UGANDA

VALUE CHAIN ROADMAP FOR SUNFLOWER

2016-2020

International Trade Centre

UGANDA VALUE CHAIN ROADMAP FOR **SUNFLOWER**

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This value chain roadmap 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.

ITC is the joint agency of the World Trade Organization and the United Nations. As part of the ITC mandate of fostering sustainable development through increased trade opportunities, the Trade Development Strategy programme offers a suite of trade-related strategy solutions to maximize the development payoffs from trade. ITC-facilitated trade development strategies and roadmaps are oriented to the trade objectives of a country or region and can be tailored to high-level economic goals, specific development targets or particular sectors, allowing policymakers to choose their preferred level of engagement.

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This value chain roadmap was elaborated as a component of the ITC Supporting Indian Trade and Investment in Africa (SITA) project, a south-south trade and investment initiative that aims to improve the competitiveness of select value chains through the provision of partnerships by institutions and businesses from India. SITA is funded by the United Kingdom Department for International Development (DFID).

The formulation of the value chain roadmap was led by the Ministry of Trade and Cooperatives and UOSPA with the technical assistance of ITC. This document represents the ambitions of the private and public sector stakeholders for the development of the sector. Stakeholders' commitment and comprehensive collaboration have helped build consensus around a common vision that reflects the realities and limitations of the private sector, as well as of policymakers and trade-related institutions.

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

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Technical support and guidance from ITC was rendered through Rahul Bhatnagar, Aman Goel, Jim Fitzpatrick, Carlos Griffin. Ben Naturinda and Dorothy Nakimbugwe provided valuable support as National SITA coordinator and the national consultant respectively.

CONTENTS

FIGURES

TABLES

ACRONYMS

The following abbreviations are used:

aBi Trust	Agribusiness Initiative Trust
B2B	Business–to–business
CAGR	Compound Annual Growth Rate
CBI	Centre for the Promotion of Imports from Developing Countries (Netherlands)
CFR	Cost and Freight
DRC	Democratic Republic of the Congo
EAC	East African Community
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
GoU	Government of Uganda
HS	Harmonized System
HYV	High-Yield Variety
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Centre
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTIC	Ministry of Trade, Industry and Cooperatives
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organization
NASSARI	National Semi-Arid Resources Research Institute
NGO	Non-Governmental Organization
NOGAMU	National Organic Agriculture Movement of Uganda
OPV	Open-Pollinated Variety
OSSUP	Oilseed Sub Sector Uganda Platform
PoA	Plan of Action
QUISP	Quality Infrastructure and Standards Programme
R&D	Research and development
SITA	Supporting Indian Trade and Investment in Africa
SME	Small and Medium-sized Enterprise
SMS	Short Message Service
SNV	Netherlands Development Organization
UCA	Uganda Cooperative Alliance
UEPB	Uganda Export Promotion Board
UGX	Ugandan shillings
UIA	Uganda Investment Authority
UIRI	Uganda Industrial Research Institute
UNBS	Uganda National Bureau of Standards
UOSPA	Uganda Oil Seed Producers and Processors Association
USAID	United States Agency for International Development
USTA	Uganda Seed Trade Association
VODP2	Vegetable Oil Development Project 2

FOREWORDS

MS. AMELIA ANNE KYAMBADDE
MINISTER OF TRADE,
INDUSTRY AND COOPERATIVES

This Sunflower oil Roadmap provides general information for farmers, seed multipliers, processors, marketing agencies, extension personnel as well as Policy Makers. It not only details out useful knowledge about challenges of sunflower production, oil milling and marketing in Uganda, but more importantly provides a set of interventions to address these challenges.

Well noted among the interventions are measures to improve availability of inputs to the sector; improving accessibility and affordability of non-seed inputs; improving quality of institutional support, attracting value addition investment; enhancing capabilities for value transformation and finally strengthening enterprise capacities for harvesting information as a tool to access target markets. These are very important interventions necessary to contribute to the growth of the sector and improve its industrial competitiveness.

The Roadmap equally compliments Government efforts to grow the sector as highlighted in the Vegetable Oil Development Projects under the Ministry of Agriculture and the Industrial Policy under the Ministry of Trade Industry and Cooperatives.

Let me further point out that the Government of Uganda is particularly happy that the activities proposed in this value chain Roadmap focus on sunflower oil and not just seed. This is important for Uganda's industrial development goals among which value addition to the country's agricultural resources is a top priority I want to thank the ITC, particularly the SIT A project funded by DFID, for technically and financially supporting the development of this Road map.

I also recognize the efforts of the private sector through Uganda Oilseeds Producers and Processors Association (UOSPA) for rallying the sector towards contributing to the development of this Roadmap. I urge you also to rally the sector again towards implementation because that will be essential to ensure tangible growth and value chain improvements.

Going forward, resource mobilization will indeed be key and as noted in this Roadmap, efforts will need to be shepherded by many different actors including the national government and donors. We look forward to continued SITA support during the implementation phase and reiterate the ministry's commitment to robustly ensure that the necessary policy and business environment exists to allow the private sector do good and profitable business in the sector. The Ministry of Trade, Industry and Cooperatives, together with the Ministry of Agriculture, Animal Industry and Fisheries and other relevant sectors will be willing to render necessary support for effective implementation of the Road map.

I look forward to smooth and sustained implementation of this important initiative.

FOREWORDS

MS ARANCHA GONZALEZ
ITC

I am pleased to introduce the Uganda Sunflower Value Chain Roadmap as part of the International Trade Centre's "Supporting Indian Trade and Investment for Africa" (SITA) project. This document highlights the potential of the sunflower value chain to be a competitive, sustainable and employment creating sector. It is aligned with the Government of Uganda's social and economic development priorities, with particular emphasis on poverty reduction and livelihood enhancement.

Sunflower, despite being a relatively new crop in Uganda, contributes significantly to socioeconomic development. While the sector has grown considerably, spurred largely by contract farming, Uganda's ability to fully capitalise on growing global demand has been limited. Strengthening the supply chain, creating greater horizontal and vertical linkages, enhancing institutional support, diversifying the product portfolio, adopting improved production technologies and supporting investment will steer the sector on to a higher –and sustainable– growth path. In addressing sustainable agricultural practises and creation of productive capacities in the sunflower sector this work will support Goals 2 and 8 of the UN Sustainable Development Goals (SDG).

In developing this Roadmap consultations were undertaken across Uganda's public and private sector. The document reflects this inclusive and coherent vision.

It is a crucial managerial instrument to guide the implementation of reforms in the sunflower sector with the aim of increasing trade and investment opportunities and enhancing livelihoods. I am confident that all stakeholders and development partners will benefit from the analysis and advice contained in this document.

I congratulate all involved in developing this roadmap; and to the United Kingdom's Department for International Development the funder of SITA for supporting the successful formulation of this document. ITC will continue to be your partner to translate this policy advice into real trade on the ground in the sunflower value chain.

EXECUTIVE SUMMARY

The goal of Uganda's Value Chain Roadmap for Sunflowers is to set the sector on the course of strategic development by addressing constraints in a comprehensive manner and defining concrete opportunities that can be realized through the specific steps detailed in its Plan of Action (PoA). Uganda's current model has performed well, yielding strong economic and social returns. Nonetheless, there is an imbalance in the sector between a competitive contract farming segment and an underdeveloped independent farming channel.

Efforts to address persistent constraints to growth must be redoubled if the sector is to remain competitive. The industry must unite and evolve in order to leapfrog into higher growth and value addition. This will require addressing gaps in input supply, skills and institutional support. At the same time market structures must be reformed, and the building of trust will remain of paramount importance. The PoA responds to these requirements by setting four strategic objectives:

1. Improve availability of inputs to the sector.
   a. Improve the availability of seeds for propagation by a twin strategy of developing import contacts and national multiplication.
   b. Improve accessibility and affordability of non-seed inputs for the sector.
2. Improve quality of institutional support, and better position the sector for attracting investment.
   a. Improve institutional coordination and upgrade representative associations.
   b. Improve the value proposition of the sector towards policymakers and investors.
   c. Improve access to finance for sector operators.
3. Enhance capabilities for value transformation in the sector.
   a. Propagate knowledge and best practices in the sector.
   b. Improve the quality of, and access to, extension services.
   c. Improve access to technology.
   d. Improve essential infrastructure, including warehousing and product quality management infrastructure.
4. Strengthen enterprise capacities for harvesting information as a tool to access target markets.
   a. Better inform/train exporters on knowledge and procedures related to exports.
   b. Improve linkages in target markets and with other sectors.

Since its inception in the first half of the twentieth century, Uganda's sunflower sector has made significant contributions to the country's socioeconomic development. Introduced by missionaries, the sunflower sector has always been of particular interest to the development community. Cultivation has generally been concentrated in the poorer regions of the country, and stakeholders looked to sunflowers to counteract the effects of the collapsing cotton sector in the 1990s. The sector has grown considerably from the turn of the century as the area under cultivation has more than doubled. This growth was spurred largely by the expansion of contract farming which, in addition to providing a market outlet, allowed farmers to access necessary inputs and training.

Yet despite considerable development support, as well as the success of the contract farming model, the independent farmer channel has failed to develop in tandem. A key constraint has been the limited availability of high-yield variety (HYV) seeds, which are monopolized by the large contractors. In addition, there continues to be a significant lack of trust at all levels of the value chain between farmers, traders and millers. Without collaboration the value chain suffers from

Photo: (CC BY 2.0) Tom Brandt, *Bumblebee on a Sunflower*.

numerous inefficiencies that diminish both output and quality, as farmers are unable to access inputs, training and buyers. At the processing level, the development of the milling segment has been stunted due to the deficit of raw material (seeds) caused by the underdeveloped independent farmer segment. As such, the vast majority of millers align themselves with the major contractors, thereby further diminishing the supply capacities of the independent channel.

Suboptimal efficiency is currently hindering Uganda's ability to fully capitalize on the sector's strong global growth. The expansion in global sunflower output is being driven by particularly robust demand in developing markets, following on the heels of population growth and changing consumption patterns associated with rising incomes. The sector's evolution has also been stimulated by the increasing health consciousness of consumers, who are drawn to sunflower oil's nutritional value and lack of trans fats. Even though sunflower oil faces stiff competition from other vegetable oils, such as less costly palm oils, the sector is poised for continued expansion.

Uganda's sunflower sector therefore finds itself at a crossroads. Its current growth model has certainly yielded strong socioeconomic results. Yet while it has laid the baseline for future advancements, leveraging the sector's potential for sustainable development will require a new paradigm. In order to achieve a greater level of competitiveness, the sector must work to strengthen the supply chain; enhance institutional support and attract investment; diversify the product portfolio; and improve the ability of enterprises to access and use market intelligence. Trust-building and the creation of greater horizontal and vertical linkages must permeate all of these endeavours.

This roadmap responds to these needs by providing Uganda with a detailed PoA that will facilitate growth in the sector within the next five-year period. Through the steps outlined in the PoA, stakeholders will improve their ability to offer competitive products. Yet these improvements will only lead to sustainable development if they result in concrete business transactions. To this end, improved competitiveness must be intimately tied to the further penetration of current markets, expansion into new markets and development of new products. Particularly promising prospects for sectoral development may lie within the following product and market opportunities, ranked according to potential.

Products	Markets
Sunflower oil	Domestic market Regional: Sudan, Democratic Republic of the Congo (DRC), Kenya, Rwanda, South Africa International: India, Algeria, Morocco, Turkey, China, Switzerland
High oleic sunflower oil	Regional: Sudan, DRC, Kenya International: European Union (EU), Middle East, China, North Africa
Fortified sunflower oil	Domestic market Regional: East African Community (EAC), Sudan, DRC
Organic sunflower oil and processed products	Domestic market Regional: EAC International: EU, China, India
Branded cold-pressed sunflower oil	International: EU, United States of America, Turkey, India, China, Middle East
Livestock feeds	Regional: Kenya, Sudan, DRC International: India and Thailand
Sunflower seeds as a snack	Non-organic: Middle East, North Africa, Kenya, Gulf nations Organic: EU and United States

Unlocking the potential of the Ugandan sunflower sector will require transformations throughout the value chain. These adjustments, as reflected in the future value chain, are the result of targeted efforts to address the competitive constraints identified and capitalize on opportunities to add value.

(i) Strong supply chain of seeds and other inputs: in the future value chain, farmers will have access to higher quality seeds, both imported and local, as well as modern and specialized farm equipment (imported and domestic), higher quality manure and chemical fertilizers (imported and domestic); higher quality pesticides and insecticides (imported and domestic); and new agribusiness services.

(ii) Enhanced institutional support and improved value proposition with investors: farmers, processors and other private sector stakeholders will be able to rely on improved services, particularly in the areas of quality management, extension services, input provision,access to finance, trade intelligence and dispute resolution. Such improvements will help attract investment, which will then serve as a catalyst for value transformation across the value chain.

(iii) Diversified sector product portfolio: in the longer term, the value chain will include a wider spread of products, including higher value added products. Product diversification will be facilitated by increased market intelligence, enhanced production capacities, and improved attention to quality management. The Roadmap's focus on value-addition is well established and will be a lever for generating growth.

(iv) Enhanced enterprise-level capabilities to access market intelligence: these capacities will lie at the base of improved export performance. Not only will information help enterprises produce goods in accordance with final demand, it will be crucial in the quest to further penetrate existing markets and diversify into new markets, as it will allow the sector to identify and cater to appropriate buyers.

Photo: (CC0 Public Domain) pixabay, *sunflower-450234.jpg*

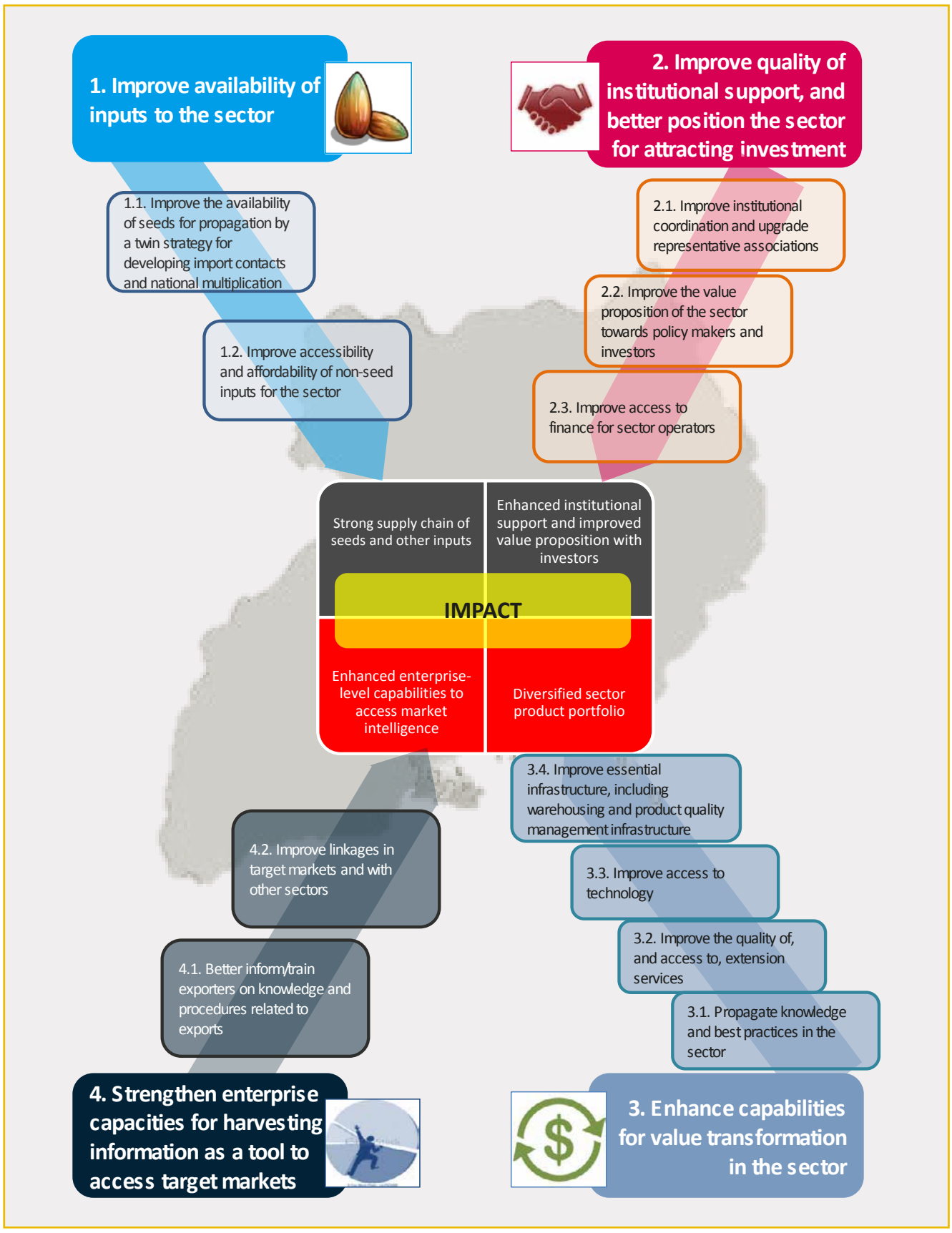
This roadmap was the result of extensive consultations with public and private sector stakeholders, leading to unprecedented levels of cooperation among sector operators. Key private sector stakeholders and leading institutions facilitated an exhaustive analysis of the sector. Market-led strategic orientations, prioritized by stakeholders and embedded into a detailed implementation plan, provide a clear roadmap that can be leveraged to address constraints to trade, maximize value addition and support regional integration. In addition, the inclusive approach ensured that all stakeholders were committed to the process and left with a clear understanding of each actor's role.

As such, this roadmap builds upon and is aligned with existing development plans and activity in the country, including the National Export Strategy. This salient characteristic ensures that the activities contained in the Strategic Plan of Action do not result in redundant action, but rather are coherent with the national development agenda.

The implementation phase will involve a rigorous process of resource mobilization, partner identification, due diligence in terms of project design and establishment of project management/implementation management structures. Far from being the sole prerogative of any one entity, resource mobilization will be led by many different actors including the national government and donors. For certain activities, the SITA initiative will identify and support select POA activities, in discussion with national stakeholders.

The roadmap is articulated around four strategic objectives.

Figure 1: Strategic objectives of the roadmap and related impact



GLOBAL SUNFLOWER VALUE CHAIN: POISED FOR CONTINUED GROWTH

PRODUCTION HAS DOUBLED OVER THE PAST 20 YEARS

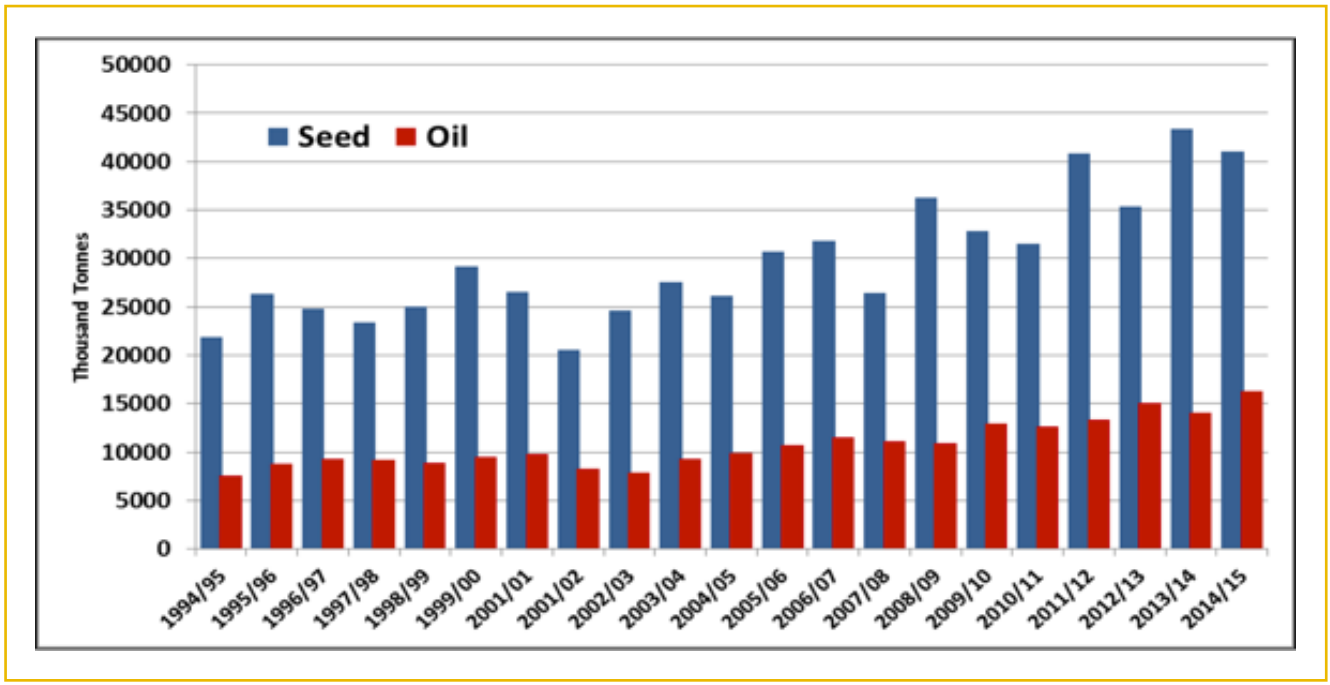
The sector broadly comprises seeds, oil, cake and derived products, and has shown impressive growth in the last few decades. Seed production has doubled in the last 20 years, although the rate of growth is slowing. Oil production has risen in tandem with seeds.

Seed production is forecast to reach 48 million tons by 2030 and 60 million tons by 2050, from a current production figure of approximately 40 million tons. Projections from the Food and Agriculture Organization of the United Nations (FAO) and others indicate that demand for sunflower oil will reach 2 million tons per annum in 2050. Driven by rising incomes, population and awareness of the health properties of sunflower products, the sector is projected to see stable demand and consumption trends in the long term.

In the short term, the sector has been prone to regular instability in global markets. Both seed and oil subsectors have experienced periods of turbulence in recent years owing to factors particular to sunflower oil as well as inherent price and demand instability that affect the entire edible oil complex.

Overall growth in the sector has produced more oilcake for sale but the market for this by-product has not grown as quickly as either the production of seeds or the crushing of seeds to make oil. Finding markets for oilcake therefore will be an essential element of expanding the sunflower oil – and indeed the overall oilseeds – sector. Markets for oilcake can constitute up to 30% of value addition in the process.

Figure 2: Production trends, sunflower seed and oil, 1994/95 – 2014/15



Source: FAO and other sources

Box 1: Sunflower utility

Sunflower seed has four principal uses.

Edible oil: sunflower derives the majority of its value from oil. The oil is appreciated for its 'light colour, high level of unsaturated fatty acids, lack of linolenic acid, bland flavour and high smoke points.*

Meal: The predominant use of sunflower oilcake (non-dehulled and partly dehulled) is for feeding swine, poultry and ruminant animals. Compared with soybean alternatives, sunflower has a higher fibre content, lower energy value, lower lysine content and higher methionine content. The use of oilcake is not limited to meal for animals and poultry; there is a gap in product diversification and market diversification globally.

Industrial uses: Although often cost-prohibitive, sunflower oil does have a number of industrial uses. It has been used in paints, varnishes, plastics, soaps, detergents and fuel. In addition, it has been used as a pesticide carrier and in the production of agrochemicals, surfactants, adhesives, plastics, fabric softeners, lubricants and coating. Unlike palm and soya, sunflower oil is not used in biodiesel, which has been a key driver of consumption in recent years. From an industrial use perspective, sunflower oil has limited usage, with only 10% of the oil used for such purposes.

Non-oilseed: sunflower seed is also used for birdfeed or human snacks (more accurately described as 'confectionary or bakery grade sunflower seed'). Seeds used for these purposes are generally larger and require a variety of processing techniques. Larger seeds are roasted, medium seeds are dehulled and smaller seeds are used for birdfeed. Lastly, sunflower can also be used as a forage crop.

Putnam, Oplinger, and others (1990). Sunflower. In Alternative Field Crops Manual. University of Wisconsin–Extension, Cooperative Extension; University of Minnesota: Center for Alternative Plant & Animal Products and the Minnesota Extension Service.

OUTPUT IS HEAVILY CONCENTRATED

Seed supply is dominated by a few countries: the Russian Federation and Ukraine account for nearly 50% of global seed production, and with the EU and Argentina included in the mix, this percentage goes up to 75%. Seed production has doubled in the last 20 years, driven by better yields and increasing acreage. This is especially true in the Black Sea region, which has seen rapid growth rates driven by replacement of older varieties of seeds with hybrid varieties. Major producers such as the Russian Federation and Ukraine drive growth through improved yields, while emerging players –including Uganda– have focused primarily on increased acreage as a means of increasing production.

The EU is the main producer of sunflower oil, accounting for 69% of production, distantly followed by Asia (15%), the Americas (12%) and Africa (5%).In 2013, the main producers of sunflower oil were the Russian Federation (26%), Ukraine (18%), Argentina (8.5%), Turkey (7%) and France (4.6%).

Sunflower production takes the form of extensive production in countries with established sector competencies such as the Russian Federation, Ukraine and Argentina, while in countries with developing sector competencies, intensive farming methods are the norm, although extensive production is also gaining ground in countries such as the United Republic of Tanzania.

The global value chain is short because the majority of milling takes place close to production areas. One reason that supply of both seeds and oil from the Black Sea region, particularly Ukraine, has been disrupted is the ongoing conflict between the Russian Federation and Ukraine.

Photo: (CC BY 2.0) Tony Alter, *Sunflower Bud.*

AFRICA'S SUNFLOWER SECTOR FINDS OPPORTUNITY IN THE DECLINE OF COTTON

Currently, Africa produces 5.4% of the world's sunflower seeds. Driven by focused development attention, production growth in countries such as the United Republic of Tanzania and Uganda[1] has been rapid and successful. One important point of note is that sunflower has largely replaced cotton seed in these countries. The decline of the cotton sector and replacement by sunflower production is an important contextual element. In Uganda especially, the sector was the target of additional focus by the donor community in the mid-1990s as stakeholders looked to counteract the effects of a collapsing cotton sector.[2] Since the turn of the century, the sector has developed swiftly.

The entry of East African producers has meant a new dynamic – intensive farming production of sunflower by smallholders, which has primarily been produced through extensive agriculture in Eastern Europe, South America and the United States. This development of sunflower production in smallholder agriculture is essentially a phenomenon of the last 15 years.

1.– Other major regional oilseed producers (excluding the United Republic of Tanzania and Uganda) such as Ethiopia and Sudan have not entered the sunflower sector in any substantial way, preferring to retain focus on other oilseeds.

2.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 28. Action Against Hunger/ACF International.

Supply and demand: global trade[3]

World exports of sunflower products posted a compound annual growth rate (CAGR) of 18% between 2003 and 2012, expanding from an average of US$ 3,779 million in 2003–2004 to US$ 15,205 million in 2011–2012. Provisional data for 2013 and 2014 suggests that this upward trajectory has continued through to today. This growth has been driven by changes in both the supply and demand sides of the sector. With regards to supply, the sector has benefited from increased yields (particularly in leading exporters/developed countries) as well as increases in cultivated areas (led mainly by developing countries). Demand meanwhile has benefited from the continued growth of the global population, together with the trend towards healthy lifestyles. Sunflower's nutritional value has made it an increasingly popular ingredient across the globe.

3.– Unless indicated otherwise, this analysis uses trade data from the FAO database because it distinguishes between safflower oil and sunflower oil. While United Nations Comtrade statistics are more updated (including data through 2014), they do not make this distinction at the Harmonized System (HS) six-digit level. Note however that the trade in safflower oil is expected to have remained stable over recent years. As such, increases in trade flows observed in United Nations Comtrade data are most likely due to increased imports of sunflower oil.

LEADING EXPORTERS: EUROPEAN COUNTRIES –PARTICULARLY THE RUSSIAN FEDERATION AND UKRAINE– LEAD EXPORTS WITH HIGH ACREAGE UNDER PRODUCTION AND YIELD IMPROVEMENTS

European countries account for more than 40% of global sunflower exports. Export trends indicate that many long-time suppliers of sunflower products have increased their market share and grown at a fast pace between 2003 and 2012; indeed, most leaders posted CAGRs in the double digits. The continued growth in market share of the two leading suppliers, Ukraine and the Russian Federation (29% and 9% 2011–2012 market share respectively measured in value, and 36% and 12% respectively measured in volume), is explained by higher yields derived from the use of hybrid seeds. Other leaders such as Argentina (ranked third) have performed relatively poorly over the last five years. Argentina's production of sunflower oil appears to have stagnated: while yields continue to rise, the area under cultivation is in decline.[4]

Within Africa, Egypt, the United Republic of Tanzania and Uganda have performed well over the past five years with regards to increased growth and market share. The case of the United Republic of Tanzania is especially notable, in that important progress was made in terms of both increased yields and cultivated area. Table 1 provides further details[5] on the leading exporters of sunflower products.

4.– Food and Agriculture Organization of the United Nations (2010). *Sunflower Crude and Refined Oils*. Agribusiness Handbook, FAO: Rome.

5.– Average values are preferred as they offer a more accurate picture in light of the volatility that characterizes the sector.

While all three sunflower derivative product categories (seeds, oil and oilcake) experienced strong growth over the past five years, the expansion of sunflower cake exports is especially notable. Ukraine and the Russian Federation are the top exporters of sunflower oil and cake, while Bulgaria and Romania are the most important exporters of sunflower seeds.

Table 1: World top 10 exporters of sunflowers

Rank	Exporter	Exports 2011–2012 (US$ thousands)	Share			CAGR
			Average 2003–2004 (%)	Average 2008–2009 (%)	Average 2011–2012 (%)	(2008–2012) (%)
	World	15 205 319	100.0	100.0	100.0	11.6
1	Ukraine	4 350 211	21.2	21.0	28.6	26.1
2	Russian Federation	1 452 004	4.0	8.1	9.5	27.1
3	Argentina	1 257 766	18.2	14.0	8.3	-9.7
4	France	1 089 608	8.2	7.5	7.2	9.0
5	Hungary	868 123	6.4	5.0	5.7	14.7
6	Romania	833 216	3.6	3.5	5.5	15.6
7	Bulgaria	768 747	2.7	4.3	5.1	16.0
8	Netherlands	722 712	7.4	8.3	4.8	-7.2
31	United Republic of Tanzania	41 048	0.0	0.2	0.3	33.2
53	Uganda	7 199	0.0	0.0	0.0	49.7

Source: Food and Agriculture Organization of the United Nations (2015).
Note: * Data from International Trade Centre (2015).

Table 2: Top 10 global exporters of sunflower products by segment (US$ '000')

Sunflower oil			Sunflower seed			Sunflower cake		
Exporter	Average 2011–2012 (US$ thousands)	CAGR 2008–2012 (%)	Exporter	Average 2012–2013 (US$ thousands)	CAGR 2008–2013 (%)	Exporter	Average 2012–2013 (US$ thousands)	CAGR 2008–2013 (%)
World	**10 319 790**	**12**	**World**	**3 868 696**	**11**	**World**	**1 832 274**	**18**
Leading and growing			**Leading and growing**			**Leading and growing**		
Ukraine	3 560 211	25	Bulgaria	624 527	19	Ukraine	750 850	23
Russian Federation	1 134 806	25	Romania	583 504	22	Russian Federation	373 180	27
France	657 261	8	France	429 217	10	Netherlands	99 315	13
Hungary	482 141	24	Hungary	415 458	0	Hungary	71 057	44
Turkey	377 663	26	China	303 518	15	Romania	55 095	43
Romania	222 073	26	United States	288 931	8	France	39 981	16
Germany	208 115	12	Slovakia	158 245	20	Bulgaria	38 809	84
Leading but declining			Argentina	114 611	13%	United Republic of Tanzania	34 981	18%
Argentina	1 023 743	–12	Ukraine	107 357	8	Germany	28 880	11
Netherlands	603 644	–10	Republic of Moldova	104 401	44	**Leading but declining**		
Belgium	218 593	–1				Argentina	129 967	–6

Sources: For sunflower oil: Food and Agriculture Organization of the United Nations (2015), and for other sunflower derivatives: International Trade Centre (2015).

LEADING IMPORTERS: IMPORT GROWTH DRIVEN BY HIGH DEFICIT LEVELS, HIGH END-USER CONSUMPTION LEVELS AND IMPORTS FOR PROCESSING

International demand for sunflowers has expanded consistently over recent years, and growth was particularly notable 2000-2005. Imports grew by a CAGR of 22% from 2003 to 2008, as opposed to 9% from 2008 to 2012. Provisional trade data indicates that growth has continued through 2014. The rise in imports was driven by both the increased number of importers and the increased value of buyers' imports. While only 11 countries imported more than US$100 million in sunflowers between 2000-2005, this number increased to 20 in 2008–2009 and 29 by 2011–2012. Fourteen of these countries saw their imports expand by double digit annual growth rates between 2008 and 2012.

Turkey and India are the leading importers of sunflower products. Oilseed production in India has consistently failed to keep pace with its increasing local demand. Consequently, Indian imports of vegetable oils have grown dramatically in the last five years. These imports are expected to continue growing due to below-average monsoon rains.[6] Turkey meanwhile is a leading importer and processor of sunflower seeds.

Special attention should also be given to the Chinese market for sunflower oil.[7] China imported US$451 million of sunflower oil in 2014, representing a three-year CAGR of 66% (2011–2014) and a five-year CAGR of 29% (2009–2014).

All sunflower derivatives experienced high rates of import growth between 2003 and 2012 (in value terms). The best performers, with regards to both growth and share, were sunflower oil and sunflower cake. While sunflower oil dominates the market in terms of share, the demand for sunflower cake and seed has registered particularly high growth in the last decade. Turkey and the EU constitute the top importers of sunflower seed and cake, while India is the top importer of sunflower oil. Despite an escalation of global prices, the sunflower cake segment (whose primary market is the EU) has proven to be the most stable and fastest-growing.

6.– Oil World (2015). Website. Available from: http:/ /www.oilworld.biz/app.php?fid=1090&fpar=0&isSSL=0&aps=0&blub= 99d5d4612ae78dfcf3f261cddd2f91a5.

7.– Based on United Nations Comtrade data. While at the time of writing FAO statistics are only updated through 2012, it is in fact only in more recent years that Chinese imports of sunflower oil began to grow at a more considerable pace. This analysis refers to HS 151211 and HS 151219. It should be noted that these product categories do not differentiate between sunflower oil and safflower oil, and that they therefore represent an estimate of the trends.

Table 3: Leading importers (excluding China) of sunflowers, imports >= US$200 million

Rank	Importer	Imports (2011–2012) (US$ thousands)	Share			CAGR
			Average 2003–2004 (%)	Average 2008–2009 (%)	Average 2011–2012 (%)	2008–2012 (%)
	World	13 844 030	100.0	100.0	100.0	9.3
1	Turkey	1 489 173	5.9	9.6	10.8	11.1
2	India	1 135 172	1.1	3.8	8.2	46.6
3	Netherlands	992 449	11.6	8.1	7.2	5.7
4	Egypt*	848 421	2.0	2.8	6.1	44.3
5	Germany	809 812	7.1	7.4	5.8	0.3
6	Spain	753 249	5.8	6.3	5.4	7.2
7	France	644 121	4.6	5.7	4.7	5.1
8	Belgium	629 620	4.6	5.3	4.5	0.9
9	Italy	597 052	5.2	5.0	4.3	4.5
10	United Kingdom	569 918	3.4	6.1	4.1	-1.8

Source: Food and Agriculture Organization of the United Nations (2015).
Note: * Data from International Trade Centre (2015).

Table 4: World top 10 sunflower importers by segment (excluding China)

Sunflower oil		
Importer	Average 2011–2012 (US$ thousands)	CAGR 2008–2012 (%)
World	**8 593 940**	**8**
Leading and growing*		
India	1 128 330	46
Turkey	808 942	11
Netherlands	508 613	3
Egypt*	732 845	41
Italy	309 560	4
Leading but declining		
Belgium	528 125	-2
Germany	420 160	-6
United Kingdom	415 021	-2
Spain	332 927	-3
France	253 627	-8

Sunflower seed		
Importer	Average 2012–2013 (US$ thousands)	CAGR 2008–2013 (%)
World	**3 887 674**	**12**
Leading and growing		
Turkey	458 981	5
Netherlands	350 259	12
Germany	349 905	3
Spain	305 720	4
France	229 284	31
Russian Federation	208 884	24
Ukraine	195 551	28
Portugal	177 861	25
Romania	138 041	12
Leading but declining		
Italy	135 131	-2

Sunflower cake		
Importer	Avg. 2012-2013 (US$ thousands)	CAGR 2008–2013 (%)
World	**2 125 040**	**15**
Leading and growing		
France	259 379	46
Italy	184 015	15
Belarus	180 992	7
Turkey	163 305	24
Netherlands	149 432	7
Poland	148 271	23
Spain	128 985	24
Denmark	126 376	23
United Kingdom	119 033	1
Germany	85 078	36

Source: For sunflower oil: Food and Agriculture Organization of the United Nations (2015); and for other sunflower derivatives: International Trade Centre (2015).
Note: * Data from International Trade Centre (2015).

CONSUMPTION GROWTH DRIVEN BY DEVELOPING COUNTRIES

Consumption of sunflower oil has grown quickly overall and particularly in fast-developing economies. Factors influencing seed and oil consumption include population growth and changing consumption patterns (notably due to rising incomes). Although sunflower faces fierce competition from other vegetable oils such as palm oils (mostly on price), demand has continued to rise as people become more conscious of the health properties of sunflower oil.[8] In fact, this trend is triggering oil processors to search for sources of trans-fat-free vegetable oil, and sunflower oil still is a cheaper alternative to olive oil, for instance.

In recent years consumption has shifted and is more balanced between Asian and European imports. This is in line with the general trend of increasing vegetable oil consumption, which is itself tied to a rise in economic development. Long-term demand from India and China is also driven by the forecast trend towards lighter, healthier oils with low unsaturated fat profiles (although price sensitivity is currently a more relevant factor than consumer health consciousness in these economies).

India's and China's booming population bases and economic growth are driving the steady demand for sunflower oil, and this trend is expected to continue in the mid-to-long term. India leads global imports, and recent estimates[9] expect consumption levels in the 2015/16 season to surpass 2014/15 figures, despite competition from alternatives.

Consumption in the EU is expected to remain stable in 2015/16, with projections of higher demand stemming from a sharp fall in prices after a period marked by high price premiums. North America is also expected to remain a significant consumer.

In the African context, consumption in all regional markets is well below recommended levels but is projected to rise as economic conditions improve. Population levels will also rise (including in Uganda), contributing to this trend.

8.– 'Compared with other vegetable oils and animal fats, the oil in sunflower seed is very high in polyunsaturated fatty acids, making it easily digestible and providing a good option when choosing cooking oil, particularly if high cholesterol is a concern.' (Agriculture and Agri-Food Canada (2015). Website. Available from http:/ /www.agr.gc.ca.)

9.– Economist Intelligence Unit (2015.) Industry Analysis, Commodities –SunflowerSeed Oil, 1 September 2015.

PRICES ARE VOLATILE BUT TRENDING UP

As indicated in figures 2 and 3, seed and oil prices have both experienced volatility, particularly since 2008.The key contributing factors are crops/weather patterns, increasing demand from developing countries, dynamics in the bio-diesel segment (and its impact on supply of sunflower oil substitutes in the market), and health-related trends to move to lighter and healthier oils. Recent factors include the conflict between Ukraine and the Russian Federation, which has disrupted supply from both countries to some extent.

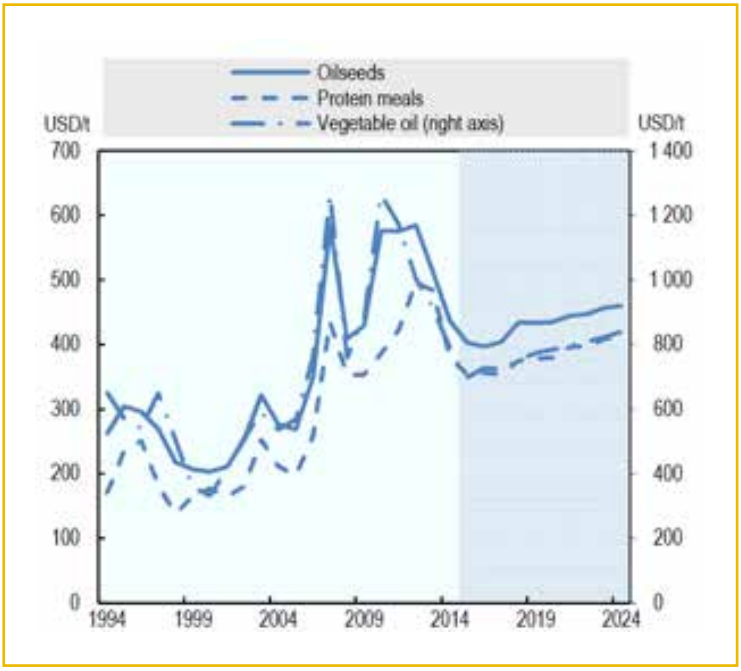
The world market is currently well-supplied with sunflower and the prices are static to soft. In the long run, it is expected that prices of all vegetable oils and oilseeds will increase as indicated in figure 5. Strong and stable demand will be a factor, as will the slower growth in production and the slowdown in yields improvement. Meal prices are expected to be driven by demand 'for non-ruminant and milk production and a greater incorporation rate of protein in feed rations in developing countries'.[10]

10.– Organisation for Economic Co-Operation and Development, Food and Agriculture Organization of the United Nations (2015). *OECD-FAO Agricultural Outlook 2015*, chapter 3 (Commodity snapshots), page 117. Figure 3 chart from Organisation for Economic Co-Operation and Development (2015). OECD Agriculture statistics database. Available from http:/ /dx.doi.org/10.1787/agr-outl-data-en. Accessed 29 July 2015.

Figure 3: Sunflower seed Cost and Freight (CFR) Amsterdam, 2000–2015 (US$ /ton)

Figure 4:Sunflower oil Free on Board EU, CFR Amsterdam, 2000–2015 (US$ /ton)

Figure 5: Evolution of world oilseed prices (all oilseeds), 1994–2024



OUTPUT GROWTH HAS BEEN SLOWED BY A VARIETY OF FACTORS

Production of sunflower oil continues to rise but the rate of growth is slowing because:

- The Russian Federation/Ukraine conflict has affected supply, and cannot be underestimated given that the two countries together account for 50% of the global supply of sunflower seed. The short value chain associated with the sunflower sector – most milling occurs at origin – adds additional strain to supply of oil from these countries. Additionally and related to this conflict are the sanctions in place against the Russian Federation, which prevent exports to key markets in the EU and the United States. Exports from Ukraine are disrupted and this can be exacerbated if the conflict continues or spreads.
- Weather has been a big factor in limiting production. A see-saw pattern of poor, better and then poor weather in 2013, 2014 and 2015 respectively has affected production in the EU and Eastern Europe. Argentina has seen three lower-planting years in a row and poor weather in 2014.
- In Eastern Europe, increasing levels of confectionary seed production means that these larger seeds are ideally suited for non-oil, food-related uses.
- The two largest consumers, India and China, have experienced lower levels of production than expected, which is driving global growth in consumption.

As discussed earlier, the mid-to-long-term forecast for this sector remains optimistic despite the slowdown in growth rate and the recent relative price and demand instability.

Photo: (CC0 Public Domain) pixabay, *sunflower-seeds*.

FUTURE TO BE MARKED BY COMPETITION FROM OTHER OILSEEDS AND BIODIESEL

Trade trends of this crop and its products are affected by:

- Price increases of other oils;
- Countries' trade policies (from export taxes to production and export incentives);
- Local production of importing countries as well as production levels of exporting countries (both of which are affected by external factors such as weather conditions and price of other crops, as farmers can be compelled to move towards a higher rent crop);
- Finally, as discussed below, even crude oil prices have a contributing effect on the sector.

Sunflower oil faces important competition from a wide range of oils at all cost levels, from olive oil to rice bran oil to novel foods such as chia. Palm oil and soy oil are the two closest oil-based competitor 'cousins'. Most of the oil consumption growth has been taken up by palm oil, although the sunflower oil share has been turning around in 2015.

Sunflower is not used in biodiesel but biodiesel influences the oils and oilseeds market. Decreases in crude oil prices in recent years have led to lower diversion of crops such as palm oil and soybean to bioethanol production, leading to excess supplies of these oils in the market. Given that consumers in price-sensitive markets such as India show proclivity to switch between soybean oil, sunflower oil and palm oil based on changing price differentials, this excess (and decreasing costs) has tended to bring prices of sunflower oils down as well. In 2014, a record United States harvest of soybean caused prices of all vegetable oils to reduce dramatically.

Biodiesel subsidies also play a role in creating uncertainty in the sunflower oil sector. Biodiesel consumption is expected to rise, driven by government subsidies and an increase in petroleum prices. However unlikely, subsidies can be removed through changes in policy directions in the future, while prices of crude oil can also fluctuate independently, impacting the sector.

Box 2: Global trends

1. The global value chain is short and the majority of milling takes place close to the areas of production.
2. Seed supply is dominated by a few countries, with the Russian Federation and Ukraine accounting for nearly 50% of global seed production
3. **Demand is growing especially fast in developing economies (and in particular China and India) due to population growth and rising incomes.**
4. Seed and oil prices have been particularly volatile since 2008 due to a number of factors, including crops/weather patterns, increasing demand from developing countries, dynamics in the biodiesel segment (and its impact on supply of sunflower oil substitutes in the market), health-related trends to move to lighter and healthier oils, and geopolitical conflict in Ukraine.
5. **Price-sensitive consumers will substitute sunflower oil with palm or soybean oil based on price changes, and sunflower will continue to face competition from other oils.**
6. Even so, demand is forecast to increase in the medium-to-long term, and seed production is expected to reach 48 million tons by 2030 and 60 million tons by 2050, from a current production figure of approximately 40 million tons.

UGANDAN SECTOR CHARACTERIZED BY AN IMBALANCE BETWEEN CONTRACT AND INDEPENDENT FARMING[11]

11.– Information source for the value chain: consultations and desk research, prominently using Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*. Action Against Hunger/ACF International.

A sector historically important to the donor community

Sunflower is a relatively new crop in Uganda, having been introduced in the 1920s and 1930s by missionaries.[12] By the 1960s, the cultivation of sunflower was widespread throughout the country and output was expanding steadily. The sector was of particular interest to non-government organizations (NGOs) and other development partners, especially in the Northern and Eastern regions of the country.[13]

Even so, yields were low and stagnant due to the lack of appropriate seeds and poor agronomic and farmer practices. Indeed, many cultivators used seeds from ornamental or confectionary varieties of sunflowers that had been introduced from the Russian Federation and Kenya in the 1960s and 1970s.[14] Significant strides came in 1988 with the initiation of the National Sunflower Programme.

This programme worked to promote best farming practices and stimulate the propagation of improved seeds, including the improved, open-pollinated Sunfola variety developed by the National Agricultural Research Organization (NARO).[15] As a result, yields more than doubled in the late 1980s and early 1990s. The provision of markets for sunflower products and the availability of seeds were therefore key factors in promoting cultivation: once farmers saw that sunflower could be a profitable crop, the area under cultivation expanded. As a result of both increasing yields and cultivation, production volume increased considerably.

The sector was the target of renewed focus in the mid-1990s as stakeholders sought to counteract the effects of a collapsing cotton sector,[16] and since the turn of the century the sector has been subject to swift development spurred by a number of factors. The Mukwano Group (a Ugandan conglomerate engaged in commodities trading and oil processing) increased its sourcing of sunflower seeds in 2001 in efforts to substitute palm oil imports.[17] In cooperation with the Investment Development Export Agriculture project of the United States Agency for International Development (USAID) and Sere Agricultural and Animal Production Research Institute, it introduced a high-yield hybrid sunflower variety from South Africa (PAN 7351) that has a significantly improved oil extraction rate compared with the Sunfola variety.[18] They also began to offer extension services and trainings to farmers, helping them to apply best practices and reduce costs. In 2001, the Government of Uganda introduced the National Agricultural Advisory Services (NAADS), providing a greater level of support services to farmers.[19] These efforts were supported by the interventions of various NGOs.[20]

12.– Turiho-Habwe, Godfrey (1992). *The Accomplishments and Constraints of Sunflower Research in Uganda*.

13.– World Bank (2011). *Making the grade: Smallholder Farmers, Emerging Standards, and Development Assistance Programs in Africa: A Research Program Synthesis,* chapter 6: case studies: upgrading for the domestic market and for traditional export commodities. Available from http:/ /siteresources.worldbank.org/INTARD/Resources/CH6.pdf.

14.– Turiho-Habwe, Godfrey (1992). *The Accomplishments and Constraints of Sunflower Research in Uganda*.

15.– World Bank (2011). *Making the Grade: Smallholder Farmers, Emerging Standards, and Development Assistance Programs in Africa: A Research Program Synthesis,* chapter 6: case studies: upgrading for the domestic market and for traditional export commodities. Available from http:/ /siteresources.worldbank.org/INTARD/Resources/CH6.pdf.

16.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 28. Action Against Hunger/ACF International.

17.– Schoonhoven-Speijer, M. and Heemskerk, W. (2013). *KIT Case Study: the Ugandan Oilseed Sector*, p. 3. Royal Tropical Institute (KIT).

18.– World Bank (2011). *Making the grade: Smallholder Farmers, Emerging Standards, and Development Assistance Programs in Africa: A Research Program Synthesis,* chapter 6: case studies: upgrading for the domestic market and for traditional export commodities. Available from http:/ /siteresources.worldbank.org/INTARD/Resources/CH6.pdf.

19.– Schoonhoven-Speijer, M. and Heemskerk, W. (2013). *KIT Case Study: the Ugandan Oilseed Sector* p. 3. Royal Tropical Institute (KIT).

20.– Please see Appendix 1 for a list of development programmes targeting the sector.

Photo: (CC BY 2.0) Ruth Temple, *Cordes-road-sunflowers.*

VALUE CHAIN ANALYSIS

Sunflowers have become attractive for smallholder farmers as they are a short cycle cash crop that requires few external inputs.[21] The average size of a sunflower farm in Uganda is 1.74 acres, and 93.56% of the harvest is sold, clearly demonstrating that sunflower seeds are produced as a cash crop.[22] It should be noted that most sunflower farmers are considered to be middle-income farmers: as it is mainly a cash crop, only those with capital to invest, or those who are able to bear the risks, engage in sunflower cultivation.[23] Less wealthy households (and women-led households) are more likely to be constrained by limited cash and a preference for subsistence crops.

21.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 28. Action Against Hunger/ACF International.

22.– *Ibid.:* p. 32.

23.– Schoonhoven-Speijer, M. and Heemskerk, W. (2013). *KIT Case Study: the Ugandan Oilseed Sector*, p. 6. Royal Tropical Institute (KIT).

Box 3: Main areas of cultivation in Uganda

Sunflower grows well in a wide variety of soil types, from sand to clay.* It is generally cultivated in the semi-arid central and northern parts of Uganda due to its tolerance of dry conditions.** This has made it a popular crop among farmers in drought-prone areas such as Otuke district. Production is found largely around the Lango sub-region due to its proximity to processors.*** Lira is the major hub for production and processing, and 80% of sunflower comes from five of its surrounding districts: Apac, Lira, Oyam, Dokolo and Soroti. Seed provision and technical services are concentrated in Lira, and nearly 60% of the region's farmers engage in sunflower production.

While sunflower also thrives in the Amuru and Nwoya districts, its production is limited largely to that required for household consumption.**** This is due mainly to a lack of market access; as buyers and agents are not present, farmers wishing to grow sunflower seeds commercially must transport their harvest to Gulu, a time-consuming and costly endeavour. It is also difficult for farmers in these areas to acquire an adequate quantity of seeds. These challenges are complicated by a general lack of knowledge with regards to best harvest practices, once again demonstrating the fact that the sector's development has been selective.

* Turiho-Habwe, Godfrey (1992). *The Accomplishments and Constraints of Sunflower Research in Uganda.*

** *Ibid.*

*** Schoonhoven-Speijer, M. and Heemskerk, W. (2013). *KIT Case Study: the Ugandan Oilseed Sector,* pp. 2–3. Royal Tropical Institute (KIT)..

**** *Ibid.:* p. 29.

Box 4: Salient points regarding the value chain

1. Two channels exist within the value chain – the 'Mukwano channel' and the 'independent channel'.
2. Despite producing seeds with lower oil content, Ugandan farmers are paid well for their supply.
3. Domestic costs of sunflower oil are well above international prices, indicating the level of deficit.
4. The sector in Uganda is currently successful as the market is managed by three companies. However, unless the value chain is rationalized (i.e. better varieties producing higher oil content) there is a risk that it will not continue to be successful.
5. Increased production will reduce the price or bring it into line with the world market. The price margins that the sector currently enjoys will decrease in the future, in line with sector improvement initiatives.
6. Exports work at present because regional countries are either heavily oilseed-deficient or have similar structures to Uganda.
7. If the world oilseeds trend was to reverse (i.e. turn towards structural surplus), the Ugandan sector would come under threat. This could have particular impact because sunflower seed is not regarded as a food security crop.
8. In recent years, an organic movement has started in Uganda, with three cooperatives involved in small production volumes and conducting milling operations on their own.

Table 5 charts the value added by each actor in the value chain based on average prices and costs.

Assuming an oil content of 32%, the farm to retail spread (or marketing margin) varies from 1,577 to 1,937 UGX per kg.8 This implies that sunflower farmers capture 36%–46% of the retail price.

Table 5: Gross margins throughout the value chain (in Ugandan shillings (UGX))

Participant	Farmer	Trader	Miller	Wholesaler	Retailer
Production price or purchase price	626 – 1 044	1 100	1 100 – 1 300	3 900 – 4 000	5 000 – 6 000
Selling price	1 100	1 200 – 1 300	3 900 – 4 000	5 000 – 6 000	7 000 – 7 500
Gross margin	56 – 474	100 – 200	514 – 714	1 000 – 2 100	1 000 – 2 500

Source: Reproduced from Dalipagic, Ian and Elepu, Dr Gabriel (2014), p. 28.

Select actors driving the value chain activity

The key actors involved in the value chain broadly comprise farmers, traders, millers and retailers. The value chain can be divided into the Mukwano channel (mainly constituting contract farmers) and the independent channel. Mukwano is the market leader in the sector, with strong vertically integrated operations. The independent channel consists of independent farmers (not contracted by Mukwano), select medium-sized millers and several local millers.

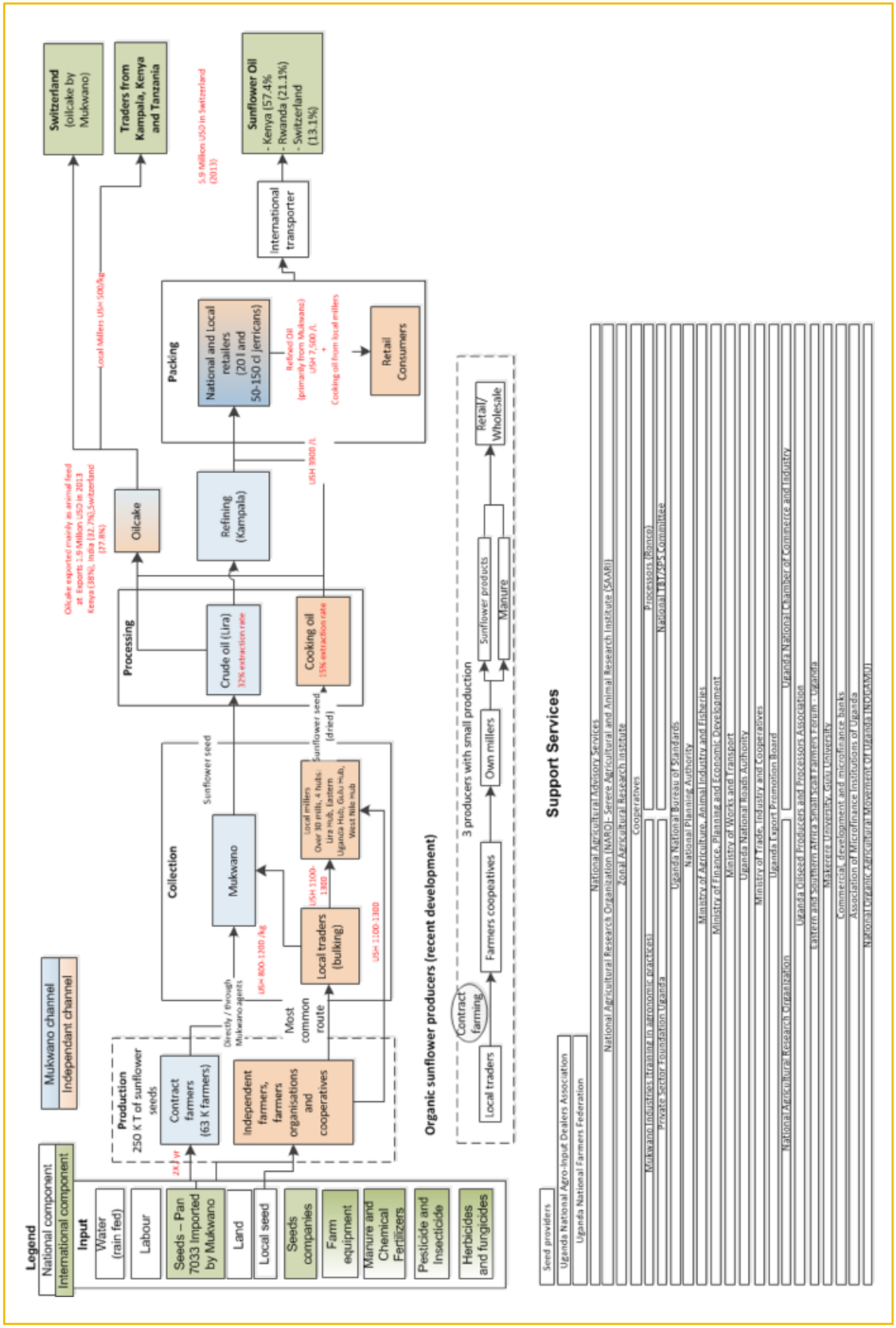
Independent farmers mainly grow local sunflower varieties. They then sell their products to local millers. Contract farmers meanwhile work with Mukwano or Mount Meru (a Tanzanian company), the latter of which has just recently established an integrated edible oil facility in Lira. Around 50% of farmers are organized into small groups (20 to 30 farmers) either by millers or NGOs. Another 5% participate in cooperatives, while the rest are independent.

Major millers maintain informal contracts with farmers under which farmers are supplied with seeds in return for a promise to sell the contractors the entirety of their production. In this way, it can help to offer farmers quality inputs and predictable prices for crops. The contractors may also provide training and other forms of material support in a bid to attract more farmers, with varying success. [24]

A detailed version of the sunflower value chain is provided in figure 6 for reference.

24.– Saturday Monitor (2010). Sunflower gains importance in the wake of regional trade, 29 September.

Figure 6: Current value chain



[UGANDAN SECTOR CHARACTERIZED BY AN IMBALANCE BETWEEN CONTRACT AND INDEPENDENT FARMING]

Input acquisition

The main input of the value chain is seed. Regardless of the channel, the main supplier of seeds in the sector is Mukwano, which imports and distributes PAN 7033 hybrid seeds from South Africa (through an exclusive contract). PANNAR is pre-ordered and pre-paid by farmers, imported by Mukwano and distributed to the farmers and to a limited extend sold into the open market. The seed is thus available to farmers who can pre-pay. Other millers, including Mount Meru, have also experimented with importing seeds with varying success.

PAN 7033 hybrid seeds from South Africa are sold to Mukwano's contract farmers twice a year at a price of UGX 16,500 per kilogram (~US$5.50).[25/26] Roughly two kilograms are required to plant a field of one hectare. The farmers must pay for the seeds months before their delivery. Upon delivery, Mukwano agrees to purchase the harvest at an estimated price. Some independent farmers meanwhile also purchase seeds from Mukwano.[27] Others opt to use local varieties, generally retained from past harvests. It should be noted that the local varieties have an oil content of just 15%, compared with 32% found in hybrid seed. There are also a number of seed merchants –such as Equator Seeds– which are quite active in the sector, as well as other emerging companies.

Production

Sunflower is generally grown together with other crops, including maize and soybean, on smallholder farms.[28] Many planting dates can be used, but the best yields and oil content are achieved when the crops are planted early.[29] Most farmers plant two crops throughout the year. Sunflowers grow best in well-drained, ploughed fields. Ploughing is done twice, and is one of the most costly exercises for those farmers without oxen.[30] Farmers weed the land throughout the growing cycles and seeds are ready for harvest after about four months.[31]

The crop generally shows yield improvements with the use of manure or fertilizers. It is estimated that using basic husbandry skills, a Ugandan farmer can potentially produce 1,200 kilograms of sunflower seeds from a plot of one hectare (2.5 acres): however, this national average has only been attained a few times owing to challenges on the supply side (explained in the competitiveness constraints section). It is estimated that the unit cost of production for the farmer is between 626 and 1,044 UGX per kg. Table 6 illustrates the revenue and cost structure of a typical sunflower farmer in northern Uganda.

Table 6: Typical gross margins for sunflower producers in Otuke district[32]

	Revenues
Output (kg/acre)	500
Price (UGX/kg)	1 100
Total revenue (UGX)	550 000
	Costs
Ploughing (UGX/acre)	160 000
Planting & seed (UGX/acre)	93 000
Weeding (UGX/acre)	48 000
Harvesting (UGX/acre)	48 000
Postharvest (UGX/acre)	12 500
Bagging (UGX/acre)	10 000
Transport	20 000
Total variable costs	391 500
Gross margin (UGX/acre)	158 500

Ugandan farmers produced 250,000 tons of sunflower seeds in 2013, representing a 216% growth from the turn of the century and a five-year CAGR of 5.6%.[33] This exceptional growth is due mainly to the expansion of area under cultivation, which itself grew by 204% from 2000, reaching 240,000 hectares in 2013. The last five years saw a 6.8% annual growth in area under cultivation. Yields meanwhile remained relatively flat; after reaching a peak of 13,322 hectograms per hectare in 2010, they fell back to 10,417 in 2013, representing a total change of 4% from the turn of the century. Although production and yields declined in 2011/12 due to unfavourable weather conditions, the area harvested continues to expand and the sector is expected to post positive gains in the future.[34] It should be noted that improved yields may be more elusive as increased production places greater demands on seed stock and training resources.

25.– *Ibid.*: p. 28.

26.– US$1 = 2,997 UGX on close of business 17 April 2015 (Bloomberg).

27.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 30. Action Against Hunger/ACF International.

28.– Saturday Monitor (2010). Sunflower gains importance in the wake of regional trade, 29 September.

29.– Turiho-Habwe, Godfrey (1992). *The Accomplishments and Constraints of Sunflower Research in Uganda*.

30.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, pp. 30–32. Action Against Hunger/ACF International.

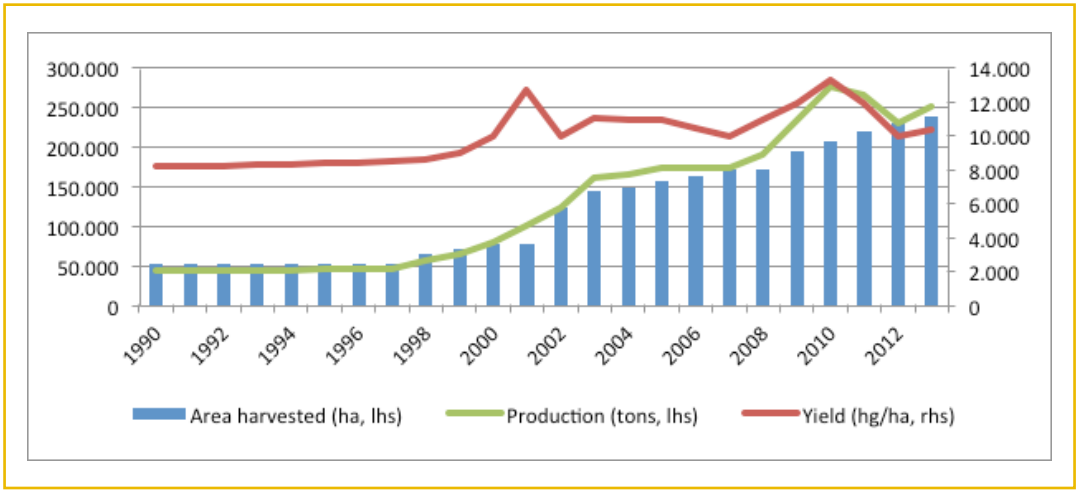
31.– Saturday Monitor (2010). Sunflower gains importance in the wake of regional trade, 29 September.

32.– Reproduced from Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 32. Action Against Hunger/ACF International.

33.– Data calculated from FAO statistics.

34.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 28. Action Against Hunger/ACF International.

Figure 7: Ugandan sunflower production, 1990–2013



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

Box 5: Major players in the Ugandan vegetable oils sector

The Ugandan market is currently dominated by Three large private sector producers of vegetable oils:

- Bidco Uganda Ltd produces palm oil from imports
- Mukwano Industries Ltd produces oil from domestic oil crops, including a well-organized programme to promote the production of sunflower seeds
- The newer entrant Mount Meru, which mainly produces oil from sunflower seeds and soya beans at their crushing plant in Lira.

The perception is that the three companies have the market covered as a dominant oligopoly with strong relations with the Government and the supply9 chain. This perception exists despite the fact that Uganda remains a significant importer of palm products; is at approximately 30% of global average annual intake of fats per capita; has a population which is forecast to multiply fivefold by 2100; 10 and has a strategy under the Vegetable Oil Development Project 2 (VODP2)11 for the development of the oilseeds sector. In addition, retail prices of vegetable oil are above international market levels, suggesting a tight supply and an opportunity for market entry.

On the negative side of the equation one of the major millers has reported that there are difficulties obtaining sufficient volumes of sunflower seed. Furthermore, competing development activity in the Palm Oil segment has at time stemmed development support in the sunflower sector.

Collection

Upon harvest, contract farmers sell the entirety of their product to Mukwano. It should be noted that although an estimated price was provided to the farmers upon purchase of the seeds, it is subject to change according to international oil prices. As such, the farmers may be paid anywhere from 800 UGX to 1,200 UGX per kg.[35] In general, farmers bring the sunflower seeds to a collection point managed by the Mukwano agents in each district. However, they are not paid immediately. Instead, they are compensated once Mukwano sets the final price for the harvest, which may take a few weeks. Linking the prices to the international sunflower seed sector (rather than the prices in the target market, i.e. the domestic oil market) means that smallholders have to compete with industrial agriculture. This dynamic creates uncertainty for the farmers contracted by Mukwano.

The majority of independent farmers meanwhile sell their harvest to local traders.[36] These traders connect rural farmers in remote areas to the larger value chain. They purchase sunflower seeds at both farmers' gates and stores. Once they have accumulated a large enough quantity, they bulk the product together and transport it to Lira, where they sell it to millers for processing. Local millers pay a higher price

35.– Dalipagic, Ian and Elepu, Dr Gabriel (2014). *Agricultural Value Chain Analysis in Northern Uganda: Maize, Rice, Groundnuts, Sunflower and Sesame*, p. 29. Action Against Hunger/ACF International.

36.– *Ibid.*: p. 30.

than Mukwano (roughly 1,100 to 1,300 UGX per kg), though the traders may take a 100 to 200 UGX cut.[37] Other farmers do sell their harvest directly to local millers, but doing so means that the farmer must cover the cost of transportation. Independent farmers who purchase seeds from Mukwano are in principle free to sell their produce elsewhere if they choose to, but the sector dynamics influence them to sell their harvest back to the conglomerate.

Processing

Mukwano processes crude oil from the sunflower seeds, achieving a 32% yield with their hybrid variety. This oil is then refined and packaged in Kampala, after which it is passed to the wholesale channel or exported.[38]

Local millers dry the seeds and then process them into cooking oil.[39] The oil is packaged into 20 litre jerricans and sold to local retailers (note: 50–150 centilitre cans are also now available). The production of oil also results in cake, which is sold as animal feed through both channels.

In recent years, an organic movement in the sector has evolved, driven by traditional cultivation practices that typically avoid chemicals, etc. and are well-suited for organic production. Operations are currently small, involving three companies that work through a contract farming model with farmer cooperatives. The product is sold domestically through wholesalers and retailers. It should also be noted that Uganda already has the largest area of organic certified land in Africa, which makes exploration of such initiatives promising.

Millers meanwhile produced 80,300 tons of sunflower oil in 2013, representing a 10-year CAGR of 4.8% and a total growth of 275% from the turn of the century.

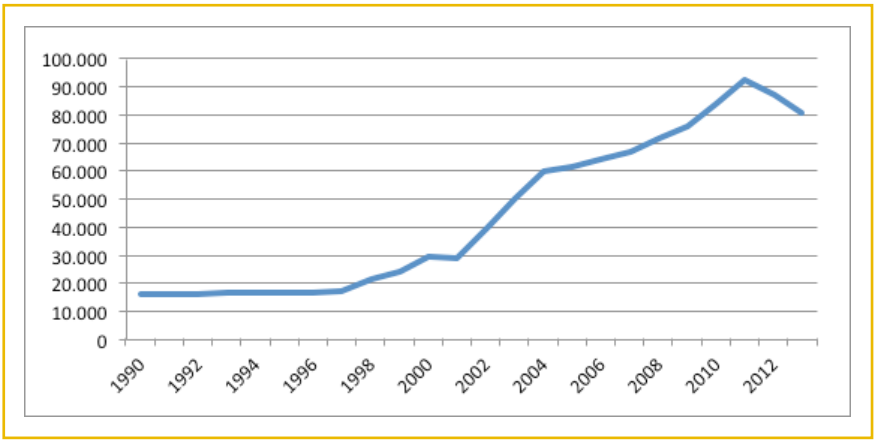
Distribution and markets

Sunflower oil is sold to retailers for a price of roughly 3,900 UGX per litre (or 78,000 UGX per 20-litre jerrican). Local retailers sell the oil either in jerricans or smaller 50–150 centilitre containers at a price of 7,000 to 7,500 UGX per litre.[40] Sunflower oil exports meanwhile were valued at US$5.9 million in 2013.[41] The largest importing markets were Kenya (57.4% of Uganda's sunflower oil exports), Rwanda (21.1%) and Switzerland (13.1%).

While some of the cake produced by Mukwano is sold on the regional market, a portion of it is exported, mainly to Switzerland. Local millers also sell the cake as animal feed to local traders in Kampala, Kenya and the United Republic of Tanzania for roughly 500 UGX per kilogram.[42] Ugandan exporters sold 8,742 tons of sunflower oilcake in 2013 valued at US$1.9 million.[43] The most important importing markets were Kenya (38% of Uganda's cake exports), India (32.7%) and Switzerland (27.8%).

37.– *Ibid*.: p. 34.
38.– *Ibid*.: p. 29
39.– *Ibid*.: p. 30.
40.– *Ibid*.: p. 31.
41.– Data calculated from United Nations Comtrade statistics.
42.– *Ibid*.: p. 30.
43.– Data calculated from United Nations Comtrade statistics.

Figure 8: Production of sunflower oil in Uganda, 1990–2013 (tons)



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

INSTITUTIONAL SUPPORT TO THE VALUE CHAIN

The institutions detailed in box 6 provide support to the sunflower value chain and can be segmented into three categories.

- Policy support network: These institutions represent ministries and competent authorities responsible for influencing or implementing policies and regulations.
- Trade services network: These institutions or agencies provide a wide range of trade-related services to both Government and enterprises.
- Business services network: These are associations, or major representatives, of commercial services providers used by exporters to effect international trade transactions.

Box 6: Ugandan trade support network

Policy support network	▪ National Planning Authority ▪ Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) ▪ Ministry of Finance, Planning and Economic Development ▪ Ministry of Works and Transport ▪ Uganda National Roads Authority ▪ Ministry of Trade, Industry and Cooperatives (MTIC) ▪ Oilseed Sub Sector Uganda Platform (OSSUP) ▪ Northern Uganda Oil Millers Association, Lira ▪ National Organic Agriculture Movement of Uganda (NOGAMU)
Trade services network	▪ Uganda National Bureau of Standards (UNBS) ▪ MAAIF ▪ Uganda Export Promotion Board (UEPB) ▪ Uganda National Chamber of Commerce and Industry ▪ Private Sector Foundation Uganda
Business services network	▪ NAADS ▪ NARO ▪ Cooperatives ▪ Processors (Mukwano Industries, Ronco) ▪ UOSPA ▪ Uganda National Farmers Federation ▪ Eastern and Southern Africa Small Scale Farmers Forum – Uganda ▪ Uganda National Agro-input Dealers Association ▪ Makerere University ▪ Commercial, development and microfinance banks ▪ Association of Microfinance Institutions of Uganda ▪ Seed providers

Policy support network

- The National Planning Authority is tasked with formulating comprehensive development plans for Uganda. As part of its Vision 2040, it has helped shape a number of policies that are expected to benefit the sunflower sector, including improvements in transportation infrastructure as well as the construction of a fertilizer plant in Tororo.
- IFAD and the Netherlands Development Organization (SNV) are co-financing VODP2 (2010–2018). The project seeks to help farmers increase production of oil palm and oilseeds and facilitate relationships between farmers and processors. Through its oilseed component, the project is providing support to 136,000 households.[44]
- MAAIF develops and manages policies related to crop sectors.
- The Ministry of Finance, Planning and Economic Development is in charge of privatization, investment, enterprise and economic development efforts.
- The Ministry of Works and Transport plays a key role in facilitating trade by planning, constructing and maintaining Uganda's transportation infrastructure and engineering projects.
- The Uganda National Roads Authority develops and maintains the road network, and advises the government on road policy.
- Lastly, MTIC performs a number of roles. Its Department of Trade is tasked with developing trade policy and participating in negotiations where appropriate. The Department of Cooperatives seeks to promote and strengthen the cooperative movement by enhancing the legal and regulatory framework while at the same time providing technical assistance.

Trade services network

- UEPB, Uganda's trade promotion organization, is a public agency established to promote and develop the country's exports. To this end, it provides trade and market information services, technical advice and capacity-building, and trade promotion services. It also advises the Government on policies related to export.
- UNBS is responsible for setting national standards, monitoring the safety and quality of foods, disseminating information on local and foreign standards, and providing necessary chemical and microbiological analysis. In addition, UNBS is the Enquiry Point for the World Trade Organization Technical Barriers to Trade (TBT).
- MAAIF, in addition to setting relevant policy, is also in charge of monitoring agricultural inputs including chemicals and seeds, and providing sanitary and phytosanitary controls. It also supports the development of agricultural infrastructure (water, for example), helps provide various inputs and services, and manages epidemics and disasters, among other activities. The MAAIF is also an inquiry point for SPS.
- The Uganda National Chamber of Commerce and Industry and the Private Sector Foundation Uganda are private sector associations that represent their membership through the provision of advocacy, marketing, research and capacity-building services, among others.

Business services network

Business support services, particularly around Lira, are quite prevalent. Such services, which include input provision, agronomy and organization, are being provided by a wide range of public, private and NGO stakeholders.[45]

- The sunflower sector is represented within a number of associations (although the focus on sunflower is weak), including UOSPA, the Uganda National Farmers Federation, and the Eastern and Southern Africa Small Scale Farmers Forum. In addition, many sunflower farmers are members of cooperatives. These groups have grown significantly in recent years, and they may provide technical advice, credit, output marketing and processing services. They may also provide farmers with the opportunity to pursue joint marketing and purchasing of inputs.
- UOSPA: funded largely by donors, UOSPA operates is an umbrella organization whose membership includes 65 small and medium-sized enterprise (SME) milling industries, 947 farmer groups, and over 47,000 farmers in 26 districts. UOSPA serves as a coordinating body for the sector, while also providing a range of business development and consulting services, including training and skills development for businesses and support institutions, credit sourcing, the provision of market information, and input supply.[46]
- In addition to associations and cooperatives, NAADS (within MAAIF), Mukwano and smaller processors such as Ronco also provide extension services to farmers. Nevertheless, it should be noted that more rural farmers often remain out of reach of these service providers. Research and development is performed by NARO of MAAIF, supported by Uganda's universities (particularly Makerere University Agricultural Research Institute, Kabanyolo).
- Financial services are provided by a range of commercial banks, development banks/ international financial institutions, and microfinance institutions. Even so, it is difficult for independent farmers to access the appropriate financial tools and services on acceptable terms.

44.– International Fund for Agricultural Development (no date). Vegetable oil development project–phase 2. Available from http:/ /operations.ifad.org/ web/ifad/operations/country/project/tags/uganda/1468/ project_overview.

45.– Schoonhoven-Speijer, M. and Heemskerk, W. (2013). *KIT Case Study: the Ugandan Oilseed Sector*. Royal Tropical Institute (KIT).

46.– Uganda Oil Seed Producers and Processors Association (2014). What we do. Available from http:/ /www.uospa.org/whatwedo.html.

As such, limited access to finance continues to be a key roadblock in the sector's development.

EXPORTS EXHIBIT SIGNIFICANT PRODUCT AND MARKET CONCENTRATIONS[47]

Uganda's exports of sunflowers accelerated in 2007. Although such a high rate is explained by the low values from which it started, the sector's export flows in the following years were characterized by a fluctuating but still upward trend; the CAGR between 2008 and 2014 was of 39%. In terms of trade balance, export growth has allowed the country to be a net exporter of sunflower derivatives since 2007.

The increases observed during the reference periods respond to the country's blueprint Plan for the Modernization of Agriculture launched in 2001 –which is the umbrella of the NAADS agency set up in 2001– and the assistance provided by NGOs and international organization to increase yields and access to markets.

47.– Trade data used herewith is from Trade Map, which data is based on United Nations Comtrade. The period covered is up to 2013, and for some countries, such as Uganda, until 2014. This source was preferred to FAO's data because Uganda does not export safflower oil and so there was no conflict, or overvaluation of trade flows, by using an HS code that classifies safflower and sunflower oils by the same HS six-digit code.

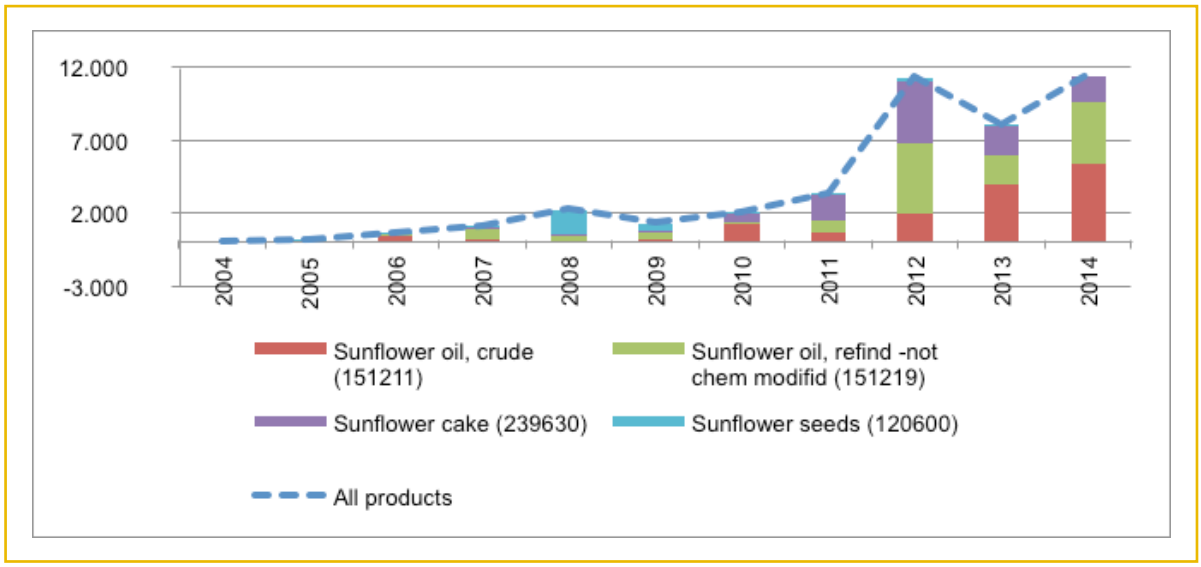
Despite positive outcomes in the sector over the past decade, this remains modest by international standards, as trade data suggest that Ugandan firms have not been able to truly develop their international market.

SUNFLOWER OIL IS THE KEY EXPORT OF ALL DERIVATIVES

The world market share of Uganda's exports of sunflower oil (the only product sustainably increased) rose to 0.04% (average 2011–2012). The subsector grew by 91% CAGR, between 2008 and 2014. Its principal markets have been Switzerland, Rwanda and Kenya (in descending order); exports to Switzerland were, however, only registered in 2011 and in 2013–2014. Within the subsector, 'sunflower oil refined, but not chemically modified,' is the product that Ugandan firms have been able to place in more markets. Export flows to six countries were registered in almost all years over the past decade; its principal markets were African countries; exports to Switzerland were only recorded in 2011 for a value of US$ 51,000. Over the reviewed period, Uganda's exports to Switzerland were primarily of 'sunflower oil crude.'

Uganda also enlarged its world share in exports of sunflower cake (to 0.20 %), as this grew by 77% CAGR between 2008 and 2014, following the trend of world demand for that product. Ugandan firms however did not maintain the export values reached in 2012. The principal markets for Ugandan sunflower cake have been Kenya and India.

Figure 9: Uganda's export basket of sunflowers, 2004–2014 (US$ thousands)



Source: International Trade Centre (2015).

TRADE FLOWS DEPICT A SECTOR VULNERABLE TO PURCHASES BY FEW COUNTRIES AND UNSTABLE TRENDS

The total number of Uganda's export partners during the whole decade sum 11, of which only eight registered export flows for at least three years and only three over most of the decade. Although Uganda's niche markets have not been the same over the decade, Kenya has topped the list in most years, with about 33% of Uganda's exports being to Kenya. Kenya ranks 67 among world importers. As for the highest export recorded over the decade, exports to Switzerland in 2014 – for a value of US$5 million – top the list. Exports to this country only occurred in 2011, 2013 and 2014, so it is yet to be seen if exports would be sustainable over time; Switzerland ranks 30 among world importers, and demand for sunflower derivatives was at 0.6% CAGR between 2008 and 2012.

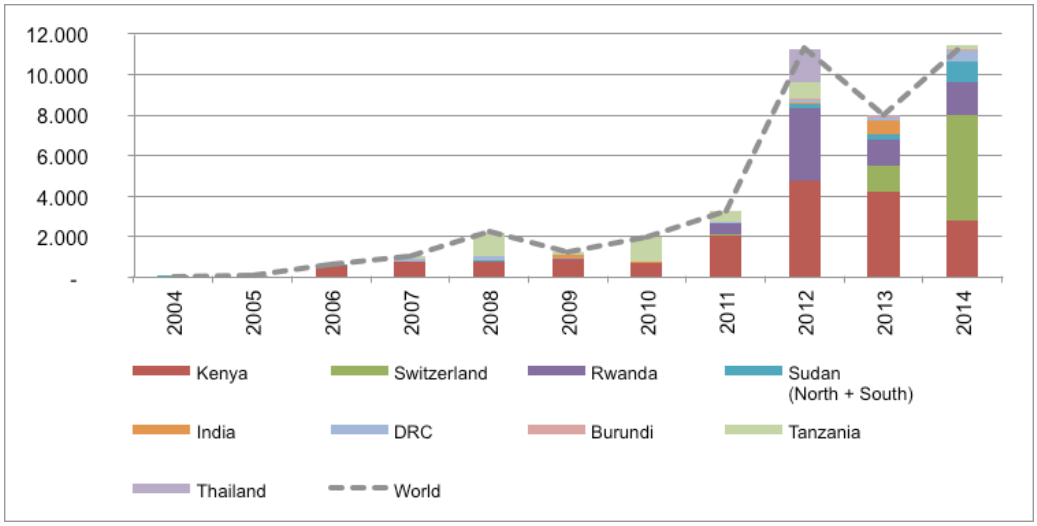
UGANDA'S PRINCIPAL PARTNERS ARE NOT AMONG THOSE WITH THE HIGHEST VALUE OR VOLUME OF WORLD DEMAND, OR THOSE GROWING THE FASTEST

A key characteristic of Uganda's partners of this sector are that most of them are in Africa and among its main partners are Sudan (whose rank in world imports is similar to Kenya but is growing faster) and members of the EAC, of which Uganda is a member (members with which Uganda is trading include Kenya, the United Republic of Tanzania and Rwanda).

As for exports to world-leading importers, India is its only partner. Export values have been very low, with the highest value registered as US$0.6 million in 2013. Although lack of experience and capabilities may be holding the sector back from access to foreign markets, critical issues such as productivity must be addressed to truly unlock the sector. The United Republic of Tanzania's experience may be useful for stakeholders to examine, as it has made important improvements in both fronts. Figure 10 illustrates Uganda's partners over the past decade – it includes all countries to which Uganda exported for at least two years.

Trade data suggest that Uganda's sunflower firms have made attempts to export to countries from all regions but, as discussed earlier, without much success. Even within Africa, Uganda's market share is slim: in 2012 its share was 0.7%. Stakeholders have yet to conquer all regions, particularly developed, emerging and frontier markets that provide preferential duties to least developed countries. Uganda has recently signed an EPA with the EU granting reciprocal preferential access. That said, a quick look at the data shows that within the list of countries that apply zero Customs duties to sunflowers exported by Uganda, such as sunflower cake (Harmonized System (HS) code 230630), are markets that remain untapped by Ugandan firms.

Figure 10: Uganda' exports of sunflower products by market destination, 2004–2014 (US$ thousands)



Source: International Trade Centre (2015).

Photo: (CC BY-SA 2.0) Ahmed Hazyl Hilmy, *Sunflower Field.*

STRENGTHS AND WEAKNESSES IN THE REGIONAL CONTEXT

Table 7 below provides some important details that assist in benchmarking Uganda's position in the broader oilseeds sector vis-à-vis key regional competitors – the United Republic of Tanzania, Kenya and Ethiopia. All four countries have a prominent smallholder sector ranging from 75% to 90+% of the overall agricultural sector. A significant vegetable oils deficit ranges from 40% in Ethiopia to almost 80% for Kenya.

The United Republic of Tanzania leads in production of sunflower seeds with 350,000 tons produced a year, and Uganda follows with an annual production of 250,000 tons. Kenya and Ethiopia are minor producers of seed. Unprocessed seed exports are banned in Uganda, reflecting the significant existing deficit of seed supply. The United Republic of Tanzania is a small exporter of seeds with less than 500 tons exported annually, and leads oil exports with 12,000 tons of sunflower oil exported annually. Uganda currently exports less than half of that amount, while Kenya and Ethiopia do not export oil.

In terms of milling, there is high concentration of processing in Uganda with three major millers and approximately 12 SMEs in addition to many village industries. In the United Republic of Tanzania, the processing sector involves 30 medium-to-large mills and hundreds of smaller mills. Kenya has 30 medium-to-large mills, of which the top five players dominate the market. Very little industrial milling exists in Ethiopia, with a handful of plants and a large number of local mills.

There is a defined government policy for promoting the growth of the oilseeds sector in all four countries.

- In Uganda, the policy focus is on import replacement and the development of oilseeds for vegetable oil production to cover a portion of the annual deficit. However, high value oilseeds such as sunflower are not explicitly supported under this policy focus. Policy implementation has resulted in major growth in production, and a concentration in terms of processing.
- In the United Republic of Tanzania there are various levies in place, including a producer levy, an export levy and an import levy.
- Kenya's stated goal is reaching food self-sufficiency by 2030. There is an emphasis on improving production but also on promoting free trade within the region. Development of infrastructure, warehousing and markets at the village level is also a focus.
- In Ethiopia there is currency control on exports linked to imports. The Government provides strong encouragement of value addition. A number of large mills are planned under new Government policies.

In terms of the strength of farmer associations and cooperatives, Kenya has a strong cooperative movement, estimated qualitatively to be the best in Africa, and quantitatively estimated to control about 40% of gross domestic product. The United Republic of Tanzania has relatively strong cooperative development in place, with varying levels of success. In Ethiopia, cooperatives have been established with moderately high levels of effectiveness, but in need of improvements related to management functions. In comparison, farmers associations and cooperatives in Uganda are relatively weakly organized relative to the other countries.

[UGANDAN SECTOR CHARACTERIZED BY AN IMBALANCE BETWEEN CONTRACT AND INDEPENDENT FARMING]

Table 7: Regional benchmarking figures

	Uganda	United Republic of Tanzania	Kenya	Ethiopia
Vegetable oils deficit	60%	60%	75-80%	40%
Imports of palm oil	180 000 tons p.a.	230 000 tons p.a.	165 000 tons p.a.	231 000 tons p.a.
Smallholder economy	90%+	90%	75%	85%–90%
Producer of sunflower seed	250 000 tons p.a.	350 000 tons p.a.	< 30 000 tons	Small producer
Exporter of sunflower seed/oil	5 000 tons p.a.	Small exporter <500 tons Oil 12 000 tons	Not an exporter	Not an exporter
Exporter of other high value seeds, e.g. sesame	Sesame circa 30 000 tons	75 000 tons, mainly sesame and castor	Not an exporter	Sesame 200 000 tons, niger seed, castor, poppy
Production trend oil crops	5%–7%	7%–10%	0.09%	6%–8%
Per capita consumption of vegetable oils (World 18.3 kg per annum (OECD)	6 kg	8 kg	10 kg	5 kg
Effective business services network	▪ Multiple agencies and interest groups without effective representation to any specific group. Well represented at Government level.	▪ Range of trade associations but ineffective representation.	▪ Trade associations stand accused of operating cartels across a number of subsectors. Kenya Association of Rolling Mills promoting Global Compact.	▪ Effective if undercapacity oilseeds association. Cooperatives supported by NGO donors. Major growth in production of oilseeds but lack of processing capacity.
Supply-side constraints (similar problems across the countries)	▪ Smallholders chain ▪ Market access ▪ Access to technology ▪ Market information ▪ Land locked ▪ Low levels of trust	▪ Smallholders chain ▪ Market access ▪ Access to technology ▪ Market information	▪ Lack of suitable land ▪ Smallholders chain ▪ Market access ▪ Access to technology ▪ Market information	▪ Smallholders chain ▪ Market access ▪ Access to technology ▪ Market information ▪ Landlocked ▪ Contract fidelity
Market entry constraints	▪ Finance cost and access ▪ Lack of market awareness ▪ Lack of management information systems ▪ High transaction cost ▪ Access to technology	▪ Finance cost and access ▪ Lack of market awareness ▪ Lack of management information systems ▪ Access to technology	▪ Finance cost and access ▪ Lack of market awareness ▪ Lack of management information systems	▪ Finance cost and access ▪ Shortage of qualified managers ▪ Lack of management information systems ▪ Foreign exchange crisis ▪ Access to technology

UGANDA'S VALUE PROPOSITION FOR SECTOR INVESTORS: A MIXED BAG

Investor profile in the region

The global leaders in agricultural inputs and providers of agricultural services which are beginning to stream into Eastern and Southern Africa most commonly enter through South Africa and Kenya, often expanding into Zimbabwe and Mozambique first and, later, into Zambia and the United Republic of Tanzania. Multinationals in search of markets may first enter a country with a sales office and, once well-established in the market, follow it with larger investments from manufacturing to research and development (R&D) and supply chain development.

This pattern can be seen in table 8, which also shows Kubota, the Japanese tractor manufacturer, as a rare multinational presence in Uganda. Table 8 presents the agribusiness value chain segments where foreign direct investment (FDI) is both needed and viable, along with leading sources of such FDI and competing locations in the region where investors are active.

Box 7: Potential growth modes for investors in Uganda

Apart from the multinationals noted in table 8, smaller regional companies may also be well-positioned to move quickly into Uganda, given their proximity and knowledge of the country. However, world-leading companies wanting to retain that leadership are likely to consider expansion into Africa more and more as the continent is given increasing importance in global food strategies. Conversely, realizing full potential for agribusiness is more likely if the world's leading players are involved in the scaling up of its production.

Furthermore, most of the companies in table 8 already have presences in the region. Future investment projects in Uganda might originate with headquarters or with these regional affiliates. For the companies with no presence currently in Uganda, a first venture would likely take the form of a sales or sourcing office. Although this does not create the jobs, technology spillovers or skill spillovers of a manufacturing project, for example, the possibility of a sales office should not be dismissed by investment promoters as being of low value. A first sales office is an opportunity for a foreign company to make tentative entry into a new market, learning the business landscape and achieving a level of comfort. Of more immediate importance, it can provide Uganda's sunflower oil sector with valuable access to more affordable, high-quality inputs – seeds being of primary interest – that are essential to the strengthening of the sector.

Table 8: Value chain segments needing FDI and likely sources

Value chain segments where FDI is needed and viable	Leading companies with foreign affiliates in Eastern and Southern Africa	Source country	Eastern and Southern African countries with an existing affiliate
Seeds, fertilizers and pesticides – sales, distribution, manufacturing, and R&D	BASF	Germany	South Africa
	Bayer CropScience	Germany	Mozambique, South Africa, Sudan, Zambia, Zimbabwe
	Dow AgroSciences	United States	South Africa
	DuPont (Pioneer)	United States	Ethiopia, Kenya, South Africa, United Republic of Tanzania, Zambia, Zimbabwe
	KWS Saat (seeds)	Germany	Kenya, South Africa, Sudan
	Monsanto	United States	Kenya, Malawi, South Africa, Zimbabwe
	Syngenta12	Switzerland	Ethiopia, Kenya, Mozambique, South Africa, Sudan, United Republic of Tanzania, Zambia, Zimbabwe
Farm machinery and equipment – sales, distribution, manufacturing, operation, maintenance and repair	AGCO	United States	None
	CLAAS	Germany	None
	CNH	Netherlands	South Africa
	John Deere	United States	South Africa
	Kubota	Japan	Kenya, Madagascar, Mozambique, South Africa, United Republic of Tanzania, Uganda
	SAME Deutz-Fahr	Italy	None
Animal feed – manufacturing and R&D	Brasil Foods	Brazil	None
	Cargill	United States	Kenya, Mozambique, South Africa, Zambia, Zimbabwe
	Charoen Pokphand	Thailand	None
	New Hope Group	China	None
	Tyson Foods	United States	None
Vertically integrated trading, including warehousing, transportation and risk management (as well as agricultural consulting and manufacturing of biofuels and animal feed in some cases)	Archer Daniels Midland	United States	None
	Bunge	United States	Kenya, South Africa
	Cargill	United States	Kenya, Mozambique, South Africa, Zambia, Zimbabwe
	Louis Dreyfus Commodities	Netherlands	Kenya, South Africa
	OLAM International		

Value chain segments where FDI is needed and viable	Leading companies with foreign affiliates in Eastern and Southern Africa	Source country	Eastern and Southern African countries with an existing affiliate
	Cotecna	Switzerland	South Africa
	Intertek	United Kingdom	Djibouti, Kenya, Mozambique, South Africa, United Republic of Tanzania, Uganda
	NSF	United States	South Africa
	SCS	United States	None (only Ghana in Africa)
	SGS	Switzerland	Burundi, Djibouti, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, South Africa, United Republic of Tanzania, Uganda, Zambia, Zimbabwe
	Control Union		United Republic of Tanzania, Ethiopia
	BCS Öko-Garantie		
Quality testing and certification	Asian Group		

Sources: Shand, Hope (2012); Noealt Corporate Services (2013); Peter Best and Ken Jennison (2012); Murphy, S., Burch, D. and Clapp, J. (2012); and company websites.

Uganda is currently at a disadvantageous position due to its location and the higher stakeholder awareness of regional competitors

As a location for investment, Uganda lags behind Kenya, the United Republic of Tanzania and South Africa in the overall investor/stakeholder perspective of East and Southern Africa. Specific to sunflower, the United Republic of Tanzania and South Africa have higher profiles and levels of interest.

In the case of the United Republic of Tanzania this is due to the fact that there has been some export trade of oil and sunflower seed cake as well as successful foreign investment in the sector – e.g. Sunshine Industrial – or in similar sectors, e.g. Pyrethrum Company. In contrast, the only high profile investment in the Ugandan oilseeds sector has been Mount Meru which, although highly successful, is regarded as a regional company despite its entry into the Indian market.

Additionally, the United Republic of Tanzania's production volume of sunflower seed is higher, and the country is generally regarded as an easier place to do business. Together these factors make the United Republic of Tanzania a lower-cost, lower-risk alternative to extraregional investors looking for strong supply in East Africa.

In the case of South Africa, interest is focused due to the belief that there is potential in the domestic market, high levels of processing opportunity with a crushing capacity for sunflower of approximately 800,000 tons, and the capacity to import to supplement the domestic crop, which was estimated at 600,000 tons in 2015.

Finally, and essentially in terms of the profitability of crushing oilseeds, there is a ready domestic market for the oilcake produced – in the United Republic of Tanzania and South Africa – as a residual by-product for sale to an organized livestock industry which is not based on smallholders raising one or two animals. This final factor would be less evident in the United Republic of Tanzania compared with South Africa despite the large livestock population, because it is not structured around large farms or feedlots. However, there is the opportunity to export oilcake, as has been seen with significant exports in recent years ranging from 51,000 tons in 2014 to 93,000 tons in 2013. India purchased 88% of 2014 exports.

Proximity to ports is an essential element in exporting the low value by-product, as logistical costs can quickly eat into margins. Uganda is at a disadvantageous position vis-à-vis the two competitors in this regard.

There is a general perception that doing business in Uganda is difficult, which, when combined with perceptions of an oligopoly in vegetable oil production, is off-putting for investors

Interested stakeholders have a general and overall awareness that Uganda has potential for growing additional oil crops including sunflower seed. Perceptions of the value chain, when present, give an impression of a sector which is poorly organized, high cost and with low levels of trust, causing contract default and difficulty of enforcement. This is probably true of a wide range of oilseed value chains in East Africa, including other major producers such as the United Republic of Tanzania, Sudan and Ethiopia.

The difficulty in gaining grower support for contract farming or other supply arrangements, leading to side selling, was mentioned in particular. Although this belief is difficult to deny, there are examples of successful sourcing arrangements such as Mukwano (sunflower), Gulu Agricultural Development Ltd (sesame seed) and the tobacco sector.

Interested parties found that it is difficult to access information about the sector as there is no active oilseed trade association promoting the sector or providing information on the sunflower or other oilseed value chain. Organizations such as UOSPA, NOGAMU and OSSUP tend to be narrowly or locally focused and lack the independent, verified information necessary as part of the initial investigation stage for investors.

Table 9: The investment climate in Uganda and possible competitors for sources of sunflower oil investment

International benchmark	India	United Republic of Tanzania	Kenya	Uganda	Bangladesh	Ethiopia	Myanmar
Ease of Doing Business ranking (World Bank Group, 2015)	142	131	136	150	173	132	177
Competitive Industrial Performance ranking (United Nations Industrial Development Organization, 2010)	43	106	102	120	78	130	Not ranked
Global Competitiveness Index (World Economic Forum, 2014)	71	121	90	122	109	118	134
Inward FDI Performance Index (United Nations Conference on Trade and Development, 2010)	97	59	129	41	114	120	52
Corruption Perception Index (Transparency International, 2014)	85	119	145 (tie)	142	145 (tie)	110	156
Economic Freedom Index (Heritage Foundation, 2015)	128	109	122	92	131	149	161

Ugandan business environment lags behind competitors

Table 9 presents several indicators of the attractiveness of Uganda's business environment, particularly as it compares to those of other likely destinations and sources for agribusiness FDI. In terms of ease of doing business and competitive industrial performance, Uganda lags well behind the United Republic of Tanzania, Kenya and India. In rankings of these four countries, Uganda brings up the rear with the United Republic of Tanzania in terms of global competitiveness (World Economic Forum) and with Kenya in terms of the perception of corruption (Transparency International). The only areas where Uganda exceeds the others are economic freedom and the track record for FDI actually attracted relative to the country's attractiveness on paper. This last factor bodes well for Uganda's future investment promotion efforts in the sunflower oil and agribusiness sectors.

Lack of both awareness and accessible, accurate and easily understandable information is giving investors and other stakeholders the perception that Uganda is not open for oilseed investment

In this situation many investors assume the worst case and focus on markets where they can access information from a mix of official and trade sources, using one to verify the other. This means that interest in sunflower subsector engagement is being deflected early in the process, causing the real opportunity to remain unidentified. The building of awareness in this area needs clear statements from the Government clarifying the position of oilseeds in the provisions of development programmes such as VODP2, highlighting the opportunity in the domestic market and promoting the incentives (as outlined later in this section) which are competitive with other regional sunflower producers.

Despite the abovementioned disadvantages, Uganda has important strengths in its investment and business climate

Though significant, the challenges noted with the investment climate of the country are not insurmountable, and Uganda has inherent strengths that can be leveraged to make the climate more attractable to investors.

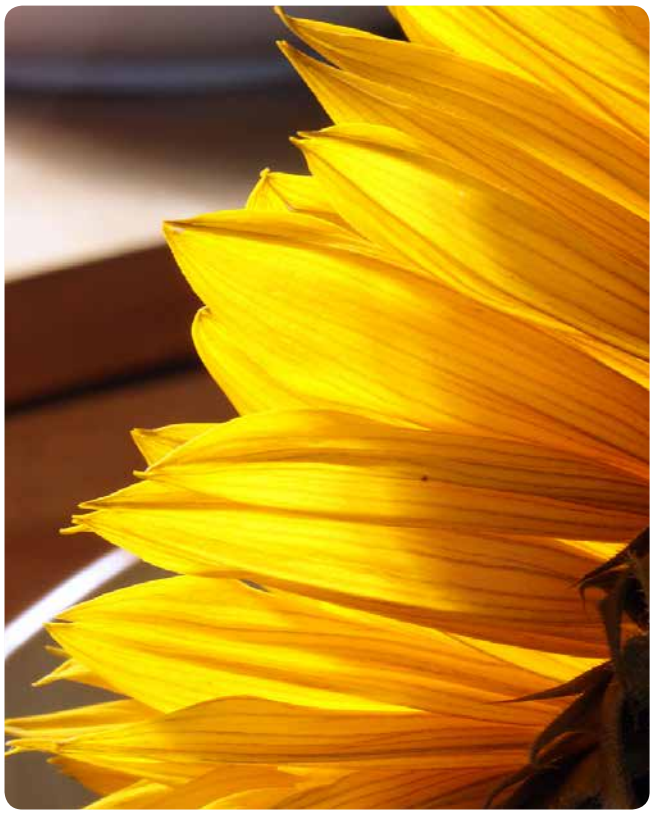


Photo: (CC BY 2.0) John, *Sunflower.*

- Uganda's primary strengths in attracting investments lie in the size of its agricultural sector, the remaining available land, and the untapped markets which these factors represent.
- Although still small by international standards, Uganda has nearly double the acreage of the United Republic of Tanzania under irrigation and several times more than Kenya and Ethiopia. Its average electricity tariff for large manufacturers (10.6 US cents per kilowatt-hour) also offers a competitive advantage over the United Republic of Tanzania (12 US cents) and Kenya (13.4 US cents).
- As discussed in box 8, the FDI policy is well-suited for attracting agribusiness-based investors.

Photo: (CC BY 2.0) www.tOrange.biz Valdemar Fishmen, *Sunflower-oil*.

Box 8: FDI policy in Uganda

In specific terms of FDI policy, Uganda meets the fundamental needs of FDI projects but with a few restrictions. FDI is generally given national treatment, but it is forbidden in crop production and a few petroleum subsectors. Profits may be remitted freely in principle, although a tax clearance certificate is needed for amounts of 50 million UGX (about US$ 20,000) or more, and there are very few sectors in which FDI is prohibited (i.e. telecoms, insurance and fishing). Although foreigners and foreign-controlled companies may not own land, 49-year leases are available with the possibility of renewal.

Bilateral investment treaties with 15 countries (six in force with major EU economies; nine ratified but not yet in force; many with major African markets) and Uganda's membership in the International Centre for the Settlement of Investment Disputes provide investors with additional confidence that they will be treated fairly by the Ugandan Government. Uganda's membership in the Multilateral Investment Guarantee Agency also provides investors with the possibility of guarantees against political risk.

'Value added agribusiness' is one of four national priorities for development. The Government's Plan for Modernization of Agriculture aims to transform the sector through better provision of research, extension services, finance, infrastructure, marketing, trade and environmental sustainability.

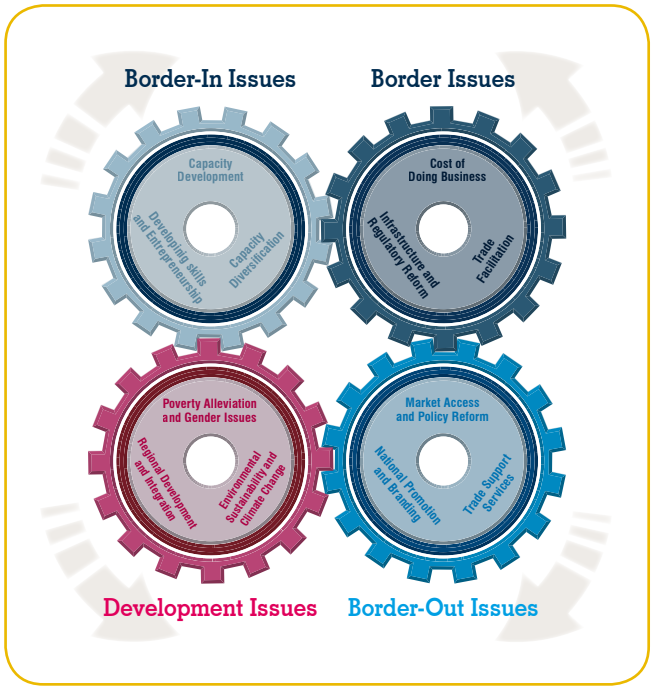
As a priority sector of the Ugandan Government, fiscal incentives are offered to value added agribusiness as follows:

- Tax deductibility of:
  - 50%–75% of capital allowances for plants and machinery
  - 100% of training costs
  - 100% of scientific research expenditure
- A corporate tax rate of 30%, which may be significantly less after a range of value added tax deferments, deductions, exemptions and depreciation allowances
- 10-year tax holiday for export-oriented production
- Zero tax on imports of plant machinery and equipment
- Value added tax deferral facility for plant and machinery
- Start-up cost allowance spread over the first four years at 25% per annum
- Duty drawback for exporters.

A total of 22 industrial parks, many of which have been designed to support agribusiness, are in different stages of planning and development around the country.

STRATEGIC ISSUES AND COMPETITIVENESS CONSTRAINTS

Traditionally, the scope of export strategies and roadmaps 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 an export 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.



Supply-side issues affect production capacity and include challenges in areas such as availability of appropriate skills and competencies, diversification capacity, technology and low value addition in the sector's products.

Business environment constraints are those that influence transaction costs, such as regulatory environment, administrative procedures and documentation, infrastructure bottlenecks, certification costs, Internet access and cost of support services.

Market entry constraints are essentially external to the country (but may also be manifested internally), such as market access, market development, market diversification and export promotion.

Social and economic concerns include poverty reduction, gender equity, youth development, environmental sustainability and regional integration.

SUPPLY SIDE ISSUES

The quality of the seed variety most commonly used by independent farmers (Sunfola) is declining due to open pollination (as an open-pollinated variety (OPV), Sunfola genes are contaminated by pollinating bees that transfer pollen from other varieties. This results in a dilution of the desirable characteristics in the gene pool such as yield and oil content), compounded by the lack of a gene bank (cold storage facility where seeds with the original genetic material are stored) to support necessary research, and the lack of research to revitalize the gene pool through the production of breeder seed (pure, uncrossed seed that is uncontaminated by cross-pollination) that is multiplied to produce farmer seed.

Value chain segment	All segments
Severity	●●●●●
Highlight	Sunfola is a local sunflower variety that was developed by the Uganda National Semi-Arid Resources Research Institute (NASSARI) in Serere. It was the first improved seed in Uganda, and it was promoted by UOSPA to encourage farmers to stop growing the low-yielding and low-oil local, unimproved varieties.
PoA reference	Activities 1.1.1 and 1.1.8

Limited capacities of farmer associations stem from low rates of participation among farmers, and consequently the small size of primary farmer groups; limited access to finance; a tendency towards slow decision-making; and limited understanding of markets.

Value chain segment	All segments
Severity	●●●●●
Highlight	Only 5% of farmers are members of cooperatives
PoA reference	Activities 2.1.3, 2.3.2 and 2.3.4

Poor contract fidelity stems from low levels of trust between suppliers and buyers, and delayed payments.

Value chain segment	All segments
Severity	●●●●●
Highlight	Due to the low levels of trust, as well as frequent 'side selling' by farmers, Mukwano does not offer credit to farmers. They are instead required to pay for their seed in advance.
PoA reference	Activities 2.1.3, and 2.1.4

Limited product quality stems from:

- The lack of significant export markets that would encourage the development of standards and quality
- Limited availability and high cost of product testing facilities
- Little to no knowledge of export buyer requirements
- Lack of traceability
- Assembly and storage facilities are below food-grade standards
- Poor knowledge of good management practices, certification and food safety issues
- Lack of market reward for quality
- Lack of national standards as reference points to reward quality.

Value chain segment	All segments
Severity	●●●●●
Highlight	While some testing is performed in Kampala, enterprises often use facilities in Nairobi at a high cost because of the limited domestic capacities.
PoA reference	Activities 3.1.4, 3.4.1 to 3.4.3, 4.1.1 and 4.1.2

Weak horizontal and vertical linkages among the independent farmer channel due to mistrust between stakeholders and the weakness of associations.

Value chain segment	All segments
Severity	●●●●●
Highlight	Business relationships are short term, and there are few long-term contracts. The situation breeds opportunism and short-term thinking, hindering the development of stronger networks, partnerships and long-term strategies.
PoA reference	Activities 2.1.1 to 2.1.4, and 4.2.2

Limited availability of seeds stems from an underdeveloped inputs supply sector; a dearth of input suppliers in rural areas; low availability of a seed propagation sector (private and public initiatives in seed propagation have largely failed); a reliance on imported seeds whose supply does not meet demand; and poor vertical linkages. Additionally, locally bred seed varieties have low uptake due to limited promotion.

Value chain segment	Inputs
Severity	●●●●●
Highlight	Past efforts to import and propagate new seed varieties have met with limited success.
PoA reference	Activities 1.1.1 to 1.1.6, and 1.1.9

Limited quality of seeds stems from:

- Poor regulation of the seed propagation sector (no reliable certified seed system for Quality Declared Seed); low quality and oil content of available seeds
- Sunfola OPV is declining due to lack of funds to maintain gene pool (mentioned above)
- Weak applied research capacities (although Serene Research Institute has developed new hybrids in recent years)
- The sale of adulterated or 'fake' seed and fraud.

Value chain segment	Inputs
Severity	●●●●●
Highlight	The Mukwano value chain has exclusive access to the PAN variety of sunflower seed.
PoA reference	Activities 1.1.1, 1.1.7, 1.1.8

Limited uptake of appropriate agro-inputs stems from:

- High costs of fertilizers and seeds (complicated by weak horizontal linkages that result in limited farmer buying power)
- Continued reliance on traditional farming methods (see 'reliance upon poor agricultural practices' below)
- Lack of trust between farmers and input suppliers
- Limited knowledge of input sources and impacts of inputs on farming
- Limited access to finance (see 'limited access to finance' under the business environment constraints).

Value chain segment	Inputs
Severity	●●●●●
Highlight	Given the small size of primary farmer groups, contracting systems for input supply are expensive to establish and difficult to maintain.
PoA reference	Activities 1.1.5, 1.1.9, 1.2.1 to 1.2.3, and 3.1.1

Reliance on poor agricultural practices continues due to:

- Weak extension services (treated separately)
- Weak farm institutions
- Low levels of investment by the private sector in farmer improvement, input provision and education
- Low investment in farm improvements
- Limited reach of cooperatives and farm organizations
- Limited access to and use of even basic technology.

Value chain segment	Production
Severity	●●●●●
Highlight	Production increases have been driven by increased area under oilseed cultivation and not by improvements in agricultural practices. It is important to be pragmatic with regards to yield and quality potential. Sunflower was chosen due to its resistance to dry weather conditions, but it may be unrealistic to expect yields and oil content that are typically associated with more temperate climates.
PoA reference	Activities 3.1.1 to 3.1.4

Weak extension services stem from:

- A shortage of extension service workers (according to anecdotes, some extension officers are responsible for areas that include thousands of farmers)
- Extension services are generic, not crop-specific
- Lack of an information system for extension knowledge
- Limited investment in extension services/poor training for public extension service employees.

It may be that potential extension workers are attracted away from Government administered extension work by the large number of donor/NGO projects that offer better wages, training and long-term career prospects.

Value chain segment	Production
Severity	●●●●●
Highlight	VODP2 is expected to contract private extension service providers specifically for oilseeds. While the initiative will be coordinated by MAAIF, it will be largely driven by development support, leading to questions regarding sustainability.
PoA reference	Activities 3.2.2, 3.2.3, and 3.2.4

High assembly costs due to the prevalence of smallholder agriculture (small volumes from many producers); the wide geographical spread of farmers (complicated by poor infrastructure); and the prevalence of middlemen.

Value chain segment	Collection
Severity	●●●●●
Highlight	VODP2 introduced the idea of regional hubs at Lira, Gulu, Mbale and Arua, but commercial interest is still heavily concentrated in Lira.
PoA reference	Activities 2.2.5, 2.2.6 and 3.1.1

Poor postharvest practices stem from the lack of appropriate storage, cleaning and grading facilities; poor infrastructure; and limited knowledge of best practices.

Value chain segment	Collection
Severity	●●●●●
Highlight	Community storage facilities would make it easier to bulk production, thereby reducing transaction costs and increasing profit margins. Adequate facilities would also allow stakeholders to store goods until market prices are better.
PoA reference	Activities 3.1.2 to 3.1.4, 3.2.1 to 3.2.4, 3.4.1 and 3.4.2

Market structure inefficiencies stem from a lack of trust between farmers and primary traders, and primary traders and assemblers and mills; low levels of contract farming; and poor horizontal and vertical linkages, which are further damaged by intense competition between traders and assemblers.

Value chain segment	Collection
Severity	●●●●●
Highlight	In 2007, Agri-ProFocus, SNV and others established OSSUP to facilitate linkages.
PoA reference	Activities 2.1.3, 2.1.4, 3.1.1, and 4.1.2

Limited processing capacity stems from price volatility and supply uncertainty of inputs; limited knowledge of value addition outside of the main mills; and limited access to technology for SMEs, complicated by limited access to finance (see 'limited access to finance' under business environment constraints).

Value chain segment	Processing
Severity	●●●●●
Highlight	Only 51% of milling capacity is used.
PoA reference	Activities 3.3.1 to 3.3.5

BUSINESS ENVIRONMENT ISSUES

Underdeveloped business support organizations due to the unclear identities of trade associations, the misalignment of associations' incentives with those of membership, and limited financial and human resource capacities.

Value chain segment	All segments
Severity	●●●●●
Highlight	UOSPA and NOGAMU, for example, both have commercial trading operations that compete with their members. Meanwhile Agrinet, set up as a business information provider, competes as a trader with its customers.
PoA reference	Activities 2.1.1 to 2.1.3

Lack of service coordination stems from the absence of a national trade association for the sunflower sector; and limited institutional and governmental coordination, despite the sector's prioritization in the national development agenda.

Value chain segment	All segments
Severity	●●●●●
Highlight	Stakeholders note that the lack of coordinated service provision is one of the critical roadblocks to sectoral development.
PoA reference	Activities 2.1.3, 2.2.4, and 4.2.2

Limited access to finance stems from weak banking knowledge of agriculture, and the preference of banks and financial institutions to fund short-term activities such as export trading. As such, the cost of funding is high and there are stringent collateral requirements for SMEs in the sector.

Value chain segment	All segments
Severity	●●●●●
Highlight	SMEs must often provide collateral at both the corporate and personal level, with directors often extending personal guarantees.
PoA reference	Activities 2.3.1 to 2.3.7

Limited public–private dialogue stems from the absence of an appropriate forum to engage in dialogue and raise awareness of stakeholder needs, and limited interaction between donor projects and Government services.

Value chain segment	All segments
Severity	●●●●●
Highlight	While many NGO and donor projects are driven by the direct provision of market-based services, they do not coordinate with Government services. As a result, some farmers are very well served, while others are not served at all
PoA reference	Activities 2.1.3 and 2.2.4

MARKET ENTRY ISSUES

Limited market information stems from:

- The multilayer value chain dominated by middlemen (these do not serve as information conduits and simply put space between producers and final markets)
- Weak capacities of farmers and trade associations
- Weak extension services
- The lack of a transparent price determination and dissemination mechanisms
- Lack of market information services.

Value chain segment	All segments
Severity	●●●●●
Highlight	There is little or no knowledge of international markets and export buyer requirements.
PoA reference	Activities 3.2.4, 4.1.1 to 4.1.3, 4.2.1 and 4.2.3

Limited market orientation stems from the focus on farm gate level interventions by Government and donors; the lack of market information; the prevalence of middlemen in the value chain; and the lack of transparency in the value chain.

Value chain segment	Marketing and distribution
Severity	●●●●●
Highlight	The lack of market orientation is particularly notable at the farm and primary trader level.
PoA reference	Activities 4.1.1 to 4.1.3, and 4.2.1

Limited branding and sales capacities due to:

- The absence of a coherent 'voice' for the sector
- Poor market information and limited knowledge of export markets and their requirement
- Poor product quality that has damaged the sector's reputation
- Weak product presentation
- Limited marketing and sales skills
- High marketing costs.

Value chain segment	Marketing and distribution
Severity	●●●●●
Highlight	SME processors do not engage in branding and they do not engage in effective marketing.
PoA reference	Activities 2.1.3, 4.1.1, 4.1.3 and 4.2.1

Limited marketing opportunities due to the low level of market interactions; and lack of organized visits to foreign markets, including trade fairs and business–to–business (B2B) meetings.

Value chain segment	Marketing and distribution
Severity	●●●●●
Highlight	The sector would greatly benefit from outreach programmes that seek to promote interaction between Uganda's value chain actors and their foreign buyers and peers.
PoA reference	Activity 4.2.1

Limited awareness of Uganda as a destination for investment due to the lack of accessible, accurate and understandable information available to investors; and limited interaction of value chain actors and support institutions with potential investors abroad.

Value chain segment	All segments
Severity	●●●●●
Highlight	This lack of awareness may give investors and other stakeholders the perception that Uganda is not open for oilseed investment. Indeed, in the absence of information, many investors may assume the worst case and focus on markets where they can access information from a mix of official and trade sources, using one source to verify the other. This means that interest in the sunflower sector is being deflected very early in the investment attraction and promotion process, causing the real opportunity to remain unidentified.
PoA reference	Activities 2.2.1 to 2.2.6

SOCIOECONOMIC AND ENVIRONMENT ISSUES

Potential for farmer mistreatment stems from the prevalence of informal contracts between farmers and buyers, and the lack of more competition in the supply chain.

Value chain segment	Production
Severity	●●●●●
Highlight	The lack of formalized relationships between farmers and contractors increases the risk of manipulation and farmer mistreatment. As the same issue also increases risks for the contractor that the farmer will side-sell his product, creating more formal mechanisms for cooperation would be mutually beneficial.
PoA reference	Activities 1.2.2 and 2.1.4

Box 9: Investors' perspective*

Many of the concerns raised in discussions with investors were the result of a lack of awareness of Uganda, and particularly of the sunflower sector in the country. There were a number of other concerns which are here listed in a tentative order of importance as mentioned. It is difficult to put a sequence on the concerns raised because some were the concerns of genuinely interested parties and others were raised by actors who are interested but unlikely to invest in the sector.

1. **Oligopolistic competition:** competing with the large, well-established and, by assumption, politically connected large millers, is perceived as difficult, particularly in relation to the apparent preference for palm oil crop development at the expense of oilseeds under government policy. Essentially it is felt that, despite market growth and opportunity, particularly over the long term, the existing major millers would be protective of their market and particularly the supply.
2. **Poor supply chain organization:** potential investors see the poor supply chain organization as a threat to security of supply. There is much written on the number of levels and middlemen present in the Ugandan market. This is further accentuated by the lack of a trade association or coherent official communication portal to indicate value chain efficiency. One party interviewed pointed to the failure to use 30,000 tons of village-level storage due to disputes about ownership and rental price of space.
   There is no doubt that there are examples of inefficiencies in the supply chain but the oft-made argument about middlemen may be spurious. Given the nature of the smallholder chain, middlemen who manage cash advances and assemble small parcels into truckloads are essential to ensure that seeds are removed from farms in a timely manner. It is also clear that the position of the larger traders such as Lira Resort Enterprises and Farmers Centre is not well appreciated, although these traders play an integral role in assembling for large milers and also in assembly for export in the case of high value seeds like sesame seed, which are assembled for export by international traders such as Olam International and Export Trading Group.
3. **Contract fidelity and trust:** the sunflower sector has been tainted by Uganda's poor reputation for honouring contracts from other sectors. This is seen not so much as impacting the security of the investment but as a threat to supplies, meaning that some potential millers see themselves as needing their own growing land to secure supplies, which increases the cost and time frame of any development. There is no doubt that there is some substance to this concern, with discussions among domestic supply chain actors often resulting in each blaming the other and all blaming the farmer. However it should also be mentioned that millers and traders do not always distinguish themselves in this aspect.
4. **Government support:** while Government support for the promotion of oil crops is clear, support for oilseeds is not, with much publicity around the VODP2 project devoted to the promotion of oil palm. This reservation exists despite clear Government support through capital allowances and duty exemption on plant and machinery imports, among other incentives. Sunflower processing as an activity with a domestic market focus is at a disadvantage compared with export-oriented agri-processing, for which the Government offers a 10-year tax holiday.
5. **Doing business in Uganda:** a number of potential actors mentioned their perception that business with Government offices, banks and other institutions in Uganda moves very slowly and must be facilitated with informal cash payments at each and every stage. One laconically commented that the payments do not make the system move any more quickly.
6. **Markets for oilseed cake and husk:** As the value of cake is relatively low, as mentioned above, the shipping cost is an essential element of profitability. The existing large-scale mills produce large volumes of oilseed cake but there is no information readily available to indicate if the domestic livestock market could absorb additional volumes. Therefore the assumption is that the cake would have to be destined for the export market, which by definition increases the costs and introduces concerns as to competitiveness with neighbouring producers, primarily the United Republic of Tanzania.
7. **Lack of reliable market information:** It was noted that while there are many reports available on the agricultural sector in Uganda, few focus on the commercial aspects, markets or trade. Mainly generated by development agencies, the reports focus on farm level and enhancing production and farmer incomes. Commercialization of crops is largely neglected, meaning that potential investors are limited to a view which gives them the big picture and the farm gate picture but little indication of what happens in between.

** The commentary that follows is based on a number of conversations with industry stakeholders and potential investors spread over a number of weeks. With the exception of Advanta, a seeds company; and DFI, an oilseeds trader, no other potential investor had any significant awareness of Uganda as a potential location for investment in the sunflower sector. Therefore discussions tended to centre on providing information on the SITA project and the Ugandan sunflower sector and gauging the response. The level of awareness did not vary whether the respondent was Indian, European or Indian-origin companies based in the United Aran Emirates.*

THE WAY FORWARD

Photo: (CC BY 2.0) www.tOrange.biz Valdemar Fishmen, *sunflower-seeds*.

Uganda's sunflower sector finds itself at a turning point. Its current growth model has certainly yielded strong socio-economic results, particularly in light of the expansion of contract farming that has occurred in recent years. Yet the stagnation of the independent farmer channel is cause for concern. Despite significant contributions from the development community, farmers continue to lack sufficient access to inputs, training and markets. In addition, the mistrust that permeates the value chain makes it all the more difficult to implement meaningful solutions. Millers meanwhile continue to suffer from a deficit of raw materials. This forces them to align themselves with the large contractors, further reducing capacities in the independent channel.

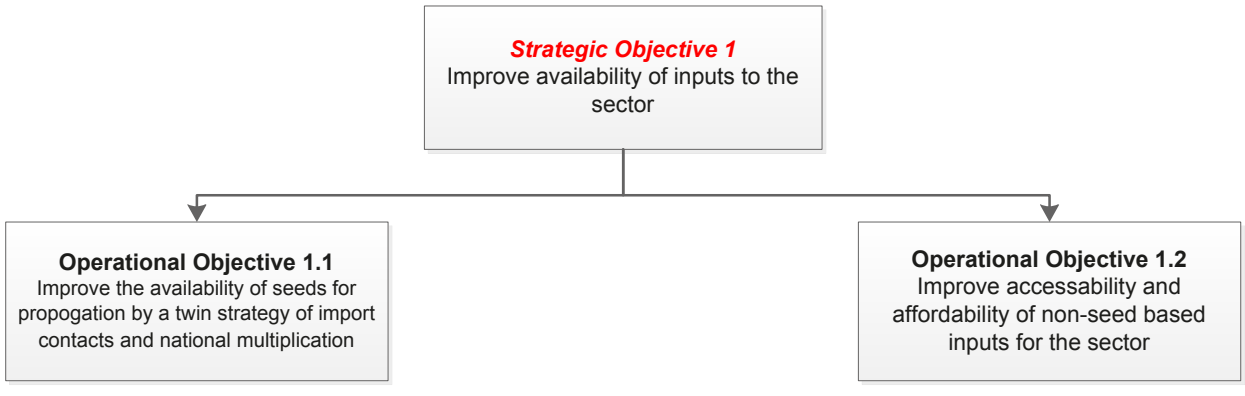
Current export relationships are symptomatic of this limited competitiveness, as they illustrate the sector's inability to pursue more meaningful market access. Trade flows are heavily concentrated towards a few regional countries, making the sector particularly vulnerable to shifts in consumption and localized economic volatility. In addition, Uganda has yet to penetrate the largest and fastest-growing markets for sunflower products, leaving it unable to fully leverage the growth in global demand.

Improved competitiveness will require comprehensive intervention, and efforts must be focused on improving the supply of inputs, enhancing institutional and investor support, diversifying into new products, and facilitating market access through greater use of market intelligence. Trust-building and the creation of greater horizontal and vertical linkages must permeate all of these endeavours. With regards to product diversification, initial efforts should focus on building current capacities and improving competitiveness in basic product segments. In the longer term, efforts can be made to diversify into new products. By entering into new product categories, the sector will be enabled to capture greater value and penetrate premium markets.

In order to realize these goals, structural deficiencies along the four gears (supply side, business environment, market entry and development side) will be addressed, and identified opportunities will be leveraged. The following is a delineation of the proposed vision and strategic approach in this direction.

THE STRATEGIC OBJECTIVES

The strategic objectives aim to define the main thrusts that will guide the strategy design process and implementation. They represent the final goals and effects expected to result from the policies and actions to be undertaken. As such, they will serve as the cornerstones on which a more competitive Ugandan sunflower sector will be built. Each strategic objective is comprised of operational objectives as well as specific activities, of which more than 50 have been formulated. These activities constitute the PoA.



Strategic objective 1 focuses on alleviating the challenges surrounding the availability of good quality seeds in the sector, and also aims to improve availability and affordability of non-seed inputs.

The future state will involve a seed supply chain marked by improved affordable and accessible HYVs. Smallholder farmers will have the option of procuring seed varieties from independent seed suppliers in addition to using the contract farming model if they so wish – the end goal being the facilitation of multiple avenues of seed procurement rather than the single source supply channel that is currently the case. The sector will have made strides towards establishing sustainable mechanisms for storing and multiplying seeds through seed banks and market-led seed multiplication initiatives, respectively.

The development and widespread adoption of high-quality seeds tailored to the Ugandan environment is at the core of increasing the sector's raw supply. Raw supply is the single most important factor in the growth potential and investment attractiveness of commodity-based trading and manufacturing. Fortunately, there is big business in seed development and distribution, as evidenced by the arrival of all the global seed players in table 8. The table shows seven leading seed companies, all with a presence in South Africa and four each in Kenya and Zimbabwe. Some are only in one country, but one has facilities in as many as eight countries, illustrating a pattern of expansion over time. None are in Uganda, but Uganda may be able to position itself well as a leading candidate for following waves of expansion.

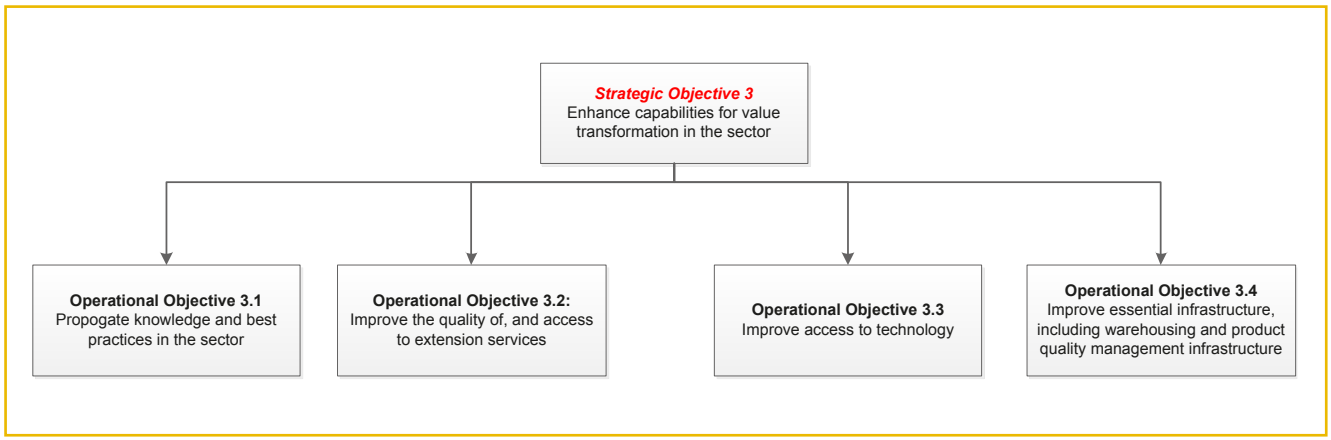
Other non-seed inputs will also be easier to access. Year-on-year demand levels will be estimated through assessments and input providers will be facilitated with access to markets and potential buyers. Quality agrochemicals (fertilizers, pesticides) are currently not available to most farmers. One very large investment has been made by a Chinese fertilizer manufacturer, but it is uncertain how much of its production it plans to export and how much it plans to sell in the domestic market. However, the domestic agrochemical sector could boom if it is well linked to Uganda's newly booming petroleum sector, the major upstream sector for agrochemicals. The roadmap will explore this linkage.

Strategic objective 2 is aimed at improving the efficacy of institutional support available to the sector, promoting the sector as a good investment destination, and improving access to finance for sector operators.

In the future, support for the sector will be more rationalized. To this end, support will be more evenly balanced across different areas of need rather than focused on a few areas of the value chain. Support actors – including extension services, active development partners and NGOs – operating in the sector will be better informed on activities of other support actors. Better dialogue and information sharing between support actors will be enabled through a revitalized OSSUP platform.

Within the second operational objective, the Government will improve the business environment through an improved legal and mediation framework, and by promoting the use of contracts in farming. Awareness will be raised throughout the public sector of issues critical to the oilseed sector, and it will be made a national priority on par with palm oil. At the same time the Government will engage in more effective investment promotion efforts, raising awareness of investment opportunities within the sunflower sector to potential foreign and local investors. It will also develop schemes to attract investors through incentives such as loan subsidies and guarantees.

Lastly, the PoA will work to ensure that enterprises can access the necessary financing to maintain and grow their operations. The first step will be to improve supply-side capacities by enhancing the understanding that bankers, loan officers, risk managers and collateral managers have of the industry. At the same time, efforts will be made to improve the ability of stakeholders on the demand side, including farmers' associations, credit unions, etc., to manage their finances and access credit. The roadmap will also investigate the potential for new financing schemes, such as the introduction of warehouse financing for the sector and the facilitation of microloans for farmers.



Strategic objective 3 is aimed at enhancing expertise and infrastructure in the sector.

A range of training initiatives will be based on the underlying philosophy that better products will fetch better prices. This will begin to establish the concept that quality is rewarded with a price premium and will encourage demand for further training at the production and postharvest levels. The trainings will also help create linkages between farmers and primary traders, thereby building trust.

The extension services – currently hampered by a public-sector-driven model that has not proved to be effective – will be revitalized through the implementation of a public–private sector-led model. Online resources will serve as a comprehensive knowledge base. To address the low levels of applied research capability in the sector, research findings will be better linked to extension workers on the ground. Better linkages will create a testing ground for the application of research findings and a two-way exchange of information.

The presence of foreign investors will prove crucial to the transfer of both skills and technology. Such investors might be attracted by the small-scale, high-quality, niche production of seeds and oil for export (such as Dutch companies currently operating in Uganda). Aside from the above-average value of this type of production, it also lends itself to contract farming arrangements whereby the foreign operator provides technical instruction and access to modern equipment. The pursuit of such arrangements should therefore be a priority, as they can help the sector upgrade farming practices and organize market structures.

Lastly, efforts will be made to improve infrastructure. Warehousing facilities will be updated and made available for use by farmers. Collateralization of storage by select farmers' organizations on a pilot basis – accepted by select partner financial institutions – could result in improved incomes and the multiplication of such efforts. Quality management meanwhile will be furthered through the upgrading of product testing facilities and the creation of a process management certification model for the sector.

Strategic objective 4 is aimed at building capacities within the sunflower sector to penetrate and expand coverage within target markets, including the domestic market.

Activities within this strategic objective fall under two themes. The first is to improve the collection and dissemination of information through the use of better technology, while at the same time helping stakeholders gain a better understanding of the export process.

Through the implementation of activities contained in the first operational objective, firms will be better informed on the trends (demand, consumption, price, product development, etc.) in global, regional and local markets. Firms will also be better attuned to fundamental best practices on conducting basic market research, contracts and settlement, market entry strategies, etc. With a better view of the 'buyer's perspective', stakeholders will improve their ability to produce products in accordance with demand and cater to buyer expectations.

The second theme of this strategic objective involves connecting the sector to local, regional and global value chains. After the ability of stakeholders to gather and use trade intelligence is enhanced, efforts will then be made to connect enterprises to target markets so that improvements in competitiveness lead to concrete business development.

LEVERAGING PRODUCT DIVERSIFICATION AND MARKET OPPORTUNITIES

Products	Markets
Sunflower oil	Domestic market Regional: Sudan, Democratic Republic of the Congo (DRC), Kenya, Rwanda, South Africa International: India, Algeria, Morocco, Turkey, China, Switzerland
High oleic sunflower oil	Regional: Sudan, DRC, Kenya International: European Union (EU), Middle East, China, North Africa
Fortified sunflower oil	Domestic market Regional: East African Community (EAC), Sudan, DRC
Organic sunflower oil and processed products	Domestic market Regional: EAC International: EU, China, India
Branded cold-pressed sunflower oil	International: EU, United States of America, Turkey, India, China, Middle East
Livestock feeds	Regional: Kenya, Sudan, DRC International: India and Thailand
Sunflower seeds as a snack	Non-organic: Middle East, North Africa, Kenya, Gulf nations Organic: EU and United States

Uganda's current growth model has certainly yielded strong socioeconomic results since the turn of the century. Significant growth has been realized despite the existence of persistent constraints to competitiveness. Even so, the sector currently relies heavily on three large companies, and stakeholders have been slow to diversify beyond a small group of foreign markets. Evidence indicates that the sector's future prosperity is at risk if stakeholders fail to reduce their reliance on such a small group of buyers and markets.

Through the steps outlined in this roadmap's PoA, stakeholders will improve their ability to offer competitive products. Yet these improvements will only lead to sustainable development if they result in concrete business transactions. To this end, improved competitiveness must be intimately tied to further penetration of current markets, expansion into new markets, and development of new products.

Particularly promising prospects for sectoral development may lie within the following product and market opportunities, ranked according to potential.

Quality sunflower oil

The sector's first priority should be to enhance its position in its most important existing product category, namely high-quality sunflower oil. The bulking and sale of well-prepared and safe sunflower oil can serve as the baseline for sectoral expansion, helping the sector to develop its market reach and build an international brand that can be leveraged later to diversify into new products. The primary challenge with these efforts will be competing with industrialized farms from Eastern Europe and Argentina.

Stakeholders should focus on expanding market penetration in existing markets, while at the same time looking to diversify into new markets. Potential targets for this product category include the domestic market, regional markets (Sudan, DRC, Kenya, Rwanda and South Africa), and global markets (India, Switzerland, Algeria, Morocco, Turkey and China). Another particularly interesting market may be the Netherlands. SNV has been heavily engaged in the sector's development activity, and stakeholders note that this connection could be developed and leveraged to forge export relationships.

High oleic sunflower oil

The demand for high oleic sunflower oils has been increasing for two reasons: the growing demand for high-stability oils for industrial use, and the increasing health consciousness of consumers.[48] With regards to the former, manufacturers are looking to eliminate harsh chemicals from their production processes in order to minimize environmental risks and reduce the exposure of personnel to caustic substances. Vegetable oils, and in particular the highly stable high oleic sunflower oil, offer attractive alternatives.

The healthy characteristics of sunflower oil have been among the key drivers behind its expansion in popularity. These health benefits are often associated with the presence of the heart-healthy oleic acid. High oleic sunflower oil is low in saturated fats, free of trans fats, and free of genetically modified organisms. Consumers are becoming more aware of what they purchase, paying greater attention to ingredients and demanding nutritional products. In this environment, high oleic sunflower oil has performed quite well.

Demand has been growing and high oleic sunflower oil fetches a premium on the world market, making it an attractive prospect for value addition. In looking to develop a high oleic sunflower oil segment, stakeholders should select markets where sunflower seeds are not produced, as pricing in those markets may be difficult. Potential markets include Europe, China, the Middle East, North Africa, Sudan, DRC and Kenya. Again, the Netherlands may offer some interesting opportunities for this product segment: its excellent distribution network could be an enabler in case potential importers would like to process and re-export the imported derivatives.

Fortified sunflower oils

Malnutrition continues to be a challenge in some African countries and many regional governments have taken steps to promote fortified vegetable oils in order to ensure that citizens get a minimum amount of nutrition. These initiatives seek to modify traditional cooking oils by increasing the content of key vitamins such as vitamin A. Given the widespread use of sunflower oil in regional cooking, together with its already high nutrition content, fortified oils may represent an interesting value option for stakeholders. Potential markets for fortified sunflower oil include local supermarkets, and countries in the EAC, Sudan and Congo.

Organic sunflower oils and processed products

The growth in demand for organic products has been impressive over recent years, driven by health-and environmentally-conscious consumers. Populations in both developed and developing markets are becoming more concerned over issues such as pesticides and genetically modified crops. Indeed, demand for organic oils exceeds supply, and those suppliers providing organic oils are fetching attractive premiums.

Small-scale exports of high-quality seeds, oil and processed food for the niche organic markets could be a viable option. Particularly in the EU, there is growing demand for products that are heart-healthy and organic, for which sunflower seeds and oil can be important ingredients. Uganda is also exceptionally well-endowed with a variety of such food ingredients. For example, the presence of high-quality amaranth, sesame seeds and sunflower oil might permit the production of sophisticated breakfast bars.

48.– National Sunflower Association (2011). High-oleic sun oil. *Sunflower Magazine,* January. Available from http://www.sunflowernsa.com/magazine/details.asp?ID=709.

Uganda is well-placed to leverage the trend: proportionally, Uganda is already the largest organic agricultural country in East Africa (estimated to include 18,074 growers and cover 1.66% of its land), and three small producers are already making organic sunflower oil. Significant profits might be realized if the sector were to receive the EAC organic mark. The key hurdle will be the cost involved in obtaining initial certification, a process which can be most efficiently undertaken by training farmers who are organized into groups. Even so, the costs would likely be justified as organic farmers tend to realize better yields and demand premium prices. Uganda could sell organic sunflower oil on both the domestic and international markets, including Europe, China, EAC and India.

Cold-pressed sunflower oil

Another way to expand into a premium segment would be to offer branded cold-pressed sunflower oil. Cold-pressed oils are produced naturally and at lower temperatures, without use of heat to facilitate oil extraction. Seeds are simply crushed and ground until the oil is obtained. This process is said to result in both better taste and greater nutritional value, as the added heat from a hot-press can damage the oil despite its ability to extract higher quantities.

The market for branded cold-pressed sunflower oils is quite niche and it might be necessary to create a joint offering that leverages high oleic and/or organic oils as well. Potential markets for branded cold-pressed sunflower oils include the EU, United States, Turkey, India, China and the Middle East.

Livestock feeds

Sunflower meal can serve as an effective source of protein and nutrition in animal feeds for a variety of livestock, including dairy cows, rabbits, pigs and chickens. Kenya is currently the only major importer of Ugandan sunflower oilcake and it remains the most attractive target for future development given its more advanced livestock industry. Indeed, sunflower feed is given preference by larger producers such as those found in Kenya due to its high protein content. In addition to Kenya, the sunflower sector can look to tap into Uganda's developing livestock industry. At the same time, the sector can diversify into new markets such as DRC, India, Sudan and Thailand.

Sunflower seed as a snack

Due to the ban on sunflower seed exports, the only way to enter this product segment would be to process and pack sunflower seeds in Uganda before exporting them. Even so, the ban has removed the appropriate incentives and farmers are currently not growing suitable varieties of sunflower seeds. If the law is changed and the appropriate varieties are produced, this segment would have long-term potential, particularly if it were organic. Potential markets for non-organic seed snacks include the Middle East, North Africa, Kenya and the Gulf nations. Efforts to sell organic sunflower seeds meanwhile could focus on Europe and the United States.

INVESTMENT OPPORTUNITIES

Interest from Indian actors appears to be primarily in secondary processing, i.e. the manufacture of oils, while European investors are more interested in specialized or certified supply chains. Generally the expected payback periods were realistic for agricultural projects, with timescales of five to seven years mentioned.

The following modes of investment have been identified:

- Crushing and packing plant investment and construction – this appears to be more likely with the participation of a local partner to access the supply chain and build supply chain linkages;
- Redevelopment/refocusing of an existing oil crushing plant in partnership with the current owners who have an existing supply chain;
- Contract growing for crushing in cooperation with a domestic miller;
- Cooperation, agency or partnership on import and distribution of agricultural inputs;
- Development of specialized or certified supply chains for oil export or for confectionary seed export if the prohibition on seed exports were to be lifted;
- Management and innovation cooperation either in the technical aspects of crushing, packing and marketing of oil; or on the import of inputs;
- Technology transfer initiatives.

The opportunities for investment in the sector can be broadly segmented into the following areas.

Agribusiness and inputs

The need for improved agricultural inputs in Uganda is clear to many. International companies such as Pioneer Seeds – in cooperation with the larger national millers – have long provided imported hybrid seeds to improve yields and quality of sunflower in Uganda. There are in addition a range of local companies which distribute seeds to growers such

as Equator Seeds and Victoria Seeds. Companies such as Advanta Limited from India are introducing new HYV to East Africa and see opportunity in Uganda based on market demand, current performance and Government/international support for the sector.

In the case of a company introducing a new seed range, the development may well be specific to the sunflower sector, but overall companies in the inputs sector are more likely to offer a range of seeds and other inputs such as fertilizer and pesticide as a package to the grower. Currently most farmers in Uganda use few inputs, which on the one hand means that the opportunities for inputs providers are limited but on the other hand that agricultural produce is relatively free of chemical residues.

Therefore the case for market development is clearer-cut for seed suppliers, who would nonetheless need a distribution network if they were to seek direct sales to the farmer. This would be a time-consuming and high-cost development, which some respondents reacted to by suggesting that a partnership with a large consumer of seeds would be a better option. This is broadly the path taken in the current import of hybrid seeds.

Domestic/regional market

This is primarily based on the establishment of new crushing/processing facilities or the rehabilitation of existing facilities. Markets targeted are domestic and regional retail pack sales of branded bottled oils in packs ranging from 250 grams to five litres. The development of this type of operation is built on the growing opportunity provided by higher consumption levels of vegetable oils by a growing population. It could not be envisaged without supply chain development, which may include contract farming.

The business case for such investment builds on the high price of retail vegetable oils in Uganda, import replacement and the availability of domestic production of oilseeds such as sunflower. It is unlikely that such a miller would operate with sunflower only, as for seasonal and supply chain security most millers will crush a range of products over the year. Key considerations for a potential investor in this type of operation would be competition from imported or domestic lower-cost palm oil, security of supply, stability and growth in the domestic economy, investment incentives including import of machines/equipment, location/distribution costs for targeted regional markets, and outlets for by-products.

Export market

This is the processing of high value and niche products for export. Although markets such as India are large importers of vegetable oils – including crude sunflower oil – there is a general conviction that a smallholder value chain will not be in a position to compete with the extensive agricultural production of the major producers and current suppliers in Eastern Europe and Argentina. Current Ugandan exports are limited to regional markets for oils and, for high value oilseeds such as sesame, to commodity trade without significant value addition (sunflower seed export is prohibited).

Interest therefore is more likely to be found in the development of higher value and niche products. There are only a very few examples of such developments in sunflower oil but there are examples in oilseeds, including in Uganda where the Shares/Doens Food Ingredients partnership is expanding the sourcing of organic-certified oilseeds for export. At present this may be somewhat limited for sunflower as the target markets are for 'confectionary' grade sunflower, which varieties are not available in Uganda, although it may be possible to introduce these grades with imported seeds from South Africa, the United States or Argentina.

For sunflower oil, export interest is likely to be centred on high oleic[49] sunflower oil, cold-pressed oil, organic oil and combinations of the three. These processes tend to be of lower volume but are sought after as high value products in the European and Chinese markets. Supply is limited as the large producers have been slow to develop high oleic production or segregation of seed varieties. Activity in these niche, high value markets requires significant supply chain development including certification, traceability and availability of inputs, and may include contract farming.

The investment by the processor/exporter in the supply chain is significant, therefore concerns as to the reliability of the grower and competition from other crushers would be a major concern for investors. Also of major concern would be the availability of local partners to develop and oversee the investment. They would need to have a good understanding of the value chain and production requirements, and possess good links to growers.

Often regarded as a market for European or North American consumers, products in this category are rapidly developing in China where there is a perception of African products as natural and healthy and worth paying a premium price for. In India, where the consumer is increasingly health-conscious, the growth of sunflower oil and the nascent organic products markets is evident and projected to continue, according to feedback.

This type of activity would fit well with the development of oil production in areas in the north of Uganda outside the main catchment area of the oil mills in Lira. It may also be interesting to millers and investors in the mills in Lira which need rehabilitation or find it difficult to compete with large mills. An example is Guru Nanak Oil Mills of Lira, which switched from vegetable oil production to high value products such as shea butter and specialist oils.

49.– Sunflower varieties low in trans fat and saturated fats.

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

VISUALIZING THE FUTURE VALUE CHAIN

Unlocking the potential of the Ugandan sunflower sector will require transformations throughout the value chain. These adjustments, as reflected in the future value chain schematic, are the result of targeted efforts to address the competitive constraints identified and capitalize on opportunities to add value. The future value chain will be characterized by the following four consequences of the PoA:

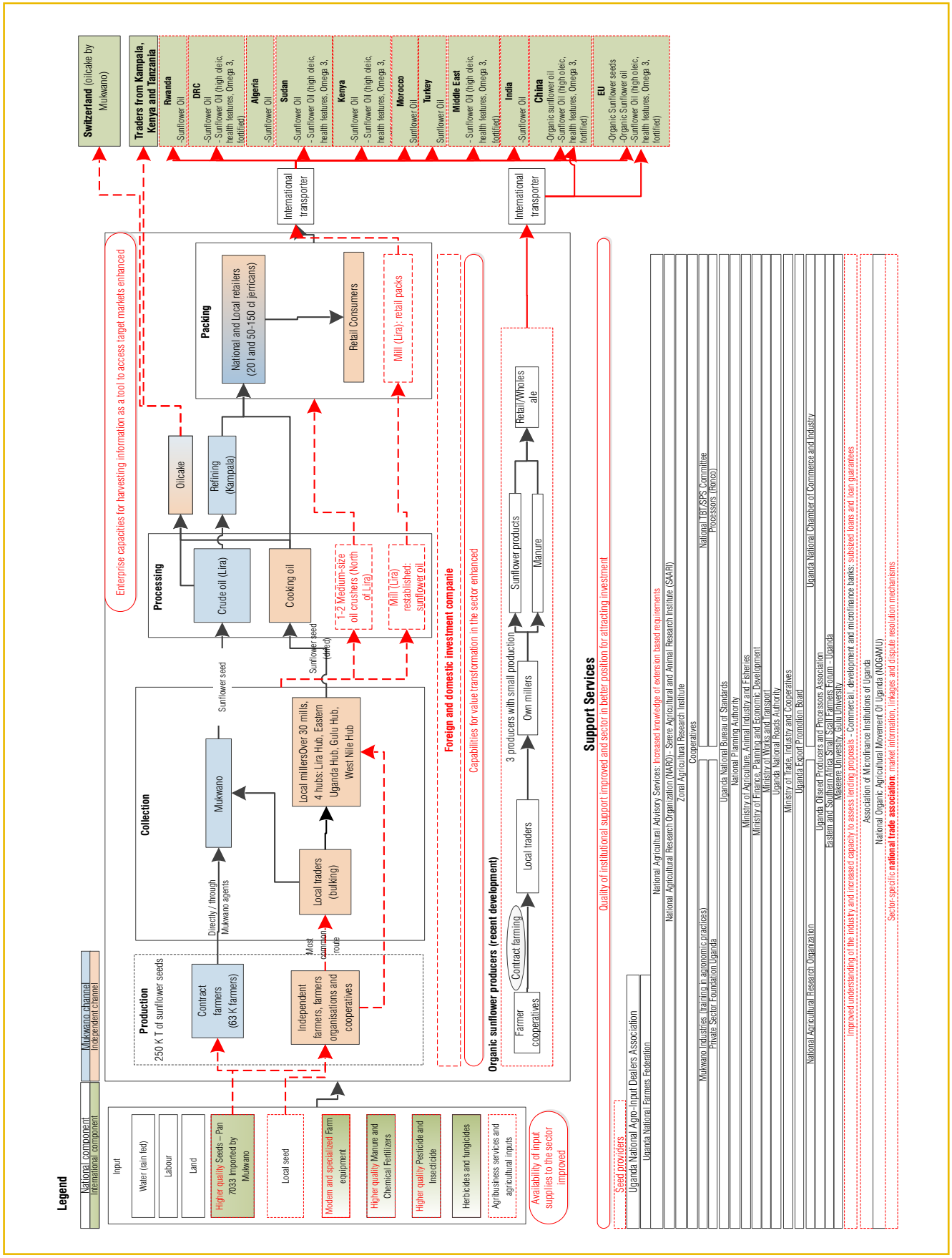
v. Strong supply chain of seeds and other inputs: in the future value chain, farmers will have access to higher quality seeds, both imported (PAN 7033) and local, as well as modern and specialized farm equipment (imported and domestic), higher quality manure and chemical fertilizers (imported and domestic); higher quality pesticides and insecticides (imported and domestic); and new agribusiness services.

vi. Enhanced institutional support and improved value proposition with investors: farmers, processors and other private sector stakeholders will be able to rely on improved services, particularly in the areas of quality management, extension services, input provision, access to finance, trade intelligence and dispute resolution. Such improvements will help attract investment, which will then serve as a catalyst for value transformation across the value chain.

vii. Diversified sector product portfolio: in the longer term, the value chain will include a wider spread of products, including higher value added products. Product diversification will be facilitated by increased market intelligence, enhanced production capacities, and improved attention to quality management.

viii. Enhanced enterprise-level capabilities to access market intelligence: these capacities will lie at the base of improved export performance. Not only will information help enterprises produce goods in accordance with final demand, it will be crucial in the quest to further penetrate existing markets and diversify into new markets, as it will allow the sector to identify and cater to appropriate buyers.

Figure 11: Future value chain



MOVING TO ACTION

The development of the future value chain for the Sunflower sector is a 5 year project defined through a consultative process between public and private sector stakeholders in Uganda.

Achieving the strategic objectives and realizing the future value chain depends heavily on the ability of sector stakeholders to start implementing and coordinating the activities defined in the Value Chain Roadmap's Plan of Action. For this reason, a list of key priority activities has been identified in order to kick-start the implementation of the Roadmap.

The priority actions to kick start implementation

Activities	Targets	Lead implementer
1.1.1 Establish a public–private-led seed strategy forum aimed at discussing strategic seed-related issues impacting the sector, and to take the lead in developing a medium-to-long-term seed strategy for the sector. Forum to focus on improving linkages between value chain actors and strengthening sector development activity. The forum can be a subcommittee of an existing platform such as OSSUP, if feasible.	▪ Seed strategy forum in place ▪ Collaborative projects resulting from forum activities	MAAIF-VODP2
1.1.4 Launch an initiative for multiplying improved seed varieties. Step 1 – Assess the inventory of seed varieties available in the country and assess the performance of the 17 varieties of seed released by MAAIF. Step 2 – Establish seed multiplication partnerships. Step 3 – Support testing by MAAIF of newly developed varieties for three seasons prior to release. Step 4 – Strengthen existing seed multiplication initiatives, including: A needs assessment study to be conducted beforehand to identify the specific needs for all the initiatives.	▪ Assessment of existing varieties completed ▪ Business model for a private-sector-led seed multiplication initiative developed and partnership established ▪ Number of new seed varieties released	MAAIF-VODP2
2.1.3 Support the development of a national trade association – an umbrella organization that will create awareness and influence Government policy vis-à-vis the sunflower sector. Will be responsible for advocacy, market intelligence and coordination.	▪ National trade association established	UOSPA
2.2.5 Commission a study in cooperation with UOSPA and the Lira Millers Association to ascertain: ▪ Profitability and sustainability of SME millers in Uganda (essentially 12–15 companies) ▪ Factors for success ▪ Constraints and investment needs. This study would serve as an investment promotion vehicle and as a policy advocacy document for use in promoting value addition policy. ▪ Encourage formation of millers' associations in other regions. Promote the spirit of cooperation.	▪ Report on operations efficiency and recommendations for improvement	UOSPA
3.1.2 Establish a sunflower seed centre of excellence which covers: a. Model farm demonstrating agricultural techniques b. Seed propagation service c. Postharvest handling demonstrations d. Techniques and technology for on-farm use e. Techniques and technology for local small-scale oil crushing f. Face-to-face, phone-in and short message service (SMS) services for farmers linking them to experienced and trained extension workers. To achieve capacity each question and answer should be posted online and be accessible for reference purposes.	▪ Centre of excellence established and linked to OSSUP	UOSPA
3.1.3 Conduct a train the trainer or master training programme and roll out a training programme based on the selection of suitably qualified individuals to be trained in the market, the product, value addition and buyers' requirements. The trainers receive the training on the basis that they will offer three days training per year free of charge to groups in the sector. The trainers will receive training in the following modules: 1. Production, postharvest and planning for farmers 2. How does the market work? 3. What is value addition? How is value added? 4. What do buyers want? Buyers' requirements at home and abroad 5. The world market – a primer	▪ Needs assessment report ▪ Training programme developed ▪ Number of trainers trained ▪ Number of free trainings provided by trainers	Makerere College of Agriculture and Environmental Science

Activities	Targets	Lead implementer
3.1.4 Launch a training initiative (practical) targeted at farmers and primary traders covering postharvest handling. Topics to include: ▪ Promote hand-driven appropriate technology for cleaning sunflower seed, to replace the manual winnowing currently done only by farmers; ▪ Assessment on physiological maturity and readiness for harvesting; ▪ Recommendations on drying practices to reduce microbial contamination resulting from drying on cow dung-smeared surfaces – to be replaced with use of tarpaulins; ▪ Improving methods of assessing sunflower moisture level to replace the current inaccurate biting method – use of moisture meters; ▪ Linking sunflower quality, including high moisture content, to marketing and reward compliance.	▪ Number of training initiatives held ▪ Number of farmers/traders trained (if possible) ▪ Reduction of postharvest losses in intervention areas ▪ Development of target standards for quality ▪ Sunflower seed consistently meets set standards	UOSPA
3.3.1 Undertake an equipment study of seed cleaning, hulling, oil crushing (small- and large-scale) and agricultural equipment for on-farm use, concentrating on the equipment available, developments in technology, technology and equipment procurement.	▪ Inventory of existing and appropriate technologies for postharvest handling and processing conducted ▪ Findings and database published/disseminated	UIRI MTIC
3.3.2 Organize equipment buyer–seller meetings in Uganda with attendance from equipment manufacturers and suppliers as well as potential buyers (farmers' organizations, SME millers). ▪ The events should be linked to the sector with introductions by well-known companies and value chain actors. ▪ Equipment suppliers will be invited to attend in addition to value chain stakeholders.	▪ Number of participants at buyer–seller meetings ▪ Number of buyer–seller meetings conducted	UOSPA
4.2.1 Organize exchange visits to India for sector stakeholders including both farmers and processors, with a focus on knowledge sharing and experience building. Agenda to include: ▪ Visit to a trade association ▪ Trade fair visit ▪ B2B meeting – invite selected buyers to a B2B event where every buyer can meet every visitor for short introductory conversations. This could be held adjacent to a trade fair, improving the likelihood of attendance and increasing profile.	▪ Number of awareness-raising workshops held ▪ Number of firms participating in the workshops ▪ Number of exchange visits conducted ▪ Number of firms participating in the exchange visits	UEPB MTIC

ROADMAP
PLAN OF ACTION

The following PoA provides a clear and detailed framework for the implementation of the sunflower roadmap for the upcoming five-year period. To this end, the PoA details the comprehensive set of activities to be undertaken, grouped by strategic and operational objectives. The activities specified within the plan seek to address the competitive constraints to sustainable development and leverage the opportunities that were identified during stakeholder consultations.

Each activity is assigned a priority and an indicative start date. In addition, the PoA identifies the institutions that will be tasked with leading each initiative, as well as potential support and implementing partners. In order to ensure effective monitoring of the roadmap's progress, a series of target measures have been formulated for each activity. These measures, which are comprised of concrete and verifiable milestones, will serve as indicators of progress.

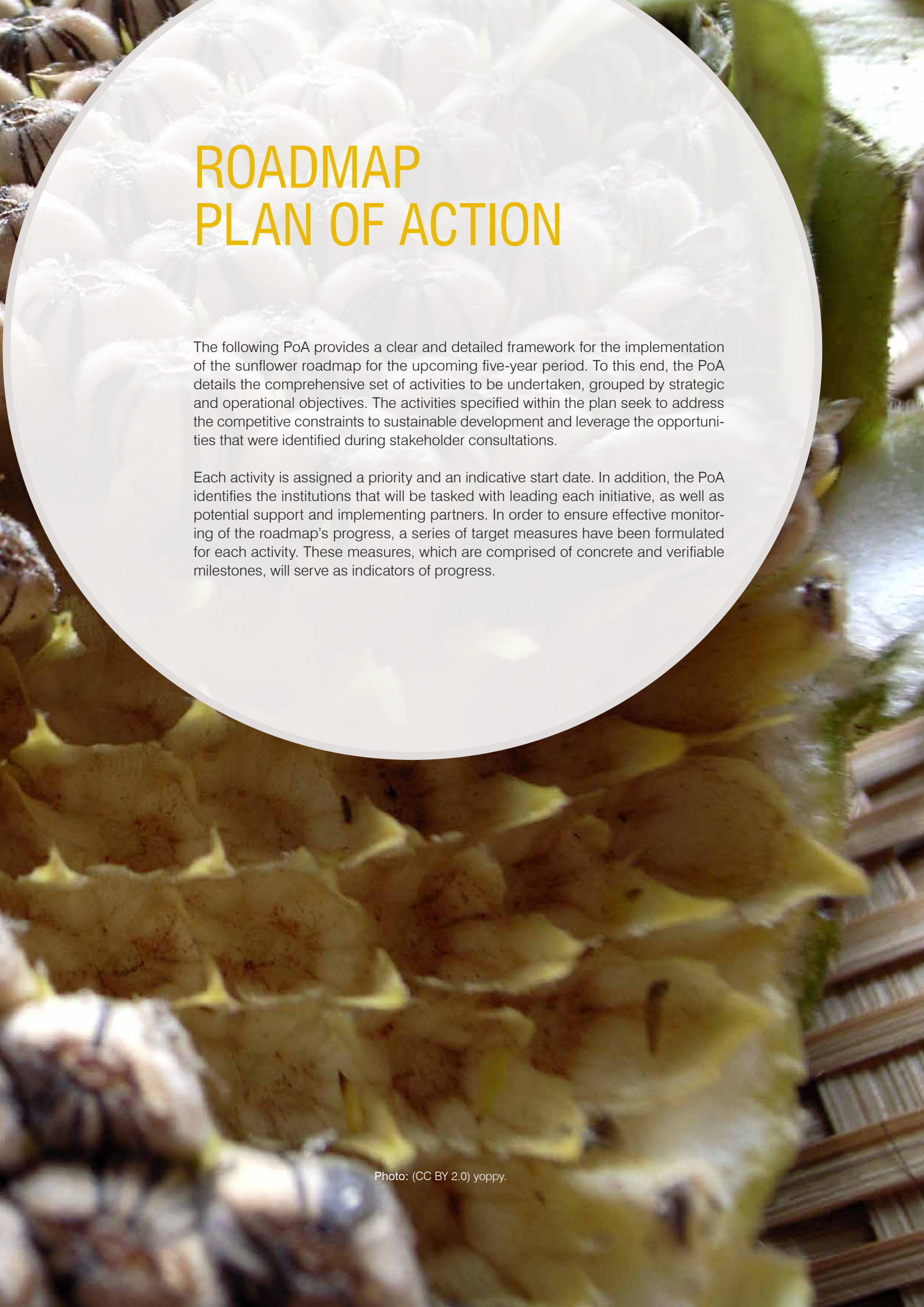


Photo: (CC BY 2.0) yoppy.

Strategic objective 1: Improve availability of inputs in the sector.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementers	Potential Funding Source
			2016	2017	2018	2019	2020				
1.1 Improve the availability of seeds for propagation by a twin strategy of developing import contacts and national multiplication.	1.1.1 Establish a public–private-led seed strategy forum aimed at discussing strategic seed-related issues impacting the sector, and to take the lead in developing a medium-to-long-term seed strategy for the sector. Forum to focus on improving linkages between value chain actors and strengthening sector development activity. The forum can be a subcommittee of an existing platform such as OSSUP, if feasible.	1	X					• Seed strategy forum in place • Collaborative projects resulting from forum activities	MAAIF-VODP2	USTA & affiliated members, UOSPA, OSSUP, NARO, large millers, SME millers, Makerere University (Department of Crop Science), Ministry of Trade/UNBS, Uganda Revenue Authority	
	1.1.2 Using the seed strategy forum as a research and decision-making platform, investigate possible alternate seed sourcing locations including the Russian Federation, Ukraine, Kazakhstan, India, Argentina and the EU. Identify alternative sources of sunflower seed with high oleic content: Syngenta (company) from France/South Africa; PAN, mostly from South Africa and Israel (very high productivity and R&D); Malaysia etc. Initiate collaboration with the Ministry and local seed companies to partner with foreign seed companies to multiply seed in Uganda. Initiate government–to–government technology transfer initiatives and collaboration with research institutes (starting with India).	1	X	X	X	X	X	• Number of alternative sources identified • Number of technology transfer initiatives	UOPSA	MAAIF-VODP 2 NAADS NARO Millers	
	1.1.3 Conduct a study to establish the effective demand for sunflower seed per season, forecast for the medium-to-long term as a baseline study that will feed into the due diligence required for other activities.	2		X				• Study conducted	MAAIF-VODP2	UOSPA, USTA, NARO, NASSARI	SITA
	1.1.4 Launch an initiative for multiplying improved seed varieties. Step 1 – Assess the inventory of seed varieties available in the country and assess the performance of the 17 varieties of seed released by MAAIF. Step 2 – Establish seed multiplication partnerships. • Establish whether or not a partnership based on investment in return for high-quality seeds (based on the seed strategy forum at 1.1.1 above) is possible, based on exchanges in that forum. • If yes, establish the partnership as an association with clear practices and access to all. Sunflower oil seed firms (Farm Inputs Care Centre, Equator, Naseco, etc.) to be invited to invest in a seed multiplication initiative by investing in an organization like NARO that will multiply seeds based on new hybrid varieties (provided NARO's mandate allows it or is adjusted), and they have a ready market in the form of farmers and millers in return. Step 3 – Support testing by MAAIF of newly developed varieties for three seasons prior to release. Step 4 – Strengthen existing seed multiplication initiatives, including: • UOSPA with Sesan 1H and 2H • New Sunfola (OPV) • East African Seed Company with EASAF 1H and 2H • Equator Seeds (currently multiplying soya bean) • Makerere University with MAK Seeds (also doing soybean) • Integrated Seed Sector Development • Local seed businesses • NARO – hybrid variety being tested. A needs assessment study to be conducted beforehand to identify the specific needs for all the initiatives.	1		X	X	X	X	• Assessment of existing varieties completed • Business model for a private-sector-led seed multiplication initiative developed and partnership established • Number of new seed varieties released	MAAIF- VODP2	NARO NASSARI UOSPA USTA Makerere University	SITA

Strategic objective 1: Improve availability of inputs in the sector.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementers	Potential Funding Source
			2016	2017	2018	2019	2020				
1.1 Improve the availability of seeds for propagation by a twin strategy of developing import contacts and national multiplication.	1.1.5 Promote the use of new seed varieties, led by a pilot scheme (if necessary) to build confidence among partners. Support to be linked to a parallel training of trainers and farmer field training initiative to ensure correct planting and harvesting methods. Promotion: 1. Set up demonstrations within farming communities for two seasons so farmers can choose based on their observation 2. Production of brochures 3. Support demonstrations within potential production areas, e.g. Central and Kasese 4. Involve millers to evaluate suitability of tested seed for crushing (oil content) 5. Support oil quality testing (oleic levels) 6. Strengthen research and extension: testing facilities, soil testing etc. 7. Launch efforts for farmer outreach and sensitization.	2		X	X	X	X	• Pilot scheme launched	NARO/NASSARI,	VODP2 UOSPA USTA Makerere University	SITA
	1.1.6 Advocate for policy change to allow research institutions such as NARO and Uganda National Farmers Federation to also act as seed multiplication bodies. This will run parallel to commercial, market-led initiatives for seed multiplication.	2		X				• Position paper developed	NARO	NASSRI UOPSA	
	1.1.7 Support existing efforts to develop a certified seed programme in the country. 1. Assess the status of the 'Quality Declared Seed' initiative that is part of the VODP2 mandate and, based on the assessment, either identify areas where support to the initiative is needed or develop a new initiative. 2. Develop a certified seed programme if necessary: – Advocacy for a system; – Develop a research and action plan to be presented to Government agencies by trade groups; – Develop a proposal for strengthening human resource capacity of the National Seed Certification Services (seed certification body) under MAAIF by recruitment and training. The certification body should have branches in the production areas; – Delineation of roles fully defined – MAAIF is responsible for ensuring compliance while UNBS is responsible for developing standards; – Enlist support of farmer groups, cooperatives and input dealers, as well as large millers.	2		X	X	X	X	• Number of proposals supported • Number of institutions committing support • Number of proposals developed	NARO	Serene Nassri UNBS Seed Breeders to produce foundation seed Farmers' organizations to multiply seed (farmer-to farmer seed multiplication) MAAIF	VODP2 Quality Declared Seed Programme
	1.1.8 Lend support to maintain Sunfola through a seed/germplasm bank (cold room) to store breeder seeds. 1. Organize a forum of key stakeholders to advocate on the issues above and source investment support, e.g. to put up a seed bank. 2. Develop a comprehensive proposal for developing a seed bank for Sunfola. – Develop a technical proposal for setting up the seed bank with key information on partners, budgetary requirements, and time frame. Launch a tendering process to solicit proposals for constructing the seed bank.	3			X	X	X	• Forum held • Seed bank proposal developed • Tendering process initiated	UOSPA	NARO Serene Nassri MAAIF-VODP2	SITA

Strategic objective 1: Improve availability of inputs in the sector.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementers	Potential Funding Source
			2016	2017	2018	2019	2020				
1.1 Improve the availability of seeds for propagation by a twin strategy of developing import contacts and national multiplication.	1.1.9 Establish a pilot initiative to facilitate funding of sunflower seed for independent farmers as a means to offer competition to contracted farming and input/output deals . This is foreseen as a microfinance operation and can be linked to the sunflower crop or to other crops. • Organize farmers into efficient producer groups, associations and cooperatives and support them to develop bankable proposals. • Involve input suppliers who would provide inputs to farmers and will in turn recover the loans as they buy back the grain. • Establish a line of credit for farmers to procure hybrid seeds. Incentivize farmers to finance inputs by conducting and disseminating research on the relationships between input usage and profitability.	2		X	X	X	X	• Number of farmer groups accessing inputs through the initiative • Research study conducted	UOSPA	Uganda Cooperative Alliance (UCA), OSSUP, NAADS, Agribusiness Initiative (aBi) Trust, microfinance institutions, input suppliers	USAID (Agricultural Inputs Activity project) Bugisu Cooperative Union model of supporting farmers' organizations
1.2 Improve accessibility and affordability of non-seed inputs for the sector.	1.2.1 Conduct an assessment on access to and affordability of fertilizer and other non-seed inputs. • Tailor-made fertilizer and other input applications. • Fertilizer use by farmers (organic/inorganic): who is using and what? • Cost/benefit analysis on use of fertilizers for sunflower production. • Comparison of soil versus foliar application. • Explore water and soil management techniques (no/minimum tillage), crop rotation = training. Based on the assessment, provide recommendations regarding fertilizers/insecticides/pesticides and other non-seed inputs focusing on: a. Levels of deficit in the sector related to inputs (1) access and (2) affordability b. Estimated demand for inputs projected for the next five years c. Training needs for raising awareness on fertilizer use (rates) and demonstrating economic benefits Best practice manual that is made available to farmers in local languages and also serves as the basis for farmer field training and related initiatives.	2		X				• Comprehensive report with data on access to inputs	Makerere University College of Agriculture And Environmental Sciences	MAAIF-VODP2 Agro-input dealers	
	1.2.2 Based on guidance received through activity 1.2.1 above, facilitate increased linkages between suppliers (with presence in Uganda) of fertilizers and other inputs to farmers' organizations such as cooperatives (to be done in tandem with other initiatives in the agriculture sector). • With the goal of increasing accessibility and affordability of inputs, use the OSSUP platform to bring together suppliers and farmers' organizations to highlight business opportunities for suppliers. With the goal of promoting investment, review terms for promoting distributorship mechanisms and other forms of foreign investment.	2		X	X	X	X	• Number of networking events held • Number of deals conducted and finalized	UOSPA	MAAIF-VODP2 OSSUP	

Strategic objective 2: Improve quality of institutional support, and better position the sector for attracting investment.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
2.1 Improve institutional coordination and upgrade representative associations.	2.1.1 Undertake a mapping study to identify the various support actors for the sunflower sector, as well as gauge the extent and quality of support to the sector. • Map support services available to the sector and identify areas of redundancies and overlaps. • Identify the extent to which direct support is available to the sunflower sector, and whether support is primarily indirect (generic, multi-crop). • Use the established forum of OSSUP to discuss – with the various support service actors mapped above – the rationalization and potential for integration of services. Address the effectiveness of the services.	2	X					• Mapping study completed • Number of extension service provider organizations engaged • Number of initiatives to harmonize and improve extension service provision • Improved extension service delivery (impact level)	MAAIF (Extension Services Unit)	OSSUP, NGOs and private sector companies and associations/FAO	aBi Trust - value chain development project, OSSUP, UOSPA extension outreach project
	2.1.2 Boost support to OSSUP. • Conduct an assessment of OSSUP's technical capacity and resource needs, as well as relative performance vis-à-vis its mandate – specifically focusing on the sunflower sector. • Assist OSSUP in developing a medium-to-long-term strategy as well as a sustainable resource mobilization plan based on membership dues.	2		X				• OSSUP resources assessment study completed • Resource mobilization plan developed and activated	UOSPA	Makerere University	SNV
	2.1.3 Support the development of a national trade association – an umbrella organization that will create awareness and influence Government policy vis-à-vis the sunflower sector. Will be responsible for advocacy, market intelligence and coordination. • Conduct a diagnostic on what the subsector needs in terms of a trade association. • Diagnostic: which of the existing organizations is most likely to offer this? • Selection of an organization for support and development by audit and interview. • Provide capacity-building and training in areas such as governance, promotion and information dissemination. • Link to trade associations in India such as the Indian Oilseeds and Produce Exporters Association, which has been very successful in developing the oilseeds sector in India. • Help the association create a contract register to become a vehicle for contract fidelity. • Analyse case studies from the Cotton Development Authority and link with Kampala City Traders' Association. • Develop regulations for governance and harmonization for the association.	1		X	X	X	X	• National trade association established • Number of member firms (including farmers' organizations) in the association • Assessment on existing organizations conducted and lead organization selected for support • Linkages to other external trade associations established • Regulations for governance developed	UOSPA	OSSUP, Uganda National Chamber of Commerce and Industry, MAAIF-VODP2, Kampala City Traders' Association, UEPB	
	2.1.4 Have the Government engage in a long-term, intensive campaign to promote a culture of contracts. This would include: • An update to the legal framework for common types of contracts in agriculture • A sustained awareness-raising campaign among agribusiness stakeholders and extension services concerning agricultural contracts • Accessible mediation services.	1						• Update of the legal framework completed • Awareness-raising campaign launched • Mediation services staffed and deployed	MAAIF	UOSPA major millers	

Strategic objective 2: Improve quality of institutional support, and better position the sector for attracting investment.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period 2016	2017	2018	2019	2020	Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
2.2 Improve the value proposition of the sector towards policymakers and investors.	2.2.1 Create government–to–government and government–to–investors outreach campaigns to emphasize constructively and clearly the commitment of the Government and the sector to the development of oilseeds (and not only palm crops) to stimulate interest from foreign direct investors through a targeted campaign.	2		X	X	X		• Campaign launched • Number of potential investors expressing interest to the Uganda Investment Authority (UIA)	UIA	MAAIF, UOSPA, UEPB, OSSUP	
	2.2.2 Develop and disseminate a simple, accurate, commercially oriented, market factsheet that would spur interest in the Ugandan sector. This could be used at trade shows and during trade missions to relevant countries to stimulate discussion and investment interest.	2		X	X	X	X	• Factsheet developed • Factsheet made available at key trade and investment-related events	UIA	MAAIF, UOSPA, UEPB, OSSUP	
	2.2.3 Facilitate entry of new investors, particularly domestic ones, through the provision of subsidized loans and loan guarantees. • Feasibility study to assess current investment rules and provisions and to offer recommendations aimed at fostering innovation. • Loan subsidy/guarantee programme developed and initiated.	2						• Feasibility study conducted • Subsidy/guarantee programme initiated • Number of investors receiving loan subsidies or guarantees	UIA	MAAIF-VODP2, UOSPA, UEPB	
	2.2.4 Run awareness-raising workshops for Government officials at the middle and top levels to encourage the implementation of existing policies and to include sunflower (ranked as non-food security) as a priority.	1	X	X				• Number of workshops conducted • Policy actions resulting from the workshop	**UOSPA**	MAAIF, UIA, local and Ministry-based Government officials	
	2.2.5 Commission a study in cooperation with UOSPA and the Lira Millers Association to ascertain: • Profitability and sustainability of SME millers in Uganda (essentially 12–15 companies) • Factors for success • Constraints and investment needs. This study would serve as an investment promotion vehicle and as a policy advocacy document for use in promoting value addition policy. • Encourage formation of millers' associations in other regions. • Promote the spirit of cooperation.	1	X	X				• Report on operations efficiency and recommendations for improvement	UOSPA	VODP2 OSSUP	
	2.2.6 Launch an awareness-raising campaign targeted at oilseed trade organizations in target countries (India and the United Arab Emirates, for instance) with a view to promoting investment in the Ugandan sector. In particular, the sustainability of oilseed cultivation; the growth of the market; and the opportunity to locate in Uganda as a base for production, processing and distribution to surrounding countries could be highlighted	2	X	X				• Marketing collateral developed and disseminated in selected target markets • Business delegations sent to selected target markets • Investor delegations hosted in Uganda	UIA	MAAIF, UOSPA	
	2.3.1 Run awareness-raising and education workshops for bank officers with the view of establishing the value of the product and informing financial institutions on the overall value proposition of the sector. • Invite sector actors to share experiences, including traders, millers and trade associations. • A series of two to three workshops would suffice to frame a context both domestic and international. The essential objective is to improve access to finance for SMEs and growers. • Assist banks in developing a baseline model to help them assess lending proposals from value chain stakeholders, using a consultative forum such as OSSUP. • Assist banks in developing financial products (including insurance products) tailored to the sector	2	X	X				• Number of value chain actors supported by microfinance institutions at various value chain levels • Loan conditions favourable to both parties developed and implemented, i.e. tailored to farmers' needs (e.g. repayments to start after harvest, postharvest processing and selling period) • Appropriate crop insurance products developed and implemented	VODP2 (Credit & Finance)	OSSUP, Uganda Development Bank, farmers' organizations, UOSPA, banks, insurance companies. millers and local government officials	SNV 4 P's & B2B project, aBi Finance, International Fertilizer Development Centre (IFDC)/Pride Microfinance Input Loan Facility project

Strategic objective 2: Improve quality of institutional support, and better position the sector for attracting investment.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
2.3 Improve access to finance for sector operations.	2.3.2 Provide coaching on managing finance for farm inputs for credit unions, farmers' associations, cooperatives and millers in the sector through a train the trainer initiative: • Education on aspects of collateralization based on existing lending instruments Train the trainer programme to train employees to train farmers in making loan applications and managing loans (there are initiatives in this area with whom cooperation might be sought for implementation).	2		X	X	X	X	• Number of trainers trained in loan applications and managing loans • Number of farmers' associations coached • Number of small-scale millers who have been trained • Number of small-scale millers who have sourced processing equipment (impact level)	UCA,	commercial banks	Opportunity Bank financial literacy programme
	2.3.3 Facilitate the development of appropriate lending products that can be incorporated into lenders' institutional structure, policies and procedures. • Due diligence to map existing products/procedures • Gap analysis and propose tangible recommendations on: – Bankers' high-level awareness and loan officers' education on the sector – Gaps in range and types of loan offered that match the needs of sector operators Options for collateralization of inventory, and assessing how inventory can be secured and valued.	3		X	X	X	X	• Mapping and gap analysis of existing lending products conducted	UOSPA	Commercial banks, Uganda Development Bank, farmers' associations, millers	SITA
	2.3.4 Establish a pilot project in cooperation with existing organizations for funding farmers in the sunflower sector through microloans. Establish linkages for funding via credit unions or farmers' associations or cooperatives where these have sufficient administrative ability to manage the loans.			X	X	X	X	• Linkages established between banks, micro lending institutions and farmers' associations	UCA	commercial banks	
	2.3.5 Assist microfinance institutions – including savings and credit cooperative societies – meet their resourcing needs, in order to ultimately bring down the interest rates they offer to loan seekers. Assist institutions in developing financial strategies to ensure sustainability in the medium-long term through coaching and mentoring sessions.		X	X	X			• Resource development plan for individual savings and credit cooperative societies developed • Additional resources acquired by microfinance institutions	MAAIF-VODP2	Microfinance associations, commercial banks	
	2.3.6 Conduct a feasibility study for setting up an agricultural bank facility that will provide affordable short-/medium-/long-term loans to farmers and millers/processors (linked to the broader agricultural sector). Also explore the possibility of the proposed bank providing credit guarantees to Ugandan financial institutions to help mitigate their risks.			X				• Feasibility study conducted • Blueprint for agricultural bank facility developed	MAAIF-VODP2	Uganda Development Bank, UOSPA	

Strategic objective 3: Enhance capabilities for value transformation in the sector.										
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
3.1 Propagate knowledge and best practices in the sector.	3.1.1 Replicate the contract farming model in northern Uganda with existing millers or, preferably, as part of negotiations to attract new foreign investors. • Targeted campaign to approach domestic entrepreneurs or to vertically integrate aggregators/processors/traders using contract farming arrangements. • Contract farming model to include provisions for sourcing high-quality inputs (seed, fertilizer, good agricultural practices, etc.) that are needed to transform the sector's productivity.	2	X	X	X	X	X	• Number of contract farming arrangements initiated	MAAIF	UOSPA, private sector millers	
	3.1.2 Establish a sunflower seed centre of excellence which covers: a. Model farm demonstrating agricultural techniques b. Seed propagation service c. Postharvest handling demonstrations d. Techniques and technology for on-farm use e. Techniques and technology for local small-scale oil crushing f. Face-to-face, phone-in and short message service (SMS) services for farmers linking them to experienced and trained extension workers. To achieve capacity each question and answer should be posted online and be accessible for reference purposes. An initial feasibility study to determine a location for the centre of excellence (Mbale hub as an early candidate). • This initiative could be linked to the OSSUP platform which is facilitated by four regional facilitators for popularization and involvement of stakeholders. Additional stakeholders: private sector (agro dealers, processors, seed traders and other service providers).	2		X	X	X	X	• Centre of excellence established and linked to OSSUP	UOSPA	MAAIF-VODP2, NARO, MTIC	UOSPA centre of excellence on value addition in Lira
	3.1.3 Conduct a train the trainer or master training programme and roll out a training programme based on the selection of suitably qualified individuals to be trained in the market, the product, value addition and buyers' requirements. • The trainers receive the training on the basis that they will offer three days training per year free of charge to groups in the sector. • Trainers can potentially work as private sector consultants offering training services. • Researchers to demonstrate relevant technologies in communities. • All sunflower growing areas: Eastern, Northern and Western (Bunyoro) to be candidates. • The trainers will receive training in the following modules: 1. Production, postharvest and planning for farmers 2. How does the market work? 3. What is value addition? How is value added? 4. What do buyers want? Buyers' requirements at home and abroad 5. The world market – a primer Contracts, negotiations and building relationships.	2		X	X	X	X	• Needs assessment report • Training programme developed • Number of trainers trained • Number of free trainings provided by trainers	Makerere College of Agriculture and Environmental Science	VODP2, NARO	SITA

Strategic objective 3: Enhance capabilities for value transformation in the sector.										
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
3.1 Propagate knowledge and best practices in the sector.	3.1.4 Launch a training initiative (practical) targeted at farmers and primary traders covering postharvest handling. Topics to include: • Promote hand-driven appropriate technology for cleaning sunflower seed, to replace the manual winnowing currently done only by farmers; • Assessment on physiological maturity and readiness for harvesting; • Recommendations on drying practices to reduce microbial contamination resulting from drying on cow dung-smeared surfaces – to be replaced with use of tarpaulins; • Improving methods of assessing sunflower moisture level to replace the current inaccurate biting method – use of moisture meters; • Linking sunflower quality, including high moisture content, to marketing and reward compliance. Delivery of this kind of programme could be done in a number of ways such as workshops, leaflets, talks to farmers' associations, but one effective way is delivery by radio programme with the possibility for asking questions by text message.	1		X	X	X	X	• Number of training initiatives held • Number of farmers/traders trained (if possible) • Reduction of postharvest losses in intervention areas • Development of target standards for quality • Sunflower seed consistently meets set standards	UOSPA	OSSUP (members)	aBi Trust value chain development project,
3.2 Improve the quality of, and access to, extension services.	3.2.1 Establish an extension service development database online that will offer technical information aimed at extension officers, with suggestions as to best practice and information on education, inputs and strategies for working with farmers. • Database to include an online forum for the exchange of views. The forum would allow for the exchange of information but would also foster the development of a professional identity among extension staff, which would make the occupation more attractive and recognized. • Support and extend VODP2 project coverage beyond the current eastern, mid-north, north and north-western areas, focusing on the following activity: 'Vegetable oils subsector agronomy manuals developed by VODP and translated into several languages; harmonized/standardized codes of practice for extension workers'. • Facilitate meetings between researchers and extension service workers and encourage them to participate in online and mass media platforms.	1	X	X	X			• Completion of new manuals to capture best practices along the value chain, e.g. postharvest, marketing • Number of new regions accessing VODP2 manuals • Social media platform developed, functioning and promoted • Number of collaborations among partners	MAAIF (extension service unit)	VODP2, UOSPA, tele-communications firms	
	3.2.2 Approach existing as well as potential investors to expand the development of agribusiness services and agricultural input supply services (in conjunction with a broader agricultural sector thrust). Specific areas of interest to include: fertilizer production, tractor sales, and quality assurance (possibly coupled with logistics and collateral management activities, which would represent sector-strengthening developments).	1	X	X				• Detailed needs assessment completed • Targeted investment campaign towards investors launched	UIA	MAAIF, OSSUP, UOSPA	
	3.2.3 Establish a querying point – with a broad oilseeds focus – which provides information on a host of technical issues ranging from planning to harvesting/postharvest management, to packaging, to costs related to logistic services, etc. Information also to be available through an online website-based system that provides the cost of export logistic services as well as other costs incurred during the exporting process.	2		X	X	X	X	• Querying point developed and manned	MAAIF-VODP2	UOSPA, OSSUP	

Strategic objective 3: Enhance capabilities for value transformation in the sector.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
3.3 Improve access to technology.	3.3.1 Undertake an equipment study of seed cleaning, hulling, oil crushing (small- and large-scale) and agricultural equipment for on-farm use, concentrating on the equipment available, developments in technology, technology and equipment procurement. Study to concentrate on: 1. Visits to large and SME millers in Uganda to ascertain the equipment used, its origins, and the users' point of view, especially in relation to operation, maintenance and spare parts. 2. Assess equipment available from the supplying countries, in particular India for small-scale equipment, but also Turkey, Brazil and Argentina, with additional considerations on durability and availability of spare parts. 3. Compare findings with existing millers and millers in other regional countries, particularly the United Republic of Tanzania and India, for processors and cooperatives. 4. Draw up a list of suppliers of equipment with indications of price, capacity, delivery time, payment terms, commissioning, maintenance, cleaning characteristics, etc. An agency in the country or region is important. 5. Develop a database of potential suppliers with an overall review of sourcing practices and business approaches in each of the relevant countries. 6. Present the findings at a launch event. Publish the findings and the database. The research findings will serve as the basis of the technology aspect of the centre of excellence above.	1	X					• Inventory of existing and appropriate technologies for postharvest handling and processing conducted • Findings and database published/ disseminated	Uganda Industrial Research Institute (UIRI), SITA	UNBS, processors, UOSPA, SITA, Makerere University School of Food of Food Technology, Nutrition & Bio-Engineering	
	3.3.2 Organize equipment buyer–seller meetings in Uganda with attendance from equipment manufacturers and suppliers as well as potential buyers (farmers' organizations, SME millers). • The events should be linked to the sector with introductions by well-known companies and value chain actors. Equipment suppliers will be invited to attend in addition to value chain stakeholders.	1	X	X				• Number of participants at buyer–seller meetings • Number of buyer–seller meetings conducted	UOSPA	VODP2, UIRI, OSSUP, UOSPA, MTIC (Department of Industry), MAAIF, SITA, UIA, UEPB	
	3.3.3 Develop a coaching programme for informing millers on best practices related to sourcing and operating small processing equipment. Develop a coaching programme focused on small-scale local millers to enable them to source expellers for use in local processing.	2	X	X	X	X	X	• Coaching programme developed and deployed as a pilot	United Nations Industrial Development Organization	UOSPA, VODP2	
	3.3.4 Develop investment-led proposals for establishing/rehabilitating crushing facilities. • Explore options for rehabilitation of a small mill in the Lira area to offer quality, cold-pressed natural sunflower oil in retail packs to high-quality segments of promising markets including the Middle East and India. • Explore options for developing a medium-sized oil crusher north of Lira. To overcome the gap of a well-organized value chain north of Lira, a contract farming model will be used in conjunction with the setting up of the crusher facility. Develop a value proposition for both opportunities through an investor-led model, either by approaching existing investors or by promoting the opportunity to new investors.	1			X	X	X	• Proposals developed • Number of investors contacted	UIA	MAAIF, farmers' associations, VODP2, UOSPA	SITA

Strategic objective 3: Enhance capabilities for value transformation in the sector.										
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
3.3 Improve access to technology.	3.3.5 Support and strengthen existing initiatives for construction of small-/medium-scale warehousing, e.g. train farmer organizations in store management, market information and bulk marketing. • Construction of public warehouses (i.e. anyone can store there once they pay the warehouse charges). The warehouses would facilitate local traders, cooperatives and farmer organizations that have the ability to wait to sell to do so, thereby helping them avoid the harvest pressure associated with value chains with poor infrastructure and high-cost funding. Private entrepreneurs will be supported in developing warehouses.	2			X	X	X	• Number of farmers/farmers' organizations trained in store management • Increase in sunflower sector's use of available stores	VODP2	UOSPA, IFDC, aBi Trust, UCA, farmers' organizations, private sector (e.g. traders and exporters), NGOs, farmers' groups including cooperatives, Warehouse Receipt Authority	Warehouse Receipt Authority
3.4 Improve essential infrastructure, including warehousing and quality management infrastructure.	3.4.2 In a public–private setting, discuss options for harnessing underused capacity at up to 300 warehouses (approximately 150 lie in sunflower production areas). Potential capacity includes not only storage facilities but also equipment, including mills that can crush sunflower seeds.							• Round-table discussions held with farmers' organizations in possession of warehouses • Model developed for leasing/renting warehouses for use by sunflower farmers/farmers' organizations	MAAIF/farmer associations	UOSPA, UCA	
	3.4.3 Upgrade product testing infrastructure. • Identify and assess product testing facilities available in Uganda. Comprehensive diagnostic study to identify and rate available testing facilities. • If (as expected) it is confirmed that these facilities are not adequate, then undertake a campaign to encourage investment in a state of the art laboratory, sampling and testing facility located in the oilseed hub, based on market potential. Lobby investors and testing firms such as SGS to invest in product testing facilities within the main production area in Lira.							• Analysis report on testing facilities in Uganda conducted • Number of testing institutions that have developed an interest in establishing testing facilities in Uganda (impact level)	UNBS, MTIC	Private and Government laboratories, UOSPA, Makerere University, UIRI	

Strategic objective 4: Strengthen enterprise capacities for harvesting information as a tool to access target markets.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period 2016	2017	2018	2019	2020	Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
4.1 Better inform/train exporters on knowledge and procedures related to exports.	4.1.1 Develop and pilot an 'exporter training' programme – an intensive programme of training intended to inform and train processors, exporters and bulking agents/bulkers in how to deal in the world market. This training will mostly target processors, while a separate programme should target farmers. • Invite applications from interested local firms. • Conduct a needs assessment through an audit of the firms and to ensure a minimum level of absorptive capacity for the training. • Develop course material through a modular approach on the following: – Market information systems – Market access, especially buyer requirements – Market entry strategies, including collective marketing of crude oil from small and medium processors – Customer relationship management – Logistics, contracts and dispute resolution – Promotions and branding for food companies. This is envisaged to run parallel with the train the trainer programme (separate activity in the PoA) and at different stages to bring groups from each value chain stage together to understand both each other's point of view and the demands of the different market levels and segments.	2		X	X	X		• Number of local firms and farmers/farmers' organizations enrolled in the training programme • Number of training modules conducted • Level of progress made by firms towards export readiness, as indicated by programme graduation rate • Number of firms organized for collective marketing	UEPB	UOSPA VODP2, OSSUP, SITA, CBI oilseeds programme, private consultants (trained under CBI export programme)	CBI export programme for oilseeds, VODP2 programme for market linkages, SNV 4P's (Public, Private, Producers, Partnerships) project for creating market linkages
	4.1.2 Develop a transparent price determination mechanism as is the case for palm oil sector. Emulate this working model and disseminate information via FM radio and other mechanisms. Price Information for farmers and primary traders – Delivery by SMS with repeats on radio broadcasts. 1. Information should be factual. Actual prices gathered from local markets, millers and a selected group of traders. It should always be the same group and the same locations for valid comparisons. 2. Based on international price, extraction rate, variety differences, etc. Note: modelling of farm gate prices is a critical and sensitive activity to be conducted in a neutral and impartial manner.. 3. Prices should always be accompanied by a description of the product and parity, e.g. farm gate, Lira market, delivered, Arua, etc. 4. Only prices for quality products should be passed on and this should be mentioned, e.g. sunflower seed, Sunfola well dried, Lira market. 5. Information should be suitable for delivery to older model telephones as well as smart phones. Frequency: weekly.	1		X	X	X	X	• Transparent price determination mechanism developed • Market information delivery system • Number of firms receiving market information • Reduction in price-related complaints at farm level	MAAIF Production Unit	UOSPA, OSSUP, VODP2, UEPB	VODP2 support to farmers' organizations to facilitate access to loans (pricing is part of the contract) UOSPA SMS market information project via phones, in collaboration with Makerere University Information and communications technology, FIT Uganda market information system
	4.1.3 Provide accurate, timely and relevant market Information/analysis to traders and millers. The purpose is to facilitate linkages, create sector identity and offer market information as a tool for strategy development rather than specific decision-making, unlike the farmer version above. 1. Delivery by e-mail or online service in bulletin or magazine style. 2. This is a more analytical description of market developments over a period with some analysis, but primarily a repeat of articles from press and other publications. 3. Factual information on prices quoting local markets, millers' prices, and reports from traders and assemblers. Provider of information is always described either by their name if they are willing or as, for example, Lira trader. Price reports are always cross-referenced. 4. International as well as domestic focus. Frequency: fortnightly.	2		X	X	X	X	• Information collection and dissemination mechanism developed and implemented • Number of stakeholders reached	UOSPA UEPB		SITA

Strategic objective 4: Strengthen enterprise capacities for harvesting information as a tool to access target markets.											
Operational objectives	Activities	Priority 1=high 2=med 3=low	Implementation Period					Target measures	Leading Implementer	Supporting Implementer	Potential Funding Source
			2016	2017	2018	2019	2020				
4.2 Improve linkages in target markets and with other sectors.	4.2.1 Organize exchange visits to India for sector stakeholders including both farmers and processors, with a focus on knowledge sharing and experience building. • Some organizations would need support, which they should be required to obtain from other funding bodies for part of the cost, while other organizations could fund themselves. • Preference should be offered to individuals and companies who have attended other workshops. The requirement for individuals or organizations to partially fund their own expenses (where possible) is to ensure buy-in. • Agenda to include: – Visit to a trade association – Trade fair visit – B2B meeting – invite selected buyers to a B2B event where every buyer can meet every visitor for short introductory conversations. This could be held adjacent to a trade fair, improving the likelihood of attendance and increasing profile. The participants will be offered a single day training workshop in Kampala prior to the event.	2						• Number of firms participating in the workshops • Number of exchange visits conducted • Number of firms participating in the exchange visits • Number of trading partnerships established • Volume of sunflower products exported to the established markets • Number of B2B meetings held	UEPB, MTIC	UOSPA, VODP2, OSSUP, processors, traders, millers, agro dealers, farmers' organizations, SITA	
	4.2.2 Organize experience-sharing meetings with other sectors in order to explore commonalities. Examples include: • Breweries sourcing sorghum and other ingredients • Sesame seed exporters – common export markets • General traders assembling and exporting to regional markets, e.g. Agrinet, Farmers Centre, UOSPA • Organic organizations, e.g. Shares. Goals to include: • Benchmarking of successes of these other organizations • Exploring resource-sharing options – storage facilities, processing equipment (e.g. grain cleaner for sorghum can also clean sunflower).	2						• Linkages to complementary organizations created. • Number of experience-sharing meetings held, and number of participants attending the meetings • Number of firms benefiting from the linkages measured through proposals, memorandums of understanding, etc. for shared resources, deals	VODP2	UOSPA, OSSUP, private sector actors, e.g. Shares, Agrinet, traders, exporters, etc	
	4.2.3 Convene a high-level, technical round-table meeting between Customs representatives from Uganda and India to discuss mechanisms for streamlining procedures. This will also serve as a problem-solving mechanism.	1		X				• High-level roundtable meeting held • Detailed recommendations elaborated	Indian and Ugandan Customs authorities MAAIF, URU		

APPENDIX 1:
RECENT AND ONGOING DEVELOPMENT PROGRAMS

Organization	Programme or activity	Funding agency	Duration	Implementation area(s)	Target population(s)
MAAIF (VODP2)	Initiative for standardization of agronomy manuals for oilseed crops including sunflower	IFAD & Government of Uganda (GoU) through MAAIF	1998 – 2008 VODP1 & 2010-2018 VODP2	Oilseed development around four hubs (Lira, Mbale, Gulu and West Nile) covering 43 districts. Also, palm oil activities.	Oilseed producers, processors & consumers
MAAIF (VODP2)	Training through service providers and supporting UNBS quality management along the value chain	IFAD & GoU/MAAIF	2010 – 2018 (eight years)	Eastern (Tororo, Bugisu, Teso subregions), Northern (Lango, Acholi and West Nile subregions) and Masindi subregions	Farmers' groups, oilseed crop millers and traders
MAAIF (VODP2)	Engagement of UNBS for quality assurance (machinery, capacity for operation, sample analysis)	IFAD & GoU/MAAIF	2010 – 2018 (eight years)	National	Farmers' groups, oilseed crop millers and traders
GoU – MTIC	One village, one product programme	Japan International Cooperation Agency	Five years starting 2008	Bushenyi, Masaka and Soroti	MTIC
GoU – MTIC	QUISP	Swedish International Development Cooperation Agency, GoU and TradeMark East Africa	Five years starting 2010	National	Industry, legislators, testing labs, consumers, etc.
NASARRI	Sunflower parental lines production	IFAD/GoU/VODP2	Five years, 2014 – 2018	NASSARI	Oilseed business organizations
Private Sector Foundation Uganda	Matching grant facility (oilseed, tourism and vegetables)	World Bank/GoU	Three years starting 2015	National	All oilseed and other value chain actors
Makerere University, College of Agriculture & Environmental Sciences, as well as other academic & research institutions	Several training & research programmes	GoU	N/A	National	General public – as required
UOSPA, Community Resource Development Initiative, Afsat	Capacity-building to farmers' cooperatives on: financial services, agronomy, etc.	IFAD & GoU/MAAIF	2014 – 2018	Bugishu, Teso, Lango, Acholi and West Nile subregions	2,000 farmers per hub for five hubs: total target 10,000
UOSPA	Promotion of two NARO-released sunflower hybrid varieties	aBi Trust	Two years: June 2012 to June 2014	Bugisu, Teso, Lango and Acholi subregions	6,000 farmers
UOSPA	Farmer-led sunflower seed (Sesun 1H, 2H & new Sunfola – OPV) multiplication	aBi Trust	Two years: June 2012 to June 2014	Bugisu, Teso, Lango and Acholi subregions	6,000 farmers
UOSPA	Farmer institutional development project	UOSPA, from members' contributions	Two years, 2012 to 2014	Bugisu, Teso, Lango and Acholi subregions	4,500 farmers
UOSPA	Extension outreach project	aBi Trust	Three years	Bugisu, Teso, Lango and Acholi subregions	27,000 farmers
UOSPA	Centre of excellence establishment	aBi Trust	Three years	Bugisu, Teso, Lango and Acholi subregions	27,000 farmers
UOSPA	UOSPA – quality management programme for producers and laboratory in Lira	aBi Trust	Four years	Bugish, Teso, Lango and Acholi subregions	27,000
UOSPA	SMS market information project via phones, in collaboration with Makerere University information and communications technology	aBi Trust	Four years starting 2013	Bugisu, Teso, Lango and Acholi subregions	27,000
Uganda Development Bank Ltd.	Financial support to farmers' cooperatives in oilseed marketing/business	GoU	Open	Lango subregion	Four cooperatives in Lango subregion producing and marketing sunflower
Micro Finance Support Centre	Agricultural loan	GoU	N/A	National	All eligible clients
OSSUP	Subsector coordination platform at national and regional levels	IFAD & GoU/MAAIF (VODP2)	One year renewable	Kampala (national platform); and Eastern (Tororo, Bugisu, Teso subregions), Northern (Lango, Achoili and West Nile subregions) and Masindi subregions	All primary, secondary and tertiary value chain actors, e.g. farmers' organizations, traders, finance institutions, R&D, UNBS and policymakers

Organization	Programme or activity	Funding agency	Duration	Implementation area(s)	Target population(s)
USAID	Integrated Seed Sector Development Uganda programme	USAID	2012 onwards	Operates in three agroecological zones: West Nile, Northern Uganda and Western Uganda	
CBI	Training and coaching of companies to export to the EU	Netherlands Government (Ministry of Foreign Affairs)	Four years	Oilseed (and coffee) subsectors	Uganda private companies
aBi Trust	Value chain development/finance project	GoU and Denmark as well as development partners: USAID, EU, Sweden, Belgium, Netherlands Embassy, UK Aid and KfW Development Bank	Ongoing and long term	National	Businesses, NGOs/civil society organizations working in value chains, including oilseeds
aBi Trust	aBi Trust supports farmer organizations and SMEs to improve compliance in sanitary and phytosanitary standards and quality	GoU and Denmark as well as development partners: USAID, EU, Sweden, Belgium, Netherlands Embassy, UK Aid and KfW Development Bank	Ongoing and long term	National	Businesses, NGOs/civil society organizations working in value chains, including oilseeds
IFDC	Promoting productivity enhancement technology among oilseed producers	Netherlands Ministry of Foreign Affairs	Five years, 2012 – 2017	Lango subregion for oilseed production and marketing and other crops in the Western region	2,000 farmers in the districts of Kole and Lira
FAO	Commercialization of agriculture among resettling population to restore livelihood and reduce poverty (GTFs/UGA/022/ITA)	FAO	18 months, starting in 2014	Northern Uganda: Lira and Kole districts in Lango subregion and Gulu district in Acholi subregion	7,000 farmers

APPENDIX 2:
LIST OF INVITED PARTICIPANTS

INSTITUTION/ORGANIZATION	INVITEE
Ministry of Trade Industry and Cooperatives	Okot Okello
Ministry of Trade Industry and Cooperatives	Harriet Susan Atim
Ministry of Finance, Planning and Economic Development	Luyiggo Anna Elsie Ajuna Sharon Magoba Sheila Mariata Ayebazibwe Ritah
SEATINI U	Alana Emmanuel
Lira Resort Enterprises	Milton Okello Ebek
Farmers Centre (U) Ltd	Ms Akello Janet
Alito cooperative	Okwang Christopher
Acwec Omio Cooperative	Eddy Okello
Olwol & Sons	Olwol Fred Wacha
CARD Eastern Hub Uganda, Agri business Development Solutions	Isaac Abwa
Gil & Rose Investments	Wandera Zubairi
Sironko Oil millers	Namisi Scania
Ikomo (kimo Investiments)	Gidudu Dominic
PKWI oil mill	Norah Ebukalin
Uganda Oilseeds Producers and Processors Association	Agong Ray Bruno
NaSSARI	Walter Anyanga
National Agricultural Research Organization (NARO)	Imelda N. Kashaija
Uganda Export Promotion Board	Paul Gitta
Uganda Export Promotion Board	Sam Karuhanga
Uganda Export Promotion Board	Moses Mabala
Uganda Expport Promotion Board	Elly Twineyo - ED
Vegetable Oil Development Project under MAAIIF	Dr. John A. Bananuka
Vegetable Oil Development Project under MAAIIF	Chales Sembatya
Uganda National Bureau of Standards -UNBS	Pamela Akwap
National Organic Agricultural Movement of Uganda (NOGAMU)	Irene Bamugayo Kugonza
Uganda Manufacturers Association	Godfrey Ssali
Uganda National Farmers Federation	Mr Augustine Mwendya
Water Solutions Ltd (Irrigation Technologies)	Frank Tumwebaze
Uganda National Chamber of Commerce and Industry (UNCCI)	Martin Okumu /Ezra
Equator Seeds (Seed Multiplication Services)	Kirikarama James
MAK-DFST (Makerere University, department of Food Science and Technology)	Dorothy Nakimbugwe PhD
Imara	Shesh Amar,
Imara	Bimal Kothari
Netherlands Development Organization SNV – For Oilseeds Subsector Platform	Rowena Namatovu

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