



# Ethiopia Soybean Value Chain Inclusive Growth Strategy

CASA Component A

*April 2023*

Supported by:

## Table of Contents

List of Tables .....	3
List of Figures .....	3
Acronyms.....	4
Executive Summary .....	5
1. Background.....	7
1.1. CASA Programme Overview.....	7
1.2. Context, Purpose and Approach .....	8
1.2.1 Study purpose and scope.....	8
1.2.2 Study Method and Approach .....	9
1.3 Report structure.....	9
2. Sector Overview.....	9
2.1. International Context.....	9
2.2 National Context.....	11
2.2.1 Socioeconomic Importance of the soybean value chain in Ethiopia.....	12
2.2.2 Sector Growth scenario.....	12
2.3 CASA Focus Regions .....	13
3. Market System .....	15
3.1. Sector Map .....	16
3.2 Core Market Functions and Actors.....	18
Overview.....	18
3.2.1 Core Market Actors and functions .....	19
3.3 Key Supporting Function Services and Actors .....	24
3.4 Enabling Environment Issues and Actors.....	27
3.4.1 Enabling Environment Issues.....	27
Foreign exchange rates .....	27
3.5 Market Potential, Opportunities, and Growth Potential .....	29
3.5.1 Growth potential and Opportunities .....	29
3.5.2 Market Performance and Drivers of Commercialisation for soybean .....	30
3.6 Cross-Cutting Areas .....	35
3.6.1 Climate vulnerability of the Soybean value chain.....	35
3.6.2 Food Security and Nutrition.....	35
3.6.3 Possible gender impacts and opportunities .....	36
3.7 Summary of market challenges and opportunities .....	37
4. Problem Analysis .....	38
4.1 Low productivity and quality of produce .....	39
4.2 Problems with contracting frameworks and market price .....	41
5. Strategy for Change.....	43
5.1 CASA strategic contributions to the Government of Ethiopia .....	43

5.1.2 Government policy and support.....	44
5.2 Process Leading to Strategy and Project Outlines .....	44
5.3 Vision of Change .....	44
6. Interventions .....	45
6.1. Intervention Areas and Project Outlines .....	45
6.2 Sequencing and Prioritisation of Projects.....	50
7. Stakeholder Assessment .....	52
8. Preliminary Assessment of Potential Partners.....	54
9. Information Gaps .....	56
Annexes.....	57
Annex 1. Next Steps.....	57
Annex 2. Existing Donor Initiatives .....	59
Annex 3 Potential processors and their capacity .....	<b>Error! Bookmark not defined.</b>
Annex 4 Research Interview List .....	<b>Error! Bookmark not defined.</b>

## List of Tables

Table 1: Details of processors engaged by CASA Ethiopia.....	21
Table 2 Summary of challenges and opportunities.....	37
Table 3: Summary of existing knowledge gaps .....	56
Table 4 Description of stakeholders from power and interest figures.....	52
Table 5: Description of potential partners' capacity and willingness .....	54

## List of Figures

Figure 1 Global Soybean production .....	11
Figure 2 National Soybean production and productivity .....	12
Figure 3 CASA focus region profile.....	14
Figure 4 The soybean market system.....	15
Figure 5 Soybean value chain map .....	17
Figure 6 Soybean production and market in Amhara region .....	18
Figure 7 Soybean oil industry- Ethiopia .....	31
Figure 8 Animal feed processors in Amhara region.....	32
Figure 9 Comparison of oilseed meal cake prices .....	33
Figure 10: Production problem analysis for soybean market system in Ethiopia .....	40
Figure 11: Marketing and contract farming problem analysis for the soybean value chain.....	42

## Acronyms

<b>ASE</b>	Amhara Seed Enterprise
<b>ATI</b>	Agricultural Transformation Institute
<b>ABC</b>	Agricultural Business Cooperation
<b>BDS</b>	Business Development Services
<b>BEE</b>	Business Enabling Environment
<b>BoA</b>	Bureau of Agriculture
<b>BoT</b>	Bureau of Trade
<b>BoT</b>	Bureau of Trade
<b>CASA</b>	Commercial Agriculture for Smallholders and Agribusiness
<b>CSA</b>	Central Statistics Agency
<b>ECX</b>	Ethiopian Commodity Exchange
<b>EMA</b>	Ethiopian Market Assessment
<b>EPOSPEA</b>	Ethiopian Pulses, Oilseeds, and Spices Producers & Exporters Association
<b>EABC</b>	Ethiopian Agriculture Business Cooperation
<b>ETB</b>	Ethiopian Birr
<b>FCDO</b>	Foreign & Commonwealth Development Office (formerly DfID)
<b>GAP</b>	Good Agricultural Practices
<b>GESI</b>	Gender Equity and Social Inclusion
<b>IAIP</b>	Integrated Agro-Industrial parks
<b>ILAF</b>	Intervention Logic Analysis Framework
<b>IGS</b>	Inclusive Growth Strategy
<b>IPM</b>	Integrated Pest Management
<b>MEL</b>	Monitoring, Evaluation and Learning
<b>MOA</b>	Ministry of Agriculture
<b>MRM</b>	Monitoring and Results Measurement
<b>MOTI</b>	Ministry of Trade and Industry
<b>MSD</b>	Market Systems Development
<b>OSAP</b>	Oilseed and Animal Feed Flagship Program
<b>RCPA</b>	Regional Cooperative Promotion Agency
<b>RIPC</b>	Regional Integrated Parks Corporations
<b>RuSACCOs</b>	Rural Saving and Credit Cooperatives
<b>SHF</b>	Smallholder Farmer
<b>SMEs</b>	Small and Medium Enterprises
<b>STTA</b>	Short Term Technical Assistance
<b>TA</b>	Technical Assistance
<b>TAF</b>	Technical Assistance Facility (Component B of CASA)
<b>ToR</b>	Terms of Reference
<b>ToT</b>	Training of Trainers

## Executive Summary

The primary focus of the Commercial Agriculture for Smallholders and Agribusinesses (CASA) programme is to make the commercial and development case for investing in agribusinesses that source produce from smallholder farmers (SHFs). CASA Component A, implemented by NIRAS and Swisscontact, supports this through implementing catalytic high-impact interventions by developing projects with agri-businesses and commercially minded producer organisations. CASA builds up the capacity and investment readiness of these organisations through the provision of technical assistance (TA) and conditional grants in order to bring more smallholders into commercial markets. It then promotes the scaling and replication in the market system of successful inclusive business models. CASA interventions aim to demonstrate 'proof of concept' to investors, ensuring agribusinesses are attractive investment propositions, which subsequently strengthens the market and improves smallholder incomes.

CASA selects 'anchor value chains', where several interventions can be implemented to demonstrate solutions to various constraints or barriers in the market, or capitalise on opportunities, and designed to address access to better and lucrative markets which results in higher incomes for participating SHFs, as well as improve food security.

In response to the global food security crisis caused by the Russian invasion of Ukraine, CASA Component A is now working towards expanding its work with agribusinesses on the ground in two new countries, Rwanda and Ethiopia.

Using a market systems development approach, the CASA Ethiopia team has undertaken a rigorous systems selection process to identify key sectors for intervention, followed by an in-depth system analysis. This report maps the Soybean value chain, including its core market functions and actors, key supporting services and actors, and any enabling environment issues and actors. It then provides a problem and root-cause analysis of the sector, addresses any information gaps, puts forward a strategy and vision of change, and suggests potential interventions, partners and key stakeholders for interaction. This document will form the basis for intervention design and concept note development for projects that will ultimately make up CASA Ethiopia's opening portfolio.

The Soybean value chain in Ethiopia has the potential to be a key accelerator of agricultural development and growth. It plays a valuable role in enhancing the rural economy and social development as well as ensuring national food security, and livelihoods. Soybean is a commodity that benefits poor farmers by providing benefits for nutrition (high protein content), income (potential for value addition) and soil fertility (through nitrogen fixing properties). Soybean is also strategically important to Ethiopia, as it is the second most exported agricultural commodity (along with other oilseeds) after coffee and plays a vital role in the country's economy. This study was limited to one Region and one value chains. The regions were selected based on the following, weighted, criteria: (1) the presence of Ethiopia's three main agro-ecological zones, *Kolla*, *Weyna Dega* and *Dega*; (2) Presence of private sector value adding activities; (3) proximity of Integrated Agro Industrial Parks. Based on this analysis, a set of practical, evidence-based interventions have been identified to address those constraints, boost market and SME growth, and generate more and better income.

Soybean production is critical for SHFs in ensuring food security, livelihoods, employment and income generation. It is used for domestic consumption for use in food products, as well as used to create edible oils, also used as a raw feed in the livestock industry. The importance of the soybean is not only to increase food security and income, but also to contribute to environmental sustainability by intercropping/crop rotation with cereals. More than 90% of the crop is grown in the Amhara, Oromia, and Benishangul Gumuz regions.

Soybean is the most important oilseed in Amhara, accounting for roughly 60% of all rain-fed edible oil land and 50% of total produce. It is grown in the northern and western parts of the region and accounts for approximately 39% of Ethiopia's total soybean production. The region comprises five potential soybean production zones with a total of 28 woredas. According to

the Amhara region Bureau of Agriculture (BoA) and Agricultural Transformation Institute (ATI) report, the region has 142,395 smallholder farmers and 892 private commercial farmers cultivating over 265,263 Ha. In 2023, the region's total soybean the production volume reached 753,600 metric tons this is mainly due to increase in cultivated land and rising productivity; additionally, farmers in some areas are shifting from sesame to soybean due to attractive market demand. Various system actors contribute to the soybean value chain, which improves soybean production, productivity, and marketing. This is justified by the increase in soybean area allocation, production, and productivity over the last 15 years, as well as the crop's rising domestic and export demand. Nonetheless, demand continues to outstrip supply.

The soybean oils can also be characterised as largely uncompetitive, because imported palm oil is much cheaper and more widely available, but there is significant government interest in developing domestic value addition opportunities. Of the principal edible oils produced in Amhara, soybean is the most important, however, it is almost entirely exported raw, and at prices that incur considerable losses to exporters. The principal business for many Ethiopian exporters is importing. Because Ethiopian export businesses often take losses on uncompetitive ex-ports as a means of generating Forex that can be used to import products and sell them at margins more than 200%. So, while exports are sometimes uncompetitive, it may still be worthwhile to export (by later selling imports), and this is the principal reason that raw soybean is purchased from the ECX for about 15-20% more than the export price.

Soybean is currently the second largest source for oil production after Niger seed, has a domestic market orientation, and is commonly processed into oil and oil cake. Despite soybean's lack of competitiveness against palm oil, the Amhara region is now primed to become a key processing centre for soybean oils, having recently received three multi-million-dollar processing investments.

This study confirmed that the Soybean value chain has the potential for growth required by the food and feed agro-industries, as well as increased consumption, because it provides high nutrition at a lower cost than the most common protein sources. Its oil is an important domestic alternative to imported palm oil. To ensure that the Soybean value chain continues to add value and accelerate market development, representatives from the public and private sectors identified the following as the most pressing issues that must be addressed immediately:

**Lack of access to quality seed:** The shortage of quality seeds of the improved varieties has been one of the major factors limiting soybean production and productivity. The majority soybean seeds in Ethiopia are bartered between local SHFs who retain a portion of their produce to use as seed source for the next planting season. This leads to decreased crop quality due to low genetic potential. Moreover, farmers have limited knowledge of best practices to grow better quality seed, nor do they have access to improved seed varieties.

**Weeds, diseases, and pests:** These are critical issues for producers because herbicide and pesticide supplies are limited and expensive and agroecological practices to tackle diseases and pests are not widely known. As a result, farmers do not use these chemicals to control weeds, diseases, and pests, reducing quantity and quality of production. This is primarily due to lack of knowledge and best farming and agronomic practices.

**Unstable Soybean market price:** The soybean market price is volatile, with large annual price fluctuations. Swings in the soybean market have a significant impact on the market, influencing farmers' investment for the following cropping season. Soybean prices fluctuate a lot due to seasonal demand. Furthermore, farmers lack market information on suppliers and buyers. Farmers are sometimes forced to store their grains at home for a period mostly between 2 to 4 months.

**Poor post-harvest management (PHM):** Poor PHM practices cause poor quality crops and increase the rejection rate of the supply in the local and international market. It also reduces the nutritional value of the produce and can cause serious health issues.



**Limited access to technologies:** Ethiopian agriculture is characterised by its low level of mechanisation. Land on smallholdings is typically prepared with oxen. Ethiopia's major agricultural imports include agricultural machinery; however, the purchase and use of modern machinery such as tractors and combine harvesters is typically limited to large-scale farms. This is because the high cost of purchase and maintenance and low availability are prohibitive for SHFs.

**Weak contractual arrangement and enforcement:** The current contract mode lacks clear and transparent communication of contract terms, enforcement mechanisms, and legal contract farming practices. The current contract mode is primarily between farmers and traders/private investors, and it is usually verbal, with no floor price, no clear terms on defaults, and no strong binding agreement between the parties. In general, it is not a real contract, but rather a vague 'when the produce is harvested, I will buy from you' agreement.

**The weak linkages among value chain actors:** The value chain's actors lack a strong platform for discussing and sharing information, ideas, and experiences. Improved coordination could foster better linkages and a win-win situation among the actors in the soybean value chain.

**Financial bottlenecks:** High transaction costs of soybean, lack of access to credit and loanable funds for soybean trading were some of the soybean production and marketing bottlenecks raised by actors along the value chain.

While the CASA programme cannot address all these constraints, this assessment has identified practical priority intervention ideas. These intervention ideas have the potential to improve the product supply as an avenue toward promoting a more competitive sector that expands value addition opportunities and thus, increases production and productivity and improves opportunities for women. The indicative interventions also seek to improve the quality of work at the farm through identifying the incentives for investment; and to positively evolve the regulatory and coordination space. In this regard, the intervention ideas are concentrated in three key areas:

1. **Enhance production to increase farmer incomes and product supply** by supporting better farm-level skills and improved technology.
2. **Strengthen sector coordination** as strong coordination supports inclusive development and can ensure stakeholders work together to lobby for and address key sector challenges.
3. **Enhance processors' capacity and working conditions to drive farm and factory productivity** by developing the business case for processors, cooperatives and farmers, to increase farm-level investment and support the ongoing work of increasing production and productivity efforts.

## 1. Background

### 1.1. CASA Programme Overview

The Commercial Agriculture for Smallholders and Agribusinesses (CASA) programme makes the commercial and development case for investing in agribusinesses that source produce from smallholders. It aims to demonstrate how this can be done effectively by bridging evidence gaps and by ensuring investors and policymakers have access to the right information and people to make inclusive agribusiness models succeed.

In support of this approach, FCDO has been funding the Commercial Agriculture for Smallholders and Agribusiness (CASA) programme since 2019 with the aim of changing how investors, donors and government's view and invest in agribusinesses that work with smallholder supply chains. In doing so, CASA is increasing economic opportunities for thousands of smallholder producers by:



- a. Demonstrating the commercial viability of small and medium-sized (SME) agribusinesses with significant smallholder supply chains and attracting more investment into these businesses;
- b. Deepening the smallholder impact of existing investments made by Development Finance Institutions and impact investors;
- c. Enabling poor smallholder farmers to engage with and trade in commercial markets; and,
- d. Researching and communicating the case for successful engagement with smallholder-linked agribusiness.
- e. Improving food production and security, and fertiliser production.

CASA's Components A and C are managed by NIRAS in partnership with Swisscontact and CABI. Component A is currently managing interventions on the ground in Malawi and Nepal, (and previously Uganda) with partner agri-businesses (including commercially minded producer groups), while Component C is a learning and knowledge-sharing component for upscaling and replication.

Having received additional funds from FCDO to combat against the global impact caused by the Russian invasion of Ukraine, CASA is now looking to expand its work with agribusinesses on the ground into two new countries, Rwanda and Ethiopia.

## **1.2. Context, Purpose and Approach**

The CASA Ethiopian Market Assessment (EMA) takes place in the context of CASA expansion into Ethiopia in 2023. Firstly, the CASA Ethiopia programme systematically used a market system development (MSD) approach to identify several commodities to prioritise for intervention over the next two years. Desk reviews and stakeholder consultations were successfully conducted at the national and regional levels to understand the overall context of the agriculture sector. Following that, a national stakeholder workshop on value chain selection was held, with key stakeholders from Federal Ministries and three regional states<sup>1</sup>, representatives of NGOs and private sector associations in attendance. The donor critically reviewed the results of this preliminary scoping research to demonstrate compliance and to ensure that the GoE's interests were properly reflected throughout the value chain selection process. Finally, a deep field investigation was conducted for the Soybean value chain because it was one of the top prioritised commodities for CASA Ethiopia intervention in Amhara regional state and possible expansion to Oromia region. As a result of the market research findings, this Inclusive Growth Strategy (IGS) for the development of the Soybean value chain has been developed. The IGS document maps the Soybean value chain and outlines the vision, change strategy, and key interventions to address the underlying causes of problems. It identifies the challenges and opportunities where CASA could facilitate interventions and the SME partners who could be entry points. The ultimate goal of this exercise is to provide a knowledge product that can guide interventions to adopt an MSD approach that has positive effects on smallholder farmer (SHF) income, food security, climate resilience and adaptation, and gender equity and social inclusion (GESI) within the evaluated market systems in Ethiopia.

### **1.2.1 Study purpose and scope**

This analysis aims to understand the soybean value chain in Amhara region. The analytical breadth can bring value to the soybean value chains in identifying key constraints and the CASA programme can leverage actors to address the larger challenges at hand. For example, absence of improved varieties, increase in production cost, weak market linkage, and access

---

<sup>1</sup> Amhara, Oromia and Sidama

to finance all constrain the soybean value chain as a whole. The programme may achieve momentum (and create more impact) with initiatives that address these challenges. While this analysis provides a strong departure point for the programme, it is recognised that markets change over time and the programme should periodically conduct minor follow-up analyses or action research initiatives to continue to remain relevant in a fast-changing market.

### 1.2.2 Study Method and Approach

The research was carried out in two phases:

**Desk research:** Available literature was gathered to provide a framework for the primary data collection process. This included review of national strategies, reports, sector data and market trends as well as research and analyses on the soybean value chain conducted by other development agencies and research institutions.

**Field research:** The primary research was carried out in zones of Agaw Awi zone (Dangila and Enjibara), West Gojjam (Durbetie), West Gonder (Hamusit) and Bahirdar city, because these are high soybean production locations and processing centres. A total of 26 SMEs, processors, cooperative unions, financial institutions, SHFs, input suppliers, and traders were interviewed during this stage (a full list of stakeholders and actors interviewed presented in Annex 5). Semi-structured interviews with government officials, producer associations and business owners, non-governmental organisations, and key industry informants were conducted. The interviews provided a detailed picture of the value chain from a variety of actors and perspectives.

The field investigation used different types of data (i.e., primary and secondary) and multiple methods (e.g., observation). The study findings were discussed with the Regional Bureau of Agriculture (BoA), Cooperative Promotion Agency (RCPA) and Bureau of Trade (BoT). The participants discussed the findings and identified suggested changes, which have been taken into consideration in the final revision of this strategy document.

## 1.3 Report structure

The report first provides an overview of the soybean value chain in Ethiopia, how the sector has developed over time and how the various interactions along the value chain affect the actors in the value chain. It then looks at the market system, the key actors and functions, and its key constraints and their possible root causes. The analysis findings are then used to develop a strategy of change which identifies potential interventions to address the root causes in a sustainable way; and includes an assessment of the incentives and capacity of market actors who could drive the change.

## 2. Sector Overview

### 2.1. International Context

Soybean has several uses and can be used as an edible crop, for extracting oil, and as feed for animals. The demand for soybean by-products like soybean meal and oil cakes has increased over the past few years. The soybean market is primarily driven by the increasing meat consumption and use of soy as a protein source in animal feeds (around 77% of global soy consumption). This is compounded by increasing demand trends in other soybean uses, including direct consumption with the increase of plant-based diets and increasing demand for vegetable oil. The high nutritional value of the products enhanced their popularity among consumers, and it is increasing the market. The increased disposable income of consumers in developed countries and the improved soybean productivity in these countries contributed to the demand for soybean by-products. The increased health awareness among consumers due to the higher standard of living also impacted the market positively. Rising income levels, along with population growth and an increase in middle-income classes in developing

countries, have increased demand for foodstuffs, including soybean. The growth of middle-income classes in non-traditional markets such as those in Africa and Asia, and the rise of a supermarket culture in developing countries have led to increased demand for processed foods, which also drives increased demand for soybean. Soybean have now gained acceptance as the 'new and improved' centre of healthy eating.

The global volume of soybean production has reached 372 million tons in 2021, a 5% increase over 2020. In 2020, soybean oil production in the United States was recorded at 11.3 million metric ton, increasing from 10.8 million metric ton in 2018. The global soybean oil market size was USD 48.16 billion in 2021 and is projected to grow to USD 60.08 billion by 2028, underpinned by 372 million tons of production. Almost all production growth is concentrated in the United States and South America, extending the trend of concentration of production in exporting countries. The world production of soybean is dominated by a few countries which include USA (24 %), Brazil (18%), Argentina (10%), India (2%), which together account for more than half of the world's output<sup>2</sup>. The increase in production along with an increase in the area harvested under soybean is likely to drive the market prices globally. For many years, the United States was the world's major producer and exporter of soybean. However, South America became the largest market for soybean production with Brazil being the leading country. In 2020, soybean production increased dramatically in Brazil, attributed to the favourable growing conditions augmented by the soil quality, weather conditions, and water availability.

Africa remains a minor player in the global soybean production scene, accounting for only 0.8% of total production. Production levels are low, as are yield growth rates. Total soybean supply has little impact on global markets. Not only are levels of production low, but growth rates in yield also show slow growth. The region's total production is rising faster than the global average, but this is due to a very low base of production. Sub-Saharan Africa produces more soybeans than it has capacity to process. Due to a lack of processing capacity throughout the region, soybean meal and oil production is limited. Ethiopia produced 180,000 tons in 2020/21, accounting for 10% of African production and has shown a production increase over the last ten years, owing primarily to an increase in cultivated area and productivity, which was 1-ton 2007/08 and increased to 2.3 tons per hectare in 2018/19 cropping season.

As an internationally grown and traded commodity, soybean is exposed to international shocks that prompt and exacerbate market volatility. IFPRI<sup>3</sup>note that, drought in South America sharply lowered production prospects for soybeans, driving price volatility starting late in 2021. Market dynamics of other major oilseeds have further contributed to soybean price volatility. Increasing concerns over palm oil supply, particularly due to damage caused by typhoon-related flooding in Malaysia, has led to increased demand and higher prices for soybean oil, a palm oil substitute for food and fuel. Similarly, Russia's invasion of Ukraine and the subsequent instability in the region, that accounts for over 50% of the world's supply of sunflower seed oil, has sent buyers scrambling for alternatives, also contributing to the excessive price volatility seen in soybean markets. Increasing prices and demand globally, have led to increased area under cultivation for soybean production, including in Ethiopia.

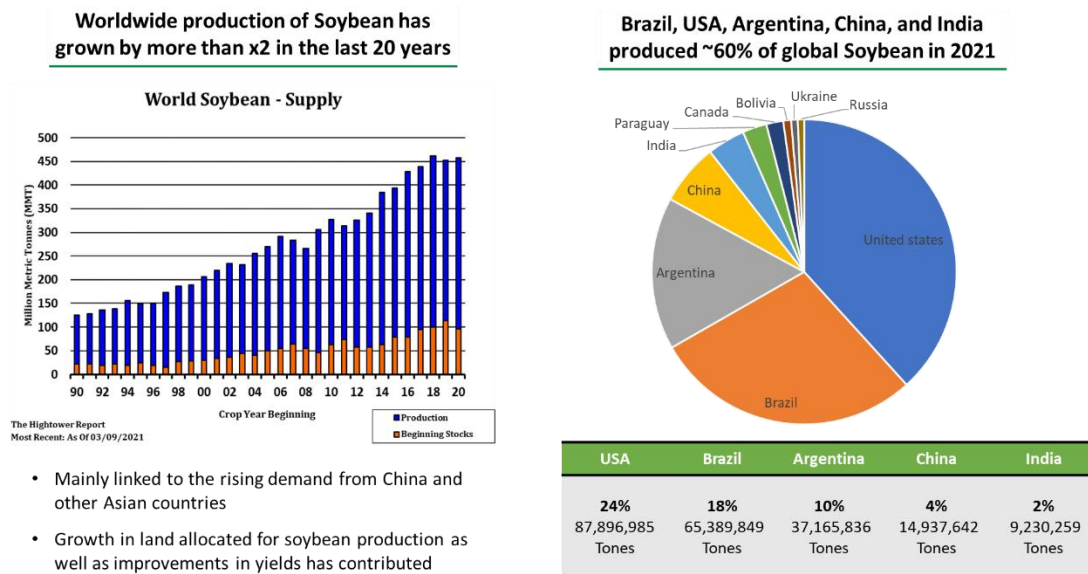
---

<sup>2</sup> FAO 2020

<sup>3</sup> IFPRI (2022) [The Russia-Ukraine war is exacerbating international food price volatility](#)

**Figure 1 Global Soybean production**

**Soybean production has more than doubled worldwide over the past 20 years, with 5 countries accounting for ~60% of global production in 2021**



Source: FAOSTAT, Team Analysis

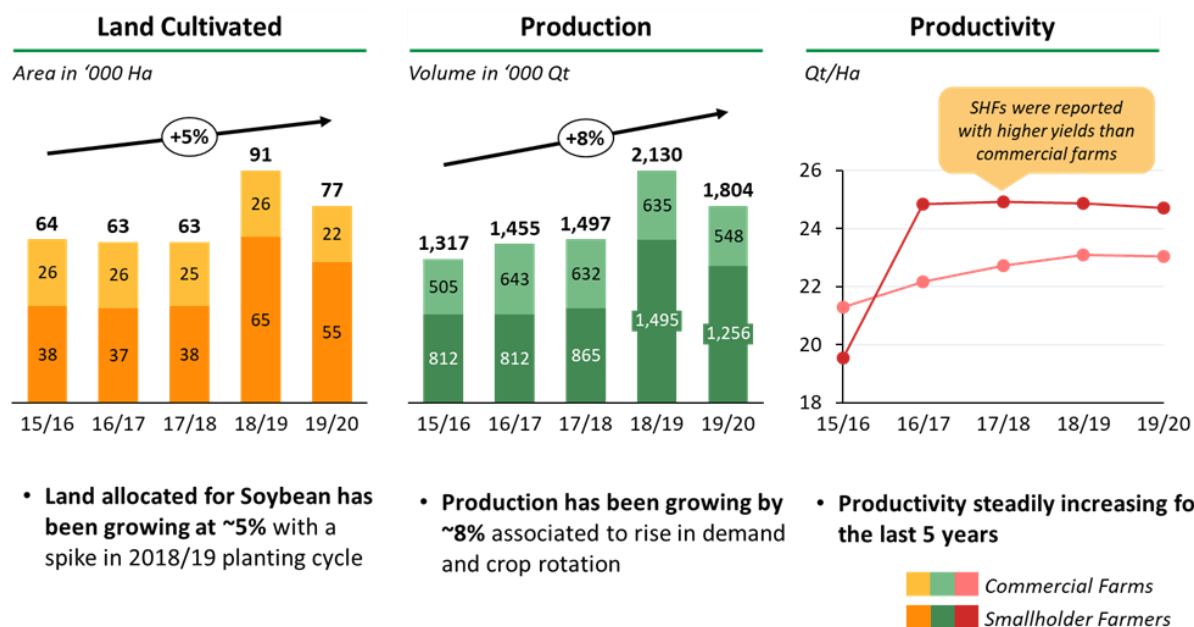
## 2.2 National Context

Soybean is a multipurpose crop both under small and large landholder farmers due to its increased demand for oil and food purposes. It is also suitable for cropping systems and sources of income. Soybeans are an important and economical source of protein in the diet of many developed and developing countries. In addition, the meat industry (i.e., beef, poultry, aquaculture etc) uses soybean for feed production. The crop residues are also rich in protein, are good feed for livestock and form a good basis for compost manure. Furthermore, it is a source of raw material for the processing industry and there is significant potential for soy-based consumer products such as soymilk, and soy-based protein and meat substitute products to increase market share in the Ethiopian market. The fact that the oil content of soybean is high (minimum content of oil 20-25% of the dry grain), makes it the leading oil crop, next to palm oil. The oil cake that is usually the residue of the soybean oil crushing is a very nutritious feed supplement for livestock, poultry, fisheries, and swine farms, accounting for 70 to 75% of the content.

Ethiopia produced an estimated volume of 180,000 metric tons in 2022/23 cropping calendar, the result of combined production by smallholders and commercial farmers. The total area of land under soybean production during the last 10 years has increased tenfold, while the total volume of production during the same period increased 21 times, attributed both to the increase in area cultivated and rising productivity and increase in technology practices. Productivity level of soybean is 2.3 tons per hectare and this level is very low compared to its potential, which could go up to 4 tons per hectare if improved varieties are used. Though Soybean can be grown in different parts of Ethiopia, the major areas currently growing the crop are situated in the western and south-western part of the country, notably Benishangul-Gumuz, Amhara and parts of Oromia Region. Amhara, Oromia and Benishangul-Gumuz regions account for the 90% of the soybean in the country. These areas have vast fertile land and a favourable agro-climate suited to growing soybean. Entry of large-scale commercial farmers, government sugarcane-soy intercropping programmes, and research in soil fertility rehabilitation have made soybean a favourite crop. Soybean productivity has also been increasing over time due to improved agronomic practices.

Figure 2 National Soybean production and productivity

## Soybean production in Ethiopia has been growing by 8% in the last 5 years to meet the rising demand for both local and export markets



Source: CSA Data; MoA 10-Year Plan

### 2.2.1 Socioeconomic Importance of the soybean value chain in Ethiopia

Ethiopia's soybean value chain plays an important role in supporting rural economies, ensuring food security, and supporting the livelihoods of market actors across the value chain<sup>4</sup>. Furthermore, cleaning, transportation, local trading, oil milling/processing are providing significant employment opportunities for many Ethiopians. Soybean production is a major source of income in some parts of the country. Farmers in Amhara (Jawi) and neighbouring woredas of the Benishangul Gumuz region, for example, grow soybean as a major cash crop. Furthermore, soybean is an important source of protein, particularly for the poor who cannot afford meat as a protein source. Soybean oil is also an important substitute for other oils in the diet of the rural population. The importance of the soybean is not only to increase food security and income, but also to contribute to environmental sustainability by intercropping with cereals<sup>5</sup>. Soybean is known to produce significant agronomic benefits when intercropped/rotated with cereals, such as increasing soil fertility through nitrogen fixation and reducing the incidence of plant diseases and pests, resulting in higher cereal yields.

### 2.2.2 Sector Growth scenario

Soybean is one of the most important crops in Ethiopia. It contributes nearly 18% to the country's total oil crop production and accounts for only 6% of the area planted to oil seeds<sup>5</sup>. Non-oil crop production is also increasing, but soybean production is increasing dramatically due to increased demand from processing industries, the government's focus on reducing palm oil imports, and farmers in some areas shifting from sesame to soybean. Since 2009, and as seen in Figure 2, soybean land coverage is steeply growing. As indicated in Central

<sup>4</sup> USDA and GAIN, 2021

<sup>5</sup> CSA 2019

Statistics Agency (CSA) reports, most of this production growth was due to an increase in the area planted. Improved technology and practices also contributed to production increase.

Soybean production by SHFs in Ethiopia is increasing. While production was 8,401 metric tons in Meher season in 2008/09, recently, soybean production has exceeded 180,000 metric tons and average production has increased by 73% over the previous year<sup>6</sup>. Future production is expected to continue its upward trend, promising to meet rising demand. Soybean consumption in 2020/21 was 64,000 metric tons and it is expected to continue its upward climb as consumer demand more soy-based edible oil and as the poultry sector demands more soybean meal. Expansion of Integrated agro-processing Industrial Parks (IAIP) and the launch of new edible oil manufacturing plants will also expand soybean demand. In addition to oil, soybeans are used to make a variety of local foods, as well as corn-soy blend for emergency food assistance programme.

Furthermore, soybean is gaining popularity as an alternative food and cash crop in local markets, attracting the attention of the government and being considered in the Ethiopian Commodity Exchange (ECX)<sup>7</sup> market since January 2019. ECX was established in 2008 as an autonomous public institution accountable to the Prime Minister, with the objective of ensuring the development of an efficient modern trading system that would protect the rights and benefits of sellers, buyers, intermediaries, and the general public. Since then, soybean has been traded on the ECX as an industrial product.

## 2.3 CASA Focus Regions

Amhara region comprises five potential Soybean production zones comprised of 28 woredas. As per the report of the regional Bureau of Agriculture (BoA) and Agricultural Transformation Institute (ATI), there are 142,395 smallholder farmers and 892 private investors cultivating over 265,263 Ha in the region. The production volume reached 753,600 metric tons in 2023, owing primarily to an increase in planted area and farmers shifting from sesame to soybean in some areas. According to the Amhara Seed Enterprise (ASE), only four of the 26 improved soybean varieties available in the country (Belesa 95, Pawe 1 and 2, Afgat, and Gishama) are used by SHFs in the region. Other potential regions such as Oromia Region were not prioritized by CASA due to ongoing security problems. Amhara regional government recommended Awi and West Gondar zones for CASA pilot interventions due to high production zones and better availability of agro-processors, but this will be justified and discussed further in a validation workshop scheduled for the end of April.

---

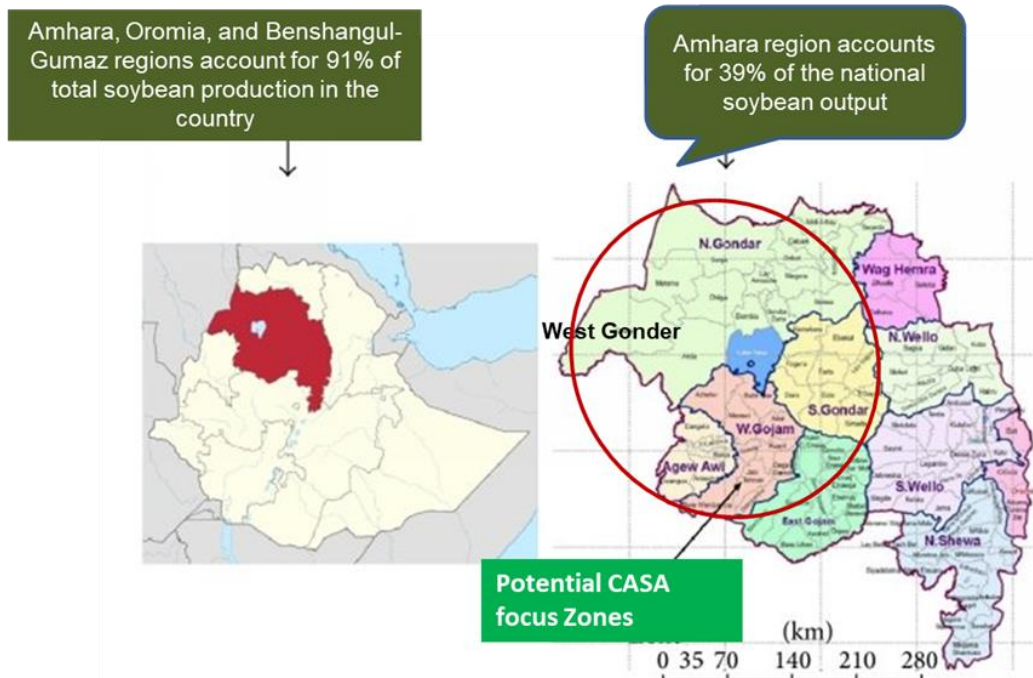
<sup>6</sup> CSA 2019

<sup>7</sup> The Ethiopian Commodities Exchange (ECX) was established in 2008 as an autonomous public institution accountable to the Prime Minister, with the objective of ensuring the development of an efficient modern trading system that would protect the rights and benefits of sellers, buyers, intermediaries, and the general public



Figure 3 CASA focus region profile

## CASA Focus Region



### Focus Region profile (2022/23)

Potential zones	Woreda	Kebele	Land (Ha)	Production (MT)	Number of SHFs	Private commercial farmers
Agew Awi, West Gonder, West Gojjam, Central Gonder & Wolkait Tegdie	28	174	265,263	753,600	142,000	892

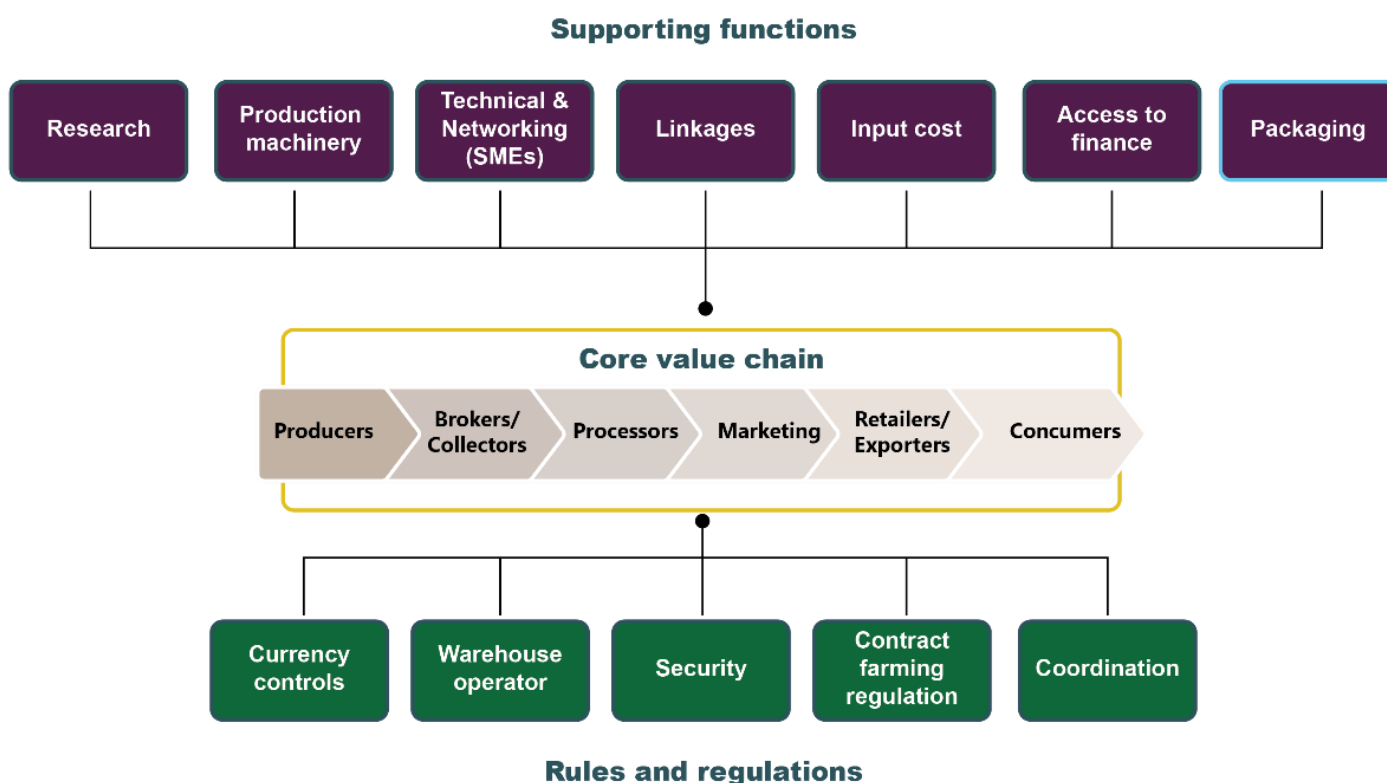
Source: Regional office of Agriculture , Team analysis



### 3. Market System

The market system is the overall picture of how a sector operates. The market system includes the supply-demand transactions in the core value chain - from producer to processor to retailer to end consumer - and the 'supporting functions' and 'enabling environment' that shape the way in which businesses and employees work in this core chain. The market system therefore takes a broader scope, because different actors in the value chain do not operate in a vacuum: their commercial success or well-being of the target group are influenced - directly and indirectly - by what happens in their surroundings. For example, access to financial services, which is a supporting function, does not directly operate within the soybean value chain, but strongly influences how businesses set-up, grow and operate.

Figure 4 The soybean market system



The CASA programme employs a Market System Development (MSD) approach building on the following key principles, that support should be systemic, sustainable, facilitative and scalable. The MSD approach is one which aims to address the root causes of why markets may not be meeting the needs of its actors and beneficiaries, as well as broader groups in society, including women, socially excluded people, people living in poverty, and other disadvantaged people. The approach builds on the capacities and incentives of market actors, both private and public, to increase the likelihood that positive results are sustained and even scaled-up after the initial pilot interventions.

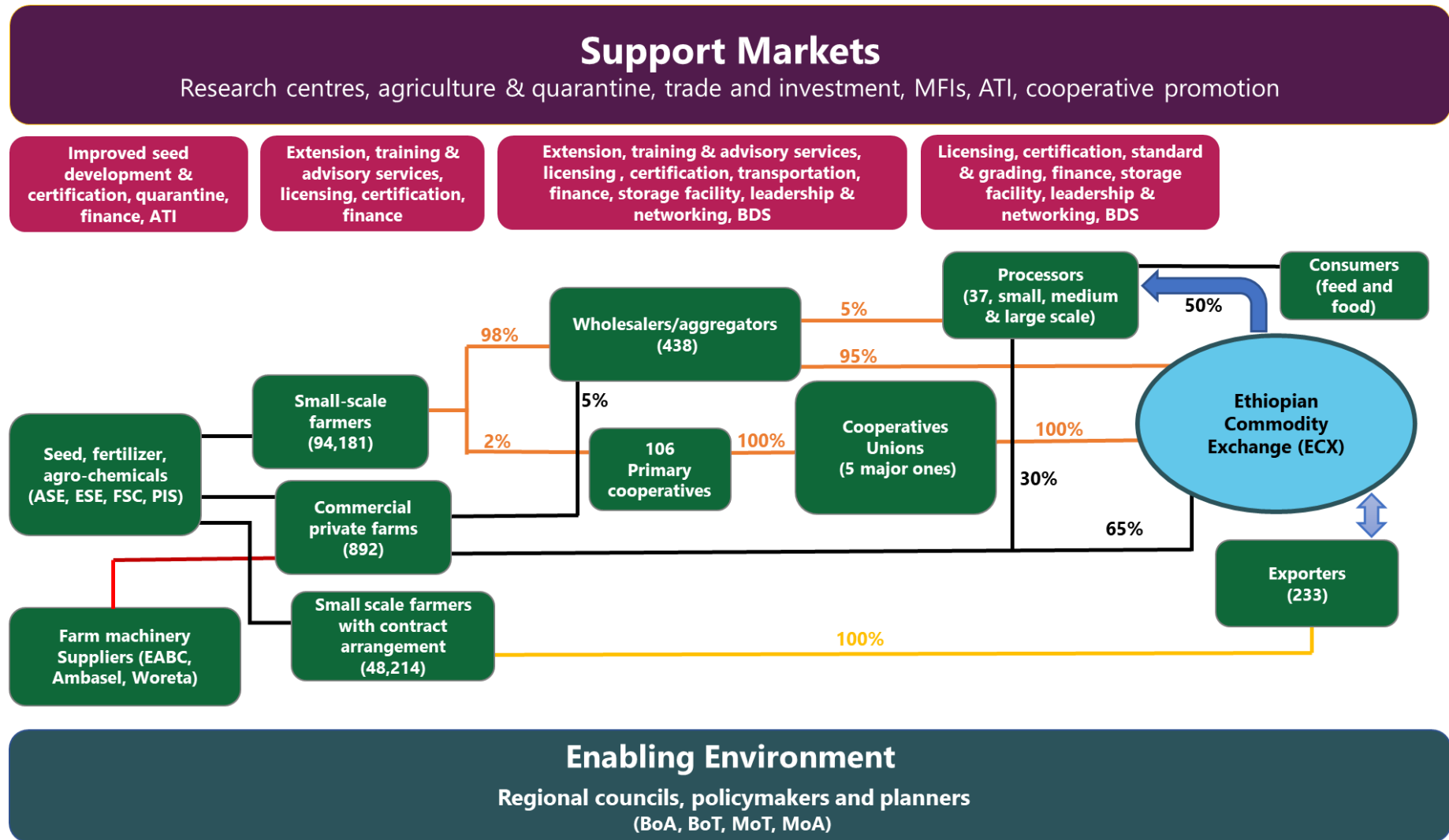
The purpose of analysing the system is to define how SHFs are currently engaging with (or buying and selling) core products or services within the system, and how the supporting functions and regulatory environment influence this core exchange or transaction. The sector map is the output of the system analysis process that starts to define the existing system and enables a better understanding of system actor relationships and dynamics including identification of key constraints, opportunities, and information gaps.

Figure 4 shows an illustrative market system for the soybean value chain in Amhara region.

### **3.1. Sector Map**

The sector map (Figure 5) is the output of a system analysis process that starts to define the existing soybean market system and enables a better understanding of system actor relationships and dynamics including identification of key constraints, opportunities and information gaps. The map is comprised of the core market in the centre, supporting functions below, and the formal and informal rules that govern the market above.

Figure 5 Soybean value chain map



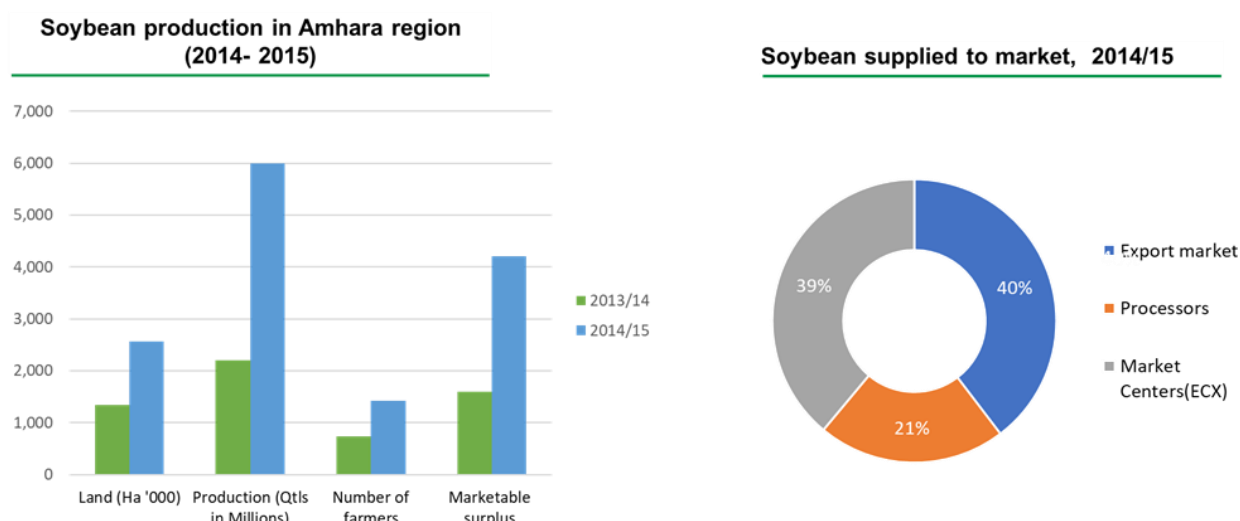
## 3.2 Core Market Functions and Actors

### Overview

The Amhara region has five high soybean production zones and a total of 28 woredas. According to the Regional Bureau of Agriculture and the Agricultural Transformation Institute, the region currently has 142,395 smallholder farmers, 42,718 of whom are women, and 892 private commercial farms cultivating soybeans on 265,263 ha. Private investors cultivated 65,960 ha (24.9%), with lease and some form of contract arrangement modalities. Between 2020 and 2023, the trend of land allocation for soybean by SHFs and private commercial farms increased by approximately 78.8% and 64.15%, respectively. This is due to an increase in land allocation and productivity improvement, as well as farmers switching from sesame land to soybean in some areas due to attractive market demand. In addition to this, the government's promotion and extension efforts to meet the massive demands of edible oil and animal feed processors operating in various locations throughout the region, including the Bure Integrated Agro Industrial Park. As a result, the region produced 976,201 metric tons of soybeans over the last three years (2021-2023), with private commercial farms producing 23% SHFs produced the rest. Despite the promising growth potential, access to quality seeds is the underlying problem that leads to low productivity and product quality. The most used seed varieties are Belesa 95 (released 20 years ago) and Pawi 1 and 2 (released 8 years ago), Gishama, and Afgat. These last two are improved new varieties, but they are not being multiplied enough due to a lack of budget and government support, as soybean has recently gained attention. According to the Amhara Seed Enterprise (ASE), nearly 65% of SHFs are now using the Pawi 2 seed variety, which has a yield capacity of 2.4 tons/ha at farm level, but this variety faces seed source issues, primarily pre-basic seed. Furthermore, a lack of market linkage between SHFs and other actors such as processors was repeatedly mentioned by system actors during the field assessment. Weak cluster farming is also a major issue in promoting farm mechanisation services and expanding contract farming practises through private sectors.

**Figure 6 Soybean production and market in Amhara region**

#### Soybean production and marketing development in Amhara region (2014- 2015)



- The production volume in 2023 was substantially increased by 46.5 % from production year of 2022.

Source: Amhara Region Bureau of Agriculture, ATI , Team Analysis

### 3.2.1 Core Market Actors and functions

**Production:** Soybean is the most important oilseed produced in Amhara (around 75% of all oil produced in Amhara is soybean based). Production largely comes from smallholder farmers though there are a limited number of medium to large scale commercial farmers<sup>8</sup>. Soybeans are produced as cash crops on subsistence farms, and production is characterised as labour intensive, low-input and rain fed<sup>9</sup>. The production of soybean can be valuable for intercropping/crop rotation as it provides nitrogen and can help break the disease cycle of other crops.

SHFs rely on family/household labour (40%) and seasonal workers (60%). Women help with soybean planting, weeding, and threshing at the smallholder level. Commercial farms employ a limited number of full-time workers, who are supplemented by larger inflows of labour during the planting, sowing, weeding, and harvesting seasons. Commercial farmers in Amhara region lowlands, such as Jawi and Humera, have a minimum of 12-15 Ha of land to produce oilseeds, primarily soybeans. To address supply shortages, the government is working to encourage commercial farming and smallholder farmers of soybean by providing irrigated lands, technologies like tractors and combine harvesters. The government is also encouraging and incentivizing investors to invest in newly constructed Integrated Agro-Industrial parks.

#### Soybean farms by size in Amhara region

- 86% of producers with < 5 Ha land
- 12% of producers with 5- 10 Ha land
- 2% of producers with > 10 Ha land

Crop yields are well below the maximum potential - about 50% less for soybean - reducing farmer income, restricting product supply to the market, driving up product prices, limiting processing factory utilisation, and significantly hampering Ethiopia's exports and access to foreign currency. Yields are low because:

- Soybean production is almost completely rain-fed, which increases risk and reduces yield;
- Producers do not use appropriate inputs like improved seed, cultivars and sufficient fertiliser – improved seed could increase the oil content for processing;
- Lack of quality seed was flagged by different actors as a key barrier to better quality production and higher productivity. However, currently there is little research into seed production and management of the seed system;
- Producers use traditional farming practices and poor technologies;
- Producers lack knowledge on post-harvest crop management and general farming practices; and
- Because of low input levels and farming on mostly uncontaminated land, soybean almost meets organic production standards. However, there is no premium for certified organic soybean, and the costs for product testing and standard machinery in processing facilities have not yet been justified. During data collection, it was mentioned that Admas Union is currently pursuing organic soybean certification in order to primarily benefit from the export market.

#### Aggregation/collection

There are several alternative soybean seed marketing channels for SHFs. The SHFs transact their produce directly through primary cooperatives, licenced aggregators/wholesalers, processors and exporters. In the region, there are 438 aggregators with a special soybean trading licence who collect and resell soybeans through a formal market channel. ECX has played a vital market linkage facilitation role for system actors since its establishment in 2008.

<sup>8</sup> Edible oil value chain enhancement in Ethiopia Final Evaluation of the Joint Programme. ILO. July 2013

<sup>9</sup> Oilseeds business opportunities in Ethiopia, SNV, 2009

Investors, unions and exporters can export through ECX or directly themselves without the involvement of ECX. Once the Soybean is delivered in ECX, it can be utilized either for export market or sold to large scale domestic edible oil processors.

Community-level brokers play an important, informal role in this stage of the chain because they can use their purchasing power and access to market price information to negotiate advantageous prices, sometimes at the expense of small-scale producers. Several stakeholders stated that these traders engaged in speculative hoarding, purchasing product at lower prices, storing it for extended periods of time, and then selling it when the price rose. While this helps to smooth out supply, it also adds cost to an activity that adds no value.

### Producer cooperatives and cooperative unions

Smallholder farmers are organized into **producer and marketing cooperatives and cooperative unions**, as well as **saving and credit cooperatives**. Cooperative unions sit as an apex body over a series of producer and marketing cooperatives, adding strength to the primary cooperatives, but also acting at “intermediary level”. Some examples of the intermediary services provided by production and marketing unions and cooperatives include:

- Purchasing and distributing inputs to members (union to coops, coops to famers)
- Production, aggregation and marketing products
- Warehouse/storage services
- Mechanization (tractor & combine) rental

#### Cooperatives in Amhara region:

- **3142 primary cooperatives**
- **36 cooperative unions**
- **1 cooperative union in edible oil processing**
- **1 cooperative union in large scale feed processing**

Although there is strong presence of primary cooperatives and cooperative unions in Amhara and they are a key vehicle for information exchange, input, and output flows to and from farmers, most operate with key constraints, including:

- **Lack of access to credit** at affordable rates;
- **Weak governance and leadership structures**, including limited flexibility in decision making;
- **Poor representation of women** in the soybean value chain primary cooperatives and cooperative unions (only around 20% in Admas union<sup>10</sup>);
- **Lack of access to land** for new investment and expansion;
- **Lack of knowledge** and expertise in operating and maintaining production and processing machinery;
- **Lack of financial sustainability and stability.**

### Processing

Processors are those who convert soybean grain into finished products such as, soy meal, oil, feed (the complete list of processors are found in annex 4). The oil processing companies are classified in to three categories depending on processing capacities: large-scale millers with processing capacity of more than 20,000 metric tons per year estimated to make up 87% of domestic milled oil production; medium-scale millers have a handling capacity of between 5,000 metric tons to 20,000 metric tons per year and are estimated to make up 7% of domestic milled oil production; and small-scale millers handle less than 5,000 metric tons per year make up 6% of domestic milled oil production with most producers in this category implementing

<sup>10</sup> Interview and discussions

less modern milling technology and producing lower quality oil. Small-scale oil millers mainly serve local community markets within their areas of operation with limited linkages to wholesale and retail chains<sup>11</sup>.

The Ethiopian government has focused on domestic processing, expansion of oil processing plants and producing soybean oil, soymilk, feed, and other food items. According to the information gathered from the Bureau of Trade there are 37 edible oil millers which are actively operating in the region, of which 22 are small-scale (59%), 7 medium scale (19%) and 8 large-scale processors (22%). Larger processors have better supply connections than small and medium-sized enterprises. SHFs, commercial farmers, aggregators, and ECX can supply large scale processors. They have a strong link because they have relatively good sourcing capacity as well as government support, primarily to increase local oil production. SMEs, on the other hand, only source from aggregators on an informal basis and are not competitive with large processors. Further information was gathered representing all scales of edible oil processors in different parts of the region. The study looked at five processors: 2 large-scale processors (MSA Business Group and Top Oil), one medium-scale processor (Mhired Oil), and two small-scale SMEs (Mr. Adugna and Aminu).

**Table 1: Details of processors engaged by CASA Ethiopia**

Processor	Location	Status
<b>MSA Processing PLC</b> is engaged in animal feed production and recently installed a soy oil processing facility with a daily capacity of processing 125,080 tons of soybean per year. Besides its nucleus farm (400 ha), MSA had an experience in a contract farming with SHFs and private investors in soy production. By 2022, MSA harvested 15,900 tons of soybean from its own farm and contract farming arrangements. MSA is expected to start edible oil processing in the coming six-twelve months period.	Bahir Dar, Amhara	Operational in animal feed processing, edible oil processing under establishment
<b>Top Oil:</b> The plant, which primarily uses soybeans to produce 30,000 litres of oil per day, was built at a cost of ETB 1.5 billion. The factory helps to alleviate the shortage of edible oil. It has now created 100 permanent and 80 temporary job opportunities. The oil cake is exported to the US market by the processing plant, which opened four years ago.	Bahir Dar, Amhara	Operational
<b>Mhired Oil:</b> A newly established oilseed processor in Enjibara that primarily processes soybean. The processing facility is cutting-edge, with a capacity of 2.4 metric tons of grain per day, but it is not being used to its full capacity due to a lack of consistent power supply and finance. Due to security and conflict concerns, the company obtains grain from local traders and brokers because there is no direct link with farmers. They see the benefit of sourcing grain directly from farmers because the current purchasing method raises the cost of raw soybean by 10 ETB/kg when they source grain from traders and brokers.	Injibara, Amhara	Operational
<b>Two SMEs (Mr. Adugna and Mr. Aminu):</b> Both are currently processing soybean oil at capacities of 100 and 400 tonnes per year, respectively. The main suppliers of Soy oil seeds to SMEs are traders through informal market linkage channels, as the government is focusing on large scale processors to meet high oil demand at the national level. This critical challenge hampers SMEs' full capacity operations. SMEs strongly advocate for the creation of a fair and competitive business environment for processors of all sizes. Other obstacles to expanding their business operations include the	Hamusit & Durbete, Amhara Region	Operational

<sup>11</sup> Oilseed and Animal feed programme



rising cost of processing machines and limited access to credit services. Due to differences in processing machines, the soy oil yield capacity of SMEs ranges from 10- 11 litres, which is less than the 15-20 litres of large-scale processors. Furthermore, SMEs produce oil cake for animal feed and supply it to smaller cooperatives engaged in fattening business, and private animal farms purchase a large amount of animal feed from SMEs. As a result, if proper market linkage is established, the income generated from oil and oil cake will motivate SMEs to scale up their operations. purchased a 1.3-million-dollar additional processing machine and secured a 5,420 square metre space for his business expansion. He hopes to reach the level of large-scale oil processor within five years, by 2028.

The problem in Ethiopia is not processing capacity, but rather processing utilization, which has historically been the lowest among food manufacturing industries. One interviewed soybean processor stated that his factory was not operating at full capacity because the cheapest soybean oils he could produce could not compete with imported palm oil. In addition, all interviewed soybean processors indicated that the lack of consistent, quality and competitively priced raw soybean is the key issue. This relates and is exacerbated by other key constraints:

- Production challenges - low productivity of the current soybean varieties, inefficient production systems and post-harvest losses - which push the sourcing price of raw materials upwards. As a result, the price of locally processed soybean oil is very high when compared with the global average and thus imported crude palm is more competitively priced.
- A lack of consistent electrical supply also increases costs to run processing factories on diesel generators and can limit their utilisation.
- Lack of skilled machine operators and maintenance providers locally.
- Poor human resource management by SMEs causes high staff turnover and increases operating costs.

## Export

### **A law obliging exporters to surrender 70% of their foreign currency earning:**

In order to strengthen the country's foreign currency reserve, the National Bank of Ethiopia (NBE) enacted a law requiring exporters to surrender 70% of their foreign currency earnings. The current foreign currency retention directive requires 70% of export currency to go to the government's reserve and 10% to the bank. Since then, exporters have complained about the meager 20 percent share of foreign currency, which is the cause of exporters' low appetite to purchase soybean, resulting in a 22.5% decrease in soybean price this year.

Exports are frequently used for market diversification, better market prices, and as a "pull" for better product quality and working conditions because of buyer requirements for social responsibility in the supply chain. However, the Ethiopian export market does not work in this manner. Exporters sell low-quality, low-value raw materials to buyers who are less concerned with social sustainability. Additionally, there are concerns that the growing export markets can undermine the local demand for soybeans as a food security crop. The dynamics of the relationship between soybean for export and soybean for domestic consumption need further exploration. Ethiopia is a major exporter of raw unprocessed soybean to India (51.8%), Vietnam (12.9%), Turkey (9.7%), and China (6.6%), as well as, to a lesser extent, Singapore,

Israel, the United Arab Emirates, Canada, Spain, and the United States<sup>12</sup>. Soybean exporters obtain their product from the ECX trading floor or from their own farms. The Ethiopian soybean export market is characterized by price distortions and failure to meet contractual obligations in terms of quality and/or quantity. The price distortion is caused by a combination of interrelated factors:

1. Production system that is low productivity but high cost, resulting in higher local prices than the global average;
2. An acute shortage of foreign exchange (Forex) leads exporters to sell exports at a loss to access foreign exchange and import products at high margins<sup>13</sup>; and
3. Low appetite of exporters this year because of the new law obliging exporters to surrender 70% of their foreign currency earnings.

### **Distribution and marketing/trade of edible oil and Soybean oil cake**

There are three sources of edible oil available to consumers: a) government-subsidized palm oil imports by private companies; b) local oil producers; and c) private importers using their own foreign currency. Sunflower, palm oil, and soybean oil are the most common edible oil types in the regional market, but other imported oils (mainly from Turkey) such as Omar and For ALL are also available. Wholesalers, consumer cooperatives, and retailers are important players in channelling edible oil to individual consumers, hotels and restaurants, and institutional buyers. Retailers source from wholesalers, whereas consumer cooperatives buy directly from oil processors and other government or parastatal enterprises, such as "Ale Bejemela," at discounted prices for local communities. Overall, retailing oil prices are lower in 2023 than in 2022. Consumer cooperatives in particular have lower average retail prices than traders, ranging from 5.8% to 12.5% per litre depending on the availability and quality of edible oils. According to the interviewees, these reduced prices are the result of the government's tax-free measures for both importers and wholesalers (VAT is not paid). Aside from that, increased soybean oil seed production contributed to increased processor efficiency, which resulted in lower oil prices. Consumer cooperatives, on the other hand, are subsidised to cover the retailing shops' rental, utility, and human resource costs. The exact demand for soybean oil in Ethiopia is a working knowledge gap.

Soybean oil cake, one of the key ingredients in livestock feed, is in short supply. As a result, prices for the cake and in turn, feed itself, have increased significantly over the last year. This has had knock-on effects on the competitiveness of sectors dependent on feed such as livestock and poultry.

Demand from export markets on raw soybean far outstrips supply and exporters are unable to meet buyer volume requirements. These buyers operate in markets which are less quality oriented than European buyers, and thus they are well aligned to the Ethiopian supply. However, Asian consumers are growing more health- and sustainability- conscious and importers in these markets will begin introducing certification and ethical business requirements. Some experts indicated that if Ethiopian exporters want to meet European or even future Asian buyer demands, they will need to fundamentally change their business model. This will require certification (HACCP, ISO 22000), training to improve their business practices, and a focus on quality sourcing as well as time and investment<sup>14</sup>.

### **Consumption**

Soybean consumption in 2020/21 reached 64,000 metric tons and is expected to continue its upward climb as consumers demand more soy-based edible oil and as the poultry sector demands more soybean meal for feed. Expansion of integrated agro-processing industrial parks (IAIPs) and the launch of new edible oil manufacturing plants will also expand raw soybean demand. In addition to oil, soybeans are used to make a variety of local foods such

---

<sup>12</sup> USDA 2021

<sup>13</sup> Ethiopia Oilseeds Report Annual, USDA & GAIN, 2020

<sup>14</sup> Lehr and Yared Sertse, VCA of Pulses and Oilseeds from Ethiopia, 2018

as soy sauce, tofu and flour, as well as corn-soy blend for emergency food assistance programs. Local consumers have a demonstrated preference for edible oils pressed from locally produced seeds such as Soybean, Niger seed and Sunflower. Oil is a necessity for Ethiopian consumers - the average per capita consumption is about five litres per year. For most consumers, price competitiveness is the most important criteria in their decision-making. Thus, for end-to-end domestic production to be competitive, the sector will need to become more competitive as compared to imported oils - i.e., the main market. Soybean products (oil, Sossi, and Soymilk) are found in supermarkets and shops. Very insignificant proportions of soybean flour are also consumed and blended with other cereal crop flours for its nutritious quality at the household level in rural areas.

### **3.3 Key Supporting Function Services and Actors**

For the core market to operate efficiently and effectively, there is need for provision of relevant support functions and services to allow the core market actors to produce, sell or buy their core product and for the value chain to grow in a competitive manner. These support services range from those needed to support supply of inputs to provision of extension services and provision of business development services. Supporting functions include key processes which lead to increased production and commercialisation of core value chain functions. Support functions usually influence several actors in the core market or value chain at the same time and are therefore of crucial importance. The key support services required by the value chain functions include:

#### **Agricultural input supply**

The primary inputs required for soybean production are seeds, chemicals (fertilisers and pesticides) and farm machinery. There are 975 agricultural inputs and farm tools suppliers of varying size in the Amhara region. Women make up 39.8% of all suppliers. Amhara Seed Enterprise (ASE) and Ethiopia Agricultural Business Corporation (EABC) are the leading suppliers of soybean seeds and chemicals. Despite the high number of suppliers, there are numerous challenges.

Along with the alarming increase in chemical input prices of more than 40% per unit from June -December 2022, the availability of essential agricultural inputs in volume and quality is a major challenge for input suppliers. For example, the price of non-selective herbicides, which farmers prefer to clean potential weed emergence, increased from 450 ETB/litre in 2021 to 700 ETB/litre in the 2022 production season. The underlying problem in the agricultural input market system is limited importation due to a lack of foreign currency and illegal input trading activities. Furthermore, access to those inputs through private dealers to SHFs is a challenge; as a result, farmers are forced to travel long distances ranging from 10-40km to obtain the required inputs that are not available in cooperative retailing shops. Cooperatives also lack credit for purchasing agricultural inputs.

Though insufficient, there are good initiatives in multiplying and supplying improved soybean seeds through private seed enterprises, agro-processors such as MSA Business Group, and EABC for contract farming practises with smallholder farmers and investors in high potential production zones, such as Jawi and Quara woredas in Awi and West Gondar zones. In 2023, EABC had collected 635 metric tons of improved soybean seed for the upcoming production season. However, there is still an unmet demand for high yield varieties to improve productivity per hectare as well as produce quality to meet the needs of edible oil processors.

To increase soybean seed production, EABC offers a benefit to investors in the seed production business by lowering the price of basic seed by 10% per kg from the market price and buying by adding 20% per kg from the market. This has encouraged investors to partner with EABC in the soybean seed business and this has the potential to increase the market's supply of improved seed.

### **Amhara Region Distributes 136 Tractors to Farmers:**

This year, the Amhara Regional Government imported 136 tractors. Mechanized farming is suitable for half of the region's 4.8 million hectares of farmland. The Amhara Regional Agricultural Bureau helped supply 1,200 tractors last year. Last year, farmers with tractors ploughed more than 500,000 hectares of land. The government had previously favored labour-intensive agricultural production until eight years ago, when the Ministry of Agriculture implemented a mechanization strategy that increased smallholder farmers' access to machinery by 30%. Over the last decade, as more farmers became acquainted with the use of mechanical power, demand for machinery has increased. By the end of last year, nearly 17 percent of smallholder farmers were using tractors, and 12 percent were using modern combine harvesters.

Regarding production equipment, simple farm tools, such as sickles and sprayers, are widely available. For more advanced machinery on the contrary, due to the government's lack of proper support in this regard for many years, private sector businesses and cooperatives have been minimally involved in supplying and renting out farm mechanisation machines in the region. However, beginning in 2021, the regional government began enlisting the private sector and government-affiliated business institutions to promote and supply machinery in soybean production areas. EABC, for example, recently imported 75 tractors, and a few private sector businesses, such as Dangla Agriculture Input Supply PLC, plan to provide tractor rental service for SHFs in Jawi woreda. Mechanization services in soybean production are currently limited, but farmers have a high demand for mechanisation services if the government continues to promote cluster-based farming practises in the region and facilitate the availability of mechanized tractors at the smallholder farmer level.

### **Access to finance**

In the Amhara region, both state-owned and private banks provide credit to actors in the soybean value chain. According to the Regional Cooperative Promotion Authority, there are 102 Rural Saving and Credit Coops (RuSSACCOs) and four cooperative unions operating in soybean production areas. There are also several MFIs and banks in the area. According to the market analysis, RuSSACCOs are the primary input financing sources for smallholder farmers. Saving and Credit Cooperative Unions provided more credit to primary cooperatives

### **Soser Savings and Credit Union**

The Soser Savings and Credit Union was founded in 2008. The union is active in four districts of the region, namely Dangila, Fagita Lekoma, Jawi, and Enjibara, and is primarily located in potential soybean producing areas. The union currently has 313 primary cooperatives and 112,141 members, 21,777 of whom are women. The capital has grown from less than 1 million ETB when it was established to 102 million ETB today. The union has 74 full-time employees and provides credit services on a short, medium, and long-term basis for a variety of purposes, with credit services for agriculture-related input and output markets for smallholder farmers and primary cooperatives and unions accounting for more than 65% of the union's total portfolio.

than banks and other MFIs. Their unions, such as Admas cooperative union, which served the soybean production woredas, had access to credit from Soser saving and credit cooperative unions and banks.

The private sector (input dealers and processors) and government development organisations, on the other hand, are primarily linked with banks such as Abay Bank, Dashen Bank, and Tseday Bank to conduct business. Tseday Bank, the former Amhara Credit and Saving Institution (ACSI), is an example of a lender actively financing farm mechanisation equipment for SHFs and private investors. It has 472 branch offices throughout the region, covering all soybean production woredas. Loan authorization mandates were issued at all levels to clients (SHFs, SMEs, medium and large-scale processors, and investors). Loans of up to 1 million ETB are available at woreda branch offices, up to 5 million ETB at the zonal level, 15 million ETB at the regional level, and above 15 million at the national (headquarters) level. By 2023, Tseday Bank had supplied 85 tractors sourced from various suppliers (including Ambasel Trading plc and Woreta International plc) for a 10-year loan with 11% interest and granting tractors as collateral as well as farmland owned by the clients/borrowers. Suppliers were paid by matching 20% of savings from clients (borrowers) and 80% of bank capital, which matched the total 100% value of the tractors. More than \$6.9 million was distributed to 101 clients through this loan arrangement (18 SHFs and 83 private investors). Tseday Bank has gained credibility and recognition as a result of its superior performance in supporting the region's farm mechanisation efforts compared to other banks. Furthermore, Tseday Bank borrowed approximately 200 million ETB for oil processors ranging from SMEs to large scale businesses, including cooperatives (Zumera Oil Processing Cooperative, two SMEs and WA Large Scale Oil Processing PLC).

Nonetheless, most key informants at all levels indicated that there is insufficient credit facility availability as a result of the country's current economic crises (low purchasing power, limited availability of foreign currency) and mistrust developed by foreign farm machinery exporting companies as a result of political turmoil, which required a domestic investor to provide 100% upfront payment before delivering the machinery. Previously, EABC received machines with only a 10% down payment and the remaining 90% payment was made upon delivery of the machinery.

### **Agricultural extension services**

The government has a well-defined organisational structure for public extension workers that reaches all the way down to the kebele levels<sup>15</sup>. Crop agronomists are available in each kebele to provide extension, training, and advisory services to smallholder farmers, both at the farm gate and in training centres. Experts are crucial in facilitating contract farming practises between SHFs and private investors; however, contract breaches are common due to the lack of a legally endorsed contract farming framework. Farmers' multipurpose cooperatives were also used by extension agents to facilitate access to agricultural inputs. In addition, private investors tested the supply of inputs, seeds, training, and credit services to SHFs with contract farming.

In addition, the government's strategy of assigning one crop extension officer to each kebele (village level) is extensive; however, these extension officers frequently lack soybean expertise. Aside from a lack of sector specialization, stakeholders identified extension officers who lacked knowledge of technology and chemical application and lacked the necessary transportation to reach rural areas.

---

15 The governance hierarchy is organized in four levels, from top to bottom: regional zonal, Woreda, and Kebele. The kebele level government structure brought together four agricultural extension experts who live in SHFs village to provide assistance in a variety of areas such as crop production, animal husbandry, and natural resource management.

Challenges facing extension exist for both SHFs and cooperatives. For SHFs, production-related extension services have seen limited uptake, limiting growth in yields. For Cooperatives, relevant extension on licensing/registration, financial management, business planning etc. is often missing, limiting their ability to capitalise on market opportunities.

### **Packaging services**

Packaging is a significant cost driver in the competitiveness of domestically processed oils; for example, bottling costs approximately 10% of the final price of soybean oil. Ethiopia currently produces approximately 25-30% of the country's packaging demand, even though most medium- to large-scale processing plants have adjacent packaging facilities to manufacture plastic bottles, some of which can bottle in various sizes up to 25 litres. Several major challenges affect packing. The fact that all packaging inputs are imported and require access to Foreign Exchange (Forex) to do so limits the consistency of imported inputs. In addition, during the field investigation, processors stated that accessing Forex to import packaging materials is a major issue, as is skill and knowledge in branding the product.

## **3.4 Enabling Environment Issues and Actors**

Formal and informal rules and regulations guide actors in the market and directly impact on the ability of the value chain and support system to develop. These include trade policies, agricultural policies, and laws as well as informal traditions and values set that influence behaviours and functional relationships in the market.

The Amhara Regional State has also developed a ten-year Crop Development Strategic Plan (2013 – 2022 Ethiopian calendar (2020-2030)). The strategic plan states that contract farming practises and farm mechanisation would increase soybean productivity from 2.4 to 4.1 tons per hectare by 2022. The regional Soybean contract farming framework was also completed and is awaiting approval at the ministry level. Nonetheless, there are disabling environments that impede the development of the Soybean value chain. Because it is a highly regulated commodity by the government, some market system actors are restricted in their business operations. Sales transactions between cooperatives and processors, for example, are prohibited under trade proclamations. SMEs are the most discouraged market system actors because they are not permitted to obtain their supply directly from producers and traders. On the other hand, limited access to credit and a lack of foreign currency hampers system actors' business operations in terms of access to quality inputs and farm/processing technologies. These constraints in the enabling environment require further investigation, as well as a collaborative effort to positively influence the business environment, which should work better for all system actors.

### **3.4.1 Enabling Environment Issues**

The key issues in the enabling environment that directly affect the soybean value chain, either enabling it to grow or hindering growth, include:

#### **Foreign exchange rates**

A key challenge that permeates into every area of business is the limited availability of foreign currency. As Ethiopia's Forex reserves continue to fall and the ETB depreciates against the dollar (by as much as 27% in February 2021), the Ethiopian government takes measures to protect the exchange rate by making it difficult to convert ETB to foreign currency. Last fiscal year, foreign exchange inflows were close to \$22 billion, essentially unchanged from previous years. According to Cepheus, data accessible since July 2021 reveal a drop in the foreign exchange positions of both NBE and commercial banks (indicating a Balance of Payment deficit) since the current fiscal year began. Based on various sources, the annual difference between official and parallel market rates had been between 25 and 30 percent on average for much of the last three years. Interviewees confirm the seriousness of this challenge - it

limits producer productivity, processor utilisation and adds substantial costs along the way, mainly through:

- Delaying or preventing imports of essential inputs and products (e.g., improved seeds, fertilizer, chemicals, machinery and packaging inputs); and
- Creating an unfair advantage for foreign investors and other traders (e.g., exporters) that have access to Forex. This limits the ability of domestic actors, including SHFs and SMEs, to capitalise on opportunities in the growing soybean market.

### **Import Duties and Taxes**

Import duties add cost to products and in particular, the agriculture inputs and packaging inputs which add considerable cost to any final raw or processed products. Now, import duties on such inputs are around 15% with an additional VAT of 15% - a substantial cost addition. Critical for the soybean production is that imported palm oil is exempt from both import duties and VAT allowing processors to buy crude palm oil for one-third of the price of domestic oil production. Given the domestic supply shortage, these exemptions have likely been a key incentive for recent investment into oilseed processing capacity. However, on the other side, the exemptions also serve as a disincentive to the local production competitiveness, as the disparity between high-cost, domestically sourced product and low-cost imported palm oil is too vast to incentivise domestic Soybean production. The government incentivises investment in agricultural production and food and beverages by processing through duty free imports of capital goods (machinery and vehicles) and construction materials. Investors have to fulfil a series of requirements for the exemption, the most cited ones include: 1.) a requirement to employ more than 50 local workers; 2.) raw materials must be used to produce goods for export. These exclude small enterprises and products not used for export, which cover most businesses in the sector.

### **Security**

Security concerns were flagged several times as bringing a cloud of volatility to the sector. One processor expressed reluctance to invest given current security issues. The most considerable security impact on soybean production is the ongoing political deadlock and security instability in neighbouring Tigray. Conflicts of lesser scale and frequency also arise from time to time in other soybean producing areas such as Wollega in Oromia and Benishangul Gumuz regions, potentially having adverse effects on the supply of soybean to the ECX trading floor.

### **Export-oriented policy**

The primary focus on soybeans for export is likely undermining opportunities in the domestic markets that could provide additional contributions to food security. The relationship between the export market for soybeans and domestic utilisation is likely complex as export-driven growth may act as a pull for local production and utilisation. This needs to be further explored to identify how the enabling environment can facilitate increased domestic consumption.

### **Contract farming regulation**

Contract farming is a mechanism for buyers to diffuse knowledge and inputs to farmers in exchange for access to their product that is in short supply. In theory, both sides benefit - the farmer produces more product with the new skills and inputs and the buyer has more product to process or export for a profit. In practice, it does not always work and one of the reasons is weak enforcement of the "contract" between buyer and farmer as farmers are prone to side-sell their product if they find a better price. This creates a disincentive for buyers to engage in scheme in the first place. To combat this and build trust and confidence between farmers and buyers, a new proclamation is in development by Ministry of Agriculture (MoA) and Ministry of Trade and Regional Integration (MoTRI), to strengthen "agricultural production contracts". The draft law has been approved by the Cabinet of Ministers and it is now awaiting the approval of the Ethiopian Parliament to come into force. The draft law articulates the rights and obligations



of parties to a contract, enforce and resolve disputes. The draft law entrusts the Ministry of Agriculture with powers and duties related to its implementation and enforcement.

#### **Market Actors opinions**

*"There are so many intermediaries"*

##### **Soybean oil processor**

*"We are providing credit for the input and output markets, but demand exceeds supply,"*

##### **Manager of a credit and savings union**

*"Price fluctuation of raw materials coupled with demand variability for poultry products make feed price volatile"*

##### **Animal feed processor**

*"The current contract itself is prone to manipulation,"*

*"The one-size-fits-all approach is not addressing the buyer and seller's needs."*

##### **Cooperative union Manager**

*"Commercial banks liquidity issue serves as a generally for access to finance in the country. Even if we are willing to lend manufacturers, our resources are limited"*

### **3.5 Market Potential, Opportunities, and Growth Potential**

#### **3.5.1 Growth potential and Opportunities**

The rapid population growth in the country is increasing demand for edible oil, which is a key driving factor in the growth of the oilseed sector, particularly for soybean, which has an advantage over other oilseeds. Because it can be used directly in the home for food or processed into soymilk and cooking oil. Furthermore, the poultry industry uses soybean for feed production, and the grain is frequently in high demand on the market. The local supply satisfies only two-thirds of the demand. The country has an approximate demand of 70.9 million litres of edible oil per month, while domestic production is around 47.7 million litres a month. This situation forces the government to import edible oil. The country spends about US\$600 million annually to purchase edible oil from abroad and this amounts to 25% of the country's foreign trade expenses<sup>16</sup>.

The soybean is expected to grow 14 percent over this year's level in the 2024 marketing year, outpacing other types of oil seed production. Expansion of planted acreage and improved yield due to favourable weather conditions will boost production; however, the country is still unable to meet oilseed supplies<sup>18</sup>.

To respond to the deficit, under the National Oilseed and Animal Feed Flagship Program (OSAP), Ethiopia has set targets to achieve 25% to 50% edible oil import substitution over the next six years (2022-2028). The establishment of Integrated Agro-Industrial Parks and entry of large-scale edible oil complexes in the market will offer new opportunities to process this anticipated increase in oilseed production. This suggests that cooking oil imports could thus decline in the future. A new edible oil industrial complex began operations recently that could ultimately meet 60 percent of the country's currently unfulfilled demand for cooking oils. Thus,

---

<sup>16</sup> MoA, OSAP 2023

the expansion in agro-industries and edible oil processing is projected to strengthen soybean production in the longer term<sup>17</sup>.

Soybean production in 2022/23 cropping season is 18,000 metric tons in response to growing local demand for cooking oil, soy-based foods, and livestock feed. Industry contacts confirm that production has expanded in new growing areas, particularly in Amhara region. Future production is expected to continue its upward climb to respond to rising consumer demand. Soybean production has been rapidly increasing over the last two decades. National research and soybean breeding programs, extension supports, improved local varieties, and better yields also contributed to the production increases. Soybeans contribute nearly 18 percent to the country's total oilseed production and account for only six percent of area planted to oilseeds<sup>18</sup>.

Total edible oil consumption in fiscal year is projected at 630,000 metric tons, of which 90 percent is imported. Most of the oil consumed is palm oil, followed by sunflower oil and locally produced soybean and Niger oil. Small amounts of linseed, groundnut, and cottonseed oils are also consumed. With increasing demand, limited domestic production and the country's heavy reliance on imported oil, there have been supply shortages especially in urban areas. This situation also will drive edible oil processing towards those commodities which could result in production growth potential for smallholder farmers<sup>19</sup>.

### 3.5.2 Market Performance and Drivers of Commercialisation for soybean

#### Edible Oil Industry

##### *Increasing demand*

In fiscal year 2019/20 (July to June), Ethiopia imported palm oil, sunflower oil, and soybeans oil valued at nearly \$283 million. Of this imported oil, more than 90 percent by volume was palm oil, most of which comes from Indonesia and Malaysia. The remainder of imported oil is made up of sunflower, soybean and olive oils. Three-fourths of current edible oil demand is satisfied by imported oil, and the growth trend in imports is 21% compared to 10% for domestic oil. Despite the steady growth, current per capita consumption (4.2 kg/year) remains far lower than the global average (23.5 kg/year). The low per-capita oil consumption, added to the rapid economic growth and population increase (9.7% and 2.3% per year respectively), shows that the industry has a favourable outlook for demand growth over the medium- to long-term. Palm, soybean and sunflower oils are the major imported oils<sup>20</sup>. The price per litre of imported soybean oil is US\$ 4 while the one processed in Ethiopia is close to US\$ 3<sup>21</sup>.

Ethiopian demand for soybean oil has also increased significantly over the last decade, owing to an increasing population and rising incomes. Even though demand for oil has reached 680,000 metric tonnes per year, domestic oilseed production of edible oil can currently only meet 2% (18,000 metric tonnes) of the demand.

---

<sup>17</sup> USDA and GAIN 2021

<sup>18</sup> USDA and GAIN 2023

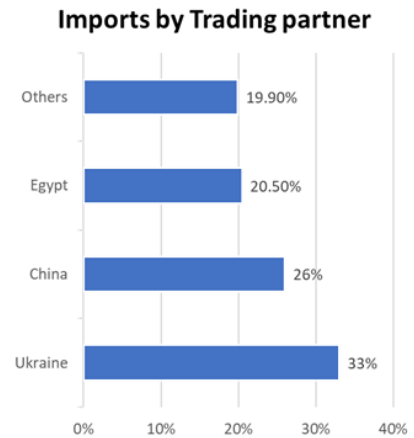
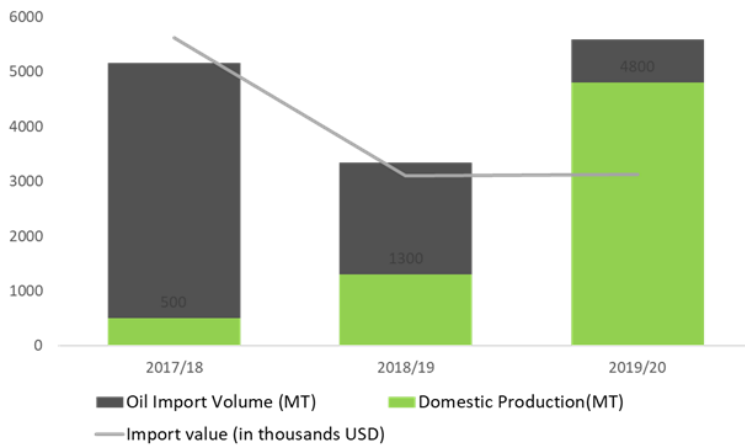
<sup>19</sup> USDA and GAIN 2021

<sup>20</sup> GAIN 2018

<sup>21</sup> GAIN 2018

**Figure 7 Soybean oil industry- Ethiopia**

**Annual Soybean Oil import volume (MT) and value (in thousand USD): July to June and domestic production (MT)**



- Local producers satisfy only 12 percent of oil consumption, while the rest is covered by imports

Source: USDA 2021 , FAO STAT

### **Animal Feed Industry**

Ethiopia has the largest livestock population in Africa and is ranked among the top eight countries in the world. Livestock provide food, draught animal power, bio-fertilizer and fuel, cash income and wealth accumulation for millions of Ethiopian farmers. The regions of Oromia, Amhara and SNNPR put together account for 90% of the total cattle population and 90% of the total number of milking cows in the country. Despite the large animal population, the feed industry has been very weak. Data on market valuation of the national animal feed industry is hard to find. However, according to estimations, annual industrial turnover and production are estimated at 0.5 billion ETB (\$9.2 million USD) (excluding traditional feed production) and 100,000 tons, respectively. At industrial level, soybean and soy cake account for 15–20% of feed. Looking at the rapid emergence of urban and semi-urban agriculture in the dairy, cattle and poultry sectors, as well as on-going depletion of grazing land in the rural areas, prospects for the Ethiopian feed industry seems strongly positive.

**Figure 8 Animal feed processors in Amhara region**

Small-scale (SMEs): Non-mixed products	Industrial: Mixed products
<ul style="list-style-type: none"><li>• The major players are oil millers who sell oilcake to end users or multi-purpose traders who sell and distribute oil cake. They work with raw produce and typically operate in rural and smaller towns where access to industrial processed feed is limited or expensive, and where grazing land or fodder is scarce. These products are mostly used by households that do dairy or fattening as a side business.</li><li>• Non-mixed products account for approximately 60% of the oil cake (noug cake) and 80% of the soybean cake trade.</li></ul> <p><i>(Based on interviews with two soybean oil processing SMEs in the towns of Hamusit and Durbete)</i></p>	<ul style="list-style-type: none"><li>• In the Amhara region, there are two commercial livestock feed manufacturers. Corn, soybean, oil cake, and wheat bran are common ingredients used by animal feed processors. Linseed cake is widely preferred over other products due to its high water-absorption capacity and nutritional content. However, due to its availability, soybean and noug cake is the most commonly used. The majority of animal feed processors in the Amhara region are concentrated in the towns of Bahirdar and Enjibara. Mulle Feed and Admas Union are two notable individual players. These feed processors incorporate 25-30% soybeans or soy byproducts into their feed mix. Commercial farmers engaged in poultry, dairy, and fattening businesses, primarily in and around Bahirdar, are the primary end-users of processed animal feed.</li></ul> <p><i>(Based on the two commercial feed manufacturers' interviews)</i></p>

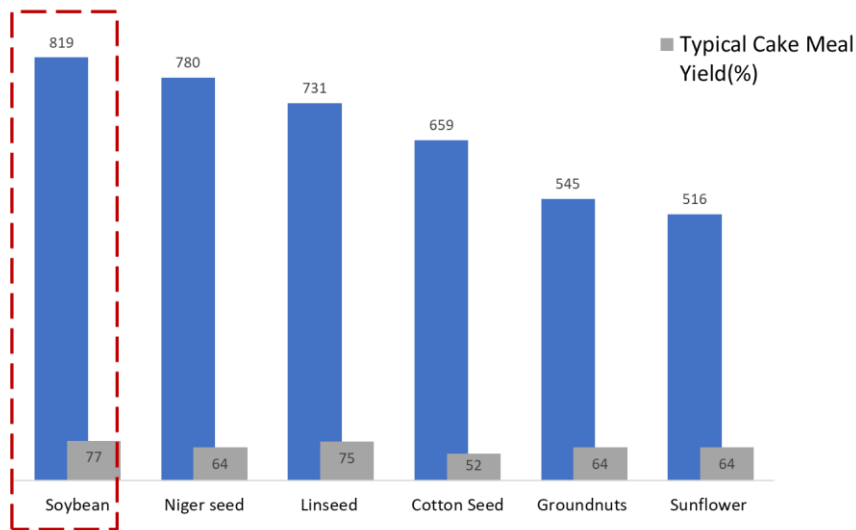
Soybean cake is sold at a 65% premium over sunflower cake (the cheapest in the market), due to the highly desired protein content and amino acid composition. In addition to the nutritional content of the cake, the risk of aflatoxin (seen in e.g., groundnut) and chemical (seen in e.g., cottonseed) contamination impacts the competitiveness of various cakes for animal feed producers due to their potential harm to cattle and poultry. Soybean cake production is the highest, accounting for nearly 94% of domestic oilseed cake production. Figure 10 below shows that soybean cake commands the highest price on the market, primarily due to having more than a 50% meal protein content. While soybean produces a cake that is similar to groundnut in protein content and is much higher in protein than most other oilseeds, its 80.5% healthy fat content in derived edible oil that is desired by consumers is similar to that of other oilseeds. Groundnut cake sells at a discount as compared to soybean cake.

However, most Ethiopian millers fail to extract the same level of oil from soybean relative to best practice in other countries due to old, run-down equipment. Given the mechanical processes used by domestic millers and the extrusion method used to extract the oil from soybean, more oil than necessary is left in the cake, lowering miller profitability, and creating an inefficiency in the formulation and manufacture of feed.

Soybean cake is the most expensive among oilseeds, however, it is still competitive given its higher cake meal yield and the cake's high quality protein content. Also, despite the relatively low level of soybean production, it remains the most highly demanded cake for animal feed despite its higher cost. This indicates a latent demand for soybean-based animal feed and a market opportunity for SMEs. The high price of soybean cake is prohibitive for some feed processing SMEs. To overcome this, many are exploring the option of directly contracting SHFs. For example, Dr. Selamlak Abnew, Manager of ELFORA Agro-industry, noted that "We are currently having difficulty sourcing soy and oil cake due to price fluctuations, and we are interested in working with farmers in both forward and backward linkage".

**Figure 9 Comparison of oilseed meal cake prices**

Oilcake prices (Animal feed), \$USD/MT



- Depending the feed formulation, soybean cake can make 21% of poultry feed in mass. Reducing prices of oilcakes by increasing production of oil can significantly improve competitiveness and access

Source: National oilseed and Animal Feed Flagship Programme, Team Analysis

### Soybean blended food stuffs

Soybean provides a wide range of opportunities for improving household food and nutrition security. The majority of the population in Ethiopia does not have access to expensive animal protein such as eggs, milk and meat, and child and maternal malnutrition are among the highest in the world. This, added to the fact that more than 40 million people cut out animal protein when fasting each year for nearly 200 days, means that domestic consumption of soybeans has great potential. When roasted and milled, soy flour as a product on its own, or blended with other cereals such as maize and wheat, has a multitude of uses in the production of bread, biscuits, cakes, porridge and sauces.



## Home use of soybean

The household utilization of soybean is limited in Ethiopia. As noted earlier, over 90% of the beans are sold to the market. However, in certain areas, corn-soy blend is used to make bread and porridge at household level. A major bottleneck stifling the growth of soy blend products at household level is the limited awareness of soybean's nutritional value and the unavailability of multi-purpose milling machines that can grind both maize and soy.

## Baltina processors

Baltina processors are small enterprises engaged in the preparation and distribution of a range of traditional food stuffs such as shiro, Kik, berbere, qolo, beso etc. New blend of cereal-legume mix for babies and adults are becoming popular. Some of these products include soybeans as a key ingredient. Baltina is an emerging industry that extends from small towns to the big cities. These processors are predominantly owned and run by women, except in the laborious process of bulking.

## Industrial processors

Corn Soy Blend (CSB) has traditionally been an attractive investment in Ethiopia. The major food processing companies such as FAFFA, Hilina, Guta Agro, Helth care and East African Tiger Brands have CSB in their product selection. The principal buyers of CSB in Ethiopia are the World Food Programme (WFP) and other aid organizations to supply to drought and famine-affected areas in Ethiopia and neighboring countries. Though the demand for CSB from aid organizations is dwindling due to the improving situation and change in international aid dynamics, it has the potential to be adapted into a strong commercial product with some investment in market development and low pricing strategies. This can be effective if a link is made with the fast-emerging confectionery and bakery industries, which are heavily reliant on cereals such as wheat and barley.



## Soy milk and related products

Soy milk is a large potential market in Ethiopia, where per capita milk consumption per year is about 19 kg compared to 98 kg/year for Kenya. WHO recommends a per capita annual consumption of 200 kg<sup>22</sup>. Milk consumption is low for both cultural and economic reasons, such as the long fasting period each year and the high price of milk and milk products. During peak production in the wet seasons, rural farmers face challenges in marketing their milk at a time when most regions experience a surplus, which is usually processed at home into local cheese or butter. Of the total population, over 40 million people fast for 200 days in the year, abstaining from milk and meat products. In these circumstances soybean milk is a perfect substitute for cow's milk. Consumption of soy milk is increasing particularly with the growing trend of fasting macchiato. Opportunities for school feeding programs are also widely available, and while not a sustainable business, this can be linked with the work of aid organizations such as UNICEF and WFP. Although it is difficult to quantify the market for soy milk and its related industry, a rough estimate based on 2 litres per capita per year for 40 million fasting people at the current price of 40 ETB per litre means an annual turnover 3.2 billion ETB (USD \$60 million). A kilo of soybeans can yield six to eight litres of milk, meaning 80 million litres of milk would create a demand for 10 million metric tons of soybeans. The by-product, okara, can be sold as animal feed for at least 3 ETB per kg. Okara can also be processed into human food, though this would require quick moisture removal and/or processing. This market opportunity is an emerging one and requires more thorough analysis to assess the validity of initial estimates.

<sup>22</sup> OSAP 2021-2028

## 3.6 Cross-Cutting Areas

### 3.6.1 Climate vulnerability of the Soybean value chain

The ten-year perspective development plan (Ethiopia 2030, the path to prosperity), envisages to build a climate resilient green economy. In this regard, Ethiopia is looking to expand development efforts to fight land degradation and to reduce pollution; reduce greenhouse (GHG) emissions; increase forest protection and development; increase production of electricity from renewable sources for domestic use and for export; and focus on modern and energy saving technologies.

Whilst soybean production is expected to expand under the current 10-year perspective development plan (2021-2030), it is at risk from climate change given the vast majority of soybean are produced under rain-fed conditions. Temperature increases and shifting rainfall patterns are likely to make soybean production more challenging in future. Adaptation strategies prioritised under the Climate Resilience Strategy for Agriculture include improved water infrastructure, access to agro-meteorological data, agricultural research, crop switching, use of fertilisers and manures, improved monitoring of crop disease and good agricultural practice including conservation agriculture, soil management, cover cropping and agroforestry.

### 3.6.2 Food Security and Nutrition

Food insecurity and malnutrition are two of the most pressing issues confronting developing countries today. Maize, a major staple food crop in most developing Sub-Saharan African nations, has a low protein content. The difficulties are particularly acute in Ethiopia, and are more severe in rural than urban areas, owing to a lack of understanding of a balanced diet and the inability to purchase animal source proteins.

Producing and consuming more soybean would enhance the circumstance (Food Security) as soybean gives a nutritious mix of both calorie and protein consumption: it is the most nutritionally rich crop product, as its dry seed contains the highest protein and oil content among grain legumes with a good sense of balance of the essential amino acids and has 18-20 percent oil on a dry seed weight basis<sup>23</sup> It is discounted and rich source of protein for poor farmers, who have less access to animal source protein, because of their low acquiring limit. Soybean is thus an alternative protein source for rural families that can be used at home in various structures and the surplus can be sold to various buyers, producers, and manufacturers for money. Many other products based on soybeans are also directly consumed by humans.

Despite the potential of soybean for improving food and nutrition security, as well as its importance for income generation through sales and employment opportunities in soymilk processing sectors, little information is available in the literature about the types of soybean varieties and processing methods that can produce soymilk with superior nutritional quality. Furthermore, soymilk production and consumption are uncommon in Ethiopia. As a result, soybean-based protein foods are an important strategy for alleviating malnutrition and hunger. Since it has been demonstrated that smallholder farmers have limited ability to overcome crop production challenges caused by climate change. They grow soybeans to increase yields, family demand, and net profits with minimal fertilizer input, ultimately improving their living standards and food security.

---

<sup>23</sup> FAO 2020



### 3.6.3 Possible gender impacts and opportunities

In Ethiopia's agriculture production, more than 40 percent of the labour force is women and they head about 25 percent of all farming households. While heavily involved, World Bank research estimates that women farmers produce between 13 and 25% less than their male counterparts - a result of women farm managers controlling smaller plots of land, cultivating fewer crops, using fewer key inputs, and being less likely to access extension services and finance. Women farmers within male headed households perform up to 75 percent of farm labour, representing 70 percent of household food production in Ethiopia. However, when farming alone women typically produce up to 35 percent less than male farmers because they have lower levels of access to extension services and inputs such as seeds and fertiliser<sup>24</sup>.

In rural Ethiopia, women are involved in most aspects of agricultural production, marketing, food procurement, and household nutrition though there is some variety across crop commodity type, region, and farming system in the traditional allocation of agricultural activities between men and women<sup>25</sup>. Participation of women in agricultural activity is constrained by cultural norms—for example, the norm that women should not engage in ploughing<sup>26</sup>. Woman headed households also possess far fewer oxen than male headed households and may need to resort to sharecropping arrangements which limit their ownership and control of crops produced. Under article 35 of the Ethiopian Constitution, as well as all regional land proclamations, it is stipulated that existing land rights are to be granted equally to men and women. However, gender irregularities in de facto access to and control over land, outlining that although women household heads may have access to land, they frequently lack other productive resources such as labour, oxen, and credit, making it difficult to obtain inputs<sup>27</sup>. While some commercial Soybean farmers indicated that women worked as hard or harder than men, they perceived that cultivation and harvesting work is too labour intensive for women. On the processing side, men are more commonly found in machine operating areas, but in general, women and men do the same tasks in the factory. The key issue here that promotion prospects and wages are more favourable to men than women. Women also have a limited presence at the ownership level. For production, it was cited that it is difficult to grow from small- to commercial size farming as women generally do not own the land, so acquiring more land would be challenging.

While the large number of extension workers makes extension services relatively accessible in Ethiopia, there are differences in access between men and women, and particularly stark differences by region, with extension services having long been focused on men. Critical shortcomings in both the gender sensitivity of extension provision and the way gender and women's affairs are situated within the agricultural bureaucracy<sup>28</sup>.

The main barrier for women to engage in soybean production is a lack of sufficient land, and there are few examples of women's youth groups engaged in farming for profit. There may be more opportunities in trading or processing. Young women, in particular, may be able to work as soybean traders due to their greater travel flexibility. However, working capital requirements for purchasing and transporting soybeans are a significant constraint. Women's groups (e.g., women's associations) and SMEs may be a promising approach to reaching out to women with extension services and finance.

---

<sup>24</sup> USAID, (2014). Empowering Women through Agricultural Development in Ethiopia. Accessed: June 16th 2015 from <http://www.usaid.gov/results-data/success-stories/empowering-women-through-agricultural-development-ethiopia>

<sup>25</sup> Mogues, T, Cohen, M, J, Birner, R, Lemma, M, Randriamamonjy, J, Tadesse, F, and Paulos, Z, (2009). Agricultural Extension in Ethiopia through a Gender and Governance Lens. (Discussion Paper No. ESSP2 007). International Food Policy Research Institute/Ethiopian Development Policy Institute: Addis Ababa, Ethiopia.

<sup>26</sup> Bishop-Sambrook, C. 2004. "Gender Analysis: An Overview of Gender Issues in the Agricultural Sector of Ethiopia. IPMS (Improving Productivity and Market Success) Gender analysis and strategy paper, Addis Ababa, Ethiopia.

<sup>27</sup> Mogues et al

<sup>28</sup> World Bank, (2015). Data – Ethiopia. Retrieved June 16th 2015, from: <http://datatopics.worldbank.org/gender/country/ethiopia>

### 3.7 Summary of market challenges and opportunities

In light of the issues discussed above, Table 2 provide a summary of opportunities and challenges experienced by core market actors and the enabling environment and service providers.

**Table 2 Summary of challenges and opportunities**

**Note:** System actors face similar challenges and opportunities. All of the information will be validated further at the upcoming all-inclusive stakeholder workshop, which is scheduled for May 2023.

Market system actors	Key constraints	Opportunities
<b>Input /farm input suppliers</b>	<ul style="list-style-type: none"> <li>• Shortage of foreign currency</li> <li>• High input price and low quality</li> <li>• Limited access to credit finance</li> </ul>	<ul style="list-style-type: none"> <li>• Technical and staffing support by d/t development programme, such as ATA and SNV.</li> <li>• Motivation of the government towards promoting farm mechanization.</li> </ul>
<b>Producers</b>	<ul style="list-style-type: none"> <li>• Lack of quality seed</li> <li>• Limited access to high yield seed variety.</li> <li>• High input price and low quality</li> <li>• Occurrence of disease and pests</li> <li>• Limited access to credit finance</li> <li>• Low Soy market price in 2023 due to high production volume</li> <li>• Limited cluster farming for aggregation and group use of farm mechanization.</li> <li>• Lack of secured markets due to contract breaching.</li> <li>• Producers do not use appropriate inputs.</li> <li>• Use of traditional farming practices and poor technologies</li> <li>• Lack knowledge on crop management and general farming practices</li> </ul>	<ul style="list-style-type: none"> <li>• High demands of edible oil and animal feeds.</li> <li>• Existence of highly favourable agroecology.</li> <li>• High government support for import substitution.</li> <li>• Well-structured public institutions to support Soy value chain development.</li> <li>• Motivation of the government towards promoting farm mechanization</li> <li>• Existence of significant number of agro-processors for potential supply linkage.</li> <li>• The recent National Oilseed and Animal Feed Flagship Program 2023 – 2027 (OSAP)</li> </ul>
<b>Aggregators</b>	<ul style="list-style-type: none"> <li>• Face difficulty in aggregation of products due to fragmented production</li> <li>• Limited access to credit finance</li> <li>• Low Soy market price in 2023 due to high production volume.</li> <li>• Unnecessary competition from illegal traders.</li> </ul>	<ul style="list-style-type: none"> <li>• High demands of edible oil and animal feeds demands and aggregation and distribution services.</li> <li>• Well-structured public institutions to support Soy value chain development.</li> <li>• Recent motivation of the government towards promoting cluster farming practices.</li> <li>• Existence of significant number of agro-processors for potential supply linkage.</li> <li>• The recent National Oilseed and Animal Feed Flagship Program 2023 – 2027 (OSAP).</li> </ul>
<b>Cooperatives /Unions</b>	<ul style="list-style-type: none"> <li>• Limited market linkage with processors due to restrictive nature of trade laws (knowledge gap needs further investigation)</li> <li>• Limited access to credit at affordable rates</li> <li>• Limited storage facility</li> </ul>	<ul style="list-style-type: none"> <li>• High demands of edible oil and animal feeds demands and aggregation and distribution services.</li> <li>• Well-structured public institutions to support Soy value chain development.</li> <li>• The recent National Oilseed and Animal Feed Flagship Program 2023 – 2027 (OSAP)</li> </ul>

	<ul style="list-style-type: none"> <li>Limited technical, leadership and networking skills.</li> <li>Weak governance and leadership structures, including limited flexibility in decision making.</li> </ul>	
<b>Processors</b>	<ul style="list-style-type: none"> <li>Lack of quality Soy for processing</li> <li>Limited market linkage for SMEs with SHFs due to restrictive nature of gov't working procedures /knowledge gap needs further investigation.</li> <li>High cost of processing machines reduces SMEs efficiency.</li> <li>Limited technical, leadership and networking skills</li> <li>High production costs/low productivity</li> <li>High packaging costs</li> <li>Lack of consistent electrical supply</li> </ul>	<ul style="list-style-type: none"> <li>High demands of edible oil and animal feeds.</li> <li>Well-structured public institutions to support Soy value chain development.</li> <li>Increasing supply of raw materials.</li> <li>The gov't provides higher attention in creating access to land for processing facility construction.</li> <li>Large processors linked different suppliers to enhance processing capacity (SHFs, aggregators, ECX).</li> <li>The recent National Oilseed and Animal Feed Flagship Program 2023 – 2027 (OSAP).</li> </ul>
<b>Exporters</b>	<ul style="list-style-type: none"> <li>High cost of supply</li> <li>Forex controls push exporters to export for the purpose of getting Forex to import, which limits incentive to invest in quality/production</li> </ul>	
<b>Service providers</b>	<ul style="list-style-type: none"> <li>Limited resources to facilitate well prepared GAP training and sufficient extension services.</li> <li>Limited technical knowledge on inclusive market system development approach.</li> <li>Very limited public-private business dialogue platforms (MSPs) to understand problems and to devise solutions.</li> <li>Very limited public-private business dialogue platforms (MSPs) to understand problems and to devise solutions for system actors.</li> </ul>	<ul style="list-style-type: none"> <li>Emergence of different initiatives working on Soy value chain development (ATI, GIZ).</li> </ul>
<b>Rules and Regulation and others</b>	<ul style="list-style-type: none"> <li>Contract Farming law: Weak contract farming enforcement and contract farming regulations</li> <li>Coordination: Weak coordination between regional and national level public sectors</li> <li>Security: Political deadlock and security instability in neighbouring Tigray</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## 4. Problem Analysis

The problem analysis seeks to define and prioritize the issues which are currently affecting the performance of the system being investigated. The underlying cause analysis is to understand the root cause of why each of the problems are occurring - to ensure that subsequent projects address systemic causes.

Nevertheless, there is a promising and evidence-based sector growth potential, lack of access to quality seeds is the underlying problems results poor productivity and quality of produces.

Besides to this, unstable market price of soybean and weak contract management & enforcement are other sides of challenges of soybean value chain development emanated from the root causes refereed as absence of legally approved contract farming framework in placed at country level.

In general, two key problems with associated root causes were identified during the field investigation process which are briefly discussed and illustrated as follows.

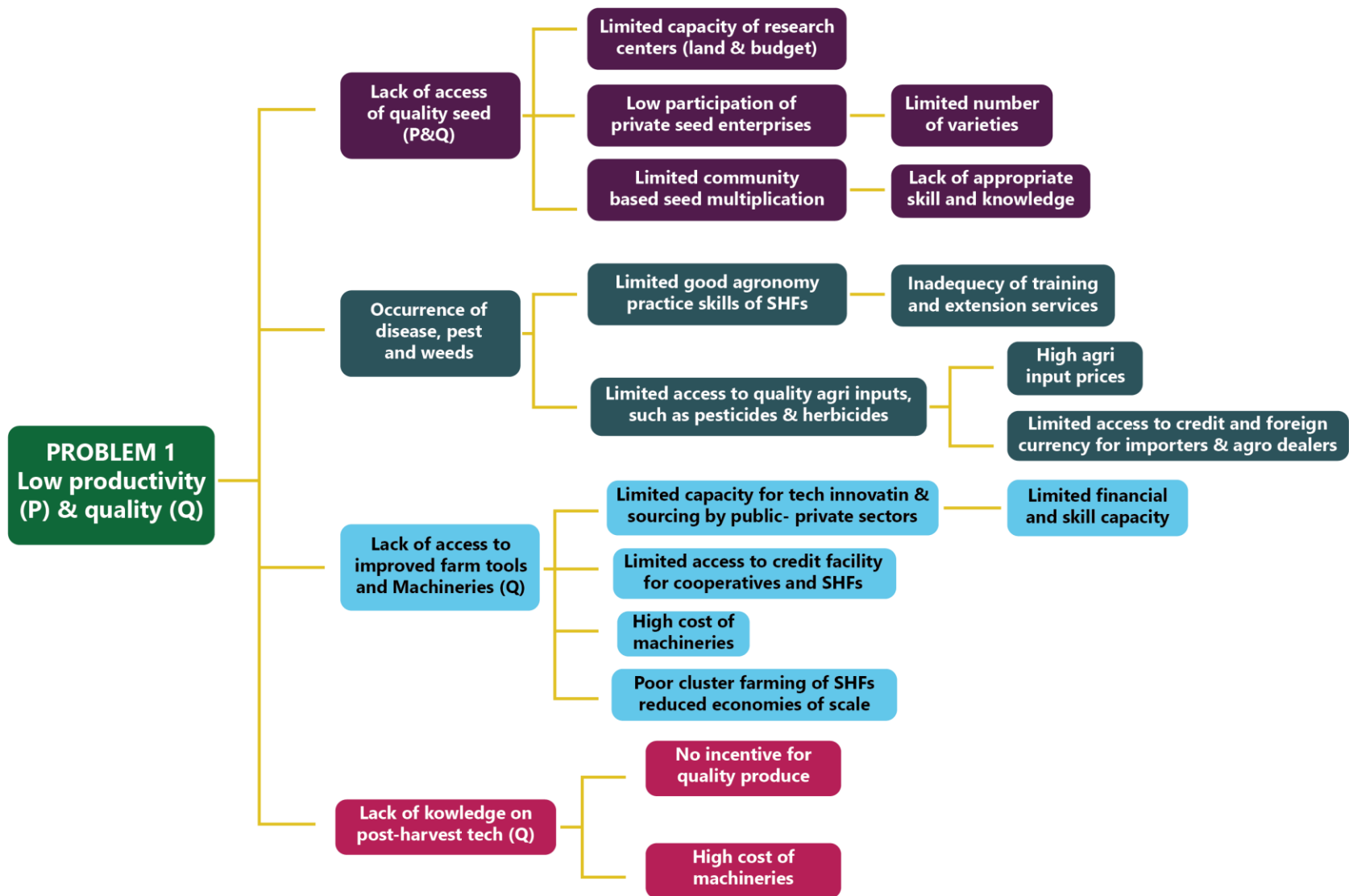
#### **4.1 Low productivity and quality of produce**

Insufficient supply and low quality of the produce are the major constraints especially for the processors. As in case of a point, according to one processor, almost 20% of the current soyabean supply is considered as impure or adulterated in one way or another. This is notably caused by limited usage of improved seed varieties, poor pest & disease management and poor-post harvest management of farmers. Limited high yielding variety release, limited access to farm techs for mechanization and lack of technical skills and knowledge of the farmers are the underlying causes of low productivity and low quality of produces affects business operations of processors.

Access to financial services either through credit, savings or other financial instruments is essential to purchase high-quality inputs. Smallholders – who constitute 85% of total soybean producers – tend to face liquidity crunches and are not in a favourable position to buy high-quality inputs. This situation is aggravated by the limited information available on credit and access to other financial resources. This clearly stresses the significance of credit, which is an important tool to help farmers afford inputs, including improved seed.

The problem analysis for low quality and quantity production is given in Figure 10.

Figure 10: Production problem analysis for soybean market system in Ethiopia



## 4.2 Problems with contracting frameworks and market price

### **Unstable soybean market price due to absence of legal contract farming framework.**

The market price of soybean is substantially decreased in the current fiscal year 2023 in contradiction with high production cost of small holder farmers and commercial farms. The price reduction recorded as 30% compared to last year price 2022 due to contractual breaching and poor market linkage facilitation endeavours between producers and buyers. Absence of legal contract farming framework and unclarity of the existing practices mentioned as the root causes to lawfully enforce those contract arrangements. In addition to this, there is no concrete business dialogues initiated by facilitators to justify equitable costs and benefits of system actors except some efforts was carried out by Agricultural Transformation Institute (ATI). Bust this initiative was not sustained due to resource limitation. This situation puts the region under pressure as the farmers might shift to produce other cereals if the market system wouldn't operate well and unable to compensate production and marketing costs of system actors in the future. This market unfunctionally will be one of a key focus area of CASA programme to address via MSD approach.

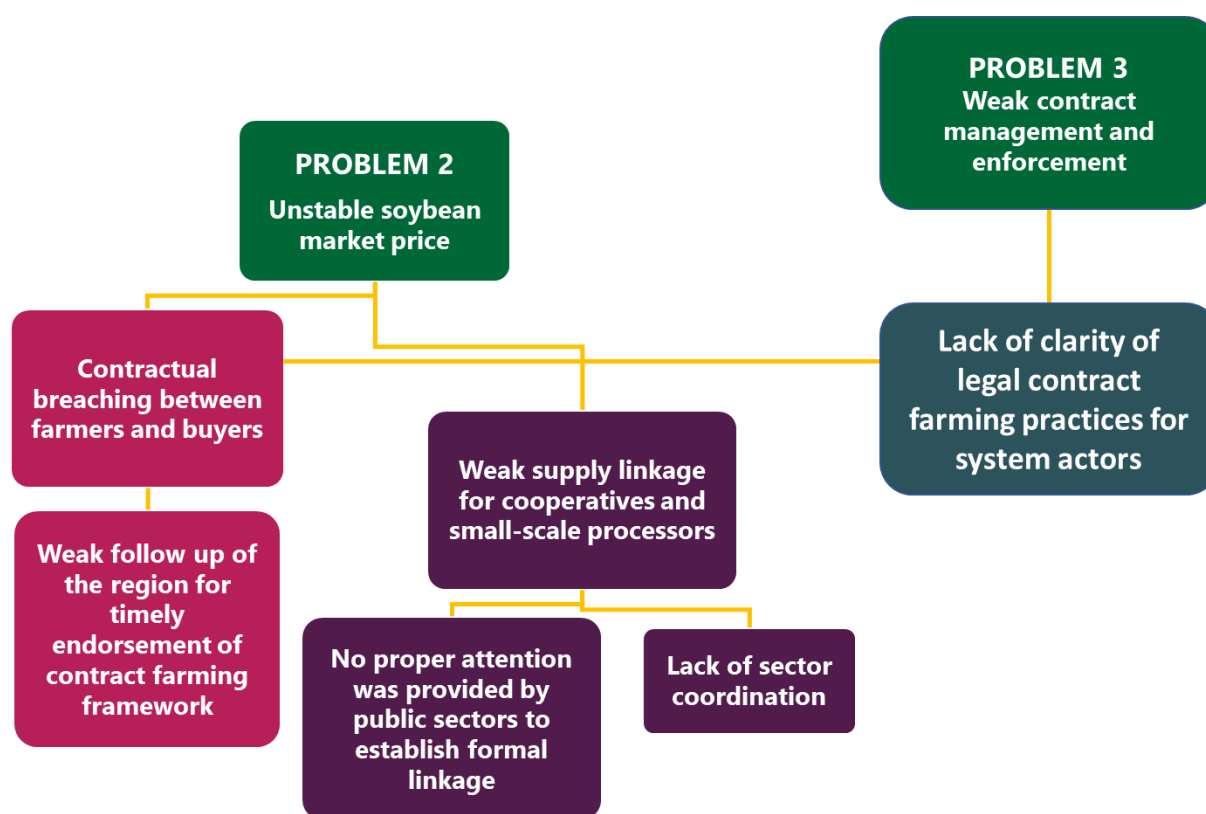
The dominance of commission agents and brokers in soybean value chain also another challenge could explain the high volatility of soybean prices. Though it is rarely, commission agents put pressure on wholesalers and processors if they are engaged in direct purchase from local traders/collectors and hinder or discouraging wholesalers and processors from coming down to Keble and buying, (especially Jawi). This influence of traders undermines the income of SHF producers.

**Lack of contract management and enforcement:** A key feature of contract farming is that it establishes backward linkages, which can involve credit for farming input, extension or other services to producers. It also facilitates forward market linkages where producers have a guaranteed buyer for their goods and buyers secure consistent supplies at a reasonable price and desired quality. Such arrangement offers a mutual gain to the contracting parties and are a cornerstone of market-led commercial agriculture. Contract farming can be

**The dominance brokers:** High levels of interference and influence from brokers is present throughout the soybean value chain. This could explain the high volatility of soybean prices and the formation of a long market chain, which could lead to a price increase in the central market. Another issue is that commission agents sometimes put pressure on wholesalers and processors if they are engaged in direct purchase from local traders/collectors and hinder or discourage wholesalers and processors from coming down to Keble (the lowest administration structure) and buying, (especially Jawi). This influence of traders undermines the income of SHF producers.

The problem analysis for unstable marketing and weak contract farming is given in Figure 11.

Figure 11: Marketing and contract farming problem analysis for the soybean value chain



**Finance is expensive or difficult to access:** Access to financial services either through credit, savings or other financial instruments is essential to purchase high-quality inputs. Smallholders – who constitute 85% of total soybean producers – tend to face liquidity crunches and are not in a favourable position to buy high-quality inputs. This situation is aggravated by the limited information available on credit and access to other financial resources. This clearly stresses the significance of credit, which is an important tool to help farmers afford inputs, including improved seed.

In addition to securing a reliable supply of soybean against the competition from imports, the millers also face an issue with access to finance - both investment capital for equipment and working capital to cover soybean purchases and other operating costs. These challenges result from the availability of finance rather than from the cost of finance. When they can access the capital, soybean oil millers are offered similar interest rates as other companies involved in commercial manufacturing. The challenges faced by edible oil millers with finance stem from the limited capacity of the financial sector and liquidity issues among the commercial banks. Even if private banks were willing to lend to manufacturers, their resources are often limited. This has resulted in extended delays and long waitlists for soybean oil millers' requesting loans for working capital.

**Lack of value chain coordination:** Active sector coordination can ensure stakeholders work together to lobby for and address key sector challenges. To support sector coordination, ATI indicated that they conduct quarterly meetings with key actors in oilseed value chain, but it is not active now due to budget constraints. In addition, the Ethiopian Pulses, Oilseeds, and Spices Producers & Exporters Association (EPOSPEA) represents medium- and large-scale processors and exporters in oilseeds as well as pulses and spices. EPOSPEA has a strong presence in the oilseeds sector through the research and advocacy work it does to influence policy in manufacturing and export of oilseeds. The association organizes training and exposure visits for its members to build capacity and improve the way players in the sector



conduct business. However, the association focuses on issues at the national and sectoral levels rather than effectively resolving critical issues at the regional level.

## 5. Strategy for Change

The inclusive growth strategy is intended to address and strengthen current service provision and enabling environment weaknesses. This includes defining the sector's growth potential and opportunities, developing a sector vision of change for an inclusive and competitive sector, and ultimately identifying opportunities to demonstrate smallholder and SME commercialization. The proposed strategy aims to position soybean processing and value addition (both feed and oil) as pivotal anchors for leveraging investments and capacity building for smallholder farmers, SMEs, producer organisations, and processors involved in the soybean value chain.

Despite challenges, the Ethiopian soybean value chain has the potential to successfully substitute imports, satisfy the demand for animal feed seed cake, and drive rural economic growth, inclusive agricultural transformation and job creation. As a result, the proposed CASA programme will be based on a strategy shift anchored in market demand and supply chain competitiveness. This will be accomplished primarily by improving the quality of soybean supplied to millers, as well as by strengthening value chain links and coordination among value chain actors, including the provision of business development services to SMEs. Furthermore, the programme will promote private-sector investment and farmer profitability. This will include a focus on long-term contract farming directly between millers and farmers, which allows farmers to share in the value generated and helps farmers purchase, lease, or rent farming equipment at a low cost. Additionally,

Such actions aim to increase the efficiency and cost-effectiveness of production to boost sector competitiveness, resulting in more opportunities for value addition and, in turn, jobs for SMEs in processing. Furthermore, CASA will assist processors to improve their business models through investments to test new sourcing models and improve the competitiveness of domestic soybean value addition.

### 5.1 CASA strategic contributions to the Government of Ethiopia

The Government of Ethiopia (GOE) has identified key priority intervention areas to increase productivity of smallholder farms and expand large-scale commercial farms. The GOE has renewed its emphasis to develop the agriculture sector, ensure food security, and achieve import substitution. Among the top priorities identified by the GOE include: small and large-scale irrigation development, financing agricultural inputs, increasing productivity of crops and livestock, improving agricultural production methods using mechanization, post-harvest loss reduction, developing a research-based food security system, and natural resource management. CASA Ethiopia aims to achieve greater commercialization of farmers, increased private sector involvement, and improved competitiveness of the entire soybean value chain, which is expected to contribute to the realisation of the GOE plans for the agro-processing sector as the engine to spur future economic growth. The proposed pilot areas of the CASA programme will be Amhara regional state which is one of the soybean high production regions and one of the prime soybean processing centres of the country.

CASA is targeted at smallholder farmers, and small and medium enterprises, supportive public bodies and private sector counterparts. CASA will demonstrate private sector led value chain development including capacity building for enhanced processing technologies and linkage promotion for access to finance and domestic edible oil markets to address import substitution. This will lead to increased food security, nutrition and innovation throughout the soybean value chain, and thus increasing the income of farmers, processors and traders.

### 5.1.2 Government policy and support

The Government of Ethiopia (GoE) has embarked on a ten-year economic development plan (2021-2030) where agriculture is on the top of priority sectors. The agriculture sector is projected to grow at 6.2% per annum over the next ten years. Ethiopia's development plan has laid out enhancing agricultural production and productivity as one of the major strategic pillars. In addition, the ten-year development plan aims at boosting agricultural export revenues and substituting imports by reducing production costs. To achieve this, the GoE seeks to leverage on developing huge unutilized arable land, modernizing production systems, and improving uptake of technology. The Ethiopia industrial development strategy (2013-2025) also underlined that the agro-processing industry is important in the production of industrial food products that are used for domestic consumption and plays a vital role in the expansion of small and medium scale enterprises.

CASA's intervention in the soybean value chain will: support these country level strategies by strengthening the inter-sectoral linkages between agriculture and industry (between smallholder farmers, and edible oil and feed processors) in Amhara region. CASA will enhance coordination and dialogues among various stakeholders in the value chain to catalyse improvement of productivity and competitiveness for sustainable inclusive growth. Therefore, CASA has prioritized and co-created key indicative interventions at different levels of the value chain, including input and animal feed supply, production, aggregation and processing, to bring a meaningful impact at the smallholder farmer level.

CASA will also contribute to the development and implementation of policies and strategies that could exacerbate growth in the sector, such as GoE's investment promotion strategies. This will support the scale up and expansion of activities as engagement at the policy level can often act as an impact accelerator.

Indicative interventions addressing underlying causes of underperformance of the market system, pertaining to commodity production, processing and marketing, were shaped and co-created with public- private stakeholders and are presented in the ILAF below.

## 5.2 Process Leading to Strategy and Project Outlines

CASA Ethiopia undertook the following activities to formulate this strategy;

- Investigation into market dynamics and institutional landscape (combination of desk research and key informant interviews).
- Analysis of systemic constraints and underlying causes of slow investment uptake for commercialisation of soybean value chain.
- Validating key findings with selected stakeholders.

## 5.3 Vision of Change

The purpose of the Vision of Change is to envisage how the system would operate if identified constraints and underlying causes were to be resolved.

### Overall vision for Ethiopia's Soybean value chain

The vision for the Soybean Value chain is to see **greater food security** and **increased incomes** for smallholder soybean farmers realized through **enhanced productivity** and better **access to markets** that are sustainable and efficient

### **Vision of change for processors**

Processors have access to regular soybean supply through structured supply chain linkages with smallholders and traders and are incentivised to invest for competitiveness and growth

### **Vision of Change for smallholder farmers**

Smallholder farmers are incentivized to increase their production and productivity of soybean and supply through structured markets to increase their income and diversify their livelihoods.

## **6. Interventions**

### **6.1. Intervention Areas and Project Outlines**

The Intervention Logic Analysis Framework (ILAF) shows the connections between the problems of the beneficiaries and the interventions that can be deployed to solve them by strengthening the system.

The field investigation pointed out that low productivity and poor quality of products are the key problems experienced by the producers. Limited access to quality seeds, high cost of inputs and farm tools/machinery, occurrence of disease, pests and weeds, lack of good skills on good agronomy practices and limited access to credit facility are the underlying causes of the problems. Besides to this, weak legal enforcement of the contract farming practices is also another key problem which provides ungranted supply system for producers (SHFs & private investors) and the buyers (processors & exporters). This problem is also emanated from substantial delay of approval of the draft Contractual Farming Framework at Federal ministries level. The existing contract farming practices is not well-articulated and lack clarity among system actors. On top of this, small scale processors are systematically ignored from the market system and unable to source the raw materials (Soy) legally from producers or aggregators. This is mainly due to the government provides a prior advantage for large scale producers aiming to increase the production efficiency to meet high edible oil demands of the people. This situation discourages SMEs business operation.

Therefore, contributing to increasing the productivity and improving the quality of products through contract farming and developing an effective market system between SHFs and processors, particularly with SMEs, will be an intervention opportunity for CASA programme. This will be a showcase for CASA credibility in terms of changing the thinking of the public sector and how SMEs really can bring about change if they are supported properly.

### A. Proposed CASA outcome areas:

- **Outcome 1.** - Productivity and competitiveness of private sector led production of Soy oil seeds is enhanced
- **Outcome 2** - The capacity and competitiveness of SMEs, medium and large-scale private sectors for processing of Soy oil seeds is enhanced
- **Outcome 3** - Access to animal feed from soybean cake for smallholder farmers improved

### B. Proposed CASA Interventions:

<b>(1) Problem/ symptom</b>	<b>(2) Underlying Cause/Immediate cause</b>	<b>(3) (4) Support and Regulatory functions</b>	<b>(5) Service Weaknesses / underlying causes/Root causes</b>	<b>(6) Interventions</b>
<b>Key problem 1. Low productivity and Quality</b>	<b>Lack of access to quality seeds</b>	Quality seeds supply	Limited capacity of research centres (land & budget)	Support research centres to promote Soy seed multiplication at farmers and private seed producers' level for existing better yield Soy seed varieties (follow up & certification budget).
			Limited community-based seed multiplication	Support for the establishment and strengthening of community-based Soy seed multiplication.
			Low participation of private Seed enterprises	Incentivise potential private seed suppliers to engage in Soy seed production.
	<b>Occurrence of disease, pests and weeds</b>	Good Agricultural Practices (GAP), Integrated Pest Management (IPM)	Limited good agronomy practice skills of SHFs.	Support extension agents to provide the required skill trainings (GAP, IPM) and advisory services for farmers.

		Supply of pesticides and herbicides.	<p>Limited supply of quality agri inputs, such as pesticides &amp; herbicides.</p> <p>Support private agro-dealers and cooperatives to avail quality inputs to the farmers.</p>	
	<b>Lack of access to improved farm tools &amp; machineries</b>	Farm tools & machineries supply	Limited capacity of private sectors for tech innovation & sourcing	Support public-private sectors engagement in manufacturing farm machineries.
	<b>Lack of knowledge on post-harvest handling tech</b>	Access to post harvest handling skills to improve quality of produces (Q)	Limited access to credit facility for cooperatives and SHFs	<p>Strengthen Rural Saving and Credit Cooperatives/Unions to create access to credit for coops and farmers.</p> <p>Link producer cooperatives with other credit sources (MFIs, Banks) etc.</p>
High cost of machineries and rental services (Q)			Strengthen Rural Saving and Credit Cooperatives/Unions to create access to credit for coops and farmers.	
Poor cluster farming of SHFs reduced economies of scale.			<p>Link producer cooperatives with other credit sources (MFIs, Banks) etc.</p> <p>Promote cluster farming to access farm machineries in a group base.</p>	
No incentive for quality produces (Q)			Encourage buyers to pay better price for quality produces through awareness creation.	

	Lack of knowledge on post-harvest handling tech (Q)	Access to post harvest handling skills to improve quality of produces (Q)	Limited skill training and extension services (P&Q)	Equip skill gaps of extension agents on appropriate post handling techniques.

(1) Problem/ symptom	(2) Underlying Cause/Immediate cause	(3) (4) Support and Regulatory functions	(5) Service Weaknesses / underlying causes/Root causes	(6) Interventions
<b>Key problem 2</b>  <b>Weak contract management and enforcement</b>	Lack of legally approved contract farming framework at ministries level.	Avail enforceable contract farming framework.	Weak follow up of the region for timely endorsement of contract farming framework.	Lobby the regional the Regional Delivery Unit (RDU) for approval of contract farming framework
<b>Key problem 3.</b> <b>Unstable Soybean market price</b>	Contractual breaching between farmers and buyers.	Avail clear, understandable and enforceable binding contract farming doc (MoU).	Not clearly defined and legally supported contract farming practices.  Weak SHFs organization to promote contract farming.	Support the public sector to produce workable contract farming docs in consultation with system actors (SHFs & buyers).  Support SHFs cluster farming to access secured market in contract farming arrangements.



	Weak supply linkage for cooperatives and small-scale processors.	Establish formal market linkage b/n SHFs, SMEs and Cooperatives.	No proper attention was provided by public sectors to establish the linkage.	Lobby the public sectors to create conducive supply chain for those actors Support the strengthen of sector coordination
--	--	--	--	---

## 6.2 Sequencing and Prioritisation of Projects

Projects	Potential partners	Year 1	Year 2	Year 3
<b>Project 1.</b> Support and facilitate Improving access to higher-yielding Soy seed for CASA-targeted farmers through community-based seed multiplication and private seed supplier support	<ul style="list-style-type: none"> <li>Seed multiplication coops</li> <li>Private seed enterprise</li> <li>ing Plc</li> </ul>			
<b>Project 2.</b> Support and facilitate the enhancement of innovative public-private sector practices by exposing new skills and facilitating access to finance in order to supply improved farm tools/machinery to target farmers and SMEs.	<ul style="list-style-type: none"> <li>Ethiopia Agriculture and Business work Corporation (EABC), Ambasel Trading</li> </ul>			
<b>Project 3.</b> Improve the financial capacity of rural savings and credit cooperatives/unions by collaborating with MFIs/banks to provide farmers, SME, and processors with credit.	<ul style="list-style-type: none"> <li>RuSACCO/union and MFIs/Banks.</li> </ul>			
<b>Project 4.</b> Supporting the organization of SHFs in cluster farming to promote commercialization of Soy production and post-harvest handling.	<ul style="list-style-type: none"> <li>Woreda Office of Agriculture</li> </ul>			
<b>Project 5.</b> Support in improving availability /affordability of quality agricultural inputs (chemicals) to farmers by strengthening agro-dealership scheme at the local level	<ul style="list-style-type: none"> <li>Agro-dealers, Dangla Agricultural Input Supply plc, cooperatives</li> </ul>			
<b>Project 6.</b> Support the enhancement of good agronomy practice skills and knowledge of Soy producers through capacitating extension agents.	<ul style="list-style-type: none"> <li>Woreda Office of Agriculture</li> <li>Processors</li> </ul>			
<b>Project 7.</b> Initiating contract farming model between SHFs and different scale of processors capacity (particularly SMEs) by formulating enforceable contract framework and binding agreements.	<ul style="list-style-type: none"> <li>Public sectors (BoA, CPA &amp; BoT)</li> <li>Processors/SMEs</li> </ul>			

## Year 1

- Support and facilitate improving access to higher-yielding Soy seed for CASA-targeted farmers through community-based seed multiplication and private seed supplier support
- Support and facilitate the enhancement of innovative public-private sector practices by exposing new skills and facilitating access to finance in order to supply improved farm tools/machinery to target farmers and SME
- Initiating contract farming model between SHFs and different scale of processors capacity (particularly SMEs) by formulating enforceable contract framework and binding agreements
- Support the enhancement of good agronomy practice skills and knowledge of Soy producers through capacitating extension agents

## Year 2

- Support and facilitate the enhancement of innovative public-private sector practices by exposing new skills and facilitating access to finance in order to supply improved farm tools/machinery to target farmers and SMEs
- Improve the financial capacity of rural savings and credit cooperatives/unions by collaborating with MFIs/banks to provide farmers, SME, and processors with credit.
- Supporting the organization of SHFs in cluster farming to promote commercialization of Soy production and post-harvest handling
- Improving the availability /affordability of quality agricultural inputs (chemicals) to farmers by strengthening agro-dealership scheme at the local level
- Enhancing good agronomy practice skills and knowledge of Soy producers through capacitating extension agents

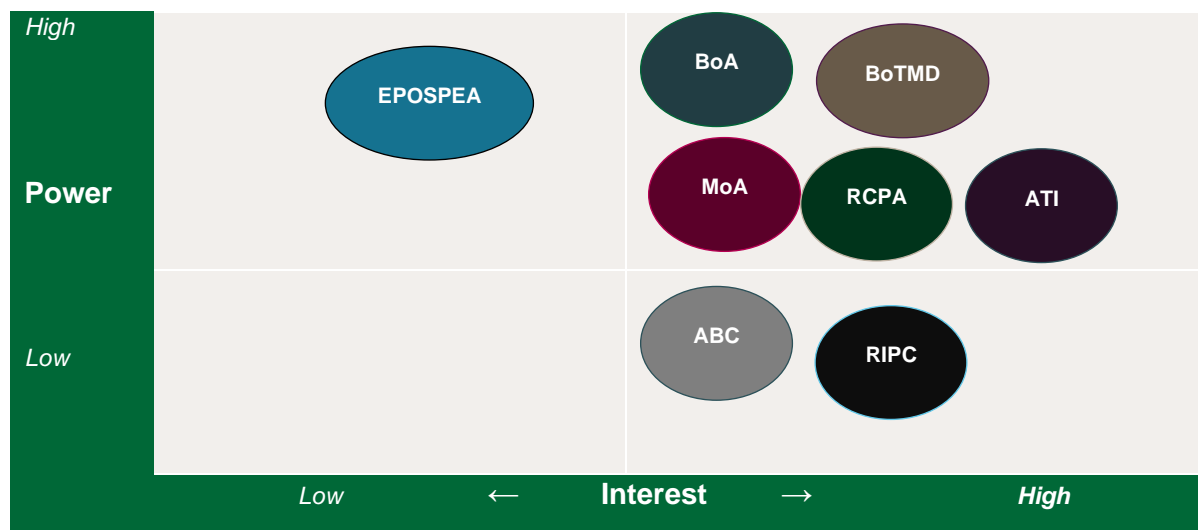
## Year 3\*

- Support and facilitate Improving the financial capacity of Rural Saving and Credit Cooperatives/Unions by linking with MFIs/banks to create access to credit to farmers, SME and processors
- Organizing SHFs in cluster farming to promote commercialization of Soy production and post-harvest handling
- Support and facilitate the availability /affordability of quality agricultural inputs (chemicals) to farmers by strengthening agro-dealership scheme at the local level

\*Subject to FCDO approval and availability of funds.

## 7. Stakeholder Assessment

The Power-Interest Matrix is designed to help categorise relevant stakeholders and suggest engagement strategies for the different groups. The stakeholders can categorize as: Low power, low interest; High power, low interest; Low power, high interest and High power, high interest depends on their influence and contribution to CASA programme.



CASA will adopt the following strategies for interacting with the sector stakeholders:

- **Low power, low interest:** CASA will stay receptive towards these actors: although they do not seem important, nor very relevant at this stage, they may still prove to be as the programme continues to build understanding of the system. If they show an interest, CASA will provide them with information about the iterative investigation and intervention preparation process.
- **High power, low interest:** CASA will stay open minded about these actors: they are powerful, and they may turn out to be important drivers of change, despite them not seeming very relevant at this stage. If they show an interest, CASA will be quick to provide them with information about process and subsequently keep them informed.
- **Low power, high interest:** CASA will stay open minded about these actors: they are an important part of the market system. Ignoring them may have severe unintended consequences. CASA will keep them informed about the investigation and preparation process
- **High power, high interest:** CASA will actively target these actors: they are both important parts of the system and the 'movers and shakers' that have lots of power to change things. CASA is now engaging them and will do so throughout the intervention preparation process.

**Table 3 Description of stakeholders from power and interest figures**

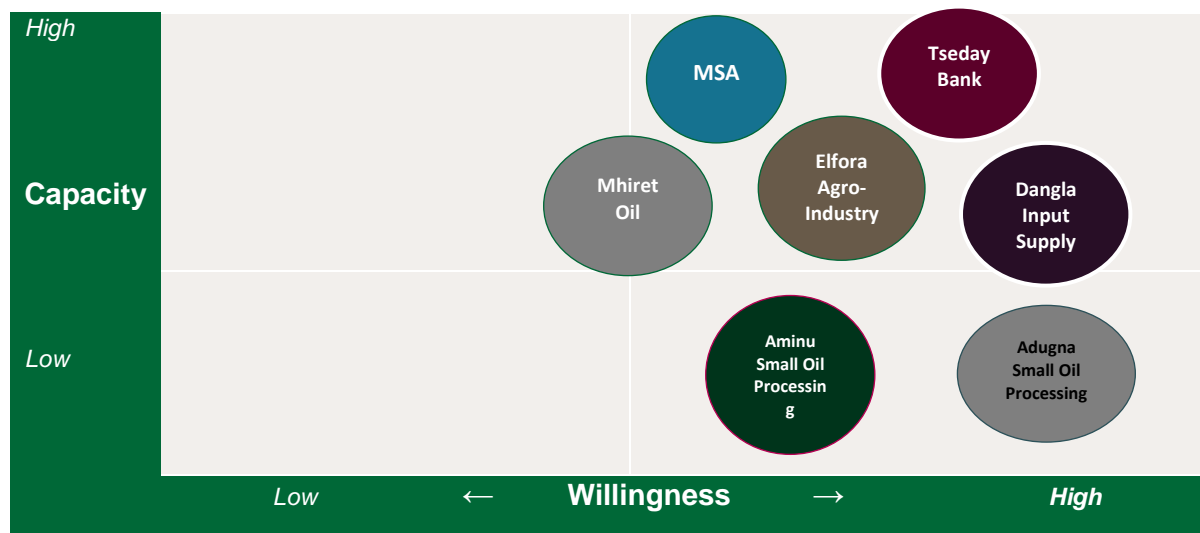
Sn	Stakeholders	Description
1	Bureau of Agriculture (BoA)	<b>BoA and ATI</b> <ul style="list-style-type: none"> <li>• Influential in promoting cluster-based contract farming</li> <li>• Mandated to improve the quality &amp; reach out of extension services to enhance productivity and quality of produces.</li> <li>• Influence the research centers for better yield variety release</li> <li>• Has well-staffed and equipped regional offices in Amhara</li> </ul>
2	Bureau of Trade and Market Development (BoTMD)	
3	Regional Cooperative Promotion Agency (RCPA)	

4	Agricultural Transformation Institute (ATI)	<ul style="list-style-type: none"> <li>Part of the technical committee for value chains development around the agro-parks in Amhara</li> </ul> <p><b>BoT and RCPA</b></p> <ul style="list-style-type: none"> <li>Influential in improving regulatory framework of Soy market system.</li> <li>Interested to improve output market system via effective participation of cooperative for aggregation.</li> <li>Highly motivated to link producer cooperatives with edible oil processors.</li> </ul>
5	Ministry of Agriculture (MoA)	<p>MoA</p> <ul style="list-style-type: none"> <li>Uppermost body of government with the mandate to capacitate, supervise, and regulate the agriculture sector. Has extensive networks of extension programs, down to the smallest level of government administration in all regions.</li> <li>Responsible to developing supply chains feeding into agro-industries</li> </ul>
6	Ethiopian Pulses, Oil Seeds, and Spices Processors and Exporters Association (EPOSPEA)	<p>EPOSPEA</p> <ul style="list-style-type: none"> <li>Established in 1998, with the objective of protecting the interest of members and building their capacity for competitiveness</li> <li>Legally registered organisation, with 130 active members</li> <li>Funding source includes; member contribution, national and international donations</li> <li>Undertakes research and provides local and foreign market information and trend analysis</li> <li>Advocates for policy reforms to improve the enabling environment</li> <li>Conducts capacity building activities, such as trainings and exposure visits for members</li> </ul>
7	Regional Industrial parks Corporation	<ul style="list-style-type: none"> <li>Responsible for developing and operating agro-industrial parks</li> <li>Manage agro-parks that will be hosting 120 - 150 agro-processing companies</li> <li>Responsible for overall coordination of support organisations and government organs to make the supply chains feeding into agro-parks work</li> <li>Leading technical steering committees made up of donor and government representatives to push the agro-parks implementation agenda</li> </ul>
8	Agriculture Business Corporations	<ul style="list-style-type: none"> <li>The corporation was formed amalgamating the Ethiopian Seed Enterprise, Agricultural Equipment and Technical Services SC. Agricultural Inputs Supply Enterprise, Natural Gum Making and Marketing Enterprise, and Agricultural</li> <li>Mechanization Service Enterprise</li> <li>Has 6,543ha of farmland for demonstration and taste farming</li> <li>Distributes seeds, fertilizer, chemicals, and other agricultural inputs through 23 outlets across the country</li> <li>Provides rental and maintenance services of machinery, tractors, and other mechanized farming equipment</li> <li>Oversees an enterprise that develops, multiples, and distributes seeds for vegetables and fruits</li> </ul>

## 8. Preliminary Assessment of Potential Partners

The Willingness and Capacity matrix is designed to identify which players to target or prioritise and the type of support required to change their behaviour.

The capacity and willingness of some potential partners were assessed during the field investigation however, this needs further triangulation in the upcoming partners identification and assessment process followed by due diligence, to finally select which partners will be selected for CASA to work with. The identification and engagement of other partners will continue as the research is an iterative process.



**Table 4: Description of potential partners' capacity and willingness**

	Potential Partner	Scale of operations	Descriptions
1	MSA Oil Processing plc	Large scale	<p>Capacity (High)</p> <ul style="list-style-type: none"> <li>• High level of technical skills.</li> <li>• Using sophisticated machineries.</li> <li>• Well-staffed in desired disciplines</li> <li>• High level of leadership and networking skills.</li> </ul> <p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Incentivized by high demands of animal feed produced from Soy milling.</li> <li>• Motivated to start Soy oil processing business</li> <li>• Continued to expand contract farming with SHFs in in forward (Soy) and backward business linkage (feed and oil supply).</li> </ul>
2	Aminu Small Oil Processing	Small Scale	<p>Capacity (Low)</p> <ul style="list-style-type: none"> <li>• Limited processing and business management skills.</li> <li>• Limited access to finance</li> <li>• Lack of proper storage facility</li> <li>• Limited source of raw materials</li> </ul>
3	Adugna Oil Processing	Small Scale	<p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Motivated to expand Soy oil processing business.</li> </ul>



			<ul style="list-style-type: none"> <li>• Incentivised by high demands of animal feed produced from Soy milling.</li> <li>• Willing to work with SHFs in forward (Soy) and backward business linkage (feed and oil supply).</li> </ul>
4	Dangla Agricultural Input Supply Plc	Not defined	<p>Capacity (High)</p> <ul style="list-style-type: none"> <li>• High level of technical skills.</li> <li>• Well-staffed in desired disciplines</li> <li>• High level of leadership and networking skills.</li> </ul> <p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Incentivized by high demands of different agri inputs/ farm tools.</li> <li>• Motivated to start renting out farm machineries for SHFs.</li> </ul>
5	Tseday Bank	Large	<p>Capacity (High)</p> <ul style="list-style-type: none"> <li>• Massive coverage of Soy production areas</li> <li>• Highly equipped staffs</li> <li>• High financial liquidity</li> </ul> <p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Incentivized by high demands of different agri inputs/ farm tools.</li> <li>• Motivated to continue mechanization of Soy production.</li> </ul>
6	Elfora Agro-Industry	Large	<p>Capacity (High)</p> <ul style="list-style-type: none"> <li>• High level of technical skills</li> <li>• Using sophisticated machineries</li> <li>• Well-staffed in desired disciplines</li> <li>• High level of leadership and networking skills</li> </ul> <p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Incentivized by high demands of animal feed produced from Soy milling.</li> <li>• Interested to source Soy directly from SHFs in in forward (Soy) and backward business linkage (feed and pullet) supply</li> </ul>
7	Mhired Oil	Medium	<p>Capacity (Medium)</p> <ul style="list-style-type: none"> <li>• Using high-tech machineries</li> <li>• Limited business management and leadership skill</li> <li>• Limited access to finance</li> </ul> <p>Willingness (High)</p> <ul style="list-style-type: none"> <li>• Interested to source Soy directly from smallholder farmers</li> <li>• Motivated to start animal feed processing facility</li> </ul>

## 9. Information Gaps

Several information gaps have been documented throughout this report. Owing to the dynamic nature of the rapidly expanding aquaculture market system, information gaps are unlikely to ever be totally filled, with new gaps emerging all the time. This highlights the importance of seeing MSD interventions as iterative processes that have to monitor and respond to changes in the market. Despite this, there are several pressing information gaps that should look to be addressed as a matter of priority by any actors or institutions looking to progress the ideas put forward in this report:

**Table 5: Summary of existing knowledge gaps**

Key information gaps	Possible source of information	Methods of info/data collection	Period
1. Relationships between market system actors in the Soybean supply chain in light of the trade proclamation: Which channels are legal and which are not? How? Why? (SMEs are not permitted to purchase directly from farmers. Cooperatives are not permitted to supply processors). The outcome would indicate which channels (if any) should be more optimised for successful Soy value chain development for CASA intervention.	BoT and ECX	One on one interview Stakeholder validation workshop	May & June 2023
2. Validating sales transactions and system actors' gross margins with concrete evidence	BoT, RCPA and ECX	One on one interview Stakeholder validation workshop	May 2023
3. The list of potential partners (processors) is still insufficient to shortlist for due diligence and concept note writing.	BoT and RCPA	Capacity Willingness matrix	May 2023
4. Understand the contract farming practices in more detail and the actual benefits for SHFs.	BoA, SHFs, processors and exporters.	One on one interview FGD	May 2023
5. Scoping the actual geographical location of CASA intervention in Amhara region	Consulting all system actors	Validation workshop	May & June 2023
6. In-depth understanding of gender impact of the soybean value chain and climate vulnerability	Scoping assessment of the issue	Interview and FGD	June & July 2023

## Annexes

### Annex 1. Next Steps

The next steps in the process are:

- a. Scoping of project concept notes (first three months of implementation), including mainstreaming of CASA crosscutting areas;
- b. Design of project plans, including mainstreaming of CASA crosscutting areas and monitoring and results measurement activities, as well as partner due-diligence exercises, negotiations and contracting;
- c. Implementation, monitoring, results measurement and evaluation;
- a. Collaborating with Component C on preparing Soybean SME success stories and engaging with investment actors.

For FCDO to agree that a project is relevant, it may be necessary to make some changes to the outline projects portfolio during scoping of the project concept notes. CASA employs the following criteria to select relevant projects for producers, SMEs and the enabling environment:

- Does the project directly or indirectly target smallholders, especially women, with the capacity to step up – that is, increase production, productivity and quality to meet market requirements?
- Does the project directly respond to the food security needs of the region and/or the country?
- Are there suitable actors available to partner with?
- Does the project avoid distortion of the market and create a sustainable market?
- Does the project create access to commercial markets for target smallholders?
- Does the project demonstrate a business case or new business model that will attract investment to commercialise smallholder supply chains?
- Is the project feasible, sustainable, scalable and relevant (in terms of factors such as resources and timelines)?
- Are the cross-cutting issues incorporated where relevant?

CASA Component A employs the following guidelines to select partners:

- Businesses with an annual turnover under \$2.0 million, or less than 50 employees, or is classed as an SME or producer organisation as defined in the country they are based;
- Wants to raise finance in the range of \$10,000 to \$1,000,000 either immediately or in the foreseeable future. (Exceptions could be possible to the lower limit, where there is expected to be a second round of finance meetings or the limit is expected to be exceeded during the life of the CASA project);
- Ideally has not received finance in the past and does not have any significant outstanding loans. (An exception may be an SME seeking finance within the above range for a new stage of expansion);
- Already engages or has potential to engage significant numbers of smallholders in the supply chain, and shows willingness to do this;
- Demonstrates commitment to a growth and development strategy or ambition, and demonstrates commitment to undertake their responsibilities under CASA support;
- CASA has the potential to add value to the partnership (ideally something that the partner would not achieve or undertake without CASA support);
- Lastly, all partners must pass CASA's due-diligence assessment.

Work on identifying a roster of potential BDS providers for engagement, including assessment of service and delivery capacity building needs, will commence early in implementation. CASA expects to focus on a small number of the most relevant providers. Capacity building may centre on services development, testing and service evaluations and consumer and other research. Provider selection criteria are expected to include:

- Capacity to deliver services;
- Close to SHFs and SMEs in culture, operating environment and geography;
- Low-cost structure;
- Commercial focus, business culture and accounting and management systems;
- Organisational independence, especially from donor funds;
- Focus on services for SHFs and agri-business SMEs.

CASA will conduct an initial mapping of the investment landscape in Ethiopia. A similar exercise for finance landscape mapping will also be conducted. The lists of actors from these exercises will be updated periodically.

The sector-inclusive growth strategy is responsive to weaknesses in service markets, the enabling environment and aggregation in the market system; and to the lack of investment needed for growth. Strategy formulation involves: (1) identifying the market potential, through calculations to show the sector's potential; (2) developing a sector vision of change for an inclusive, competitive sector; and (3) designing a portfolio of interventions that can be targeted at specific market actors or groups of market actors to drive changes in the market system and attract investment into target agribusinesses.

## Annex 2. Existing Donor Initiatives

---

### GIZ

Soybean appears to be a "green field" in terms of development actors. Some GIZ-funded projects are active here, such as Strengthen Rural Value Chain, which focuses on soy, avocado, and onion. The project was launched Oct 2022 in collaboration with regional BoA. in the main Soybean production belts: Awi zone (Jawi), W/Gojjam (N/Achefer), West Gondar (Kura, Metema, Merab Aremachho) and Central Gondar (Alefa, Tegedi and Tach armachiho). The Agricultural Transformation Agency (ATI), has initiatives along Agricultural Commercialization Clusters in the Soybean Belt that extends from western and Eastern part of the Amhara region, covering 3.6M farmers. Initiatives aim to enhance productivity, create linkages to market, and improve labour management practices, especially of large-scale commercial farmers.

---

### Agriterra

Agriterra has been actively involved in capacity building of cooperatives. Cooperatives and unions are its major channels of intervention. Within these channels, the major interventions of Agriterra include, but are not limited to: 1. improving the business and organisation capacities of unions as well as cooperatives via coaching and training; 2. facilitating market linkage locally and internationally; 3. supporting cooperatives to access finance. In relation to sesame, Agriterra has linked over 2,500 farmers to financing through its latest C4C programme (jointly executed with SNV). Currently, it is also promoting cooperative exports to the EU and other markets. A successful case to hand is Wedera Union (major production area for mung, white pea and faba bean), which recently exported to the EU with the support of Agriterra.

---