibration and verification, with regular

inspection of the scales at factories¹⁵ in order to ensure that farmers and consumers obtain unbiased pricing on inputs. The Agency also advises manufacturers and other clients on the proper use, care and custody of weights and measures.

The **Ministry of Communication, Science and Technology** is responsible for policy formulation, monitoring and evaluation, and regulatory and legal matters pertaining to communications, information and communications technology, science, technology and innovation.

- **COSTECH** is a parastatal organization, created by an act of the National Assembly of the United Republic of Tanzania in 1986. Its function is that of coordinating and promoting research and technology development activities in the country.

PMO-RALG firstly acts as a body to empower and build the capacity of regional authorities and local governments. This is done through the coordination of agricultural development strategies, acting as an information point for all stakeholders, and mobilizing and allocating resources for the implementation of specific development programmes and activities.

- **LGAs** were first initiated in the United Republic of Tanzania in 1998 as a means by which to transfer political, financial and administrative powers from the central Government to local government. LGAs are expected to be multisectoral bodies, and are responsible for social development and service provision. They also have their own stream of revenue with which to work.

TRADE SUPPORT NETWORK

TIC was established in 1997 to be the primary agency of the Government to coordinate, encourage, promote and facilitate investment in the United Republic of Tanzania and to advise the Government on investment policy and related matters.

TPSF is responsible for facilitating the overall growth of the private sector. The Foundation undertakes policy impact programmes aimed at influencing national policies in favour of private sector businesses, as well as providing capacity-building and other member services, and seeking to improve enterprise competitiveness.

TCCIA facilitates the development of the Tanzanian private sector, undertaking sector-specific advocacy and lobbying while providing a forum for business dialogue. This is also the institution tasked with providing certifications of origin, business information, sector-specific surveys, trainings and workshops.

The **Tanzania Fertilizer Company Limited** is a fertilizer trading company owned by the Tanzanian Government. It was established in 1968 as a joint venture between the Government and M/S Kclochner-INA of Germany, to run the fertilizer production plant in Tanga. Following the closure of this production facility in 1991, the Government became the sole shareholder. The company is mainly involved in the importation, procurement and distribution of various types of fertilizer in the United Republic of Tanzania.

TFRA was established as a regulatory body by the Fertilizers Acts of 2009, to provide rules relative to the manufacturing, importation and use of and trade in fertilizers or fertilizer supplements. It is also responsible for the quality control of fertilizer. TFRA is also responsible for implementing policies, strategies and programmes related to the fertilizer industry.

TFDA has the mission of protecting and promoting public health by ensuring the quality, safety and effectiveness of food, drugs, cosmetics and medical devices. TFDA regulates the promotion of such material, undertakes laboratory analyses, and also controls their import and export. They are also responsible for issuing permits and licences within these sectors.

CTI is a business membership organization that was created in 1991 to represent the interests of its members. CTI aims to ensure that there is a conducive legal, financial and economic environment within which industry can operate effectively, prosper and contribute to wider national wealth and development.

TANEXA is responsible for lobbying and advocating on behalf of Tanzanian businesses looking to export products abroad, building their capacity and providing relevant information to exporters and importers.

TEOSA is responsible for lobbying, advocating and advising on the formulation of policies, programmes, strategies and legislation conducive to the cultivation, processing and marketing of edible oilseeds in the United Republic of Tanzania. It aims to improve and enhance communication between edible oilseed actors, and to unite farmers and all other actors in the edible oilseed industry through zonal, regional and district TEOSA chapters.

TASUPA is an apex body of all regional sunflower oil processors and other stakeholders in the country. The role of TASUPA is to coordinate all regional sunflower oil

15. Tanzania Edible Oil Seeds Association (2012). Assessment on the potential of edible oilseeds produced in Tanzania: the case of sunflower and sesame. Available from http://www.best-dialogue.org/wp-content/uploads/TEOSA_Edible_Oils_Study_10_-2012.pdf?eae10f

processors associations in the country in the matters of lobbying and advocacy, improving of the quality and environment of sunflower production and processing in the country, markets information, technology, sunflower contract farming, data collection and dissemination as well as coordination of all interventions of government as well as development partners acting in the sunflower sub sector.

TASTA was formed in 2002 and is a member of the African Seed Trade Association. TASTA aims to lead the private sector in lobbying and undertaking consultations with the public sector, to allow for a more competitive and viable seed industry.

EAGC is a membership-based organization of the stakeholders of the East African grain value chain. Core members include farmers, traders and processors. The EAGC mandate covers 10 countries including the United Republic of Tanzania, Kenya, Uganda, Burundi, Rwanda, Ethiopia, South Sudan, Malawi, Zambia and the Democratic Republic of the Congo. EAGC aims to be the leading voice of the sector, facilitating and advocating for a structured grain trading system for the benefit of the industry's stakeholders. EAGC works across four main pillars, including structured trade, marketing information systems, policy and advocacy, and capacity-building.

The **Tanganyika Farmers' Association** is one of the central players in the agricultural sector, in existence since 1935, with members representing a large cross section of the Tanzanian farming population, encompassing smallholders all the way through to larger commercial farmers.

BUSINESS SERVICES NETWORK

The **Agribusiness Innovation Centre** aims to provide a set of financial and non-financial services to high-growth potential entrepreneurs, aiming to accelerate the growth of their enterprises and demonstrating product, process and business model innovation across focal sectors. The Centre complements other efforts focused on farm-level improvements and foreign investment facilitation. Their overall aim is to support the transformation of the agro-processing sector in the United Republic of Tanzania.

TADB was launched in 2015 and is set to receive US\$48 million every year for the next eight years from the Tanzanian Government, to help with the implementation of its 20-year strategic plan. TADB will work with commercial and community banks, and savings and credit cooperative societies (SACCOS), to extend loans to farmers. Small- and medium-scale farmers, who dominate the Tanzanian farming sector, will be given priority.

AMCOs were formed as a result of the poor performance of the Tanzanian cooperative sector in the late 1980s. The main objectives of AMCOs is supplying inputs for

agricultural crop production; the purchasing, processing, marketing and distribution of agricultural products; and facilitating skills for the improvement of the commodity being produced. AMCOs play a significant role in the poorer farming communities of by offering an appropriate channel by which the incomes of poor farmers can be increased or stabilized without using a middleman. The Government has relied on AMCOs for the implementation of their Poverty Reduction Strategy.

SAGCOT is an agricultural partnership designed to improve agricultural productivity, food security and livelihoods. The SAGCOT Investment Blueprint showcases investment opportunities in the Corridor and lays out a framework of institutions and activities required to realize development potential. By addressing the entire agricultural value chain, the SAGCOT approach goes beyond raising agricultural productivity and ensures the necessary infrastructure, policy environment and access to knowledge to create an efficient, well-functioning agricultural value chain.

CIVIL SOCIETY NETWORK

MVIWATA brings together smallholder farmers across the country in order to have a common voice to defend their economic, social, cultural and political interests. MVIWATA aspires to empower smallholders through capacity-building, and facilitating communication and learning among farmers.

ACT is the umbrella organization of the agricultural private sector. It aims to unite groups and associations of farmers, suppliers, processors, transporters and researchers in order to push for an improved economic and organizational environment in the sector. They aim to be the most effective private sector instrument for the whole agricultural sector in the country by emphasizing the modernization and commercialization of agriculture, and to lobby for key private sector agricultural issues.

ANALYSIS OF TRADE AND INVESTMENT SUPPORT INSTITUTION PERFORMANCE

Trade services, such as banking and export product testing, are readily available in the United Republic of Tanzania. However, the availability of trade finance for exports is less clear, as the sector is currently dominated by larger diversified companies with developed access to financial services. The key trade services currently lacking in the sector are related to market access. Market intelligence on sunflower products is limited both in terms of

day-to-day market information and market development. Exporter training and access to export market development services is limited to matchmaking and trade fair access, which are valuable but tend to provide only ad hoc market access opportunities. Market development decisions in terms of market choice, customer research and customer choice are complex. Exporters who lack good market knowledge tend to become price takers or to experience high customer turnover, impacting on margins, planning and longer-term investment decisions.

A number of key institutions play a critical role in the development of the sunflower sector. The most relevant institutions have been plotted in figure 28 according to the perception of stakeholders, in terms of the institution's importance for the sector and their capacity to fulfil their mandates as they relate to the sunflower sector.

Most of the institutions listed have a very high influence on the sector, and a number respond well to the sector in carrying out their mandate. Examples of the more successful institutions include TASTA, TIC, EPZA, NDC and TADB. These organizations mostly have the necessary financial resources at their disposal, and the technical skills, human resources and equipment required to fulfil their mandates with some success. Other institutions, such as TFRA and CTI, have some difficulties in successfully fulfilling their mandates, but still play a critical role in the sector's development. A number of other institutions are seen as having quite weak capacity and require substantial support.



Photo: (CC BY-NC-ND 2.0) Trust for Africa's Orphans (TAO), Demonstrating sunflower seeds as part of TAO's agri-business project.

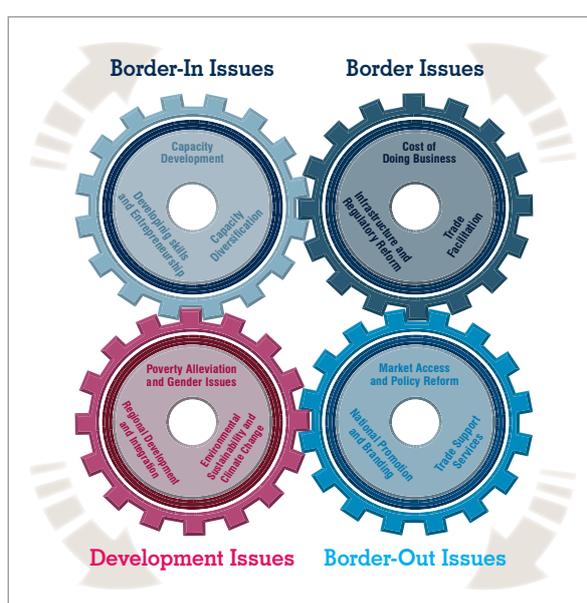
Figure 28: Perception of trade and investment support institutions – influence versus capacities

Capacity to influence on the sunflower sector	High	<ul style="list-style-type: none"> • Tanzania Fertilizer Company Limited • Weights and Measures Agency 	<ul style="list-style-type: none"> • TASTA • TIC • EPZA • NDC • TADB • SAGCOT • EAGC
		<ul style="list-style-type: none"> • ASA • MVIWATA • TEOSA • TOSCI • TBS • TFDA • TIRDO • SIDO • TanTrade 	<ul style="list-style-type: none"> • TCCIA • TPSF • TADB • TANEXA • PMO-RALG • TASUPA • MITI • MALF • AMCOs
	Low	<ul style="list-style-type: none"> • Department of Research and Development • Tanganyika Farmers' Association • Ministry of Communication, Science and Technology 	<ul style="list-style-type: none"> • TFRA • CTI
		<ul style="list-style-type: none"> • ARIs • MATIs • TEMDO 	<ul style="list-style-type: none"> • ACT • COSTECH • CAMARTEC
	Low		High
Capacity of the institution to respond to the needs of the sunflower sector			

COMPETITIVENESS CONSTRAINTS AFFECTING SECTOR PERFORMANCE

Traditionally, the scope of trade strategies has been defined in terms of market entry, such as market access, trade promotion and export development. This ignores several important factors in a country's competitiveness. For a strategy to be effective it must address a wider set of constraints, including any factor that limits the ability of firms to supply export goods and services, the quality of the business environment, and the development impact of the country's trade, which is important to its sustainability. This integrated approach is illustrated by the four gears framework schematic on the right.

The following section describes the key performance issues identified as challenges to the performance of the Tanzanian sunflower sector. Listed below each major constraint are the root causes that impede sector performance.



Box 5: Key performance issues affecting the sunflower sector

Supply-side issues

- Availability and accessibility of high-quality certified sunflower seeds
- Availability of agricultural inputs, including fertilizers and pesticides
- Management capacities of farmers' associations to sustainably increase sunflower production
- Adoption of GAP
- Access to finance and limited use of insurance across the value chain
- Storage capacity and application of premiums and discounts for quality

Business environment issues

- Coordination of the sector
- Trust and transparency between producers and processors
- Complex and discriminatory application of taxes
- Capacity of key support institutions in the sector

Market development issues

- Compliance with and adherence to internationally recognized food safety and quality standards
- Promotion and branding of sunflower products
- Targeted market development interventions
- Industry clustering to promote collective production and marketing of sunflower products

SUPPLY-SIDE ISSUES

Availability and accessibility of high-quality certified sunflower seeds

Despite the good growing conditions in the United Republic of Tanzania for producing sunflower crops, yields remain low (at 12,805 hectograms/ha) compared with European and Central Asian producers (between 20,000 and 30,000 hectograms/ha).¹⁶ A key reason for this situation is the limited availability of high-quality, high-yielding certified seeds, as well as a low awareness on the part of some farmers of the benefits and value of paying for such high-quality seeds. Consequently, most farmers, the majority of whom are smallholders, do not use quality seeds; instead they rely on their own recycled seeds or uncertified seeds. The result is low-quality seeds for propagation and consequently low yields and insufficient volumes produced.

While some seeds are available in the United Republic of Tanzania – through traders, cooperatives, the District Agricultural and Livestock Development Office, and non-governmental organizations – these are unavailable in sufficient quantities. Partly this is due to the limited capacity of MALF and the associated ARIs in releasing either new, improved seed varieties or ensuring the purification of existing seed stocks. In fact, ARI's are under resourced to develop new seed varieties. On the other hand private sector companies do not regard sunflower seeds as a good business, since the record variety is an open pollinated variety which leads farmers to recycle it without buying new certified seeds. In addition, the laboratories that test and certify new varieties are not working as effectively as they should be due to equipment deficits and a lack of skilled technicians, which results in a long testing and certification period, thereby further reducing the release of new certified seeds.

All of this leads farmers to use uncertified seeds or low-yielding varieties; with 'fake' seeds also a common problem in the country.¹⁷ Therefore, capacity constraints remain, as well as limited knowledge coordination and planning between sector operators, which includes weak collaboration between public and private actors at both the national and regional levels.

The Strategy will address these issues firstly by establishing better linkages between the key institutions, including MALF, ASA and TOSCI, and increasing their capacity to facilitate the production and dissemination of high-quality seeds. In particular the capacity of MALF and the ARIs

16. Food and Agriculture Organization of the United Nations (2015). Statistics database. Available from http://faostat3.fao.org/download/T/*/E. Accessed 5 December 2015.

17. AllAfrica (2015). Tanzania: fake seeds add brutal twist to farmers' misery, 14 March. Available from <http://allafrica.com/stories/201503160401.html>.

should be boosted by increasing their budget to ensure their ability to address infrastructure gaps, including laboratory equipment and storage facilities; increasing the skills of their employees; identifying better seed varieties; and purifying existing ones. It is also important to create an incentive for the private sector to register new seed varieties. TEOSA should also collaborate with MALF to provide annual volume requirements through better data collection.

The Strategy will also promote the use of high-quality seeds to farmers and farmers' associations and cooperatives, as a means to increase yields and strengthen the demand for distribution services. Increased training and access to finance will also be important, as will strengthened partnerships with regional and international seed-producing institutes.

Improved coordination and transparency across the sector as a whole will be encouraged. A new business model for managing seed demand and production will also be applied and seed companies will be encouraged to begin importing higher-yielding seed varieties. The idea of shortening the trial period for imported seed which has been certified in another EAC/Southern African Development Community (SADC) country will also be explored. Lastly, a stronger role is envisioned for TEOSA and TASUPA to better manage seed demand and organize distribution, and in this respect a full capacity review of TEOSA is recommended.

The following activities of the PoA focus on these issues: 1.1.1 to 1.1.6, 1.2.1, 1.3.3, 1.4.1, 1.5.1, 1.5.2, 2.1.1, 2.1.3 and 2.3.1.

Availability of agricultural inputs, including fertilizers and pesticides

Due to underdeveloped agribusiness services in the United Republic of Tanzania there is limited availability of necessary inputs, such as fertilizers and pesticides. This is partly due to the low level of agro-dealer representation at either the village or district level, as well as a result of the limited availability of extension services. Agricultural extension services are mainly provided by extension officers visiting farmers to provide agricultural advisory services. This system of extension service provision faces a number of challenges, including the limited number of extension officers and limited resources. The Tanzanian agricultural extension approach integrates different extension service providers, allowing room for pluralistic extension approaches and empowering farmers, organizationally and financially, to demand appropriate services. However, this intention may not reflect the reality on the ground due to limited capacity in finance, human resources, systems and logistics to support the extension services.

In addition, while agro-input distributors are widespread throughout the country; distribution is problematic, often insufficient or delayed. Agro-inputs are needed at a specific time of year, within a specific time frame, in order to have the necessary impact. However, agro-input imports are handled slowly at the ports and sometimes miss their windows of opportunity as a result. This not only deprives the farmer of the required fertilizers and pesticides, it also discourages the importer and distributor, who is left holding the stock perhaps for a further six months.

Finally, knowledge of the amount of fertilizers needed per farm is quite limited, such that it is important to undertake soil surveys to ensure correct use of fertilizer without damaging long-term soil fertility. However, there is inadequate soil testing which would allow for efficient levels of use.

The Strategy will support strategic linkages between sunflower producers – including AMCOs – and the agro-dealer network to increase the presence of agro-dealers at the village and district levels. Support and guidance will also be provided to AMCOs and farmers' associations to better assess fertilizer requirements, with annual soil testing to be introduced. Support will be given through TIC for the successful implementation of the country's first major foreign (Chinese) fertilizer manufacturing plant. TIC will also work to actively promote additional investments in fertilizer production. Finally, the Strategy will build the capacity of extension services.

The following activities of the PoA focus on these issues: 1.1.7, 1.2.1; 1.2.2; 1.3.3; and 2.4.7.

Management capacities of farmers' associations to sustainably increase sunflower production

Few farmers' associations in the country have the necessary detailed business plans that would facilitate access to finance, while some of the Cooperative Unions have a reputation for high costs and weak management, and the primary cooperatives may require further training to officers.

The AMCOs, who work to represent the interests of the farmers, are reported by stakeholders to suffer from weak functioning powers and imperfect adherence to good governance practices; often operating with both a lack of sufficient training and sector-specific knowledge. This affects the credibility of the associations, which can hinder the ability of the farmers who rely on them to ensure a supply of agro-inputs and ensure the smooth purchase, processing, marketing and distribution of agricultural products.

The lack of the necessary support prevents farmers from achieving a conducive business environment for the

development of the sector, and in turn the production of quality sunflower seeds.

The Strategy seeks to address this by providing the required training to AMCOs and farmers' associations to ensure improved planning for production, better defined market orientation and increased access to finance. The lack of leadership capacity among AMCOs will also be addressed through training, as will the need for good governance practices. An annual forum will be held to discuss sunflower sector production development issues in general, but will include a session which will focus on the importance of associations to register and be recognized by finance providers. Learning visits to modern and well-performing production and processing operations will also be organized for the associations at national and international levels, to ensure their improved capacity to support the farmers that they represent.

The following activities of the PoA focus on these issues: 1.2.2; 1.4.1; 1.4.2; 1.4.3; 1.7.2; and 3.2.3.

Adoption of GAP

GAP address the environmental, economic and social sustainability of all on-farm processes, obtaining safer and higher-quality food. However, the United Republic of Tanzania's sunflower sector still faces a lack of awareness about GAP, despite the Agriculture Sector Development Strategy's efforts to build a modernized, commercialized, competitive and effective agriculture and cooperative system through different initiatives, including GAP training.

Sunflower production is predominantly carried out by small farmers with one to three acres under sunflower, although there are also a few medium- and large-scale farmers¹⁸. Many small farmers do not apply proper agronomic practices in land preparation, planting, weeding, and use of fertilizers and pesticides. Even where land is not a limiting factor to farmers, crop rotation and intercropping is not properly practised to allow the replenishment of soil nutrients.

Different organizations and associations provide GAP training. Nevertheless, they are not harmonized, and do not necessarily cover the same aspects. In addition, the quality of the final product is affected by the lack of effective postharvest techniques, such as effective drying, seeds employed, and the use of the correct kind of packaging. Generally, the government extension service still does not provide enough support in introducing better agronomic practices.

18. Rural Livelihood Development Company, 2008, available at http://www.rldp.org/downloads/sunflower_strategy.pdf

The Strategy seeks to address this lack of knowledge by collecting and harmonizing all training materials currently used for GAP training into one sunflower sector-specific training manual. In addition, trainings covering climate adaptation techniques, particularly as regards good post-harvest practices, will be provided by associations and AMCOs. Partnerships will be promoted with agribusiness service providers to deliver GAP trainings to both sunflower farmers and small processors in the target regions. Furthermore, farmers will be supported to obtain GLOBALGAP certification. The creation of a fund to assist with the modernization of climate-ready technology and infrastructure will also be explored.

The following activities of the PoA focus on these issues: 1.2.3, and 3.2.1 to 3.2.8.

Access to finance and use of insurance across the value chain

Access to finance and credit extension services are an important support to sunflower production, to assist with investment and the cash flow operations of the process. However, in the United Republic of Tanzania, access to finance proves particularly difficult in the sunflower sector due to the weak position of the smallholder farmers involved.

Farmers and farmers' associations have limited collateral, and for many, the limited implementation of and adherence to the Village Land Act hinders the ability of farmers to raise collateral, as it would be difficult to seize one's land titles if a default were to arise. Furthermore, farmers have little knowledge about crop insurance, and the insurance companies feel that it is risky to offer insurance to smallholder farmers unless they are organized. The limited use of contract farming between processors and producers' associations (see business environment issues), as well as a warehouse receipt system, further increases the credit risk posed by smallholder farmers in particular. Additionally, the development banks are often underfinanced themselves and lack specialist appraisers, and so are unable to provide timely pre-harvest finance due to lengthy evaluation procedures.

The downstream actors in the value chain, including processors, also struggle to access finance and very few make use of Tanzanian insurance services, which are underdeveloped. They tend to be mostly small businesses with limited business registration, weak governance structures and poor record-keeping, making them too high a risk for most banks to give them credit. In addition, the SME sector lacks the ability to write the necessary strong business plans that would unlock the finance needed. This also prevents their ability to build equity for joint ventures with foreign investors that would allow the sector to develop.

The Strategy will seek for TEOSA to develop the business case to support the sector through the TADB, and to establish a special preference for the sunflower sector for a production and processing financing mechanism. It will also sensitize and accompany AMCOs and farmers' association members to begin the process of formalizing land titles. An annual meeting between TEOSA, sector associations, AMCOs, SACCOS/TADB and other banks will be organized to discuss access to finance and opportunities for financing the development of the sunflower subsector.

The Strategy will also seek to apply the commodity exchange/warehouse receipt system to recognize sunflower as a priority crop to be traded on the exchange. This would help provide collateral to obtain working capital to build up stocks and inputs. In addition a 'Weather Index Crop Insurance plan' will be promoted and built up, by facilitating microinsurance companies to work with farmers' associations and cooperatives. An insurance scheme based on yield thresholds will also be piloted, before being expanded to a nationwide scheme.

The following activities of the PoA focus on these issues: 1.4.1, 1.4.2, 1.5.1, 1.5.2, 1.5.3, 1.6.1, 1.6.2 and 1.6.3.

Storage capacity and application of premiums and discounts for quality

In many cases, smallholder sunflower farmers and the associated AMCOs and farmers' associations do not have the necessary storage facilities (which are either absent or in need of renovation) for the harvested sunflower crop. The result is that farmers must sell their crop as soon as possible after harvest, in order to ensure that it does not spoil before it can be processed. If the harvested sunflower seeds are not kept dry, this poses a challenge to quality. Postharvest losses are problematic across the sector, with percentages ranging from 3% to 10% of stock losses.

The lack of storage facilities or a warehouse receipt system affects the bargaining ability of the farmer, who has no holding power and is forced to sell as soon as possible. This makes small farmers vulnerable to manipulation by buyers and increases the impact of harvest pressure and resulting low prices. It also reduces the quality of the raw material which the processors have to deal with, as well as reducing the farmers' income.

In a separate, related issue there is limited reward (or premium paid) for higher-quality seeds. At present, sunflower seeds can only be tested for oil content on arrival at the larger millers. In general the testing techniques and equipment would need to be standardized and calibrated, and the testing equipment would need to be independently verified. Testing by an independent company or body would not be good value for money for small quantities,

which the majority are. Therefore, testing for oil is difficult at the farm gate without the ability of farmers' associations to bulk, or larger traders and processors to build supply chain linkages to growers.

Without premiums or discounts being applied for a higher oil content (with the exception of Mount Meru), the farmer is not motivated to adopt improved seed varieties or better agro-inputs. Therefore, production is hindered by the lack of reward.

The Strategy will seek to improve the quality, number and capacity of storage facilities. This will involve firstly taking an inventory of all warehouses, and then considering the use of incentives to encourage LGAs, as well as the private sector, to effectively use, rehabilitate – or construct where needed – village-level storage facilities, possibly through public–private partnerships. A new regulation may also be lobbied for that would require sunflower farmers to use the storage facilities, thus improving the quality and value of the crop.

The Strategy will develop a chart of premiums/discounts based on the quality of seeds, for oil, fibre, free fatty acids and purity. This can be used as an indicative price premium/discount system and will bring transparency to transactions. All transactions in the country will be encouraged to make use of this premium/discounts system by regular dissemination of the chart through the media and sector associations, among others. Collaboration between public and private laboratories will be encouraged, in order to explore opportunities for testing smaller lots, while the capacity of existing laboratories will be strengthened.

The following activities of the PoA focus on these issues: 2.7.1 to 2.7.3, and 3.1.1 to 3.1.4.

BUSINESS ENVIRONMENT ISSUES

Coordination of the sector

There is poor coordination in the sector and a lack of vertical or strategic linkages. This is further hindered by the inability of organizations such as TEOSA and TASUPA, which have weak capacity and lacks the necessary expertise or resources to offer effective coordination or act as apex bodies leading the sector development and growth. It is essential that organisations like TEOSA and TASUPA have the potential to fulfil a need to coordinate the whole value chain, but currently struggle to effectively drive the sector coordination.

The sector also suffers from a lack of knowledge on who the key stakeholders are in the sector. All of this contributes to sector fragmentation and poor performance, and further limits structured sectoral growth.

The Strategy will work to strengthen the coordination of the sunflower industry by conducting a capacity review of TEOSA/TASUPA to define how it can coordinate the sector efficiently as an apex body. TEOSA and TASUPA being country wide umbrella organizations it will be required to work in close collaboration with other regional organizations. An inventory of all key stakeholders in the sector will be taken and the national database will be reviewed to improve its accessibility. Voluntary membership registration to TEOSA/TASUPA, from all levels of the sunflower value chain, will be mobilized to strengthen overall coordination within the sector. Additionally, a lead agency will be appointed for the coordination of issues related to edible oilseeds nationwide.

The following activities of the PoA focus on these issues: 2.3.1 to 2.3.4.

Trust and transparency between producers and processors

A lack of trust in the sector is a result of the absence of: premium/discount rates based on quality of seeds; a code of conduct to limit contamination of seeds and adulteration of oil; use of standard weights and measures; and sufficient market information that would empower the farmer and other local stakeholders.

In general, a lot of hostility is therefore aimed towards the 'middleman' from both ends of the value chain. However, the problem of the 'first mile', i.e. the initial evacuation from the farm, is handled by these traders who collect small quantities and pay cash, all with a fairly tight margin. These middlemen are necessary due to the current absence of any other structure. However, much of the problem of mistrust comes from the absence of linkages and transparency across the sector, which would allow each party to better see and understand each other's needs and realize that all parties would benefit from improvements.

The lack of contract farming compounds the poor supply chain linkages from processors to growers. Without formal contract farming, the processor does not cooperate with the inputs supplier, which would add scale to purchasing and incentivize the farmer not to engage in side selling, which only occurs when the grower has reason to engage in it.

The Strategy will improve transparency and trust in the value chain through such measures as developing a simple and clear code of conduct concerning the best practices along the value chain, and promoting the use of standard scales and measures for sunflower grain trading. It will also seek to establish and recognize collection–selling centres with certified weighting scales for sunflower and other crops by setting up mandatory permits for buying sunflower seeds.

Additionally, transparency will be promoted by including sunflower grains in the existing market information systems of MVIWATA and other actors. The Strategy will promote contract farming by building the capacity of sunflower farmers and processors on the rules and regulations surrounding contract farming. It will also seek to raise awareness among sector actors regarding the availability of arbitration through the National Construction Council, and encourage its use to bring a sense of weight to contracts.

The following activities of the PoA focus on these issues: 2.1.1 to 2.1.5, 2.2.1 and 2.2.2.

Complex and discriminatory application of taxes

The complex nature of the tax system, which includes cess, value added tax (VAT) and import duty, is a major example of the complex policies in place and the lack of harmonization that would support the growth of the sector. Cess is an agricultural tax which everyone in the sector has to pay. Therefore, while it does not impact on the competitiveness of the sector in the domestic market, it does make imported palm oil more competitive because the Tanzanian Government has removed import duty on palm imports.

Additionally, as government policy is very much geared towards other sectors, there is a clear lack of prioritization of the sunflower sector. Cess spending, for example, does not go towards the sunflower industry.

The Strategy will seek to review all policy constraints and issues affecting the sunflower industry, including undertaking an impact analysis on edible oil imports and the tariff regime compared to local edible oil production, with the possibility of raising the tariffs on palm imports. It will also ensure the 0% tariff on imported crude palm oil is only applied to crude oil and not to refined oil, and lobby the Government to enact a law that instructs the application of a 0% tariff on all imported crude oil. The Strategy will also ensure that the 18% VAT on the sunflower oil sector is not creating a disincentive for small operators to grow.

The following activities of the PoA focus on these issues: 4.1.1 and 4.1.2.

Capacity of key support institutions in the sector

The key support institutions for the development and promotion of the sunflower sector in the United Republic of Tanzania include MALF, MITI, TBS and TOSCI, among various other trade and investment support institutions covering policy support, trade services, business services and civil society networks.

However, despite the number involved there is concern that some of these institutions that play such a critical role in supporting the industry have some difficulties in successfully fulfilling their mandates because of their weak capacity. For example, TBS is marked by a lack of skilled technicians in labs and missing lab equipment, which hinders their ability to act as the main standards body in the country.

In addition, extension services are also under-resourced, with a single local farm adviser having to potentially work with thousands of farms. As the sunflower sector is not necessarily seen as a priority for MALF, the farm adviser may never get to a crop such as sunflower seed. In recent years, many of the good local farm advisers have been recruited away into the private business sector.

Poor data collection on production, imports and demand affects the ability of the Tanzanian Government to set adequate and supportive import and tariff policies which would allow the sector to grow and prosper.

The Strategy will address these capacity issues, namely by supporting the training of at least two members of TBS staff so that they can provide further training of trainers on issues of food safety and quality, standardization, and quality management systems.

The capacity of ARIs will be strengthened through building linkages with other regional and international research stations. The capacity of TOSCI will also be built through the expansion of their lab facilities. Further trainings and capacity-building exercises will be carried out among the key institutions, including TFDA on the training of oil processors, TIRDO and SIDO on improved research and technology upgrading, and ASA by developing an annual identification of demand and distribution plan.

The capacity of PMO–RALG will be built through trainings to strengthen the role of extension services and harmonize extension packages for the sunflower industry. The Strategy will improve data collection accuracy and data harmonization for effective planning and policy implementation, including through the development of an electronic monitoring system. Lastly, TIC's investment promotion capacity will be strengthened to increase their resources for agribusiness promotion.

The following activities of the PoA focus on these issues: 1.1.3, 2.4.1 to 2.4.8, 4.2.1 and 4.2.2.



Photo: (CC BY-SA 2.0) Per, Bee and the Sunflower.jpg

MARKET DEVELOPMENT ISSUES

Compliance with and adherence to internationally recognized food safety and quality standards

The implementation of a sector-specific food safety policy has been only partially achieved, because of lack of awareness. Tanzanian crushers and packers are unable to apply high levels of food safety, quality and traceability, including GMP and HACCP quality management systems.

Adulteration is an issue in the sector. Products labelled as sunflower oil often contain a high percentage of palm or other low-cost oils. In addition, Tanzanian law requires that sunflower oil intended for human consumption must be double refined (refined edible oil). Nevertheless, the law is not being properly applied across all edible oils, thereby creating market distortions.

The responsible organization for enacting, formulating and implementing the national standards applicable to sunflower products, TBS, faces significant capacity constraints, hampering its ability to fully perform its role. The establishment of spot tests of consumer products could ensure the implementation of the food safety and quality standards. In addition, the promotion and establishment of accredited testing laboratories would ensure better compliance.

The adoption and application by sunflower oil producers of food safety and strict quality measures are essential elements to the long-term development of the sector. Nowadays, buyers and consumers seek higher standards of food safety, traceability and quality, and this situation no longer applies exclusively to Western markets.

The Strategy will ensure compliance and adherence to internationally recognized food safety and quality standards by harmonizing TFDA, TBS and other guidelines governing the edible oils sector, ensuring alignment with, and increasing awareness of, international standards. Stringent measures will be introduced to end the practice of adulteration of oil for both the benefit of the regional and national markets.

In addition, TFDA and TIRDO enforcement capacity will be enhanced. Needs-based training will also be necessary on quality assurance, including HACCP and international standards. The human resource capacity for producing and certifying safe and high-quality vegetable oils will be strengthened by supporting relevant programmes at Sokoine University of Agriculture (SUA).

The Strategy will seek to build collaboration between public and private laboratories, such as TASUPA and TIRDO, to explore opportunities for testing smaller lots from traders, as well as build the capacity of existing laboratories to act as multi-user testing facilities. In addition, the use of mobile testing will be promoted, and regular monitoring of

compliance will be encouraged to assure measures' implementation. Better public awareness on quality marks will also be encouraged.

The following activities of the PoA focus on these issues: 3.1.3, 3.1.4, and 3.3.1 to 3.3.8.

Promotion and branding of sunflower products

There is weak evidence of any clear market segmentation, promotion, advertising or branding of the sunflower sector in the United Republic of Tanzania. Most of the smaller sunflower seed crushing companies for example sell their oil unrefined, in indistinguishable transparent containers along the roadside at their crushing site gate, without any unique or distinguishable branding. Additionally, a number of operators are not registered and as such need to be encouraged to formalize, which would increase stakeholder access to finance and boost their ability to better access the markets, both local and export.

The low level of promotion of sunflower products to the Tanzanian population has led to limited public knowledge of the value of good sunflower oil. Evidence suggests that consumers are now used to the less refined, possibly impure oils available. In addition, consumers are also less aware of the benefits of sunflower oil, which include the health benefits – particularly when compared with palm oil, sunflower's main competitor.

The Strategy will seek to promote the use of locally produced sunflower products by co-financing the participation of key actors in the value chain in the annual national and zonal agricultural shows, as well as the international trade fair in Dar es Salaam. A media programme will also be initiated to stimulate the demand for, and use of, sunflower as a healthy edible oil product. In order to better promote and more consistently brand the sector, the Strategy will also work with MITI, the Ministry of Finance (MoF), EPZA and MALF, among others, to position sunflower as an import substitution crop and product.

A support system will also be developed to encourage processors to participate in local, regional and international fairs, through supporting their presentation and marketing skills, and availing opportunities to members. Work with TEOSA will also be undertaken as part of an oilseed intervention, to organize and participate in monthly or quarterly call-in interviews with the electronic media. Lastly, in partnership with TanTrade and other actors, marketing and branding material that reflects the unique story of Tanzanian sunflower products will be developed and implemented.

The following activities of the PoA focus on these issues: 2.5.1, 2.5.2, and 5.2.1 to 5.2.5.

Targeted market development interventions

There are approximately 1,000 sunflower seed crushers (of varying types) working in the United Republic of Tanzania. The market can therefore be considered highly diversified, with a number of major brands and many small mills.

However, there is a low level of product diversification for reasons which include low processing and marketing skills, and also a lack of sufficient market intelligence or trade information. While TCCIA (which has regional offices) and TBS provide some of the required information, TanTrade, which is tasked with implementing the National Trade Policy, the National Export Development Strategy, the Trade Integration Strategy and the Agricultural Marketing Policy, among others, only has Information Centres located in Dar es Salaam, making them inaccessible for the average value chain member.¹⁹

There is low local industry knowledge or research in line with global market trends, buyer requirements and opportunities, all of which would allow the market to expand and develop. The United Republic of Tanzania is well located to serve market opportunities which are present in India, North Africa, Turkey, South Africa and Europe. The export of seed for crushing is a low-value, high-risk strategy; therefore, the development of an export capability for value added products – especially oil and cake – is essential. However, while buyer requirements in these markets are rapidly developing and require quality process management systems and certification, as well as the ability to test for pesticide residues, microbiological activity and chemical residues; the capacity of TEOSA and others to support market development is weak.

Organic production, an opportunity for certified producers and processors to obtain price premiums ranging from 10%–25%, is not given the emphasis it deserves as a niche market, with the misnomer 'organic by default' often heard, illustrating the lack of knowledge and understanding.

The Strategy will enhance market intelligence within the country, regionally, and in various international markets such as India, China and Europe, to develop a market profile for sunflower oil and cake, and to facilitate buyer-seller meetings. It will also promote and support TEOSA members to use e-commerce for the trade of sunflower products by providing targeted support and trainings.

Additionally, the Strategy will promote the development of organic sunflower production to respond to this growing market demand. A database will be established, mapping out the organic sector and linking it with the international

19. TanTrade (2015). About TanTrade. Available from http://www.tantrade.or.tz/docs.php?page=1_1.

organic market, and mentoring will be provided for farmers' associations and oil crushers wanting to produce organic sunflower grains and seeds. Finally, field plots for organic farming will be mapped through geographic information systems, in order not only to provide information for insurance providers, but also to encourage organic production.

The following activities of the PoA focus on these issues: 3.4.1 to 3.4.3, and 5.1.1 to 5.1.7.

Industry clustering to promote collective production and marketing of sunflower products

Sunflower industry clusters that would bring together farmers, buyers, traders, millers, processors and refiners of sunflower products would allow for increased access to agribusiness services, and greater occurrence of contract farming, collecting, crushing, refining and marketing. However, there is an absence of industry clusters in the country, which hinders the sector's structured development.

The lack of industry clusters prevents the pooling of resources, the sharing of facilities and the sharing of best practice, which would not only help lower the cost of production but also increase its efficiency and promote a favourable and more cost-effective business environment overall.

The Strategy will seek to promote a clustering approach in the sector to enhance the collective marketing of sunflower products and, through the regional authorities, support the establishment of a sunflower cluster in each of the targeted regions, with the aim of at least five by 2018. Discussion will also be facilitated in partnership with Regional and District Business Councils, to make resolutions that will promote public and private investments in the identified clusters. In addition, a joint investment promotion of clusters between TEOSA, TASUPA, PMO–RALG and TIC will be developed in the main sunflower producing regions.

The following activities of the PoA focus on these issues: 5.3.1, 5.3.2 and 5.3.3.

THE STRUCTURE AND ROLE OF INVESTMENT IN CURRENT PERFORMANCE

Private investment is behind production at all segments of the sector's value chain, the supply of material inputs, and the trading of seeds and their derived products. Investment by the Tanzanian Government in the sunflower sector is, and will continue to be, important to agricultural R&D (e.g. seed development); the delivery

of training to farmers; transportation and storage infrastructure; support to the organization and coordination of sector stakeholders; and capacity to effectively develop growth policies and regulate the sector. Private investors in the sector can be categorized as Tanzanian SMEs, large Tanzanian firms and foreign firms, with each group being more active at different parts of the value chain.

INPUTS

With Tanzanian smallholder farmers having very low usage rates of agrochemicals and modern agricultural machinery and equipment, the business case is weak for most investment in manufacturing, assembly, R&D, and even marketing of most inputs. The largest exceptions seem to be in certified seeds, with Pioneer (DuPont), Syngenta and Advanta having operations in the United Republic of Tanzania.

Mahindra Tractors (through its subsidiary ETC Agro Tractor & Implements) and Kubota Tractors have sales offices for farm machinery, and a large Chinese investment in fertilizer production has been announced. Apart from these big-name foreign investors, high-quality input production and distribution is mostly absent in the United Republic of Tanzania, although the discovery of large natural gas reserves offshore could lead to significant fertilizer production. Most farmers use lower-yielding domestic varieties of seeds, and other inputs are available largely through domestic trading firms, although not consistently, not always at the times when they are needed, and with little specialized support in terms of maintenance and repair.

However, the United Republic of Tanzania is a large market in what is expected to be the world's largest growing region for agriculture, and could become a very attractive location for market-seeking producers of seeds, agrochemicals and farm equipment.

SUNFLOWER PRODUCTION

Tanzanian SMEs dominate the highly fragmented and uncoordinated production of sunflowers. These investors are smallholder farmers with little access to finance and small cash reserves, making them highly vulnerable to crop failures and other financial shocks. They are also subject to numerous taxes from the local government, some of them charged at farm level even before harvest. They tend to operate informal, often family enterprises, with practices that lead to poor yields, quality, consistency and environmental management. Furthermore, their weak financial positions often leave them with little wherewithal to invest in upgraded inputs, machinery, equipment, storage and practices. In addition, their short-term risk aversion makes them unwilling to experiment with costly new inputs and



Photo: (CC BY-SA 3.0) Bluemoose~commonswiki, *Germinating sunflower seedlings.jpg*

approaches without a guaranteed return on investment in the short time frame they can afford.

Consequently, the sector's collective sunflower seed output is of a quality and quantity that discourages investment in more value-adding activities downstream in the value chain, as well as in local sale and production of more sunflower oil. The United Republic of Tanzania has substantial investment opportunities in oilseed refinement, oilseed milling, collateral management, and the production and distribution of inputs. Unlocking this potential will require private investment in the upgrading and consolidation of existing sunflower producers, as well as the entry of new producers. Upgrading would be facilitated by improved access to finance and training, while consolidation would occur through mergers, joint ventures, cooperatives and contract farming arrangements.

SUNFLOWER OIL PRODUCTION

As indicated above, there at least 1,000 oilseed processors of sunflower seeds into crude oil in the United Republic of Tanzania.²⁰ These also include a few large domestic firms and at least two large Chinese mills. Tanzanian Mount Meru and Chinese Sunshine are the only two firms to export sunflower oil in significant quantities, all of it crude. In fact, Tanzanian sunflower oil producers are all focused on serving the domestic market. Tanzanian consumers are accustomed to the taste and appearance of cloudier, less refined vegetable oils. The same type of oil could be exported to regional markets with similar preferences, but as a lower-quality product with thinner margins, the geographic range of such a product will be limited. The global exportability of Tanzanian sunflower oil will require more investment in refining, which is itself

dependent on improvement in certified seed quality and supply consistency.

Some small production of high-quality seeds for the purpose of producing high-quality oil for export exists through contract farming arrangements led by companies such as Quality Food Products, and TASUPA. Quality Food Products provides fixed-price purchase contracts, technical guidance and agricultural services to farmers. It then mills and refines to produce high-quality oil for niche markets in Europe.

PUBLIC INVESTMENT

Although the term public investment typically evokes images of infrastructure spending, public funds support sector development in a number of ways, including sector-organizing initiatives (such as SAGCOT and the present Strategy), R&D on local seed varieties, agricultural extension services, and the formation and enforcement of effective regulations on everything from food and agriculture to environment and labour. When well-coordinated, these policies can come together to create sector-building initiatives, such as SAGCOT, but policy areas affecting development of the sunflower oil sector remain uncoordinated in many respects.

For example, health policy, industrial policy and balance of payment considerations would favour domestically produced sunflower oil over cheaper, yet less healthful imports of palm oil. Yet sunflower oil is put at a competitive disadvantage within the United Republic of Tanzania by tariff-free imports of refined palm oil, a high VAT on sunflower oil, and weak tax collection practices that effectively shift tax obligations from the early value chain to millers.

20. Source: core team data collection.

WHERE DO WE WANT TO GO: THE TANZANIAN SUNFLOWER INDUSTRY OUTLOOK

The previous section of this document delineates the sector's value chain and its operators, and reviews its overall positioning within the global industry context in order to confirm its current performance. The following sections discuss the strategic development and positioning of the sector to increase its performance. In doing so, the sections discuss two questions – 'where do we want to go?' and 'how do we get there?'

Through the definition of a sector vision and specific strategic objectives, the Strategy sets the goals to be achieved in the following five years. The description of the future value chain will highlight focus areas for structural

improvements of the sector's operations, define specific market opportunities and identify target areas for investment. These steps are then further detailed in a structured and prioritized manner within the PoA.

The growth of the Tanzanian sunflower sector will be underpinned by a successful response to growing global demand for healthier fats but also by its capacity to supply edible oil to national and regional markets. These trends are expected to continue in the future, owing to the growing demand for health products and increase in revenues in Africa.

The sector's vision is:

“ A leading and dynamic sector in Africa that sustainably supplies value added sunflower products. ”

THE STRATEGIC OBJECTIVES

To achieve the development of the sunflower sector in the United Republic of Tanzania, five strategic objectives have been identified as the cornerstones to enhance its competitiveness and organization.

The *first strategic objective* is to increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand. The Strategy will achieve this through the following operational objectives.

- Increase the availability and accessibility of certified sunflower seeds.
- Improve the availability, distribution and accessibility of agricultural inputs, including fertilizers and pesticides.
- Strengthen and facilitate the development of small-, medium- and large-scale agribusiness services (bundle of services) and agro-processing across the United Republic of Tanzania.
- Increase the capacity of farmers and farmers' associations to produce quality sunflower seeds for crushing.
- Improve access to finance along the value chain.
- Promote the use of insurance across the value chain.
- Encourage the modernization of technologies in the sector.

The *second strategic objective* is to modernize the sunflower industry through strengthening coordination, institutional capacity and skills across the value chain. This will be achieved through the following operational objectives.

- Improve transparency and trust across the value chain.
- Promote contract farming in the local sunflower industry.
- Strengthen sunflower industry coordination.
- Strengthen the capacity of key organizations in the sector.
- Promote the use of locally produced sunflower products.
- Improve business management skills across the sunflower value chain.
- Improve the quality and increase the availability of storage facilities at both the village and district levels.

The *third strategic objective* is aimed at improving the quality of sunflower products to comply with both national and international standards. This will be achieved through the following operational objectives.

- Implement premium or discount rates for grains based on quality.
- Promote GAP techniques in local sunflower production.
- Ensure compliance with and adherence to internationally recognized food safety and quality measures.
- Promote development of organic production of sunflower to respond to market demand.

The *fourth strategic objective* is aimed at stimulating growth in the sunflower industry by implementing coherent and supportive policies in line with national development objectives. This will be achieved through the following operational objectives.

- Review policy issues affecting the sunflower industry.
- Improve data collection accuracy and data harmonization for effective planning and policy implementation.

The *fifth strategic objective* is to provide timely and appropriate market entry support for effective market development. This will be achieved through the following operational objectives.

- Implement targeted market development interventions.
- Promote the sunflower sector.
- Promote collective production and market development of sunflower products through a cluster approach.
- The outcomes from the implementation of the different strategic objectives will be to develop the future value chain map presented in figure 29.



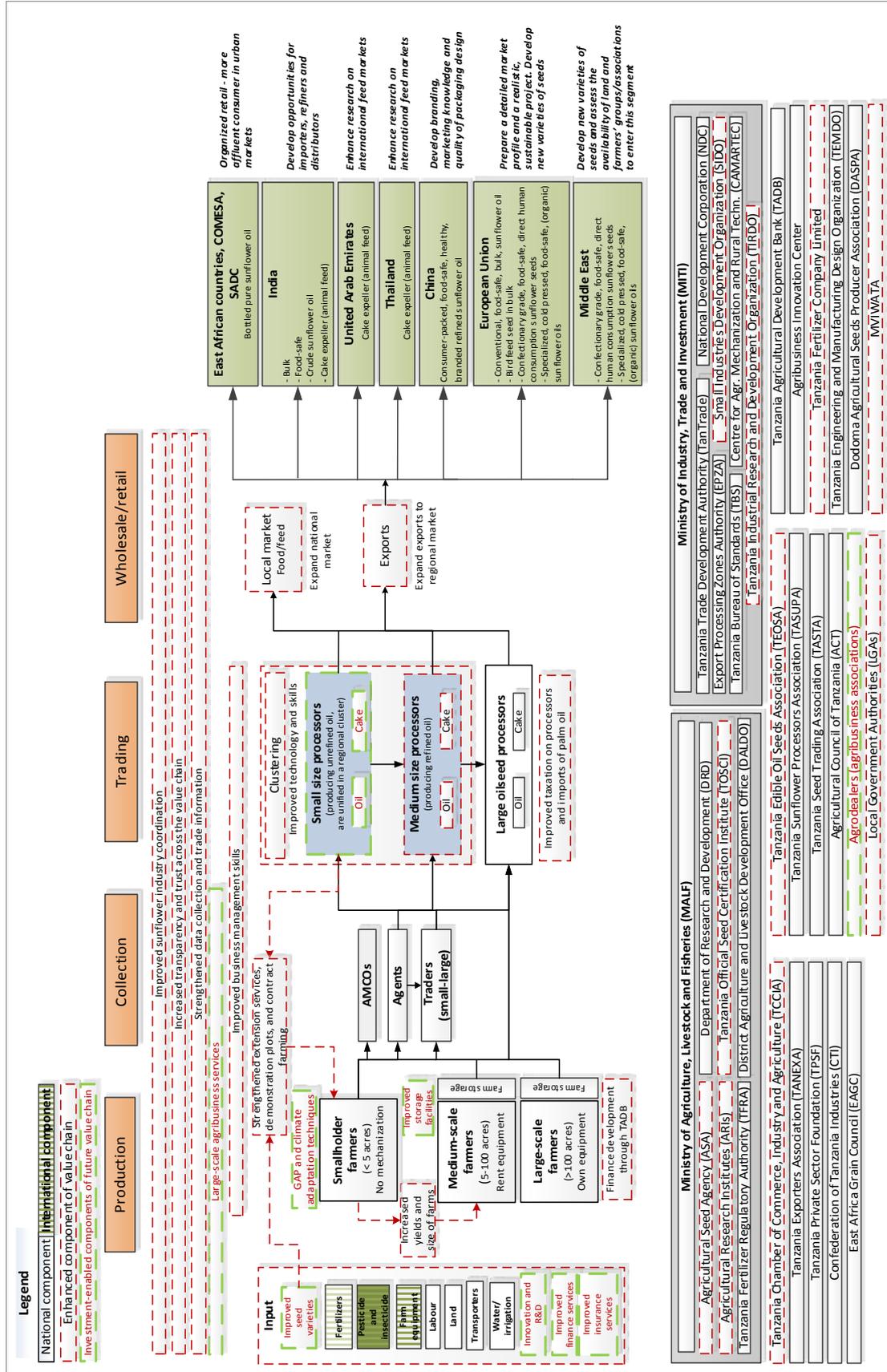
Photo: (CCBY2.0) www.tOrange.biz Valdemar Fishmen, Sunflower-oil.jpg

FUTURE VALUE CHAIN

As the global population grows and concern over food security with it, the fact that 60% of the world's uncultivated arable land is in Africa is earning the continent considerable attention as a source of food commodities and agribusiness investment opportunities. The African population itself is projected to double between 2010 and 2050, many of whom will represent a new middle class, as six of the world's 10 fastest-growing economies are in Africa. As a consequence of these trends, Africa's food market is projected to grow from US\$313 billion in 2010 to US\$1 trillion in 2030, with a corresponding boom in investment. Among global agribusiness investors, the United Republic of Tanzania is viewed as a strategically important investment destination in Eastern and Southern Africa, typically behind only South Africa, Kenya, Zimbabwe, Zambia and Mozambique.

This is some of the critical information that has been considered in drafting the future value chain for the sector which is presented in figure 29, with enhanced components at different stages presented in dotted red lines.

Figure 29: Future value chain of the Tanzanian sunflower sector



DEVELOPING THE FUTURE OF THE SECTOR

Unlocking the potential of the Tanzanian sunflower sector will require transformations throughout the value chain. These adjustments, as reflected in the future value chain schematic, will be the result of the targeted efforts detailed in the PoA of the Strategy that address the constraints identified in the competitiveness constraints section, as well as the opportunities detailed in this section.

The future value chain will be characterized by:

- Improved access to quality seeds and inputs, including GAP training and climate adaptation techniques
- Expanded agribusiness services to enable higher production volumes
- Strengthened coordination for forward planning and sector development
- Transparency and efficient contractual agreements
- Improved linkages between small and larger crushers, as well as regional clusters
- Enabling policies and taxation for sustainable sector growth.

The future value chain of the sector is driven by its market development objectives that effectively steer the value chain enhancements and the investment focus areas. The identification of new products and new markets underpins the elaboration of the future value chain.

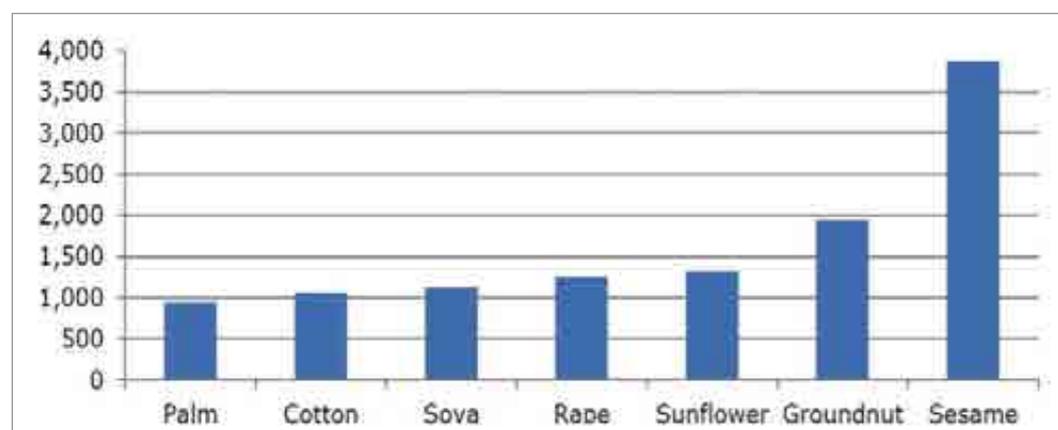
MARKET DEVELOPMENT AND INVESTMENT OBJECTIVES

Price relationships between vegetable oils have an impact on purchasing decisions, particularly among food ingredient and food service buyers who are the major palm oil consumers in international markets, such as the EU and India. Sunflower oil has the highest price of the large oil crops, surpassed in the mainstream product groups only by groundnut and sesame oil. Price-sensitive markets will shift consumption based on price and depending on the perspective of consumers. Therefore, India, for example, is likely to see a greater shift to cheaper palm oil than to soybean oil, which has a higher price, although the price differential between palm and soybean narrowed in 2015. The first seven months of 2015, to the end of July, saw Indian groundnut exports up by almost 200,000 tons (40%), while vegetable oil imports grew by 23% to 11.7 million tons for the 10 months to the end of August 2015, according to The Solvent Extractors Association of India.²¹

Sunflower oil and seed prices have been volatile in recent years, while showing an underlying upward trend. In recent months, and despite lower production in Europe, prices have declined due to price pressure from cheaper oil crops such as soybean and palm oil, as well as the decline in demand from China. Indications are that there will be no short-term changes in this direction, but longer-term forecasts from the FAO suggest that the supply of and demand for vegetable oil will tighten, thus increasing prices.

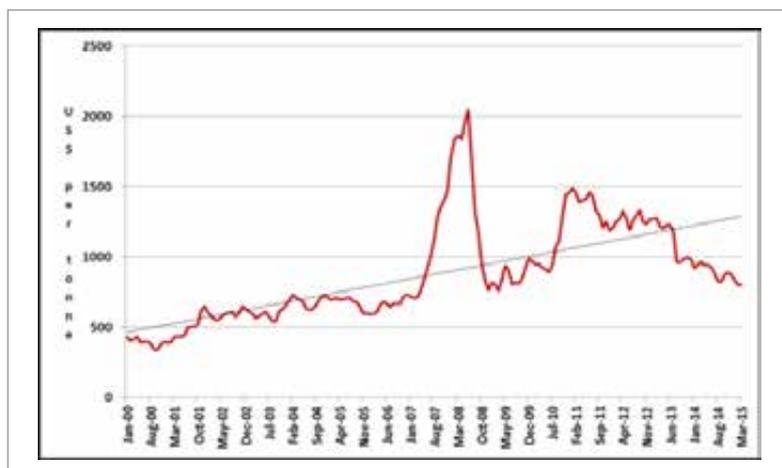
21. The Solvent Extractors Association of India (2015). Statement of 15 September. www.seaofindia.com.

Figure 30: Average crude vegetable oil prices (US\$ per ton)



Source: Oil World.

Figure 31: Sunflower oil prices FOB in the EU June 2000–March 2015 (US\$ per ton)



Source: Oil World (2015).

Shorter-term forecasts by the FAO²² indicate that the growth in oilseed production is likely to halt in the 2015/16 marketing year, following the previous year's record production. It is forecast that vegetable oil prices may stabilize, particularly if the impact of El Nino in Malaysia and Indonesia increases. Oil meals are forecast to remain at the current low levels.

The United Republic of Tanzania is well located to benefit from positive trends in the sunflower oil sector, notwithstanding short-term market challenges from palm and soybean oil in price-sensitive markets such as India. The entry of East African sunflower producers has created a new dynamic in the global sunflower industry, as their production of sunflower is mostly by smallholder farmers, whereas until now it has been primarily produced by intensive agricultural methods in Eastern Europe, South America and the United States.

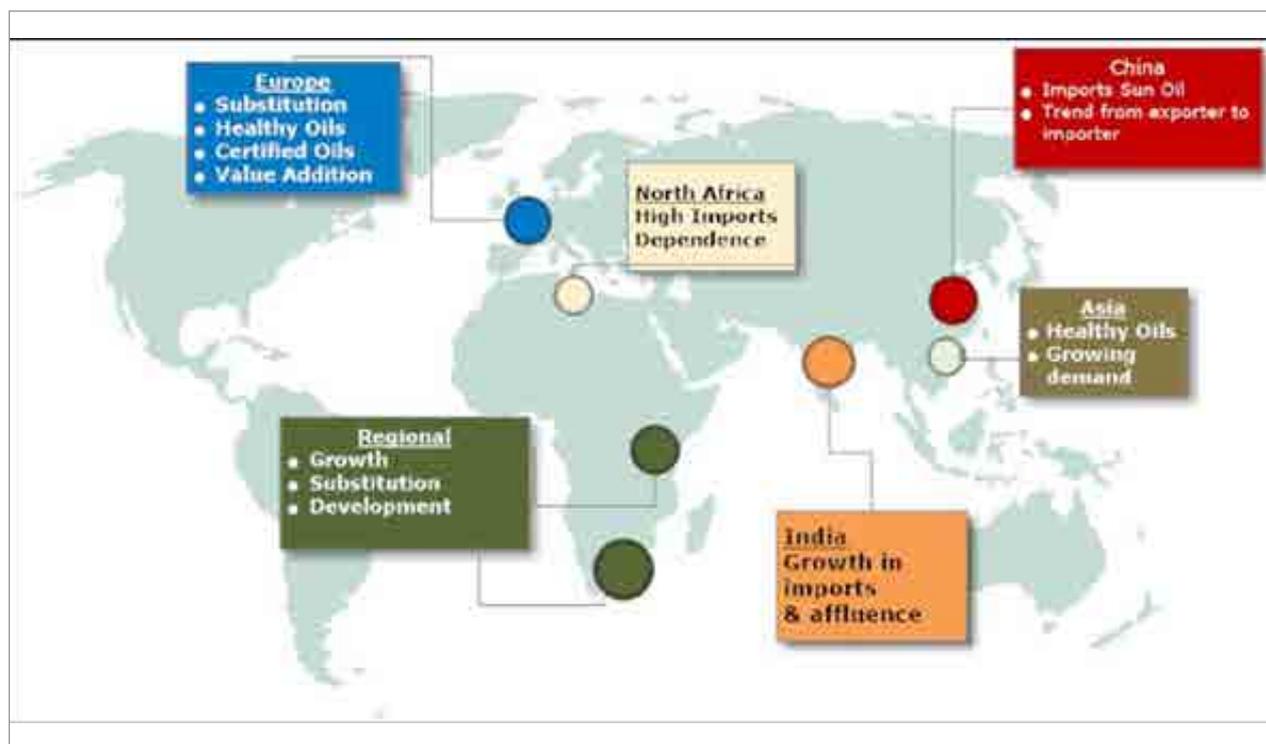
The Tanzanian oil chain is primarily driven by domestic demand; therefore the impact of international pricing is limited, especially in a year of poor domestic crop, as was the case in 2014. However, this may well be a short-lived situation, as inevitably biodiesel volumes will rise, and there is a significant chance of disruption to palm oil production in 2016 as a result of the strong El Nino that is predicted. If all of this were to coincide with a recovery in Chinese demand, then international prices could recover, which would have a knock-on effect in the Tanzanian market. In the meantime it is essential that the Tanzanian sector seeks markets where it has or can create a competitive advantage, which is not based on pricing alone.

The growth in international demand will create markets for export but will also create competition for supplies for import. Price-sensitive markets, such as those of India and Pakistan, may well seek palm oil supplies if prices rise, making the import substitution opportunity more important in the United Republic of Tanzania, with rising consumption per capita and a growing population. A recent example of a shift in oilseed demand can be found in Ethiopia, where traditional sesame seed production fell in 2015 as a result of lower planting, which followed disappointing prices for farmers in the previous season. Now, farmers there are planting more niger seed, which is used for domestic oil crushing and local consumption. This has caused a remarkable shift; while niger was half the price of sesame a year ago, it is now \$100 per ton higher than sesame seed. The switch was initially based on the unrealistic price expectations (ultimately disappointed) of farmers for sesame seed.

The impact of oil substitution at the consumption level is often taken into account, but the capacity of farmers to switch also needs careful consideration at both the policy and marketing levels, particularly if companies base their marketing strategy on a branded single oil product. This also highlights the need for good market information. Unrealistic expectations, or failure to recognize a market anomaly as such, will often cause supply chain disruption and make it more difficult for processors to build sustainable supply chain relationships. It is essential then that the constraints inherent in smallholder production in the United Republic of Tanzania are addressed, in order to ensure the continued competitiveness of domestic sunflower production.

22. Food and Agriculture Organization of the United Nations (2015)
(a). *Food Outlook: Biannual Report on Global Food Markets*.

Figure 32: *The United Republic of Tanzania is well located to benefit from market developments*



Source: Author's compilation.

In particular, the constraints resulting in a lack of seed for propagation, low farmer capacity in postharvest handling, high evacuation costs, lack of incentives on quality for growers, and poor market information or awareness need to be addressed in order to ensure the competitiveness of Tanzanian sunflower seeds against cheaper imported palm oil in the domestic market, as well as against large-scale producers in the international markets. Sunflower oil production targeting the domestic market would be best placed to access international markets if it were to produce at levels of quality and process management which match international standards.

Therefore, it is essential to consider international market trends in better positioning the subsector for increased market access and competitiveness in the future, by implementing standards and production methods in the domestic chain now.

MARKET IDENTIFICATION

The following are important trends to be considered in identifying markets for the future development of the Tanzanian sunflower sector.

There is a trend towards lighter, healthier oils with low unsaturated fat profiles in all importing countries, including

India and China. Sunflower has become a versatile vegetable oil sought after by buyers, and has few large-volume competing oils of the same health profile. However, this trend is tempered by market conditions in price-sensitive markets, with substitution always a possibility.

Buyer requirements are changing, with food safety, GMP, traceability and certification of the process becoming more and more important and sought after. Tanzanian crushers and packers must introduce high levels of food safety, quality and traceability if export markets are to be accessed. This includes HACCP quality management systems at a minimum. Changes in buyer requirements are not limited to Western markets, as the establishment of the Food Safety Authority of India and a series of recalls and food safety scandals in China demonstrate.

Business practices, labour practices, responsibility in the supply chain, anti-corruption and social impact are all becoming features of buying requirements and audits. This is linked to risk management and the development of CSR practices. CSR-driven buying is becoming a central feature of the consumer market, along with CSR-driven investment strategies, which are also becoming more prevalent. This trend should be addressed as an opportunity rather than a barrier to market entry.

'A good story' is becoming increasingly important as more and more consumers are interested in the story behind the products they buy. This makes the sourcing, supply chain and processing background increasingly important. In some cases, a good story can make up for insufficient certification. This trend is partly due to conscience-driven consumption but it is also linked to marketing trends. The United Republic of Tanzania is weak in this area compared with its regional competitors, particularly Uganda and Ethiopia.

Organic food consumption is growing fast, and vegetable oils are no exception. Demand in this segment far outstrips supply, with resulting high premiums for organic products. Organic production offers a niche market which

pays premiums as well as providing an opportunity for closer cooperation with buyers. Already Tanzania Organic Agriculture Movement (TOAM) is working with UNIDO-TIUMP to start certification process for some sunflower small farmers in Dodoma and Morogoro.

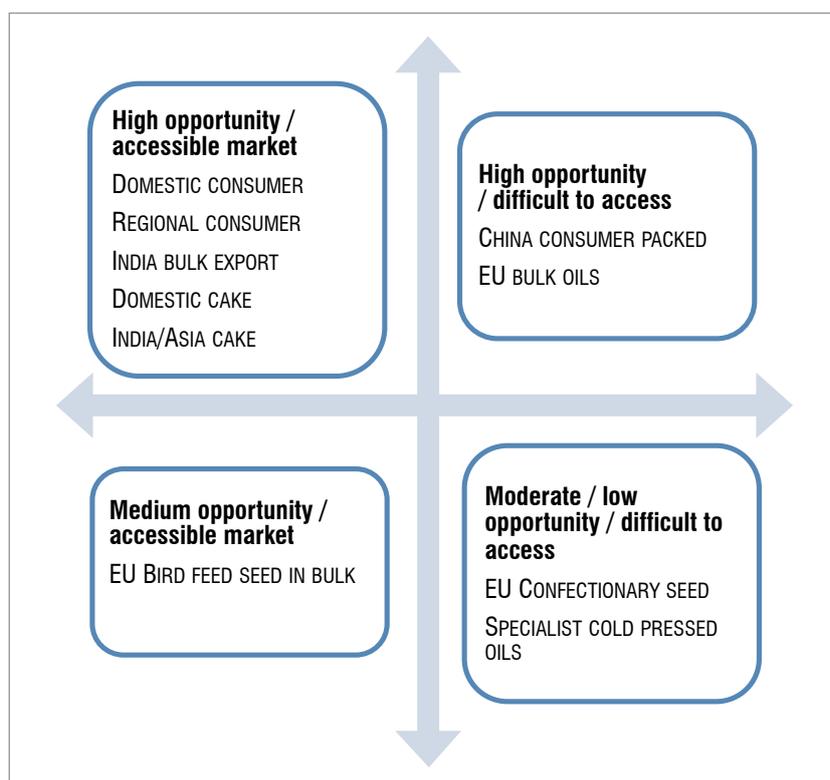
The consumption of sunflower seeds across a range of products other than oil is rapidly growing. The use of confectionary grade seeds in breakfast cereals, bakeries, confectionary and snacks is now common and is driven by the demand for healthier foods, ethnic foods, and a demand for new tastes and textures. The development of a market in this segment involves the introduction of new varieties of sunflower.

Table 3: Summary of identified markets

	Market	Product	Time frame	Probability of success
1.	Domestic	Food-safe, refined, consumer packed sunflower oil for cooking	Immediate	High, increasing with the degree that constraints are addressed
2.	Regional	Food-safe, refined, consumer packed sunflower oil for cooking	Immediate	High, increasing with the degree that constraints are addressed
3.	India	Bulk, food-safe, crude sunflower oil	Immediate start to five years	High, but dependent on branding and marketing
4.	Domestic market	Cake by-product	Immediate	Good, but dependent on domestic livestock market
5.	India, Thailand, United Arab Emirates	Cake by-product for animal feed sector	Immediate	Good
6.	China	Consumer packed food-safe, healthy branded refined sunflower oil	1–3 years	Moderate to high
7.	EU	Conventional, food-safe, bulk, sunflower oil, linked to social impact and CSR projects	3–5 years	Moderate
8.	EU	Bird feed seed in bulk	1–3 years	Good
9.	EU, Middle East	Confectionary grade, food-safe, direct consumption sunflower seeds	3–5 years	Low
10.	EU, Middle East	Specialist, cold pressed, food-safe, (organic) sunflower oils	3–5 years	High, if a certified supply chain can be built

For purposes of prioritization, and in order to link to the value chain actions to develop market access, the 10 identified markets were assessed by stakeholders as follows.

Figure 33: Stakeholder assessment of market access priorities



WHAT DO WE MEAN BY OPPORTUNITY AND ACCESSIBILITY?

High opportunity / accessible markets are those markets which have the potential to buy large volumes of sunflower products, have existing links to the Tanzanian sector, and for which there is no difficulty in meeting legislative or commercial buyer requirements. They could also be viewed as those markets for which the current value chain constraints in the Tanzanian sector have a limited negative impact.

High opportunity / difficult to access markets are those markets which have the potential to absorb large volumes of sunflower products, but which do not have significant existing links to the Tanzanian sector and/or have exacting legislative or commercial buyer requirements.

Medium opportunity / accessible markets are those markets which have a limited potential for volume, but have a lower level of legislative or commercial buyer requirements. The lower opportunity is a consequence of the capacity of the destination market in this case.

Medium / low opportunity / difficult to access markets are those markets which can absorb only low volumes of product and have exacting legislative or commercial buyer requirements. These are often niche markets which can offer good returns to exporters who have the necessary capacity in management, quality control or certification but will not have the capacity to change the sector. In these cases the investment necessary to correct supply chain constraints from a sectoral perspective would not justify the rewards for doing so.

IDENTIFIED MARKETS – HIGH OPPORTUNITY / ACCESSIBLE MARKETS

1.	Market:	The United Republic of Tanzania, domestic
	Product:	Bottled pure sunflower oil in 1-litre, 5-litre and 20-litre packs to meet price points
	Segment:	Organized retail – more affluent consumer in urban markets
	Time frame:	Immediate
	Logic:	Development of an existing accessible market

The United Republic of Tanzania has a high level of dependence on imported palm oil and related products. Palm oil is recognized as a health risk, particularly as the level of consumption rises. The promotion of sunflower oil as a healthy, medium-priced alternative can offer Tanzanian consumers an opportunity to support a national industry, as well as improve the fat profile of their diets. The product offered must be food-safe and high-quality, building on consumer concerns and aspirations for higher status products. The capacity to produce such products already exists. The opportunity in replacing imported oils amounts to a doubling of current production levels.

From a marketing perspective for the foreseeable future, palm oil products are likely to be lower cost than sunflower oil products, with the possibility of substitution always likely. Raising awareness of the benefits of consuming lighter oils is necessary, both directly with the consumer and with the health authorities, who will ultimately have to pay the cost of high cholesterol levels in the national diet. Engagement with consumers, retailers and health authorities is an important part of the sector's marketing plan. There is much written and many examples of such programmes to draw on, without new research being necessary.

Sunflower oil should be marketed as a pure (resisting the temptation to reduce price points by blending) and refined clear oil, allowing the appearance, colour and low odour aspects to be appreciated by consumers. The practice of describing blended oils as 'pure sunflower' must be resisted through branding and product integrity. Consumers must be made aware of the benefits of the golden, clear oil – as opposed to the current preference for cloudy oils – for successful market development.

Domestic consumer vegetable oil prices are already high, which reduces the impact of competition from lower-priced products. However, price points will play an important part, as consumers who shop more regularly due to cash constraints must be accommodated with smaller bottles of oil which they can afford.

Key constraints

- Price competition from palm oil products and imports without Customs duty
- Poor food safety practices
- Adulteration of consumer products branded as single oils, with lower-priced palm blended in, and a failure to enforce regulations covering quality and food safety
- Low awareness of the benefits of sunflower oil
- Poor supply chain linkages and failure to reward or encourage quality, and increasing the cost of production
- Weak subsector business support organizations

Suggested actions at the market level

- Sector-level promotion and engagement with the Government, particularly MITI and the Ministry of Health, Community Development, Gender, Elders and Children.
- Awareness-raising campaign
- Introduction of a health levy on palm oil products, to be used to cover the long-term health implications
- Target higher profile food ingredient segments, such as snacks – a key awareness-building tool in Europe to encourage sunflower as cooking oil was its marketing to potato chip manufacturers who highlighted 'cooked in pure sunflower oil' on every pack sold
- Food safety and quality branding at the national level: for example, TEOSA-approved mark – Pure Food-Safe Tanzanian Sunflower Oil.

2.	Market:	Regional consumers, EAC, Common Market for Eastern and Southern Africa, SADC
	Product:	Bottled pure sunflower oil in 1-litre, 5-litre and 20-litre packs to meet price points
	Segment:	Organized retail – more affluent consumer in urban markets
	Time frame:	Immediate
	Logic:	Development of potential in accessible markets

The regional markets of Kenya, Uganda, Rwanda, Burundi and the Democratic Republic of the Congo are all importers of vegetable oils. They all import palm oil products and, with the possible exception of Uganda, do not have the short-term capacity to replace imported vegetable oils. There is evidence that regional and other countries are taking action to protect against cheap palm oil; for example, India has raised import duties, and Cameroon has effectively banned the import of palm oil.

There is an opportunity to build on the brands, packaging and food safety practices introduced in the Tanzanian domestic market and apply these in regional markets, taking advantage of economic ties, tariffs and a common language. Kenya and Uganda have a history of purchases of sunflower seeds or oil from the United Republic of Tanzania, while Rwanda, Burundi and the Democratic Republic of the Congo have imported seeds from the United Republic of Tanzania sporadically in recent years.

Key constraints: The domestic market constraints still are relevant plus:

- High cost of distribution
- Building awareness in a foreign market

Suggested actions at the market level

- Extension of the Tanzanian food-safe quality 'Pure Sunflower Seed' mark across the border by participation at trade fairs
- Presentation of the opportunity as contributing to regional food security by spreading the crop and supply risk
- Reciprocal arrangements with trade associations in neighbouring countries, facilitating their trade with the United Republic of Tanzania

3.	Market:	Indian market
	Product:	Bulk, food-safe, crude sunflower oil
	Segment:	Importers and distributors
	Time frame:	1–5 years
	Logic:	The largest adjacent import market with good economic ties

India is a major importer of sunflower oil, with import levels forecast at 1.6 million tons for 2015. Most Indian imports are from the Black Sea area, and sunflower oil is most popular in southern India. This means that the United Republic of Tanzania has a freight advantage, provided that the oils can be shipped in large bulk. Bulk is favoured as there is difficulty accessing the Indian retail market for bottled oils due to the disparate and regionalized nature of the retail sector.

The Indian market is a crude oil market and there is a lower import duty for the import of crude, as opposed to refined, oils (12.5% versus 20%). India is dependent on the markets of the Black Sea region for supply, e.g. Ukraine, the Russian Federation and Moldova, who are currently experiencing constraints in supply due to weather and political reasons. India is not a low quality market as sometimes thought. Its demands, in terms of food safety and qualities, are similar to other markets. Therefore, issues

such as quality, packaging, food safety and process management must be addressed in approaching Indian buyers. However, buyer requirements in other areas such as traceability and specification may be less demanding.

Key constraints

- Lack of awareness, reputation in the Indian market
- High cost of production compared with major producers

Suggested actions at the market level

- Awareness-raising campaign at the miller and refiner/bottler level in India
- Approach the market as a 'second supplier' offering an alternative to existing high dependency sources
- Offer importers and refiners opportunities to develop the United Republic of Tanzania as a supplier through cooperation and partnerships; for example product/technology reciprocal arrangements may allow Indian importers preferential import duty arrangements
- Approach Indian Government authorities seeking preferential import duty rates based on the development of the sector in the United Republic of Tanzania, which will in time create markets for Indian export-finished goods

4.	Market:	Domestic market
	Product:	Cake expeller
	Segment:	Animal feed
	Time frame:	Immediate
	Logic:	A market for cake is essential for a successful crushing sector

Sunflower seed expeller cake is the primary by-product of the manufacture of sunflower oil. Markets for cake are essential in all cases, but particularly in the current situation in the United Republic of Tanzania where the oil content is on the lower side. Discussions at the first consultation indicated that the local market is ad hoc, but that there are significant exports to India. Successful marketing requires an initial assessment of the product available, e.g. what is the oil content of the cake to be sold? This is determined by whether or not the oil is simply expelled or thereafter goes through a solvent extraction process. The oil content will impact the protein value of the meal and, therefore, its suitability for specific markets. Sunflower expeller is usually most suited to ruminants.

The United Republic of Tanzania has a cattle population of 21.3 million, with growth at 5% per annum. The sector is largely smallholders and, like sunflower production, suffers from low yields and poor access to inputs. MALF estimated that there were 13.7 million goats and 3.6 million sheep in 2010. The improvement of feed and

the use of locally produced feed are part of the Livestock Development Strategy of the country.

Key constraints

- Lack of market organization, with many small mills competing at a local level
- Lack of sector-level links to the animal feed industry

Suggested actions at the market level

- Immediate linkage of the sunflower oil extraction sector to the animal feed distribution sector
- Animal feed buyers buy various types of meal, so linkages within the oilseed crushing sector could prove to be a constructive element of the animal feed sector
- Investigation of how feed supply (30% of farmers keep ruminants – some of them are likely to be sunflower growers too) can be linked to the distribution of agro-inputs
- Assessment of the product available in term of its quality, particularly its oil and protein content, to assess its best usage

5.	Market:	Export markets – India, United Arab Emirates, Thailand
	Product:	Cake expeller
	Segment:	Animal feed
	Time frame:	Immediate
	Logic:	Building on existing markets

The United Republic of Tanzania is an exporter of cake, with exports reaching 51,725 tons in 2014. India purchased 88% of these products, with Pakistan a smaller but significant market. In past years Kenya and the United Arab Emirates were also significant markets. Thailand is also a potential buyer for lower oil content meals after solvent extraction. In 2012 exports were 46,036 tons, while in 2013 they were 93,431 tons, which appears to indicate volatility in crush volumes rather than in exported volumes.

Development of volume crushing requires the development of export markets, as the capacity of the domestic sector to consume meals from a range of crushing operations will become exhausted. It is also likely (although will require some research), that export markets can pay higher prices for expeller meals. The feeding lots of the Middle East and Thailand, where intensive production is more likely to afford higher meal cost, may prove to be better markets.

Key constraints

- Lack of linkages to and knowledge of the animal feed sector
- Lack of export market information outside of current market linkages to India

Suggested actions

- Engage with MALF
- Engage with the animal feed sector
- Research international feed markets
- Identified markets – high opportunity / difficult access

6.	Market:	High-quality markets for consumer goods – China
	Product:	Consumer packed food-safe, healthy branded refined sunflower oil
	Segment:	Consumer goods marketed to specialized importers
	Time frame:	1–3 years
	Logic:	African products are seen as natural and healthy in China

Reports from the first consultation suggest that products from African countries are seen as natural and pure in China, where there is a growing premium market for products which are seen as healthy or 'good for you', without necessarily having to have verified supporting scientific claims. Indications are that prices can range up to US\$ 12.00 per litre, compared with US\$ 1.50 per litre for mainstream sunflower oil in the Tanzanian domestic market. This would take sunflower oil from being a commodity or food ingredient to being a branded, high-value specialized food product. This could serve as an example to the entire agri-sector in the country, if successful. Food safety, brand development and distinctive packaging are essential elements of this product range development. Some Tanzanian processors are already capable of producing the product to a suitable specification but there is no evidence that the packaging and product presentation elements are present.

Key constraints

- Branding and marketing knowledge specific to the Chinese market
- Quality of packaging design
- Access to distributors (as opposed to importers)

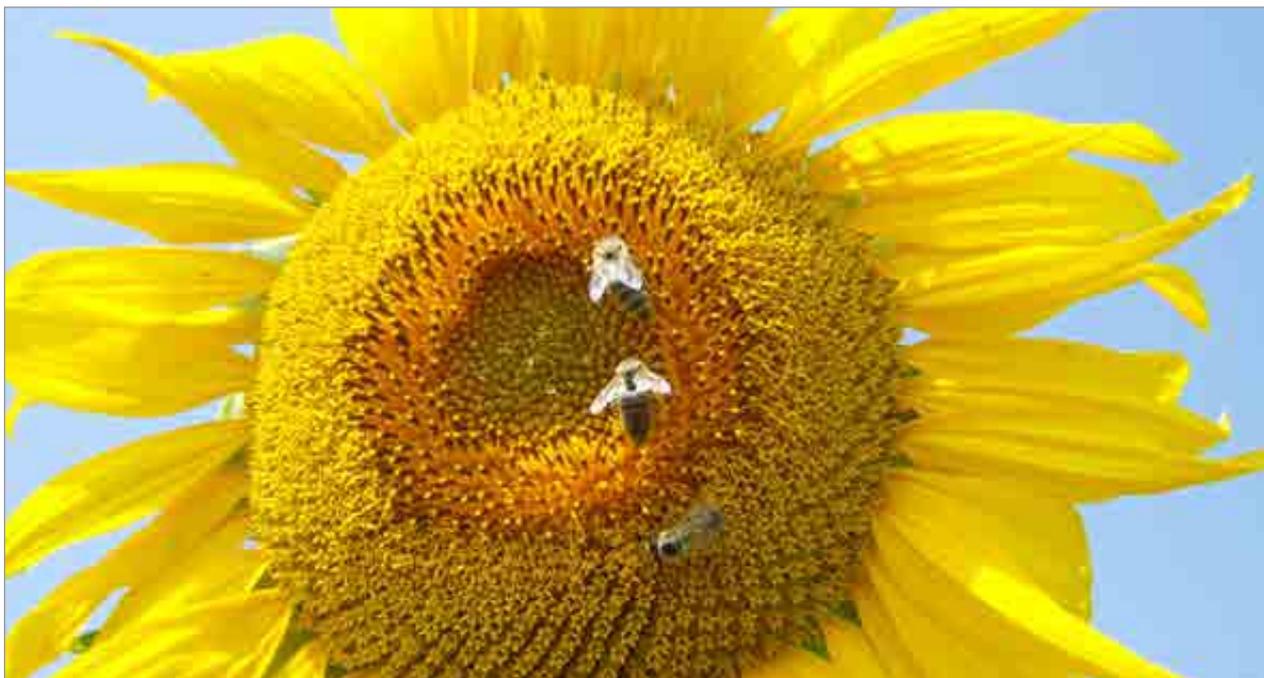


Photo: CC0 Public Domain, sunflower-yellow-855849.jpg

Suggested actions

- This project would be better and more easily managed if a basket of pure and natural products were established under the one marketing umbrella, in order to attract distributors and spread the costs of market development. Products such as cashew nuts, sesame seed, sesame seed oil, spices and dried fruits have the potential to be marketed either as part of a national pure, healthy, natural brand or a corporate brand. Linkages to these sectors should be investigated.
- An assessment of the Chinese market for such products must be undertaken to validate the anecdotal evidence. Good examples of success in this type of marketing approach can be found in almonds and pecan nuts from the United States to China.
- Trade fair visits – SIAL China May 2016 or Gulfood February 2016 could be good options for initial market diagnosis.

7.	Market:	EU
	Product:	Conventional, food-safe, bulk sunflower oil linked to social impact and CSR projects
	Segment:	Large refiners, crushers and food ingredient buyers
	Time frame:	3–5 years
	Logic:	European companies are interested in developing supply chains as part of their marketing story and supply security

The European market is probably the most demanding market in the world in terms of legislative requirements, buyer requirements and process quality management certification. It is a large producer of sunflower seed and is close to the large Eastern European producers of sunflower seed and oil. Production costs are low; yields are high and standards often not accessible. However, the EU is also a major importer of sunflower seed and crude oil with approximately 2.8 million tons per annum imported.

Key constraints

- Lack of experience dealing with European companies.
- Lack of well-planned projects to bring to prospective CSR departments or impact investors. European companies often seek projects in developing countries which will suit their stated development goals and social responsibility objectives. However, there is a shortage of realistic and relevant projects. Large European-based crushers and refiners such as Cargill, Bunge, and Maas Refinery are all experts in the production of vegetable oils and can offer high-quality management and technical skills as part of a sector development strategy. Given that the chances of competing in the European market (except in the longer term) are limited, these projects offer companies an opportunity to use their core competencies and at the same time access growing markets in East Africa as part of their CSR portfolio. There are also investment companies and funds which seek investment in African countries to contribute to food security, e.g. Veris Investments.

This strategy may become more and more relevant as the opposition to palm oil in Europe grows among consumers for environmental and health reasons. For example, many supermarkets are now instructing suppliers to display 'palm oil free' on products.

Suggested actions

- This is a difficult project, so an initial survey of the CSR policy of European oilseed crushers is essential before committing to further research.
- Project development – there must be a realistic, sustainable project in-hand to present.
- Competing sunflower from Eastern Europe is mainly linoleic. If high oleic varieties are available or if they can be made available from the United Republic of Tanzania then the market positioning would become much easier.
- Link to the companies or funds.

IDENTIFIED MARKETS – MEDIUM OPPORTUNITY / ACCESSIBLE MARKET

8.	Market:	EU
	Product:	Bird feed seed in bulk
	Segment:	Importers of ingredients for bird feed
	Time frame:	1–3 years
	Logic:	The product is used at higher values than crushing seed where the quality parameters can be met

Sunflower seeds – both striped, confectionary grade and black seeds – are important ingredients in seed mixes for pet food and bird feed in the European market. It is estimated that 80% of sunflower seeds destined for the pet food market are black seeds, as found in the United Republic of Tanzania. Buyer requirements in this sector are as exacting as in the human consumption market, although tolerance for some contaminants is lower and bird feed is often used as an outlet for slightly inferior products. It is difficult to estimate the size of the market, as it is not separately recorded at import. The European pet food industry organization estimates the number of pet birds in Europe at 42 million. The seeds and nuts ingredient market for this form of usage is estimated in the region of 175,000 tons annually.

Key constraints

- Lack of market knowledge on this niche sector and consequent lack of linkages
- Testing for contaminants

Suggested actions

- Tanzanian exporters have access to this sector through the pulses and sesame sectors. This should be explored to assess the existing market linkages, and whether the sunflower sector should market in its own right or via the other sectors.
- This is a niche market, which can offer higher-value returns through contracts with a few importers, mainly based in the Netherlands or the United Kingdom. It is therefore relatively easy to make the necessary contacts and access the market.

IDENTIFIED MARKETS – MEDIUM / LOW OPPORTUNITY / DIFFICULT TO ACCESS MARKETS

9.	Market:	EU, Middle East
	Product:	Confectionary grade, food-safe, direct human consumption sunflower seeds
	Segment:	Snack food and breakfast cereal manufacturers
	Time frame:	3–5 years

This is a medium/low potential due to the need to import new varieties. One of the fastest-growing uses of seeds is in direct human consumption, where they are regarded as healthy snacks or ingredients in breakfast cereals and bars. A maximum of 10% of sunflower imports to Europe are used in this way, which puts market estimates in the region of 70,000 tons. The seeds are sold in the shell or as kernels with the shell removed. It does, however, offer much higher market values and production in the United States; currently one of the main suppliers of this grade is falling due to difficult growing conditions and as crushing seed values rise.

This idea was mentioned during the first consultation, as a Danish company had approached some stakeholders in the United Republic of Tanzania with the concept.

Key constraints

- Confectionary seed is a different variety, which is not yet available in the United Republic of Tanzania.
- The establishment and import of new seed varieties is a slow process.
- Growing and handling confectionary seed is a more complex and technical process than growing oil crop sunflowers. If confectionary grade seeds do not achieve required quality parameters, they will only receive lower values in the crushing market as oil content is low.

Suggested actions

- This is closely linked to the availability of propagation seed as discussed above.
- The project should be linked to a buyer or group of buyers at an early stage so as to involve their expertise.
- Conduct a feasibility study initially by investigating the market, after which – if an opportunity is verified based on specific potential customer links – move on to an agronomic study linked to an appropriate institution in the United Republic of Tanzania.

10.	Market:	EU, Middle East
	Product:	Specialized, cold pressed, food-safe, (organic) sunflower oils
	Segment:	Distributors, health food segment
	Time frame:	3–5 years
	Potential:	High potential if the certified chain can be built

This niche market is fast-growing but its development is constrained by the lack of available raw material. Countries which have low use of inputs and no presence of genetically modified organisms have opportunities to enter these specific, high-value niches in the market, which can increase values of the finished product up to a factor of 10 if well branded and marketed. There are ongoing projects such as this in Ethiopia (sesame, linseed oils) and Uganda (sesame seed oil).

Key constraints

- Cold press needs high levels of food safety
- Land and growers must be certified
- Availability of organic inputs

Suggested actions

- Assess recent changes to Tanzanian biosafety laws. What impact do they have? An initial reading suggests that strong protection remains in place.
- This project needs to be linked to a customer at an early stage. Suggestions would be Olvea (France), Tradin Organic (Netherlands), Rapunzel Naturkost (Germany), Doens Food Ingredients (Netherlands), Traidcraft (United Kingdom), Dutch Organic International Trade (Netherlands).
- Assess the organic sector in the United Republic of Tanzania as it stands. Build collaboration with partners working on organic sunflower oil (TOAM and TIUMP)
- Assess the availability of land and farmers' groups/associations who may be willing to enter this segment.

STRUCTURAL IMPROVEMENTS TO THE VALUE CHAIN

The market development opportunities described above aim to both enable the transformation to, and be the result of, a modernization of the sunflower sector value chain in the United Republic of Tanzania. The following segments of the value chain are foreseen as key areas of focus for achieving the future value chain.

1. Improved access to quality seeds and inputs, including GAP training and climate adaptation techniques

The improved provision of quality seeds is considered a critical priority for a well-performing sunflower value chain. To ensure the availability of seeds for increased production, there will be a need to stimulate public–private partnerships and investment in higher-yielding seed development; promote research and production of new varieties; and develop a number of demonstration plots in collaboration with LGAs and extension services.

A key opportunity to increase sunflower production capacity is to improve easy access for farmers and farmers' associations to relevant inputs to maximize production. This would be helped by greater attraction of foreign manufacturers of world-class inputs, such as Mahindra, and ensuring their strong strategic linkages to sunflower producers (AMCOs, farmers' associations and processors) and the agro-dealer network (through the Tanzania National Agro-Dealers Association (TANADA)).

In terms of investment, DuPont, Syngenta and Advanta are already in the United Republic of Tanzania developing seeds for other crops, and Monsanto and KWS are next door in Kenya doing the same. Sector stakeholders,

committing their support to the development of seed multiplication and dissemination infrastructure and working with TIC and EPZA, could make a persuasive case for one or more of these companies to begin developing and disseminating locally tailored seeds, either privately or through public–private partnerships.

Farm mechanization and the use of high-quality inputs depends on small farmers having better financial security and awareness of the returns on investment promised by their use. For this reason, it will be important to develop collaborative agreements with SACCOS in sunflower producing regions, and TADB and other financial partners.

2. Expanded agribusiness services to enable higher production volumes

The United Republic of Tanzania is a growing global player in sunflower production with the potential to expand production, especially considering the suitability of sunflower as a rotation crop at the end of the planting cycle.

A key success factor for improved performance of the Tanzanian sunflower sector is to enable and stimulate the development of agribusiness services (farming services, crop processing and marketing services) to support smallholder farmers to increase their production area, volumes and quality. The development of partnerships with agribusiness services in the sunflower sector will be essential to ensuring easier access to inputs, mechanization, drying equipment and more.

The potential of the country's sunflower oil sector and, more generally, its agricultural sector as a whole makes the country a promising destination for investors. Evidence of this exists in a range of small-scale foreign investments already involved in processing and agribusiness services, including contract farming, agricultural services, collateral management, trading and milling. Quality Food Products is engaged in contract farming with sunflower producers, to whom it offers instruction, equipment, and mechanization for hire on a per-acre basis, yielding high quality seeds for the Swiss market.

More generally, the Tanzanian agribusiness sector has begun to attract input manufacturers, such as a Chinese fertilizer producer, and service providers like Société Générale de Surveillance (SGS) and ACE Global, who provide collateral management and other quality and risk management services.

Investor-targeting and investor aftercare could build on these FDI inflows without much government action to improve the country's attractiveness to investors. However, significantly ramping up volume or attracting higher value-adding projects (e.g., breakfast bar manufacturing) will be linked to the Government actions recommended

in the strategic considerations section and the PoA sections of this roadmap.

3. Strengthen coordination for forward planning and sector development

The development of sunflower production and processing requires effective coordination of all key stakeholders along the value chain. This is important to programme seed multiplication and production based on market requirements and opportunities. Improved collaboration and communication between sector stakeholders will also increase the sector's capacity to influence the policy framework through advocacy. It is anticipated that improved coordination is important to increase transparency and facilitate contractual arrangements between operators. Increasing the capacity of TEOSA as the sector apex organization is considered a key priority to build this coordination and planning capacity in the sector.

4. Transparency and efficient contractual agreements

The development of trust in the sunflower value chain, namely between seed producers and crushers, is critical. It will stimulate a sustainable increase in production and an improvement in quality, due to a better mutual understanding of demands and requirements. It is foreseen that the application of a chart of premiums/discounts based on quality of grains (oil, fibre, free fatty acids, purity) will contribute to bringing this transparency to the value chain. The development of market information systems will also contribute to an improved understanding of price variations.

The development of contract farming in the sunflower sector is also considered essential to better match producers' capacities with processors' needs. To that effect, producers' associations and processors with experience in contract farming arrangements could have a large effect on total production and, importantly, on the organization of Tanzanian production. By guaranteeing prices to farmers and committing them to predetermined volumes, contracts can be leveraged to approach financial institutions.

5. Improved linkages between small and larger crushers, as well as regional clusters

It is foreseen that an increase in sunflower edible oil production will be achieved through better linking micro-processors, small processors and large processors. The linking of these productions would enable smaller crushers to produce unrefined or once-refined oil that would then be second-refined by larger crushers. This would also enable the development of larger volumes

and brands to supply the national, regional and international markets.

In addition to reinforcing linkages between small and large crushers, the Strategy foresees the creation of clusters in selected production areas. This approach is considered important to transition smaller crushers into medium-sized ones capable of processing larger volumes, reduce operations costs, and stimulate production of seeds through contract farming. These clusters would generate dynamism in the sector's development.

6. Enabling policies, regulations and taxation for sustainable sector growth

As indicated earlier, there are a number of policy and taxation challenges currently affecting the development of the sector. The future value chain of the sector anticipates that the business environment supporting sector development is more favourable, namely in terms of prioritizing the sunflower sector in agricultural plans, providing favourable conditions for investment in the sector, and ensuring that all companies operate according to standards and food safety requirements. Additionally, sunflower would be promoted as a healthy edible oil by the Ministry of Health, Community Development, Gender, Elders and Children.

In terms of taxation, in the future value chain 0% import tariffs are only applied on imports of crude palm oil and not on refined palm oil, as per the existing regulation. The adequate application of this regulation will encourage refining in the United Republic of Tanzania. Additionally, feasibility studies would stimulate a debate on adequate tariffs to be applied to refined palm oil.

MARKET DEVELOPMENT AND INVESTMENT OBJECTIVES

In rough order of ripeness, the clearest **market development opportunities** for the Tanzanian sunflower oil sector are as follows.

1. Greater penetration of sunflower oil in urban Tanzanian markets, through improved oil quality and food safety.
2. Expansion of sunflower oil into urban areas within the Eastern, Southern and Central African regions, through improved oil quality, food safety and consistency of production volume.
3. Expansion of sunflower oil into foreign markets, particularly India and the Middle East and North Africa, through improved oil quality, food safety, consistency of production volume and market intelligence.
4. Expansion of confectionary seed exports to Europe, and to a lesser degree the United States, through

greater adoption of high-quality seed varieties, improved organic/not genetically modified/fair trade marketing and better postharvest practices.

The areas in which **private investment** is most needed to realize these market development objectives are as follows.

1. Contract farming arrangements, by which an internationally competitive processor and trader of high-quality sunflower oil provides farmers with the inputs, technical knowledge and equipment rental needed to produce high-quality sunflower crops. These investments would most likely be made by companies with well-established niche markets for confectionary seed, high-quality oil, and/or oil which can be certified as organic, not genetically modified, or fair trade. Quality Food Products is an example of such a company already operating in the United Republic of Tanzania.
2. Input design, manufacturing and sale, in particular of seeds and agrochemicals, making these products more accessible, cheaper, and better tailored to Tanzanian crops than imported inputs. These investments would most likely be made by large international companies, such as Pioneer (DuPont) and Syngenta, seeking first-mover advantage in the large national and regional markets.
3. Investment in worker training, plant floor set-up and some equipment upgrading at existing mills to achieve greater food safety and quality. These investments would be made by existing domestic investors with greater access to finance and better market information, or foreign joint venture partners with experience in the type of upgraded production sought. As the United Republic of Tanzania's most promising foreign market for sunflower oil, India is also the most likely source of foreign investment.
4. Investments in new mills with higher food safety and quality standards. These would be made by the more successful of the existing investors or by new foreign investors.
5. Investment in new plants providing refining services to existing producers of crude oil. These investments would be made by the more successful of the existing investors (as an integral part of their milling operations) or by new foreign investors specializing in refining as a value-adding service to the producers of crude oil.
6. Investment in several new, medium-sized (10,000-ton capacity) oil packing plants to aggregate the output of smaller mills in packages that are saleable regionally and globally. In the United Republic of Tanzania, where there is little trust among players at different segments of the value chain, this investment is most likely to come from domestic traders with better records of transparent and mutually appreciated cooperation with small millers or from foreign companies



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specializing in quality certification and integrated commodity and collateral management.

7. Investment in marketing and distribution services to smaller towns. This investment is most likely to come from domestic trading firms which are either market leaders looking for new markets or smaller players looking for areas where they can operate with less competition.

Public policies and investment promotion activities have a significant role to play in fostering these private investments and, in fact, represent a vital form of public investment. Public investments needed to realize the future value chain include those in the following areas.

1. Delivery of public training in food safety. Financial support of such training at relevant technical and vocational education and training institutions (e.g. Department of Food Science and Technology at SUA).
2. Loan guarantees, industrialization funds and support to the proper functioning of insurance markets.
3. Building capacity to effectively regulate food safety and environmental impact in the sector. This refers both to the formulation of best practice policies and the capacity to enforce them.
4. Greater allocation of resources to initiatives that build trust among stakeholders and organize the sector. These include public–private dialogue, cooperatives, trade shows and networking events, etc.
5. Investment promotion capacity and resources for TIC, in particular for the hiring and/or development of agri-business specialists, purchase of marketing studies, internal systems for the management of investor information and relationship management, articulation of opportunity-specific business cases that will resonate with likely investors, and allocation of budget to overseas investor-targeting campaigns.

INVESTMENT AS A DRIVER

Export development entails new business activities, capacities, productivity and international market connectivity, none of which occurs without investment. On a macro level, increased exports also tend to lead to increased interest from investors globally. For example, an Indian manufacturer using inputs from East Africa can buy them from abroad (i.e. trade) or establish an East African affiliate to procure or manufacture the inputs themselves (i.e. invest). Over time, successful procurement offices in East Africa may evolve into manufacturing facilities, which may eventually add the functions of R&D or regional headquarters. In short, trade and investment are often part of the same continuum. As more and more Indian businesses evolve farther down that continuum, trade and investment linkages between India and East Africa strengthen, and there are greater spillovers of technology and skill in East Africa. This helps make domestic businesses more efficient, improves the marketability of their products and services, and deepens their participation in global value chains.

Few factors are as fundamental to the success of a sector as its capital investment, and the most sustainable investment is profit-driven private investment. The measures described in this Strategy are designed to stimulate and attract private investment. Foreign direct investment, in particular, can have a transformative effect on the exports of a developing country's home-grown, domestic-market-oriented sector, as international investors are likely to possess a wide range of assets otherwise unavailable to local enterprises. These may include technologies, skills, management practices, operational experience, economies of scale and international distribution channels, among others.

HOW TO GET THERE – MOVING TO ACTION

The development of the future value chain for the sunflower sector is a five-year project defined through a consultative process between public and private sector stakeholders in the United Republic of Tanzania.

Achieving the future value chain of the sunflower sector depends heavily on the ability of sector stakeholders to implement the activities defined in the Strategy. For this reason, it is recommended that the following key areas of intervention be implemented with priority, in order to facilitate the overall implementation of the sunflower Strategy:

- Review key policy issues that affect the sunflower industry, including assessing the impact of any tariffs and VAT;
- Strengthen coordination across the sunflower industry, in particular through TEOSA, and strengthen the capacity of key organizations in the sector, including TBS, the research institutions, related government agencies and authorities, and training institutions;
- Increase the availability and accessibility of quality sunflower seeds and promote contract farming in the local sunflower industry;
- Ensure compliance with and adherence to national standards for edible oil through enhanced evaluation capacity;
- Improve the accuracy of data collection and data harmonization for more effective planning and policy implementation;
- Promote sunflower oil as a healthy product for national consumption.

These actions aim to enable the implementation of the Strategy PoA in a coordinated and transparent manner. Sunflower being a growing sector in the United Republic of Tanzania, a large share of the value chain development will fall under the responsibility of the private sector as key drivers and beneficiaries. By enabling and supporting private sector operators to develop the sector, the Tanzanian Government will be able to contribute to its overall national development goals.

MANAGING STRATEGY IMPLEMENTATION TO GENERATE RESULTS

The comprehensive Sunflower Sector Development Strategy of the United Republic of Tanzania endeavours to generate the conditions for a favourable expansion of the industry so as to contribute to overall socioeconomic development. Nevertheless, a strategy in and of itself is not enough to ensure the industry's sustainable development. Such development will require the implementation of the various activities from the Strategy PoA. While the execution of these activities will allow for the Strategy's targets to be achieved, success will also depend on the ability of stakeholders to plan and coordinate actions in a tactical manner. Apparently unrelated activities must be synchronized across the public sector, private sector and non-governmental organization communities in order to create sustainable results.

Indeed, the Strategy is not the strategy of any specific institution; rather it is the strategy of the United Republic of Tanzania. Therefore, to ensure its success, it is necessary to foster an adequate environment and create an appropriate framework for its implementation. The following section presents some of the key success conditions considered necessary for the Strategy to be effectively implemented and achieve self-sustainability and long lasting benefits for the United Republic of Tanzania.

Establish and operationalize a public and private coordinating body and its subsidiary organ

A key success criterion for the Strategy is the United Republic of Tanzania's ability to coordinate activities, monitor progress and mobilize resources for its implementation. It is recommended that the country establishes an independent committee for public–private deliberations that acts in an advisory capacity to the Government and the private sector over issues related to or affecting the sector and its Strategy.

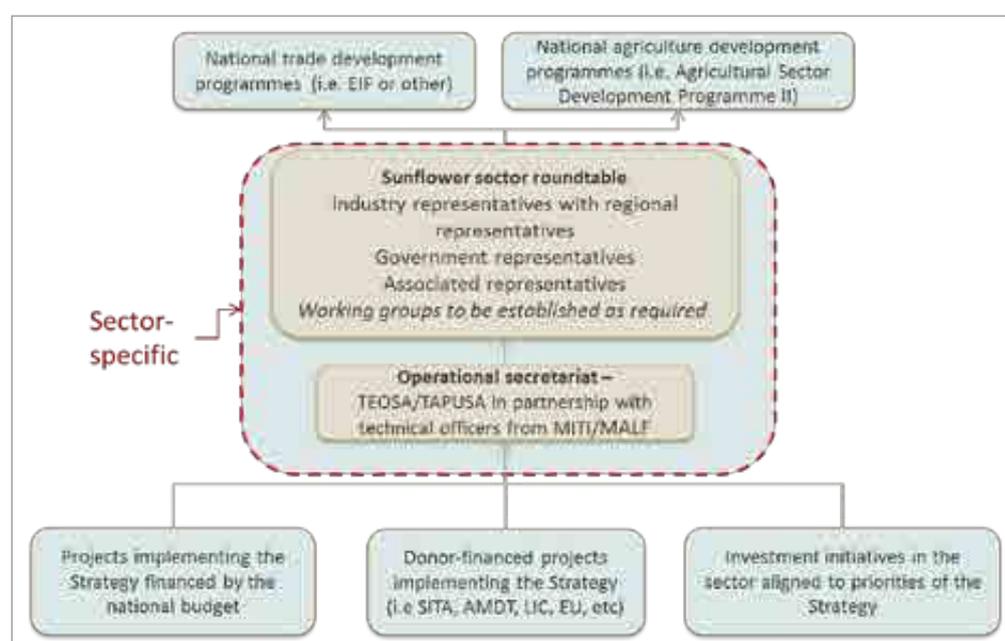
The formal dialogue platform will require a high level of involvement of the trade support network members (public and private), as their role is crucial and will impact the effectiveness with which the Strategy is implemented. Likewise, the ability of the private sector to provide inputs to the Strategy implementation process will significantly influence the success of the Strategy.

The core team set up for the design process is composed of a panel of representatives of key institutions, involving ministries and trade support network members. It also comprises private sector representatives from all segments of the industry. As such, the current core team is a

good initial framework to serve as the independent technical advisory committee responsible for the oversight of the Strategy's implementation. An executive secretariat will be required to act as its subsidiary organ to coordinate, monitor and mobilize resources for implementing the Strategy in line with other export development plans. It is proposed that CEZOSOPA takes the responsibility of hosting the secretariat of the national committee. Finally, at the regional and local level, subcommittees will also play a pivotal role in channelling information up to the national committee and forum.

The institutional framework is presented in figure 34.

Figure 34: Institutional framework for the implementation of the strategy



The sunflower sector roundtable is meant to be responsible for the following tasks:

- Create a shared understanding of key market challenges and opportunities facing the sector;
- Set goals and targets that, if achieved, will strengthen the sector's competitive position and enhance Tanzania's overall capacity to meet the changing demands of markets;
- Propose key policy changes to be undertaken and promote these policy changes among national decision makers;
- Support the coordination, implementation and monitoring of activities in the sector by the Government, private sector, institutions or international organizations to ensure alignment to goals and targets;

The national sector forum aims to provide an annual platform for public and private sector stakeholders to take

stock of the progress made in the implementation of the sector Strategy, revise implementation challenges, discuss new opportunities for sector growth and agree on key objectives for sector development.

The core responsibilities of the operational secretariat are to:

- Execute the secretariat work of the sector round table (minutes, agenda, venue, etc.); Collect, centralize and preserve all archives
- Collect information on sector development and prepare regular monitoring reports to be submitted to the umbrella forum;
- Facilitate the work of the working committees; (minutes, agenda, venue, etc.); Collect, centralize and preserve all archives

- As instructed by the roundtable, liaise with government and partners programmes to ensure coordination; prepare project proposals, including budget, for the implementation of sector plans and policies;

KEY SUCCESS FACTORS FOR EFFECTIVE IMPLEMENTATION

Capacities for managing the implementation

The presence of a national implementation framework to oversee the implementation of the Strategy is a key success factor but it is not sufficient to effectively fulfil its assigned functions. It will be important that the capacities and skills of the sector secretariat be sufficient to ensure effective management of Strategy implementation. The secretariat should have knowledge of best practices in monitoring, programming, mobilizing resources and communicating results. It will be important to ensure the secretariat be adequately resourced and capacitated to effectively assume these responsibilities.

Private sector support and participation

As the primary beneficiary of Strategy implementation – through improved productive capacities, reduced costs of doing business, facilitated administrative procedures, enhanced access to finance, etc. – the private sector will need to be directly involved. The private sector clearly expressed during the Strategy design process its willingness to contribute, directly or in partnership with public institutions, to the implementation of the Strategy. Their implementation efforts can range from providing business intelligence to institutions to contributing to development projects, establishing processing and transformation units, advocacy, etc. In brief, the private sector's practical knowledge of business operations is essential to ensuring that the activities of the Strategy are effectively implemented and targeted.

Proactive networking and communication

The key implementing institutions detailed in the PoA need to be informed of the content of the Strategy and the implications for their 2016–2020 programming. This networking and communication is essential to build further ownership and provide institutions with the opportunity to confirm the activities they can implement in the short-to-long term. Communication and outreach to sector stakeholders is equally important to create momentum and support for the recommendations of the Strategy. This active communication normally serves to speed up implementation through a larger engagement of all parties.

Resources for implementation

The national committees and the operational secretariat, together with the authorities, will need to capitalize on the momentum gained as part of the Strategy design process in order to leverage additional support for efficient implementation. Resource mobilization is crucial and indispensable in supporting Strategy implementation. Resource mobilization involves the identification of priority activities from the Strategy and proactive networking with various resource providers, ranging from MoF to development partners, as well as national and foreign investors. Resource mobilization should be centralized at the sunflower sector secretariat and supported by the national committee.

For effective implementation of the Strategy, the Government should define a minimum annual budget to be directed towards Strategy implementation. This commitment will demonstrate the Government's engagement towards strengthening the sunflower sector and encourage partners to also support sector development.

In addition to national budget support, resource mobilization will also target development partners and foreign investors to support key areas of the Strategy PoA. Because the Strategy has been developed with political endorsement, private sector buy-in and collaboration between national institutions, it provides an adequate framework for development partners to plan interventions based on the Strategy PoA.

Investment flows to the United Republic of Tanzania should also be considered as a valuable driver of Strategy implementation and overall trade development. The relevant authorities of the country, in partnership with the private sector, should target priority investment as detailed in the future perspective section of the Strategy.

The various implementation modalities detailed will determine the success of Strategy implementation. However, high-level support from the Government, in collaboration with strong championship by the private sector, will be the real driver of successful Strategy implementation.



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THE REPUBLIC OF TANZANIA
SUNFLOWER SECTOR
DEVELOPMENT STRATEGY

PLAN OF ACTION



Strategic objective 1: Increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand.											
Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2020	2019	2018	2017	2016				
1.1 Increase the availability and accessibility of certified sunflower seeds.	1.1.1 Improve linkages between the sector's actors through a Memorandum of Understanding (MoU) to be signed between TASTA, MOLF, TOSCI, ASA and farmers' associations to facilitate the production and dissemination of seeds. MOLF to support the implementation of the MoU and to table an agenda for the coming national seed committee.	1						<ul style="list-style-type: none"> » MoU is signed and operational between seed actors by mid-2016 » TEOSA is co-opted in the national seed committee by the end of 2016 	MOLF	TASTA, TOSCI, ASA, TEOSA, TASUPA	MALF
	1.1.2 TEOSA and TASUPA to jointly define annual volume requirements for sunflower seeds. It will achieve this by collecting data from districts and aggregate this to the regional and national level in collaboration with MOLF.	1						<ul style="list-style-type: none"> » TEOSA/TASUPA to produce three-year rolling projections every mid-June 	TEOSA/TASUPA	TASTA, TOSCI, ASA, MOLF, REGIONAL SUNFLOWER ASSOCIATIONS AMDT, PMO-RALG	AMDT, LIC
	1.1.3 Substantially increase the capacity of MOLF agencies (ASA, TOSCI and ARIs) by increasing its budget, through being recognized as a priority development area for donor funding and by inscribing the sunflower Strategy in Big Result Now (which fast-tracks decision-making in Government policy). The additional funding will be geared towards: <ul style="list-style-type: none"> » Addressing infrastructure gaps, including laboratory equipment (for ARIs and TOSCI), increasing storage facilities (for ASA), rehabilitating and extending buildings for ARIs, and obtaining new facilities for TOSCI; » Strengthening human skills in the field of sunflower seed breeding and purification; » Identifying and adopting high-yielding sunflower varieties from other countries and harmonizing seed laws; » Purifying existing varieties of sunflower; » Promoting the use of improved and high-yielding varieties to sunflower farmers (by seed companies, processors, LGAs, MOLF and demonstration plots). 	2						<ul style="list-style-type: none"> » At least two new sunflower varieties (hybrids) are introduced in the market by 2019 » Three new storage facilities constructed for ASA » Two new sites, including lab and offices, for TOSCI » Three additional ARIs deal with sunflower » At least 10% annual budget increase for the ARIs over 2016–2019 in comparison to 2015 » At least 75% of sunflower farmers are using improved varieties 	MOLF	MoF, SUA, Ilonga and Naitendele ARIs, PDB, AMDT, LGAs	AMDT, Supporting Indian Trade and Investment in Africa (SITA)
	1.1.4 Promote the use of quality inputs, namely high-quality seeds, to farmers; farmers' associations and cooperatives, as a means to increase yields but also improve input distribution services.	1						<ul style="list-style-type: none"> » A plan for promoting high-yielding seeds developed by 2016 » ASA and TASTA establish annual distribution network for sunflower seeds 	TEOSA	TASUPA, Agro-dealers, TASTA, MOLF, ASA, Ilonga and Naitendele ARIs	MALF, AMDT, TASTA, SITA, LIC
	1.1.5 Introduce high-yielding seed varieties from EAC / SADC in order to speed up the process of adoption (one year testing at TOSCI, or less is required if registered in two EAC/SADC countries) on a temporary basis of two to three years. Increase the number of seed companies' demonstration plots.	1						<ul style="list-style-type: none"> » At least four companies acquire permits to import and establish demonstration plots for new improved varieties 	TEOSA	TOSCI, MOLF, TASTA, ARIs, PMO-RALG	AMDT

Strategic objective 1: Increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
1.1 Increase the availability and accessibility of certified sunflower seeds.	1.1.6 Apply a new business model for managing seed demand / production (current record variety) for sunflower: » Processors to have annual crushing requirement (what is the seed requirement for annual crushing, how many farmers + volume); » TASUPA to consolidate the annual seed requirement for processors to distribute seeds through contract farming / AMCOs); » TEOSA & TASUPA to meet with ASA / TASTA to discuss annual seed requirements; » Establish annual contracts between processors and ASA / TASTA for producing seeds; » ASA / TASTA to deliver seed to processors based on contract clauses; » Processors to source through contract farming (link to insurance and contract enforcement).	2						TASUPA	TEOSA, CEZOSOPA and other processor associations, AMDT, EAGC	AMDT, TASUPA	
	1.1.7 Strengthen partnerships with regional and international seed-producing institutes (Syngenta Foundation, etc.), supporting Naliendele ARI, Ilonga ARI (and maybe TOSCI) to become members so as to have new germplasm varieties for specific needs.	1						Naliendele ARI	TOSCI, MALF	SITA	
	1.1.8 Develop and apply a incentive scheme to encourage farmers to use high-yielding seed varieties	2						MALF	ANSAF, TASUPA, TEOSA, MWIWATA, Mount Meru Millers	SITA, ANSAF	
1.2 Improve the availability, distribution and accessibility of agricultural inputs, including fertilizers and pesticides.	1.2.1 Support – through strategic linkages between sunflower producers (AMCOs, farmers' associations, and processors) and the agro-dealer network (through TANADA) – agro-dealers to increase their presence at the village / district level. Activity to be achieved through collaboration between regional cooperative officers and district councils (Department of Agriculture) in supplying the list of AMCOs, associations, etc. that work in sunflower.	2						TEOSA	TANADA, MALF		
	1.2.2 Support and build capacity of AMCOs, farmers' associations and microfinance institutions (SACCOS, etc.) to complete soil tests to assess fertilizer requirements and to proceed with complete regular procurement procedures for fertilizers and pesticides. The activity will ensure that AMCOs, farmers' associations and microfinance institutions (SACCOS, etc.) have an assessment of annual input requirements as a part of their business planning procedures.	2						TEOSA	MALF, fertilizer companies, PMO–RALG	MALF	
	1.2.3 Support sunflower demonstration plots to promote GAP and new quality seeds, including at Farmer Field Schools in priority regions: Dodoma, Singida, Iringa, Mbeya, Njombe, Shinyanga, Simiyu, Manyara, Katavi, Ruvuma, Morogoro, Rukwa and other emerging regions.	2						MALF	TEOSA, EAGC, TASTA, PMO–RALG		

Strategic objective 1: Increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
1.3 Strengthen and facilitate the development of small-, medium- and large-scale agribusiness services (bundle of services) and agro-processing across the United Republic of Tanzania.	1.3.1 Lobby the Government to accord investors in agribusiness services with the same incentives as 'strategic investor' status, thereby qualifying them for special incentives and encouraging the development of agribusiness services across the United Republic of Tanzania. TEOSA, ACT and EAGC to lobby MALF NISO for adapted / reduced requirements to attribute 'strategic investor' status to agribusiness investors due to the risks associated with agriculture.	1						» At least 50% of large- and medium-scale investors in sunflower agribusiness have acquired strategic investor status by 2020	TIC	ACT, TEOSA, EAGC	
	1.3.2 Promote and encourage a clustering approach so as to facilitate access to strategic investor status by working with EPZA and LGAs.	1						» At least 50% of all sunflower clusters and priority regions supported by the Government and bilateral partners	TIC	EPZA, NDC, TEOSA, PMO-RALG	
	1.3.3 Convey to agribusiness providers the specific demands of the sector (acres, tractors, seeds, etc.) in order for the agribusiness providers to adapt their supply and marketing.	2						» A databank detailing the need for agribusiness requirements is developed, maintained and accessible through TEOSA	TEOSA	MALF, TPSF, TCCIA	TPSF, SITA
	1.3.4 Promote partnerships (joint ventures) between foreign investors and national entrepreneurs (bundle of services providers) and agro-processors to increase the size of national agribusiness providers. This will be achieved through legally binding shareholding companies.	1						» Local and foreign investors provide bundled services to farmers by 2018	TEOSA	EAGC	
	1.3.5 Provide long-term, public financial support to domestic agribusiness investors, through loan guarantees, a low-interest industrialization fund and crop insurance.	1						» Capital raised through local channels increases over the baseline period	MoF	TEOSA, MITI, MALF	
1.4 Increase the capacity of farmers and farmers' associations to produce quality sunflower seeds for crushing.	1.4.1 Provide training to AMCOs and farmers' associations on the importance of having detailed business plans as an instrument to plan production, define market orientations and access finance.	1						» Each AMCO or registered farmers' association is supported to develop a business plan reflecting farming as a business	SIDO	SUA, Moshi University, private consultants, TCCIA	
	1.4.2 Organize an annual forum to discuss sunflower subsector production / development issues. Hold a session which will focus on the importance of groups / associations being registered so they will be recognized by financial resources providers, in order to encourage the registration of such groups. Also use the forum to sensitize farmers' association members to approach the Government Property and Business Formalization Programme (Mkurabita) to formalize land titles. Back to back with the forum, organize an annual sunflower event (i.e. sunflower or edible oil week / business to business meetings, etc.), including supplier matchmaking sessions to promote the economic value of sunflower production, trade and nutritional information (food security).	2					» Annual forum takes place from 2016 » At least 50% of all farmer groups who attend the forum are registered and can be eligible for financial resource applications	TASUPA	TEOSA, TCCIA, AMDT, FAO, LIC MVIWATA, Tanzania Graduate Farmers Association, Mkurabita		
	1.4.3 Strengthen leadership capacities of farmers' association / co-ops through trainings to adhere to good governance practices.	1						» Leadership trainings conducted to all sunflower farmers' associations, and elections held periodically	SIDO	TEOSA, TASUPA, Department of Cooperatives, SUA, Moshi University, private consultants, TCCIA	LIC

Strategic objective 1: Increase sunflower production and productivity through the adoption of modern production techniques to meet national and international demand.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
1.5 Improve access to finance along the value chain.	1.5.1 TEOSA and TASUPA to prepare the business case to TADB for establishing a special preference for a sunflower sector production and processing financing mechanism.	1						TEOSA	TASUPA, TADB, EAGC, MALF	AMDT, MALF	
	1.5.2 Organize an annual meeting between TEOSA, sector associations, AMCOs, SACCOS / TADB and other banks to discuss access to finance and opportunities for financing the development of the sunflower subsector.	1						TADB	TADB, TEOSA, ACT, ANSAF		
1.6 Promote the use of insurance across the value chain.	1.5.3 Apply to the commodity exchange / warehouse receipt system to recognize sunflower as a priority crop to be traded on the exchange.	1						TEOSA	Tanzania Warehouse Licensing Board, TCDC, MITI		
	1.6.1 Build up the system to operate a 'Weather Index Crop Insurance plan' (e.g. drought, floods, etc.) by facilitating microinsurance companies to work with farmers' associations and cooperatives by setting up Global Positioning System weather stations.	1						TEOSA	TMA, MicroEnsure, TCDC	SITA	
	1.6.2 Pilot an insurance scheme based on yield thresholds, before expanding to a nationwide scheme.	1						MicroEnsure	TEOSA, ANSAF		
	1.6.3 Promote the 'Weather Index Crop Insurance plan' (i.e. Kilimo Salama's) and storage and warehouse insurance to organized AMCOs by bundling insurance products.	1						TEOSA	Insurance companies		
1.7 Encourage the modernization of technologies in the sector.	1.7.1 Promote the adoption by sunflower processors of appropriate processing technologies in the target regions. Include promotion of leasing of technologies for small-scale refiners.	1						TASUPA	Regional sunflower associations, TEOSA, sunflower sector associations	SITA, MITI, UNIDO, SNV, LIC, AMDT	
	1.7.2 Organize learning visits by sunflower subsector associations to modern and well-performing production and processing operations at national and international levels so as to encourage rapid adoption of technologies in the sector.	1						TASUPA	TEOSA, sunflower sector associations	SITA, MITI, UNIDO, SNV, LIC	
	1.7.3 Facilitate linkages between sunflower processors and manufacturers and suppliers of modern sunflower processing and refining machines through organized visits and participation in various agricultural exhibitions / shows at national and international levels.	1						TASUPA	CEZOSOPA, TEOSA, sunflower sector associations	SITA, MITI, UNIDO, SNV, LIC	
	1.7.4 Provide training in GMP to oil refiners by working through processors' associations, so that the majority of processors adopts acceptable standards for processing edible products.	1						TASUPA	CEZOSOPA, TOSA, sunflower sector associations	SITA, MITI, UNIDO, SNV, LIC	

Strategic objective 2: Modernize the sunflower industry through strengthening coordination, institutional capacity and skills across the value chain.											
Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
2.1 Improve transparency and trust across the value chain.	2.1.1 Develop a simple and clear code of conduct concerning the best practices along the value chain, to be disseminated to all actors: farmers' organizations, processors' associations, financial institutions, etc.	2						» A code of conduct for actors developed and disseminated	TASUPA	TEOSA Cereals and Other Produce Board (COPB), regional sunflower association, AMCOs, SACCOS	SITA
		1						» At least 80% of farmers sell grains using weighing scales	Weights and Measures Agency	TEOSA, MITI, MALF, EAGC, ANSAF, TASUPA	SITA, AMDT
		1						» New regulations that govern sunflower grain selling through recognized centres introduced » COPB to issue sunflower grain buyers permits by 2018	COPB	PMO-RALG, TEOSA	COPB
2.2 Promote contract farming in sunflower production.	2.1.4 Promote transparency by including sunflower grains in the existing market information systems of MVIWATA and other actors: » Confirm status and performance of existing market information platforms for smallholder farmers' organizations; » Build cooperation among regional associations for information sharing; » Consolidate and disseminate this information to value chain stakeholders – bulk messaging for farmers; » TEOSA to negotiate a preferential rate for its members to access the market information systems.	2						» Existing market information systems at MVIWATA and EAGC incorporate sunflower products by 2017	TASUPA	TEOSA EAGC, MVIWATA, ACT, regional sunflower associations	SITA
		3							TASUPA	TEOSA	
		2						» Contract farming pilots are organized in target LGA's to demonstrate effectiveness	MVIWATA	TEOSA, TASUPA regional processors' associations, millers, TCDC	AMDT, LIC
2.3 Strengthen sunflower industry coordination.	2.2.2 Develop – with the help of farmers and buyers – at least two contract models that can be adapted by the actors.	3						» At least two models for contract farming developed and adopted by buyers and farmers by 2018	TASUPA	TEOSA, EAGC, regional sunflower associations MALF, MITI, TCDC, COPB	SITA, LIC, AMDT
		1						» Capacity assessment report for TEOSA and expected activities are compiled	TEOSA/TASUPA	MITI	SITA, SNV

Strategic objective 2: Modernize the sunflower industry through strengthening coordination, institutional capacity and skills across the value chain.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2020	2019	2018	2017	2016				
2.3 Strengthen sunflower industry coordination.	2.3.2 Take inventory (capacity, type of technology, location, services, management level) of all key stakeholders (farmers' groups, processors, institutions) in the sunflower value chain and review the national database so that is easily accessible through an online platform.	2						» Sunflower stakeholders database is established, regularly updated and shared through an online platform	TEOSA/ TASUPA	MITI, MALF, EAGC, ANSAF, SNV	SITA, EAGC
	2.3.3 Mobilize voluntary registration of membership to sector associations from all levels of the sunflower value chain (to strengthen coordination within the sector) by including new associations through campaigning and other promotion activities.	3						» Increased membership of the sunflower network	TEOSA/ TASUPA	EAGC, ANSAF, SNV, LIC	TEOSA
	2.3.4 Appoint a lead Government agency for the coordination of edible oilseed-related issues in the country.	2						» Lead agency appointed	MALF	CEZOSOPA, TASUPA, MBESOPA, IONESA, EAGC, TEOSA	
	2.3.5 Support the review and relaunching of TEOSA's and TASUPA's five-year strategies so that it can align to emerging opportunities and challenges, and its members' needs.	1						» A new strategy focusing on the future of TEOSA is launched by early 2017	TEOSA/ TASUPA	MITI, MALF	SITA, AMDT
	2.3.6 Based on the new sector association strategies, support the establishment of required units who will then be tasked with the implementation of the strategy.	1						» A strategy unit is established at TEOSA and financial capacity to implement its plans is in place by 2018	TEOSA/ TASUPA	TanTrade, SIDO, TCCIA, MITI	SITA, AMDT, UNIDO
2.4 Strengthen the capacity of key organizations of the sector.	2.3.7 Create strategic alliances with other national, regional and international agencies and institutions through visitations, MoUs, etc. for market penetration of different products from sunflower.	1						» TEOSA signs MoUs with at least five agencies and institutions	TEOSA	TanTrade, EAGC, SIDO,	EAGC, AMDT, UNIDO
	2.4.1 Strengthen capacity by supporting training and exposure programmes to at least two TBS staff so that they can provide training of trainers on food safety and quality issues, standardization, and quality management systems.	2						» Two TBS food safety staff are trained	TBS	TEOSA	SITA
	2.4.2 Strengthen the capacity of ARIs through linkages with other regional and international research stations and breeders, in order to improve research capabilities on new varieties.	2						» At least four regional and international research stations and breeders identified and collaborating with ARIs	Naliendele ARI, Ilonga ARI	MALF	SITA, MALF
	2.4.3 Strengthen the capacity of SIDO in terms of infrastructure and technical staff skills by: » Trainings » Procurement of testing equipment » Delivering incubator programmes.	2						» SIDO staff are trained and new equipment has been procured » Incubator programmes are implemented	SIDO	MITI, TBS, TEOSA	SITA
	2.4.4 Strengthen the capacity of TIRDO in terms of infrastructure and technical staff skills by: » Trainings » Procurement of testing equipment » Delivering incubator programmes.	2						» TIRDO staff are trained and new testing equipment has been procured » Incubator programmes are implemented	TIRDO	MITI, SIDO, TBS, TEOSA	SITA
2.4.5 Strengthen capacity of TFDA on training of oil processors on HACCP and to reach out to consumers on potential health risks through targeted outreach services.	2						» TFDA trains processors in all target regions	TFDA	TEOSA, IONESA, etc.	SITA, TFDA	

Strategic objective 2: Modernize the sunflower industry through strengthening coordination, institutional capacity and skills across the value chain.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
2.4 Strengthen the capacity of key organizations of the sector.	<p>2.4.6 Support the Vocational Educational and Training Authority to develop a curriculum on sunflower oil processing and machinery maintenance.</p> <p>2.4.7 Build the capacity of PMO–RALG through trainings to strengthen the role of extension services and harmonize extension packages for sunflower industry.</p> <p>2.4.8. Build TIC's investment promotion capacity and resources for agribusiness promotion, in particular for the hiring and / or development of agribusiness specialists; purchase of marketing studies; internal systems for the management of investor information and relationship management; articulation of opportunity-specific business cases that will resonate with likely investors; and allocation of budget to an overseas investor-targeting campaign.</p>	2					<p>» A curriculum for sunflower oil processing and machinery maintenance is developed by 2017</p> <p>» Extension packages on sunflower industry harmonized by 2018</p> <p>» Two agribusiness specialists on staff</p> <p>» Investor tracking system in place</p> <p>» Well-articulated value proposition for a variety of sunflower value chain segments</p> <p>» One targeting campaign completed</p>	Vocational Educational and Training Authority	MEVT, TEOSA	SITA	
2.5 Promote the use of locally produced sunflower products.	<p>2.5.1 Co-finance key sunflower value chain actors to participate in the annual national and zonal agricultural shows (Name Name) as well as the international trade fair in Dar es Salaam (Saba Saba). The selection of actors across the value chain (from input providers to distributors / exporters), should not be regional-specific but instead promote a value chain model.</p> <p>2.5.2 Initiate media programmes to stimulate demand for and use of sunflower as a healthy edible oil product.</p>	2					<p>» Twenty sunflower value chain actors participate in each event</p> <p>» Targeted sunflower oil is promoted in at least 10 electronic and three print media</p>	TASUPA	TEOSA, MITI, MAF	SITA, AMDT, LIC, UNIDO, SNV	
2.6 Improve business management skills across the sunflower value chain.	<p>2.6.1 Provide specialized training and mentoring on business / financial planning, company records, accounting, etc. to the sunflower industry by developing a partnership with some select specialized training institutions such as Moshi University College of Cooperative and Business Studies, University of Dodoma, College of Business Education, University of Dar es Salaam Entrepreneurship Centre, Mzumbe University, etc.</p> <p>2.6.2 Working through registered farmers' organizations, conduct training for farmers on farming as a business and on related agribusiness services, including contract farming.</p>	2					<p>» An MoU is signed between TEOSA and at least five training institutes by 2017</p> <p>» Seventy-five per cent of registered farmer groups receive training by 2018</p>	TEOSA	TASUPA, MEVT	TEOSA, ANSAF, EAGC, MITI, MAF	
2.7 Improve the quality and increase the availability of storage facilities at the village and district levels.	<p>2.7.1 Take inventory of all village, district and regional warehouses to establish the quality, quantity and capacity of proper storage facilities. Depending on missing warehousing facilities, LGA to construct new facilities, or the private sector (since charges are collected on storage facilities). The private sector could be provided incentives to construct new facilities in terms of land leasing.</p> <p>2.7.2 Propose the refurbishment of warehouses through the establishment of Rehabilitate, Operate and Transfer or Rehabilitate, Own and Operate public–private partnerships. Invite collateral management systems to be piloted in specific zones.</p> <p>2.7.3 Lobby for the enactment of by–laws that require sunflower farmers to use the storage facilities, as a means to improve the quality and simultaneously the value of the crop in line with the premiums / discount chart.</p>	2					<p>» In each target region at least one warehouse is built through public-private partnership / Rehabilitate, Own and Operate or Rehabilitate, Operate and Transfer by 2019</p> <p>» By–laws are enacted</p>	MVIWATA Tanzania Warehouse Licensing Board MITI	EAGC TADB, COPB MALF, TIC, EPZA	PMO–RALG	

Strategic objective 3: improve the quality of sunflower products to comply with national and international standards.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
3.1 Implement premium or discount rates for grains based on quality.	3.1.1 Develop a chart of premiums / discounts based on quality of grains (oil, fibre, free fatty acids, purity) to be used as an indicative price premium system and to bring transparency in transactions. Organize a visit to see how the system works for coffee and cashew.	1						<ul style="list-style-type: none"> » A chart of indicative prices for premiums / discount established by 2017 » One visit to coffee and cashew boards organized for learning 	TEOSA	MVIWATA, MITI	SITA
	3.1.2 Encourage all transactions to be made following the premiums / discounts system by disseminating the chart of premiums / discounts regularly (twice a year through newspapers, SACCOS, AMCOs, sector associations, etc. and websites) to value chain operators.	1						<ul style="list-style-type: none"> » At least 50% of sunflower is sold following the chart of premiums / discounts 	TEOSA	MVIWATA, PMO–RALG	MALF, SITA
	3.1.3 Build collaboration between public and private laboratories (e.g. SGS, Veritas, CEZOSOPA, TIRDO, Weights and Measures Agency, higher learning institutions, etc.) to explore opportunities for testing smaller lots from traders.	1						<ul style="list-style-type: none"> » At least 40% of sunflower traders / processors are using existing laboratories to test sunflower by 2019 	TASUPA	TEOSA	LIC, UNIDO, MITI
	3.1.4 Establish and strengthen the capacity of existing laboratories (CEZOSOPA, TIRDO) to act as multi-user testing labs for producers, traders and small-scale processors to test quality.	1						<ul style="list-style-type: none"> » CEZOSOPA & TIRDO laboratories are functional and have multi-users by 2017 	CEZOSOPA	TEOSA	UNIDO, LIC
3.2 Promote GAP techniques in sunflower production.	3.2.1 Harmonize training curricula adapted to sunflower production by working with SUA and MALF to develop a single GAP training manual.						<ul style="list-style-type: none"> » Harmonized training manual adapted to sunflower developed by 2017 	MALF	TEOSA, SUA, PMO–RALG, ARIS	MALF	
	3.2.2 Provide trainings to the targeted subsector associations and AMCOs on GAP for sunflower production through extension officers and Farmer Field Schools. Information on climate adaptation techniques and technologies to be provided as part of the trainings. Trainings to cover: <ul style="list-style-type: none"> » Good drying techniques » Harvesting » Storage techniques » Packing and use of good packing materials » Integrated pest management practices » Etc. 	1					<ul style="list-style-type: none"> » At least 75% of sunflower farmers in the target regions trained on GAP and postharvest loss management by 2020 	ASA	MVIWATA, PMO–RALG, TEOSA, CEZOSOPA and other processors associations	GLOBALGAP National Technical Working Group	
	3.2.3 Organize exchange visits for sunflower producers to best-performing pilots for learning about productivity and quality improvement.	1						<ul style="list-style-type: none"> » At least 20% of all sunflower producers supported to participate in the exchange visits by 2019 	MVIWATA	TEOSA, PMO–RALG, TASUPA	MALF, ANSAF, ACT
	3.2.4 Build partnerships with agribusiness service providers to deliver the GAP trainings to sunflower farmers and small processors in the target regions. Agribusiness service providers will sign a contract with TASUPA specifying the type of services needed and targeted subsector actors.	2						<ul style="list-style-type: none"> » Seventy-five per cent of GAP trainings are provided by agribusiness providers 	TASUPA	TEOSA, ASA, MVIWATA, DANADA	SITA, LIC
3.2.6 Support sunflower farmers through their associations and AMCOs to become GLOBALGAP certified by promoting contract farming and capacity-building trainings on GAP to strengthen sunflower farmers' capacities.	3						<ul style="list-style-type: none"> » At least 100 farmers' associations and AMCOs supported per target region 	MVIWATA	ASA, TEOSA, TASUPA, PMO–RALG, processors associations	SITA, LIC	

Strategic objective 3: Improve the quality of sunflower products to comply with national and international standards.								
Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period			Possible funding source		
			2016	2017	2018			
			2019	2020	Targets	Lead implementer		
3.2 Promote GAP techniques in sunflower production.	3.2.7 Provide regular information to farmers on GAP, climate change, pest management, etc. through radio and TV programmes, mobile applications, meetings, market information systems, etc.	2			» Publicity materials / programmes on GAP, climate change and pest management prepared and aired weekly	TEOSA	MALF, MVIWATA, TASUPA, Tanzania Graduate Farmers Association, radio and TV stations	SITA, LIC, UNIDO, SNV
	3.2.8 Subsector actors to collaborate with TADB and other financial institutions to explore the creation of specific funds dedicated to modernizing infrastructure (solar technologies, irrigation, etc.).	2			» Special funds allocated to sunflower subsector actors created by 2017	TEOSA	TASUPA, Formal financial institutions	TADB, MoF
3.3 Ensure compliance with and adherence to internationally recognized food safety and quality measures.	3.3.1 Harmonise edible oil standards by TFDA, TBS and other guidelines governing edible oils sector to ensure the national edible oil standards and regulations are aligned to international standards.	1			» All guidelines governing the edible oil sector reviewed, harmonized and aligned to international standards by 2017	TBS	TFDA, MITI, Prime Minister's Office, TASUPA	MITI
	3.3.2 Institute and enforce stringent measures to bar adulteration of oil (mixing of sunflower oil with palm oil) for regional and national markets by strengthening the enforcement capacity of TFDA and TIRDO for adulteration testing and punishment.	2			» Capacity-building of TFDA and TIRDO on testing for adulteration conducted » Tests for adulteration are conducted regularly and actions taken	TFDA	TBS, TNFC, TEOSA, TASUPA, regional sunflower associations TCCIA, TFSF	MITI
3.3.3 Provide training on assurance frameworks such as HACCP, international standards and private standards to sunflower oil processors of all categories. A training needs assessment will be conducted and processors will be trained according to their needs.	3.3.3.1	3			» At least 80% of processors are aware of and conform to international standards » All sunflower oils exported meet international standards by 2020	TBS	TFDA, quality assurance bodies, MITI	MITI
	3.3.3.2	1			» Quality assurance monitoring conducted regularly	Veritas	TBS, TFDA	Veritas, SGS
3.3.4 Organize joint planning with TFDA so as to have systematic monitoring and supervision of the implementation of quality standards practised by processors.	3.3.4.1	2			» Awareness creation campaigns on quality marks and use of barcodes for sunflower products conducted annually	TEOSA	TASUPA, TBS, TFDA, MVIWATA	MITI
	3.3.4.2	2			» All laboratories are well equipped and functional to test sunflower lots by 2019	TEOSA	TASUPA, TBS, TFDA	LIC, UNIDO, MITI
3.3.5 Create public awareness of the importance of quality marks and use of barcodes for sunflower products through media and campaigns.	3.3.5.1	2			» All processors trained on the use of mobile kits to test sunflower oil quality » Mobile testing kits for sunflower oil purchased and supplied to processors	TEOSA	TBS, TFDA, MITI, TIRDO, TASUPA	MITI, SITA, contributions from processors
	3.3.5.2	2						

Strategic objective 3: improve the quality of sunflower products to comply with national and international standards.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
3.4 Promote development of organic production of sunflower to respond to market demand.	3.3.8 Build the sector's human resource capacity for producing and certifying safe and high-quality vegetable oils by supporting relevant programmes at the Department of Food Science and Technology at SUA.	2						» Improved quality of tested oils. More positive test each year.	TFDA	TEOSA	
	3.4.1 Establish a database and mapping of organic sunflower producers, processors and traders / exporters and link them the international organic market.	2					» A database of all sunflower producers, traders and processors established by 2018	Tanzania Organic Agricultural Movement	TEOSA, ACT, MVIWATA, Tanzania Graduate Farmers Association	MALF, Participatory Guarantee System, International Guarantee System	
	3.4.2 Map field plots for organic farming through geographic information systems in order to provide information for insurance systems and to encourage organic production.	2					» Organic sunflower farms receive certifications by 2018	TASUPA	TEOSA, TanCert, MicroEnsure, MALF		
	3.4.3 Provide a mentoring and accompaniment programme for farmers' associations and oil crushers wanting to produce organic sunflower grains / seeds and organic sunflower oil by collaborating with the Tanzania Organic Agricultural Movement, Participatory Guarantee System and International Guarantee System to select and certify larger and small sunflower producers and oil processors in organic production.	2					» Larger and small sunflower producers and oil processors certified in organic production	Tanzania Organic Agricultural Movement	TEOSA	MALF, Participatory Guarantee System, International Guarantee System	

Strategic objective 4: Stimulate growth in the sunflower industry by implementing coherent and supportive policies in line with national development objectives.							
Operational objectives	Activities	Priority 1= High 2= Med 3= Low	Implementation period			Possible funding source	
			2016	2017	2018		2019
4.1 Review policy issues affecting the sunflower industry.	4.1.1 Conduct impact analysis of edible oil imports and tariff regime versus local edible oil production in order to assess the effect of raising tariffs on palm imports. The impact analysis will address health issues, 0% tariff on import of crude oils, application of 18% VAT to all oil traders, and crop cess.	1					TEOSA Impact analysis report of edible oil highlighting current imports tariff, health issues and VAT issues produced by 2017 MVIWATA, ANSAF, TASUPA, TCCIA, producers' and processors' associations SITA, LIC
	4.1.2 Write evidence-based policy position papers to conduct policy campaigns, lobbying and advocacy interventions (public debates / dialogues and media conferences / events) on the following topics: land for sunflower farming; benefits of sunflower oil compared with other edible oils; imports versus local produce; and how tariffs and other taxes can affect sunflower production and marketing.	2					TEOSA Position papers with evidence on issues for advocacy formulated by 2017 Lobbying and advocacy campaigns conducted MVIWATA, SUA, ARIs, TASUPA, MBESOPA, INEOSA, ACT SITA, BEST-D
4.2 Improve data collection accuracy and data harmonization for effective planning and policy implementation.	4.2.1 Develop and apply a data collection methodology appropriate to the sunflower sector (production to processing to sales) and seek approval from the National Bureau of Statistics.	1					MALF Guidelines for sunflower data collection established by 2017 Surveys conducted and sunflower data updated annually TEOSA, National Bureau of Statistics, ACT, EAGC, TASUPA MITI, MAF, FAO
	4.2.2 Develop an electronic monitoring system to record volumes of sunflower produce traded locally and internationally. Study the existing market information systems, and review and harmonize them to get one consolidated system accessible to all sector actors where data on market transactions of sunflower products are easily accessible.	2					TOCIA An electronic monitoring and evaluation system for sunflower transactions established by 2019 PMO-RALG, TanTrade, TEOSA, EAGC, TASUPA, ACT MITI

Strategic objective 5: Provide timely and appropriate market entry support for effective market development.

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
5.1 Implement targeted market development interventions.	5.1.1 Enhance market intelligence within the country and develop a market profile for sunflower oil and sunflower cake products. Facilitate by organizing buyer–seller meetings with local users of the cake such as animal feed industries or livestock keepers.	2					<ul style="list-style-type: none"> » National market profiles of oil and cake are developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TanTrade	TEOSA, TASUPA, EAGC, National Economic Empowerment Council	SITA	
	5.1.2 Enhance market intelligence on the Indian market by developing a market profile with a specific focus on sunflower oil and cake by organizing buyer–seller meetings with importers from India.	2					<ul style="list-style-type: none"> » Indian market profile for oil developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TEOSA	TASUPA, EAGC, TanTrade	SITA	
	5.1.3 Enhance market intelligence on the Chinese market by developing a market profile with a specific focus on sunflower oil, and organizing buyer–seller meetings with importers from China.	2					<ul style="list-style-type: none"> » Chinese market profile for oil developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TEOSA	TASUPA, EAGC, TanTrade	SITA	
	5.1.4 Enhance market intelligence on the European markets by developing a market profile with a specific focus on sunflower oil and cake, traceability, quality requirements, contract management, certifications, packaging methods and materials; and organizing buyer–seller meetings with importers from Europe.	2					<ul style="list-style-type: none"> » European market profiles for oil and cake are developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TEOSA	TASUPA, EAGC, TanTrade	SITA	
	5.1.5 Enhance market intelligence on regional markets (EAC, Common Market for Eastern and Southern Africa, SADC) by developing a market profile with a specific focus on sunflower oil and cake, and organizing buyer–seller meetings with importers from these trading blocks of EAC, SADC and the Common Market for Eastern and Southern Africa.	2					<ul style="list-style-type: none"> » Regional market profiles for oil and cake are developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TEOSA	TASUPA, EAGC, TanTrade	SITA	
	5.1.6 Enhance market intelligence on the Switzerland market by developing a market profile with a specific focus on sunflower oil and types or preferred varieties, certifications, traceability, and organizing buyer–seller meetings with importers from Switzerland.	2					<ul style="list-style-type: none"> » Switzerland market profiles for oil and cake are developed, accessed and implemented by 2017 » Number of buyer–seller meetings organized 	TEOSA	TASUPA, EAGC, TanTrade	SITA	
5.2 Promote the sunflower sector.	5.1.7 Promote and support TEOSA and TASUPA members to use e-commerce for trade of products by providing targeted support and trainings.	2					<ul style="list-style-type: none"> » An information technology expert at TEOSA supports members to engage in e-commerce so as to improve trade in sunflower products 	TanTrade	TEOSA, TASUPA, EAGC, SIDO		
	5.2.1 Work with MITI, MoF, EPZA and MALF to position sunflower as an import substitution crop and product.	2					<ul style="list-style-type: none"> » Sunflower is listed as a priority crop in the United Republic of Tanzania by MALF and Big Result Now 	MALF	MITI, TEOSA, PMO–RALG	Big Result Now	
	5.2.2 In partnership with other development partners and programmes such as AMDT, LIC, SNV, United States Agency for International Development, etc., promote sunflower as a climate-change-resilient crop.	1					<ul style="list-style-type: none"> » Sunflower crop is deliberately promoted in at least 50% of drought-prone regions of the United Republic of Tanzania 	MALF	International Crops Research Institute for the Semi-Arid Tropics, ASA	FAO	

Operational objectives	Activities	Priority 1=High 2=Med 3=Low	Implementation period					Targets	Lead implementer	Supporting implementers	Possible funding source
			2016	2017	2018	2019	2020				
5.2 Promote the sunflower sector.	5.2.3 Develop a support system to encourage processors to participate in local, regional and international fairs by supporting presentation and marketing skills	2						» At least 30 processors participate in locally and internationally by end of 2018 and demonstrate adequate marketing skills.	TanTrade	TEOSA, TASUPA	AMDT, LIC UNIDO, United States Agency for International Development
	5.2.4 As part of an oilseed intervention, work with TEOSA to organize and participate in monthly or quarterly call-in interviews with the electronic media.							» TEOSA secretariat and members participate in both radio and TV programmes every quarter	TEOSA	TNFC, regional sunflower associations, INEOSA, MBESOPA, MBEOSA, TASUPA	TEOSA, AMDT
	5.2.5 Develop and implement marketing and branding material that reflects the unique story of Tanzanian sunflower products, such as production by smallholder farmers, naturally / organically grown, etc.	2						» Promotional and marketing material developed jointly with TEOSA members	TEOSA	TASUPA, TanTrade	
	5.3.1 Work through regional authorities to support the establishment of a sunflower cluster in each of the targeted regions where sunflower is grown.	2						» Sunflower clusters established in at least five regions by 2018	TASUPA	TEOSA, MBESOPA, CEZOSOPA, INESOPA etc., SIDO, TCCIA, PMO-RALG	
	5.3.2 In partnership with Regional and District Business Councils, discuss and make resolutions that promote public and private investments in the identified clusters.	2						» Annual Regional and District Business Council meeting minutes identify and support clusters	TPSF	TASUPA, TEOSA, EAGC	
5.3.3 Develop a joint investment promotion of clusters between TEOSA, PMO-RALG and TIC in the main sunflower producing regions.	2						» Regional secretariats in the target regions allocate land and develop infrastructure for clusters	TPSF	TEOSA, TIC, TASUPA	LIC	

APPENDIX 1: PARTICIPANTS IN SECTOR STRATEGY CONSULTATIONS

Pre-engagement consultation

Name of institution	Contact person
ACT	Janet Bitegeko
ASA – seed suppliers	Jackline Itatilo
Birchand Oil Mills	Manish Aggarwal
CEZOSOPA	Ringo Ringo
COSTECH	Festo Maro
CTI	Hussein Kamote
EAGC	Terry Ikunda
MALF	Twahir Nzalawahe
MITI	Stella Lugongo
Mount Meru Millers Ltd	Atul Kumar Mittal
NDC	Goodwill G. Wanga
UNIDO	Vedastus Timothy
SIDO	Omari J. Bakari
Sunshine Industrial Ltd	Li Lun
Tanzania Organic Agriculture Movement	Jane Marwa
TCCIA	Adam Zuku
TEOSA	Rashid Ally Mamu
TIRDO	Mkumbukwa Ma Mtambo
Uncle Milo Sunflower Oil	Joseph Lwoga
Jackma Enterprises	Jackson Massawe

First consultation

Name of institution	Contact person
ACT	Susan Masagasi
ASA – seed suppliers	Jackline Itatilo
CEZOSOPA	Ringo Ringo
EAGC	Sharifa Chikaha
MITI	Otilia G. Haule
MALF	Twahir Nzalawahe
Mount Meru Millers Ltd	Nayan Valand
UNIDO	Vedastus Timothy
Sunshine Industrial Ltd	Li Lun
Tanzania Organic Agriculture Movement	Jane Marwa
TEOSA	Rashid Ally Mamu

Name of institution	Contact person
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Jackma Enterprises	Jackson Massawe
INNODEV Consultancy Co. Ltd	Laurent Kaburire
Advanta	Iqtidar Ahmed
Root Capital	Ally Jamal
Tuboreshe Chakula	Epimaki Boniface
Mji Mpya	Lukas Sebastian Mdoe
TanTrade	Asha Fikiri Malanga
EPZA	Grace Lemunge
TIRDO	Ludovick Manege
UNIDO Tanzania Industrial Upgrading and Modernization Project Unit	Margret Ikongwe
Tumaini University	Enock S. Ugulumu
Shadeco	Enock Ndongole
Niponika Oil Processing Enterprise	Colman Masawe
Regional Agricultural Officer	Ben Abraham
ANSAF	Audax Rukonge
Jielong Holdings	Jie Qi
MITI	Ellie Pallangyo
MITI	Gevaronge Muyombe
	Allan Magoma
Agri Link Tanzania	Isaac Paul
Toam	Jane Albert

Second consultation

Name of institution	Contact person
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CEZOSOPA	Ringo Ringo
UNIDO	Vedastus Timothy
Sunshine Industrial Ltd	Li Lun
TEOSA	Rashid Ally Mamu
Uncle Milo Sunflower Oil	Joseph Lwoga
Jackma Enterprises	Jackson Massawe
National consultant	Laurent Kaburire
Tuboreshe Chakula	Epimaki Boniface
Mji Mpya	Lukas Sebastian Mdoe
TBS	Stephen Rwabunywenye
EPZA	Grace Lemunge
TIRDO	Ludovick Manege
UNIDO Tanzania Industrial Upgrading and Modernization Project Unit	Margret Ikongwe

Name of institution	Contact person
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Shadeco	Enock Ndongole
Niponika Oil Processing Enterprise	Colman Masawe
Regional Agricultural Officer	Ben Abraham
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Agri Link Tanzania	Isaac Paul
COSTECH	Festo Maro
TOSCI	Firoz Mwakitwange
ASA	Phillemon Kawamala
TANEXA	Isaac Dalushi
Litenga Holdings	Beatrice Mbunda
Greenfield Investments	Amos Malongo
EAGC	Juma Bruno Ngumuo
	Suleman Hamisi
	Goodluck Luwoga
COPB	Sarah Sudi
MITI	Yusuf Nyuki
Azania Bank	Audulile
Out Assurance Brokers	Priscilla Karobia
Out Assurance Brokers	Joash Mutal
CRS Agribusiness	Stephen Warioba
NDC	Goodwill Luwanga
MVIWATA	Aquiline Wamba

APPENDIX 2: STANDARDS THAT CAN HELP MEET BUYERS' REQUIREMENTS

1. Legislative requirements	India	<ul style="list-style-type: none"> • Food Safety and Standards Act • Vegetable Oil Products Regulation Order 1998 Food Safety and Standards Authority of India • Codex General Principles of Food Hygiene, CAC/RCP 1–1969, Rev. 3 (1997)
	Middle East	<ul style="list-style-type: none"> • Food safety laws • Maximum Limits of Pesticide Residues in Food • Codex General Principles of Food Hygiene, CAC/RCP 1–1969, Rev. 3 (1997)
	EU	<ul style="list-style-type: none"> • EU General Principles of Food Law Reg. EU No 178/2002 • General Rules on Food Hygiene Reg. 852/2004 • Microbiological Criteria for Foodstuffs Reg. 20783/2005 • HACCP
	Regional	<ul style="list-style-type: none"> • Food safety legislation in the different countries • Codex General Principles of Food Hygiene, CAC/RCP 1–1969, Rev. 3 (1997)
2. Product quality and specification	India	<ul style="list-style-type: none"> • Indian Standard Sunflower Oil IS4277:2014
	Middle East	<ul style="list-style-type: none"> • Standard for edible fats and oils not covered by individual standards GSO 2228
	EU	<ul style="list-style-type: none"> • Specific buyers' requirements and standards
	Regional	<ul style="list-style-type: none"> • Edible Sunflower Oil ICS 67.200.10 EAS299:2013
3. Packaging standards	India	<ul style="list-style-type: none"> • Code of Practice for the storage and transport of edible oils and fats in bulk
	Middle East	<ul style="list-style-type: none"> • Code of Practice for the storage and transport of edible oils and fats in bulk • Food packages – Part 1: General requirements GSO 839
	EU	<ul style="list-style-type: none"> • EU General Rules on Food Hygiene Reg. 852/2004 • European Seed Crushers' and Oil Processors' Federation Code of Practice for the transport in bulk of oils into or within the EU
	Regional	<ul style="list-style-type: none"> • Code of Hygiene for transportation of edible fats and oils in bulk EAS320
4. Traceability and preservation of identity	India	<ul style="list-style-type: none"> • N/A
	Middle East	<ul style="list-style-type: none"> • N/A
	EU	<ul style="list-style-type: none"> • Traceability Regulation EU No 178/2002
	Regional	<ul style="list-style-type: none"> • N/A

Source: Guide to Standards and Buyer Requirements in East Africa, India and International Markets for Sunflower Oil.

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