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**AN APPRAISAL OF KENYA'S AGRICULTURAL POLICY AND LEGISLATIVE
FRAMEWORK AFFECTING OIL SEED CROP PRODUCTION**

BY

STELLAH MWENDE SAMPERU

ADM: 152771



**A DISSERTATION SUBMITTED TO STRATHMORE BUSINESS SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER IN PUBLIC POLICY AND MANAGEMENT OF STRATHMORE
UNIVERSITY**

MAY 2026

DECLARATION

I declare that this dissertation represents my original work and has not been submitted for award degree at any other institution. All materials sourced from other authors are properly cited within the text.

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APPROVAL:

I confirm that as the University Supervisor, I have approval this research project to be submitted for examination.

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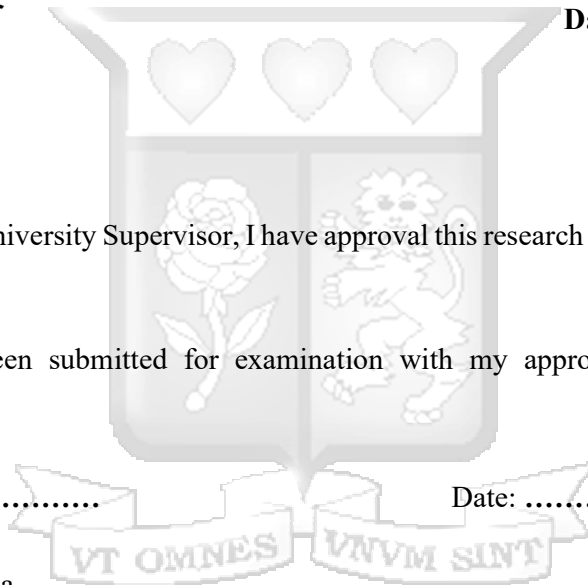
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ABSTRACT

Kenya remains heavily dependent on imported edible oils despite having considerable potential for domestic oilseed production. This situation reflects underlying policy, institutional, and implementation constraints that limit the sector's development. The general objective of the study was to appraise Kenya's agricultural policy and legislative framework affecting oilseed crop production, guided by two specific objectives: (i) to appraise Kenya's agricultural policy and legislative framework for oilseed production and identify gaps and emerging issues; and (ii) to assess the challenges facing the oilseed crop subsector. Grounded in Institutional Theory and Policy Implementation Theory, the study adopted an exploratory qualitative design. Data was collected from 17 purposively selected key informants representing Ministry of Agriculture Livestock and Development, County Government, Kenya National Farmers Federation (KENAFF), Kenya Agricultural and Livestock Research Organization (KALRO). Data was analyzed using thematic analysis, which enabled the identification of recurring patterns and themes across stakeholder perspectives. Reliability in this study was enhanced by employing a standardized interview guide that was consistently applied across all respondents. This ensured uniformity in the questions asked, minimized interviewer bias, and facilitated comparability of responses. Ethical considerations were strictly observed, including informed consent from participants, confidentiality of responses, and adherence to Strathmore University's research ethics guidelines and NACOSTI licensing requirements. The study establishes that while Kenya has a formal legislative foundation including the Crops Act, 2013 and related policies oilseed crops are not adequately prioritized within major national strategies. Weak national-county coordination, limited budgetary support, institutional fragmentation, and an underdeveloped seed system hinder effective policy implementation. Other constraints include inadequate research and extension services, unstructured markets, and competition from low-priced imports, all of which reduce farmer incentives and suppress productivity. To address these policy, institutional, and market gaps, the study recommends the formulation of a National Oilseed Development Strategy (2026-2036) to systematically integrate oilseeds into Kenya's agricultural planning, budgeting, and implementation frameworks, with at least 15% of the agricultural development budget earmarked for oilseed-focused breeding, seed multiplication, and varietal improvement in line with national and continental agricultural development commitments. The seed certification and variety release framework should be reformed to reduce approval timelines for oilseed varieties while maintaining regulatory quality standards, and extension service delivery should be strengthened through full implementation of the Kenya Agricultural Sector Extension Policy (2023) with targeted support to oilseed-producing regions. The study further proposes the establishment of a National Oilseed Development Fund with an indicative annual allocation of KSh 5 billion, benchmarked against Kenya's edible oil import bill, to support seed system development, farmer aggregation, processing infrastructure, and structured market development through public-private partnerships. Finally, enhanced national-county coordination, structured market systems, and targeted investment in domestic processing capacity are necessary to reduce import dependency, strengthen value addition, and improve the competitiveness and sustainability of Kenya's oilseed subsector. These measures directly support the study's justifications by lowering reliance on imports, improving food and nutrition security, stabilizing foreign exchange reserves, and fostering climate-resilient livelihoods, thereby providing a coherent pathway for transforming the oilseed subsector into a driver of sustainable agricultural and economic development.

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ABREVIATIONS

AFA:	Agriculture and Food Authority
AGRA:	Alliance for Green Revolution in Africa
ASTGS:	Agricultural Sector Transformation and Growth Strategy
CIDP:	County Integrated Development Plan
FAO:	Food and Agriculture Organization
IFAD:	International Fund for Agricultural Development
IFPRI:	International Food Policy Research Institute
ITC:	International Trade Centre
KALRO:	Kenya Agricultural and Livestock Research Organization
KEBS:	Kenya Bureau of Standards
KES:	Kenya Shilling
KEPHIS:	Kenya Plant Health Inspectorate Service
KIPPRA:	Kenya Institute for Public Policy, Research and Analysis
KNBS:	Kenya National Bureau of Statistics
MoALD:	Ministry of Agriculture and Livestock Development
MoALFC:	Ministry of Agriculture, Livestock, Fisheries and Cooperatives
NEMA:	National Environment Management Authority
NEOCPP:	National Edible Oil Crop Promotion Project
NAIP II:	Kenya National Agricultural Investment Plan II
NARS:	National Agriculture Research System
OECD:	Organization for Economic Co-operation and Development.
USD:	United States Dollar
WITS:	World Integrated Trade Solution

OPERATIONAL DEFINITION OF KEY TERMS

Oilseed Crops: Crops that are grown primarily for the oil contained in their seeds, such as sunflower, sesame, and soybeans.

Policy Implementation: The process of carrying out and enforcing laws, regulations, and policies by institutions and stakeholders.

Agricultural Policy: A set of laws and regulations set by the government to achieve specific agricultural goals.

Legislative Framework: A system of laws and regulations that provide the legal basis for managing a sector.

Stakeholders: Individuals, groups, or organizations with an interest or concern in the success of a project or policy.

Value Chain: The full range of activities involved in producing and bringing a product to the market.

Extension Services: Support services provided to farmers, including training and dissemination of agricultural knowledge.

Certified Seeds: Seeds that are guaranteed to be of a high quality and have been produced under regulated conditions.

Import Substitution: A trade and economic policy which advocates replacing foreign imports with domestic production

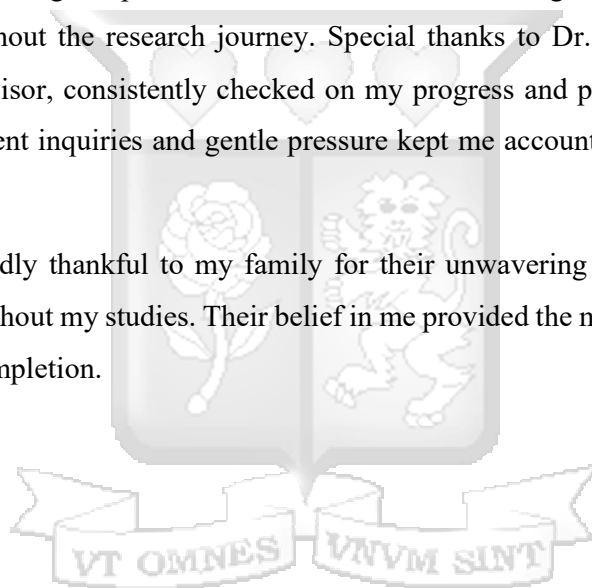
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DEDICATION

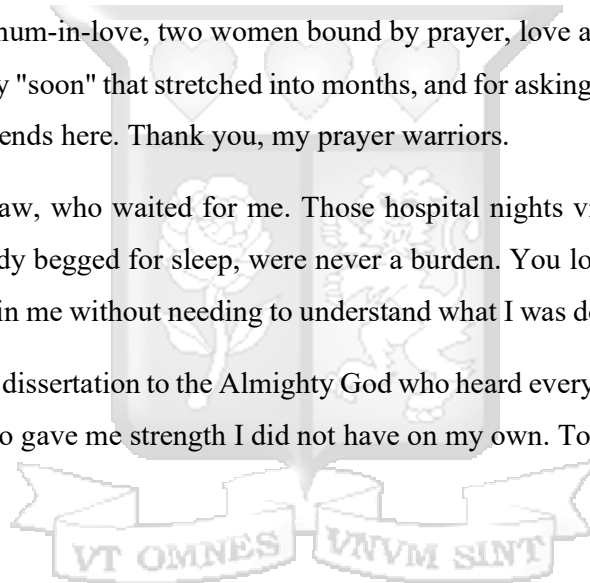
I dedicate this work to my beloved children Gail, Lesham and Jamin who learned early that love sometimes means waiting. For every weekend I missed, every movie we couldn't watch, every moment stolen by exams and assignments, you never stopped believing I would come back to you. You laughed when mum stumbled-yes, even that low CAT mark became family folklore. But you also saw me rise. You learned that failure is merely the first draft of success, and that the best chapters often follow the hardest ones. I love you.

To my husband who understood without resentment when school consumed our evenings, who let the light stay on through midnight studies, and who refused to let me quit when I wanted to quit on my research. Thank you for the pressure. I am here because you would not let me stop.

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Finally, I dedicate this dissertation to the Almighty God who heard every prayer, granted health and provision, and who gave me strength I did not have on my own. To You be all glory.



CHAPTER ONE

INTRODUCTION

1.1 1.1 Background of the study

Oilseeds are among the most traded agricultural commodities globally, serving as the basis for vegetable oils, animal feeds, and industrial products such as biofuels and cosmetics. According to the Food and Agriculture Organization (FAO), global oilseed production reached approximately 645 million metric tons in 2022, with soybean, rapeseed, sunflower, and groundnut as the dominant crops (FAO, 2023). These crops play a significant role in global food systems, especially as sources of protein and fat.

Vegetable oils derived from oilseeds, particularly soybean oil, palm oil, sunflower oil, and rapeseed oil, constitute over 60% of global consumption of fats and oils. The global vegetable oil market was valued at over USD 270 billion in 2022, and demand is projected to grow due to increasing urbanization, changing dietary patterns, and rising demand for renewable energy (OECD-FAO, 2023).

In Europe, the oilseed sector has received substantial policy and financial support, especially under the European Union's Common Agricultural Policy (CAP). Germany is one of Europe's largest producers of rapeseed, contributing over 3.6 million metric tons in 2022, much of which is used for biodiesel production (Eurostat, 2023). Rapeseed alone accounts for over 60% of the total oilseed area in Germany. France, the EU's second-largest oilseed producer, harvested over 4 million metric tons of oilseeds in 2022. The country emphasizes sustainable agriculture and subsidized oilseed farming through green payment schemes (Ministère de l'Agriculture, 2022). The Netherlands, while not a top producer, is a leading player in oilseed processing and trade. Rotterdam serves as a critical hub for the importation and refining of oilseeds, with over 6 million metric tons of oilseeds processed annually, contributing significantly to the EU's edible oil supply chain (OECD-FAO, 2022). These countries have succeeded by linking oilseed production to structured input support, value addition, research, and sustainable agricultural practices, demonstrating how effective policies can stimulate sectoral growth.

Moving beyond Europe, India stands out as one of the world's leading producers and consumers of oilseeds. In 2022–2023, India produced approximately 41.4 million metric tons of oilseeds, with soybean, groundnut, and rapeseed-mustard as the primary crops (Ministry of Agriculture & Farmers Welfare, 2023). India's oilseed sector has historically been supported

by key policy interventions such as the Technology Mission on Oilseeds (1986) and the National Food Security Mission (Oilseeds and Oil Palm). Despite these interventions, India still imports more than 60% of its edible oil requirements, revealing persistent productivity gaps and market inefficiencies (Solvent Extractors' Association of India, 2023). India's approach illustrates the complexities of balancing domestic production with rapidly growing consumption.

In Africa, oilseed production has grown, albeit unevenly, constrained by policy inconsistencies, poor infrastructure, and limited access to quality seeds. South Africa is the continent's leading producer of sunflower seeds and soybeans, with soybean production reaching 2.2 million metric tons in 2021, up from just 500,000 tons in 2010, an increase driven by private sector investment and government support (DAFF, 2021). The Grain SA Soybean Strategy helped foster public-private collaboration, resulting in increased processing capacity and local demand for oilseed meal. Nigeria, Africa's most populous nation, has focused on reviving groundnut and oil palm sectors through policy reforms such as the Presidential Fertilizer Initiative (PFI) and the Anchor Borrowers' Programme (ABP). However, oilseed yields remain below global averages, groundnut yields, for instance, average 1.2 metric tons/ha, compared to over 3.5 metric tons/ha in China (FMARD, 2020; FAOSTAT, 2023). Despite these efforts, sub-Saharan Africa continues to import more than 50% of its edible oil needs, highlighting the need for policy-driven interventions and investment in oilseed value chains.

In Kenya, the situation is particularly concerning. The country imports over 90% of its edible oil requirements, primarily in the form of crude palm oil from Southeast Asia. This heavy reliance on imports places immense pressure on the national trade balance, depletes foreign exchange reserves, and exposes the country to global price shocks and supply disruptions. In 2023 alone, Kenya spent over KSh 100 billion on edible oil imports, making vegetable oil one of the highest food-related import categories (KNBS, 2023).

Despite Kenya's agro-ecological potential to produce oilseed crops such as sunflower, soybean, groundnuts, and sesame, particularly in arid and semi-arid counties, local production remains dismally low. Several government and donor-led initiatives have attempted to revitalize the sector, including the Edible Oil Crops Promotion Project (EOCPP) launched in 2023. However, systemic challenges persist, particularly around policy fragmentation, institutional coordination, limited seed systems, and inadequate extension services (FAO, 2021; IFPRI, 2022; KIPPRA, 2022).

Oilseed crops such as sunflower, sesame, canola, groundnuts, and soybeans are increasingly recognized for their role in enhancing food security, nutrition, and agro-industrial growth in Kenya. These crops offer a sustainable livelihood for smallholder farmers, especially in arid and semi-arid regions, and serve as a key input for the production of edible oils, livestock feed, and biofuels (Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MoALFC, 2022)). Despite the availability of domestic oilseed crops with commercial potential such as sunflower in Rift Valley and sesame in Eastern Kenya their contribution to national oil supply remains minimal due to limited production support, low seed quality, and weak value chain development (KIPPRA, 2022; MoALFC, 2022). This reliance on imports not only exposes the country to international market shocks and price volatility but also undermines the development of a potentially viable domestic oilseed industry.

Among the various edible oils consumed in Kenya, palm oil constitutes the majority, making up over 90% of total vegetable oil imports (FAO, 2022; KNBS, 2022). Globally, palm oil is largely produced in Southeast Asia, and this is reflected in Kenya's import patterns. According to the Kenya National Bureau of Statistics (2022), Indonesia stands as the leading source of Kenya's palm oil imports, contributing approximately 70-75% of the total edible oil imports. Malaysia follows as the second-largest exporter to Kenya, supplying about 20-25% of imported oil. Together, these two countries account for nearly all of Kenya's palm oil imports (ITC, 2022).

The edible oil sector in Kenya is dominated by a few key players who are responsible for the importation, refining, packaging, and distribution of various vegetable oils. These processors play a central role in meeting domestic demand, given that local oilseed production remains insufficient to satisfy national consumption levels (FAO, 2022). Some of the major manufacturers include: Bidco Africa Ltd, Kapa Oil Refineries Ltd, Pwani Oil Products Ltd, Golden Africa Kenya Ltd, and Menengai Oil Refineries Ltd among others.

The underperformance of the oilseed sub-sector is attributed to a host of production and policy-related challenges. Farmers contend with poor access to certified seed, inadequate agronomic extension services, and limited value addition capacity. Compounded by fragmented value chains and weak market linkages, oilseed farming remains economically unviable for many smallholders (FAO, 2022).

The regulation of oilseed crop production and processing in Kenya is coordinated by several government agencies, each playing a distinct role across the value chain. The lead institution is the Ministry of Agriculture and Livestock Development (MoALD), which is responsible for

formulating national policies, supporting crop research, and implementing programs that promote oilseed farming across various agro-ecological zones (MoALD, 2023). On the other hand, the implementing body under the Ministry is the Agriculture and Food Authority (AFA), which houses several directorates. Oilseed crops fall under the Industrial Crops Directorate, which is mandated to oversee licensing of processors, coordinate value chain development, and ensure compliance with crop production guidelines (AFA, 2022). AFA also provides market intelligence and supports farmer training initiatives aimed at increasing local oilseed output. The Kenya Bureau of Standards (KEBS) plays a central role in regulating the quality and safety of processed edible oils. It sets standards for oil composition, labeling, packaging, and fortification, ensuring consumer protection and alignment with international norms (KEBS, 2022). The Kenya Plant Health Inspectorate Service (KEPHIS) ensures that only certified and disease-free oilseed varieties are distributed to farmers. KEPHIS also oversees import inspections and the approval of new seed varieties (KEPHIS, 2022). National Environment Management Authority (NEMA) issues environmental impact assessment (EIA) approvals and ensures sustainable waste management practices within the industry (NEMA, 2023).

On the policy front, Kenya has made significant strides in restructuring its agricultural governance framework. The enactment of the Agriculture and Food Authority (AFA) Act, 2013 and the Crops Act, 2013 was intended to streamline crop development and regulatory functions, however, these reforms have not effectively translated into targeted support for oilseed crops, which are often overshadowed by staple and cash crops such as maize, tea, and horticultural produce (KIPPRA, 2022). As a result, the sector continues to operate below its potential due to policy ambiguity, lack of prioritization, and weak implementation.

1.1.1 Overview of Oilseed Crops in Kenya within Policy and Institutional Context

Policy frameworks such as the Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019–2029 broadly acknowledge the importance of oilseed crops as part of the food and nutrition security pillar. The ASTGS proposes increasing investment in underutilized value chains through county-led agricultural flagship programs and public-private partnerships. However, oilseed-specific initiatives under this framework have been limited and largely donor-driven (Ministry of Agriculture, 2019). The National Agricultural Investment Plan II (2019–2024) outlines value addition and agro-processing for edible oil crops as strategic priorities, aiming to enhance competitiveness and improve farmer incomes. Nevertheless, implementation remains fragmented due to a lack of coordination among actors, weak regulatory enforcement, and insufficient budgetary allocations for oilseed-specific programs

(Bukonya & Kasaija, 2020). Institutionally, the Agriculture and Food Authority (AFA) is tasked with overseeing the regulation and development of scheduled crops, including oilseeds. However, AFA's sub-sector-specific directorates often operate without clear mandates or adequate funding, limiting their ability to effectively promote oilseed production and standardization (AFA, 2022). Similarly, while the Kenya Agricultural and Livestock Research Organization (KALRO) has developed improved varieties of sunflower and soybean, uptake among farmers remains low due to weak seed distribution systems and limited extension outreach (KALRO, 2021).

County governments, empowered by the 2010 Constitution, have incorporated oilseed crop promotion into their County Integrated Development Plans (CIDPs). For instance, Bungoma, Busia, and Nakuru counties have initiated local projects to promote sunflower and soybean farming. These efforts include seed subsidies and aggregation models, although they remain isolated and lack national policy harmonization (Wanyama, 2021). While donor and private-sector involvement such as initiatives supported by IFAD, AGRA, and various contract farming models have begun to address some production and market gaps, these efforts are constrained by unclear policy signals and lack of a comprehensive national strategy for oilseed crops (IFAD, 2020). Thus, the development of the oilseed sector is not merely an agronomic or market issue, but fundamentally a governance and policy coordination challenge. A coherent national oilseed strategy, supported by robust institutional mechanisms, targeted investments, and clear regulatory frameworks, is necessary for scaling domestic production and reducing import dependency.

Kenya's journey toward edible oil importation dates back to the colonial period. The establishment of East African Industries (EAI) in 1943 by the British colonial administration marked the beginning of structured oil production in Kenya. EAI was tasked with producing cooking fats and other essential commodities to support the British war effort during World War II (United Nations University, 1995). Despite this early investment in domestic edible oil processing, Kenya's production capacities failed to keep pace with the growing population and consumption demands post-independence. By the 1980s and 1990s, local production was significantly constrained by factors such as low adoption of oilseed crops, poor value chain development, and limited processing infrastructure. Consequently, Kenya began to import large volumes of crude edible oils, primarily palm oil, to bridge the growing consumption-production gap.

As of 2023, Kenya's annual consumption of edible oils stands at approximately 900,000 metric tons, while domestic production accounts for a mere 80,000 metric tons, leading to an import demand of over 820,000 metric tons (Kenya News Agency, 2023). Crude palm oil, the dominant import, accounted for \$767 million in 2023, with Malaysia and Indonesia being the leading sources (World Bank WITS, 2024). The heavy reliance on imports has severe implications. Edible oils are now among the top import commodities after petroleum products, putting immense pressure on the country's foreign exchange reserves and exposing the economy to global price volatility (Kenya News Agency, 2023). Furthermore, the concentration of the domestic market among a few dominant processors, such as Bidco Africa, has led to concerns about market competition and price manipulation.

In response, the Government of Kenya launched the Edible Oil Crops Promotion Project in 2023. This initiative aims to increase local production to cover at least 50% of national demand by expanding the acreage under oilseed cultivation and investing in local processing capacity (Kenya News Agency, 2023). Research institutions like KALRO are also spearheading studies into high-yielding and disease-resistant oilseed varieties to support this agenda. The goal is not only to achieve self-sufficiency in edible oil production but also to enhance farmer incomes and reduce Kenya's import bill by billions of shillings annually.

1.1.2 The Crops Act (2013)

The Crops Act was enacted to consolidate over 130 fragmented laws regulating crop agriculture in Kenya. It created a unified framework for regulating, promoting, and developing scheduled crops, including oilseeds, under the oversight of the Agriculture and Food Authority (AFA). Despite its broad mandate, implementation has been uneven. Oilseeds have not received the same policy attention as export-oriented crops such as tea, coffee, and sugarcane. Weak enforcement, overlapping institutional mandates, and limited funding have constrained its potential to transform the oilseed sub-sector (IFPRI, 2022; KIPPRA, 2022).

1.1.3 The Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029

The ASTGS was launched as Kenya's flagship agricultural blueprint aligned with the Big Four Agenda. It emphasizes food security, farmer incomes, and agricultural competitiveness, with strategies such as county-level value chain hubs and farmer aggregation models (MoALD, 2019). However, oilseeds are not explicitly prioritized as strategic value chains. This omission has translated into minimal resource allocation and private-sector engagement, despite Kenya's edible oil import bill exceeding KSh 100 billion annually (KNBS, 2023; World Bank WITS,

2024). The neglect of oilseeds within ASTGS has discouraged investment in research, processing, and aggregation systems (Kaonga, Mwau, & Poulton, 2023).

1.1.4 The National Agricultural Research System (NARS) Policy (2012)

The NARS Policy sought to strengthen agricultural research through the Kenya Agricultural and Livestock Research Organization (KALRO). Yet oilseed research remains underfunded, receiving less than 5% of public agricultural research resources (FAO, 2022). Outdated varieties, weak breeder-seed systems, and low farmer adoption continue to limit productivity. The lengthy seed certification process under the Seed and Plant Varieties Act (Cap 326) further discourages seed companies from investing in oilseed improvement (KIPPRA, 2022). Farmers often rely on uncertified or recycled seed, undermining yields and market confidence.

1.1.5 County Integrated Development Plans (CIDPs)

CIDPs are designed to align county development priorities with national strategies. While agriculture is a major focus in many counties, oilseeds are rarely prioritized. Where mentioned, they often lack concrete budgets, targets, or monitoring frameworks (Council of Governors, 2020; IFPRI, 2022). Misalignment between CIDPs and national frameworks like ASTGS further weakens oilseed promotion, leaving farmers without adequate extension services, credit, or market support.

1.1.6 The Kenya National Agricultural Investment Plan (NAIP II) 2019–2024

NAIP II was developed to operationalize ASTGS and align Kenya's agricultural priorities with the African Union's Malabo Declaration (MoALFC, 2019). However, oilseeds are notably absent from the list of priority value chains. This omission has limited the flow of technical and financial resources into oilseed research, seed systems, and market infrastructure. Weak M&E frameworks have also made it difficult to measure oilseed-specific progress (Kaonga, Mwau, & Poulton, 2023).

1.2 Statement of the Problem

Oilseed crops present a viable opportunity for Kenya to reduce its high dependency on imported edible oils. Economically, it would save substantial foreign exchange currently spent on importing edible oils over KSh 100 billion annually thus improving the trade balance and stabilizing the Kenyan shilling. (KNBS, 2023; Kenya News Agency, 2023).

Additionally, increased domestic production would enhance food and nutrition security by making edible oils more affordable and accessible, and promoting the consumption of healthier oils with better fat profiles than imported palm oil. Environmentally, cultivating oilseed crops such as sunflower, sesame, and soybean especially in arid and semi-arid regions would support climate-resilient agriculture and reduce the carbon footprint linked to international shipping. Moreover, reducing dependency on imports would shield the country from global price shocks and supply disruptions, improve national food sovereignty, and foster stronger institutional coordination, policy reform, and private-sector investment in agro-industrial development. (Kaonga, Mwau, & Poulton, 2023; IFPRI, 2022).

Kenya continues to import over 90% of its edible oil needs, mainly in the form of crude palm oil from international markets (FAO, 2022; KNBS, 2023). This import dependency not only drains foreign exchange but also undermines the development of a potentially transformative domestic oilseed sub-sector. Preliminary observations reveal that smallholder farmers, who constitute the majority of producers, face numerous production challenges such as poor access to certified seeds, low mechanization, limited extension support, and inadequate market infrastructure (KIPPRA, 2022). Moreover, despite the existence of multiple regulatory bodies such as the Ministry of Agriculture and Livestock Development (MoALD), the Agriculture and Food Authority (AFA), and the Kenya Bureau of Standards (KEBS) the sector lacks a coherent, well-coordinated policy strategy targeting oilseed crops specifically (AFA, 2022; MoALD, 2023). These policy and legislative shortcomings have led to fragmented support services, minimal investment in research and value chain development, and low private sector engagement.

Kenya stands to lose significant economic opportunities, including billions in foreign exchange spent on imports, job creation, and rural income generation. It would also hinder the development of agro-industries, increase vulnerability to global supply chain disruptions, and perpetuate nutritional insecurity due to continued reliance on less healthy imported oils. Environmentally, the underutilization of arid lands and missed adoption of climate-resilient crops would limit progress in sustainable agriculture. As a result, Kenya risks falling short on several Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being) and SDG 12 (Responsible Consumption and Production). By appraising these policy and institutional frameworks and identifying key production challenges, this study intends to contribute to evidence-based recommendations that can support the development of a sustainable, locally driven oilseed crop industry in Kenya.

1.3 Research Objectives

1.3.1 General Objective of the Study

The general objective of the study was to appraise Kenya's agricultural policy and legislative framework affecting oilseed crop production.

1.3.2 Specific Objectives

1. To appraise Kenya's agricultural policy and legislative framework for oilseed production and identify gaps and emerging issues.
2. To assess the challenges facing the oil seed crop sub sector.

1.4 Research Questions

- 1) How do Kenya's agricultural policies and legislative frameworks affect oilseed production, and what gaps and emerging issues are there in the sub-sector?
- 2) What are the key challenges facing the oilseed crop sub-sector in Kenya?

1.5 Scope of the Study

This study was confined to a focused assessment of the policy and legislative environment influencing oilseed crop production in Kenya. It specifically explored the institutional and regulatory frameworks that affect the performance of the oilseed sub-sector, with an emphasis on identifying gaps and recommending strategic policy enhancements.

This study focused on an appraisal of Kenya's agricultural policy and legislative framework affecting oilseed crop production examining how policy gaps inhibit sectoral development, specifically addressing the challenges facing the sector. The study relied on primary data from key informant interviews and secondary data on the Crop Act implementation from 2013 to date to evaluate its impact. Geographically, the study was limited to Kenya, with a focus on selected stakeholders representing diverse population to provide an inclusive and balanced assessment of the Kenya's Crop Act, 2013. It engaged key stakeholders, including the informants, comprising policymakers at the Ministry of Agriculture, KALRO, KENAFF Officials, AFA Officials, and County Agriculture Officers.

1.6 Significance and Justification of the Study

This study provides a timely contribution to Kenya's ongoing efforts to transform its agricultural sector by focusing on the underdeveloped yet high-potential oilseed crop sub-sector. The significance of this study lies in its potential to inform evidence-based

policymaking and guide strategic interventions that support the sustainable growth of the domestic oilseed industry.

Firstly, the findings will benefit government agencies such as the Ministry of Agriculture and Livestock Development (MoALD) and the Agriculture and Food Authority (AFA), by identifying gaps in the current policy and legislative frameworks. These insights will support the revision and implementation of targeted policies that align with the Agricultural Sector Transformation and Growth Strategy (ASTGS), which seeks to enhance value chains and reduce import dependency (MoALD, 2023; AFA, 2022).

Secondly, Oilseed crops offer a diversification opportunity for smallholder farmers, who often face income insecurity due to climate related shocks and unstable market prices. By shedding light on the challenges at the production level such as limited access to certified seeds, poor extension services, and inadequate market linkages the study will contribute to the design of more inclusive programs that enhance farmer participation and profitability (KIPPRA, 2022).

Also, for processors and private investors, the study provides critical information on domestic sourcing opportunities and the regulatory environment surrounding oilseed processing. This can inform strategic investment decisions and foster stronger backward linkages with local producers, ultimately reducing the need to import crude palm oil (FAO, 2022).

Partners and NGOs engaged in agricultural development will benefit from the research findings when designing donor-funded interventions or advocating for policy reforms that promote food security, rural employment, and agribusiness development.

Lastly, the study also contributes to the academic discourse on agricultural policy analysis and industrial crop development in Sub-Saharan Africa. It offers a foundation for further research into sustainable oilseed production, value chain economics, and climate-resilient cropping systems.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the impact of policy measures on the production and performance of Kenya's edible oil industry, existing theoretical literature and relevant studies that have been conducted in relation to the research problem. It aims to provide a deeper understanding of the issues under investigation by offering insights into previous work. The chapter outlines the theoretical framework that underpins the study, alongside the empirical studies that inform the research. It concludes by presenting the conceptual framework that guides the study's approach and analysis.”

2.2 Theoretical Framework

A theoretical framework refers to a conceptual structure that plans the key concepts, theories, and factors that lead a research study or academic review. It provides a foundation for understanding and analyzing a specific phenomenon or problem. The study was anchored on Institutional Theory and Policy Implementation Theory.

2.2.1 Institutional theory

Institutional theory was introduced in the late 1970s, with key contributions from John Meyer, Brian Rowan, and W. Richard Scott. Their work focused on how organizations are shaped by their environments, including societal, state, and global influences. The theory explores how organizations adapt to and are influenced by the norms, rules, and expectations of their institutional environments to gain legitimacy and survive. (Meyer & Rowan, 1977; Scott, 1987, 2008).

It is a foundational concept in social sciences that examines how institutions defined as the formal rules, informal norms, and organizational structures shape human behavior and organizational practices. The theory asserts that institutions are not just background frameworks but active forces that influence how policies are developed, interpreted, and implemented (Scott, 2008). Institutions can be governmental bodies, regulatory agencies, cultural practices, or societal norms that confer legitimacy and structure to individual and collective actions.

According to W. Richard Scott (2008), institutions operate through three pillars: Regulative structures which include laws, policies, penalties, normative structures that entail social norms,

expectations, and roles, and Cultural-cognitive structures which include beliefs and assumptions. Each of these structures can either enable or constrain policy development and implementation, depending on how they interact with institutional actors and systems. Organizations, such as government ministries, cooperatives, and agribusinesses, often align their actions with institutional expectations to gain legitimacy and access to resources.

Institutional Theory, while widely respected and applied across disciplines such as sociology, political science, and organizational studies, has attracted several criticisms over the years. One of the main critiques is that Institutional Theory places too much emphasis on the maintenance of stability and conformity, often neglecting how organizations innovate or change in response to dynamic environments (Greenwood et al., 2008). The theory tends to portray institutions as rigid and slow to evolve, which can overlook the agency of actors such as farmers, cooperatives, or NGOs in driving bottom-up change. In Kenya's oilseed context, this limitation may understate how informal actors adapt or bypass weak policies, such as by forming informal cooperatives or engaging in cross-border seed trade

Institutional Theory is relevant to the study as it is concerned with how existing formal policies, regulatory frameworks, and institutions affect the development of the oilseed sub-sector. In the Kenyan context, the oilseed sector is influenced by both formal rules (e.g., the Crops Act, 2013; Agriculture and Food Authority Act, 2013) and informal practices, such as policy neglect or a historical preference for other staple crops like maize or tea (KIPPRA, 2022). Institutional Theory helps in understanding how such dynamics affect the allocation of resources, policy implementation, and value chain development. For instance, Kenya's oilseed crops continue to be under prioritized due to institutional inertia and weak alignment among key actors. The lack of regulatory enforcement, limited stakeholder engagement, and overlapping mandates among government institutions such as the Ministry of Agriculture and Livestock Development (MoALD) and the Agriculture and Food Authority (AFA) are institutional constraints that affect the sub-sector (MoALD, 2023; AFA, 2022).

Institutional Theory sheds light on the systemic nature of these challenges. The weak institutional infrastructure such as under-resourced extension services, fragmented cooperatives, and a lack of certified seed systems is a product of both regulative gaps and normative disinterest (FAO, 2022). Moreover, farmers' behavior is influenced by historical perceptions that oilseeds are less profitable or unsupported by government policy a reflection of cultural-cognitive institutional influence. Institutional Theory also facilitates a structured critique of existing policies. It enables this study to assess how Kenya's agricultural

frameworks have been implemented, whether they align with national development goals, and how institutional weaknesses limit their effectiveness (Scott, 2008; Pressman & Wildavsky, 1984). The gap between policy design and real-world implementation illustrates a breakdown in institutional alignment and capacity.

2.2.2 Policy Implementation Theory

Policy Implementation Theory was introduced by Jeffrey Pressman and Aaron Wildavsky in their book "Implementation" published in 1973. Their work is often considered foundational in the field of policy implementation research. This theory seeks to understand the processes, challenges, and outcomes associated with turning policy decisions into actionable programs and tangible results. It bridges the gap between policy formulation and on-the-ground outcomes, emphasizing that a well-designed policy does not automatically lead to effective implementation (Pressman & Wildavsky, 1984). The theory emerged out of dissatisfaction with the assumption that public policies would automatically produce desired effects if logically designed. Scholars began to realize that the complexity of political, administrative, and social environments plays a major role in influencing how and whether policies are successfully executed (O'Toole, 2000). The theory is built around several key principles which include: Policy clarity and consistency, Institutional capacity, Stakeholder involvement, Inter-agency coordination and Political and social environment: Policy clarity and consistency states that the more coherent and specific a policy is, the easier it is to implement (Mazmanian & Sabatier, 1983). On the other hand, Institutional capacity states that Effective implementation depends on the availability of financial, human, and logistical resources. Stakeholder involvement stipulates that engagement of target groups like farmers, cooperatives, processors improve compliance and effectiveness. For the Inter-agency coordination, multiple actors involved in implementation must communicate and cooperate to avoid redundancy or conflict (O'Toole, 2000; Pressman & Wildavsky, 1984). Lastly, Political and social environment states that Political will, bureaucratic support, and public attitudes can greatly affect implementation. (Matland, 1995; Hill & Hupe, 2002).

Even though Policy Implementation Theory has significantly contributed to our understanding of the complex processes between policy formulation and on-the-ground outcomes, it has been subject to critical scrutiny over the years. The key criticisms of Policy Implementation Theory especially in the context of agricultural policy in developing countries such as Kenya is that early top-down approaches to implementation, such as those by Pressman and Wildavsky (1984), have been criticized for oversimplifying the policy process. These models assumed that

if policy goals were clear and administrative machinery was in place, successful implementation would follow. Critics argue that such assumptions fail to capture the complexity, ambiguity, and dynamism of real-world policy environments (Sabatier, 1986). In Kenya's case, national oilseed policies may seem well-structured on paper, yet implementation at the county level reveals significant variation due to political, economic, and cultural contexts not accounted for in linear models.

Critics also argue that traditional implementation theory underestimates the role of power, politics, and institutional interests in shaping outcomes (Hill & Hupe, 2002). Policies are not implemented in a vacuum; they are subject to negotiation, resistance, and compromise among actors with divergent interests. In Kenya, oilseed policies may be undermined by political favoritism toward dominant crops like maize or tea. Powerful lobbies may influence funding and attention allocation, yet classic implementation theory often overlooks these dynamics.

The relevance of this theory to this study is that, Kenya's oilseed crop sub-sector presents a textbook case for applying Policy Implementation Theory. While the government has introduced several agricultural policy frameworks such as the Agricultural Sector Transformation and Growth Strategy (ASTGS), The Crops Act (2013), and the National Edible Oil Crop Promotion Project (NEOCPP) implementation has often been ineffective or inconsistent (MoALD, 2023; AFA, 2022). Many policy documents lack explicit strategies tailored for oilseed crops, often grouping them within the broader category of industrial or horticultural crops. This lack of specificity hinders focused implementation and dilutes resource allocation (KIPPRA, 2022). Multiple agencies including the Ministry of Agriculture, the Agriculture and Food Authority (AFA), and county governments share overlapping mandates, resulting in poor coordination. Additionally, many of these institutions suffer from limited financial and technical capacity, further hindering implementation (FAO, 2022). Implementation has also been hampered by insufficient engagement with local farmers, cooperatives, and private sector players. Policy decisions are often made at the national level without adequate input from grassroots actors, weakening buy-in and compliance (IFPRI, 2022). Changes in leadership, shifting political priorities, and bureaucratic inertia frequently stall or redirect implementation efforts. For example, devolution has led to variability in how counties support oilseed production, with some treating it as a priority and others largely ignoring it (MoALD, 2023).

The application of Policy Implementation Theory in this research allows for a comprehensive analysis that moves beyond surface-level critiques of policy documents. It brings attention to

Structural constraints in implementing agencies, Local dynamics affecting uptake by farmers, Resource flows and how they are managed, and Institutional incentives that may or may not align with stated goals. By doing so, it enables the identification of reform opportunities that are not only policy-focused but implementation-sensitive.

2.2 Empirical Literature Review

2.3.1 Policy gaps and emerging issues.

Tibamanya (2022), in a study on the drivers and barriers to adoption of improved sunflower varieties, highlighted that farmer decisions are shaped by a mix of socio-economic, institutional, and market-related factors. Access to quality seed, extension services, and credit were identified as key adoption drivers, while challenges such as high input costs, weak seed systems, and inadequate awareness constrained uptake. The study emphasizes that bridging information gaps and strengthening institutional support structures are critical for improving adoption levels.

Similarly, Omondi et al. (2021) examined factors limiting soybean yield in Southern Africa and found that productivity was constrained by low soil fertility, limited access to improved germ plasm, poor crop management practices, and recurrent pest and disease outbreaks. The authors stressed that yield gaps were largely attributable to management-related inefficiencies rather than solely genetic potential, suggesting that integrated soil fertility management, improved extension delivery, and access to quality inputs are necessary to unlock soybean's potential.

Odunga et al. (2025) analyzed the peanut value chain in the Lower Lake Victoria Basin of Kenya and revealed that farmers faced numerous challenges, including poor access to improved seed, weak extension support, and limited market linkages. The study noted that while peanuts hold significant potential for enhancing food security and income, systemic weaknesses in value chain coordination and lack of structured markets continue to undermine competitiveness. Strengthening collective marketing, developing agro-processing infrastructure, and building farmer–market linkages were recommended to boost the peanut sector.

Complementing this, Lokosou (2022) provided evidence from West Africa on the impacts of improved groundnut varieties. The study demonstrated that adoption of improved varieties significantly enhanced yields, farm incomes, and resilience to climate shocks. However,

diffusion remained uneven due to limited seed availability, affordability constraints, and inadequate policy support. The findings suggest that while improved varieties can drive transformative impacts, broader institutional reforms in seed systems and extension delivery are needed to achieve widespread adoption.

Mwangi et al. (2025) advanced the debate by applying multi-trait and genotype $\times$ environment (G $\times$ E) analysis in soybean selection in Kenya. Their results showed that accounting for trait interactions and environmental variability significantly improves selection accuracy and breeding efficiency. This methodological advancement offers a pathway for tailoring soybean varieties to specific agro-ecological zones, thereby enhancing productivity. The study underscores that incorporating advanced breeding techniques into national breeding programs could accelerate varietal improvement and adoption.

Similarly, studies on sunflower production have underscored the importance of both environmental and management factors. Beteri, Lyimo, and Msinde (2024) assessed the influence of climatic and environmental variables on sunflower planting-season suitability in Tanzania and revealed that rainfall variability, temperature fluctuations, and soil characteristics strongly influence yield outcomes. They warned that climate change may exacerbate these risks, making adaptive measures and climate-resilient breeding crucial.

Joseph, Kambwily, and Emmanuel (2025) investigated the effects of planting windows on grain and oil yield under rain fed sunflower in Kilwa District, Tanzania. Their findings confirmed that early planting aligned with rainfall patterns produced superior grain and oil yields, while late planting reduced both yield and oil quality. Despite being a cost-effective strategy, adoption was limited by lack of weather information, delayed input supply, and competing labor demands. The study recommends integrating agro-meteorological services with farmer training to improve synchronization of planting schedules.

Beyond sunflower and soybean, other underutilized oilseeds such as sesame are gaining attention for their potential contributions to livelihoods. Kitilio (2022), in a study on sesame production characteristics and challenges in Western Kenya, found that farmers primarily relied on low-yielding local landraces, faced limited access to improved seed, and contended with pest and disease challenges. Structural barriers such as poor post-harvest handling, weak market organization, and lack of policy support further constrained sesame's development. Nevertheless, the study emphasized that sesame's climate resilience and suitability for semi-

arid areas position it as a strategic crop for diversification, provided seed systems, extension services, and value chains are strengthened.

These studies reveal a consistent set of challenges across oilseed crops in sub-Saharan Africa: limited access to improved varieties, weak seed systems, poor extension delivery, environmental stresses, and market inefficiencies. However, they also highlight promising pathways for improvement, including advanced breeding approaches (Mwangi et al., 2025), adoption of improved varieties (Lokosou, 2022), and climate-informed management strategies (Beteri et al., 2024; Joseph et al., 2025). Evidence from value chain analyses (Odunga et al., 2025; Kitilio, 2022) further suggests that productivity gains must be matched with structural improvements in marketing and policy support to ensure sustainability. Collectively, the literature underscores that enhancing oilseed productivity and adoption requires a multi-pronged approach that integrates technological, environmental, institutional, and market dimensions.

2.3.2 Challenges Facing the Oil Seed Crop Sub Sector

One of the foremost challenges is the limited prioritization of oilseed crops in Kenya's agricultural policy and planning documents. While crops like maize, dairy, and horticulture enjoy flagship status in the Agricultural Sector Transformation and Growth Strategy (ASTGS), oilseeds are largely overlooked (MoALFC, 2019). The Kenya National Agricultural Investment Plan (NAIP II) similarly excludes oilseed crops from its core funding pillars, limiting the flow of public and donor resources to this sub-sector (IFPRI, 2022). As a result, counties are not incentivized to allocate resources toward oilseed development in their County Integrated Development Plans (CIDPs), further reinforcing neglect at the sub-national level (KIPPRA, 2022).

The institutional environment governing oilseed production is fragmented, with overlapping and sometimes conflicting mandates among key bodies such as the Ministry of Agriculture, the Agriculture and Food Authority (AFA), Kenya Plant Health Inspectorate Service (KEPHIS), and county agricultural departments. This fragmentation leads to regulatory duplication, poor service delivery, and confusion among farmers and processors (IFPRI, 2022). For example, licensing, seed certification, and marketing oversight often involve multiple agencies without a clear chain of accountability, impeding the development of a coherent oilseed value chain strategy.

Access to certified, high-yielding, and climate-resilient oilseed varieties remains a major bottleneck. Kenya's National Agricultural Research System (NARS), led by KALRO, has historically focused on staple and export crops, allocating minimal funding to oilseed research (FAO, 2022). The Seed and Plant Varieties Act (Cap 326) imposes complex and expensive procedures for variety registration, discouraging both public and private breeders from introducing new oilseed varieties. This leads to a limited number of certified varieties available in the market and widespread reliance on recycled seed, which undermines productivity and quality (KIPPRA, 2022).

Oilseed farmers, particularly in semi-arid counties, have limited access to extension services tailored to their crops. Many agricultural officers are not trained in oilseed agronomy, pest and disease control, or post-harvest management. This knowledge gap results in low yields, high post-harvest losses, and limited adoption of best practices. According to a study by IFPRI (2022), less than 30% of smallholder oilseed farmers had access to relevant extension support in the past three years. The situation is further exacerbated by low farmer awareness of the commercial potential of oilseed crops and poor access to market information.

Oilseed value chains in Kenya suffer from weak market integration, characterized by inconsistent buyer presence, poor price discovery, and a lack of formalized aggregation systems. Most farmers sell their produce through informal channels at low farm-gate prices, discouraging investment in the crop. Additionally, oilseed processing capacity is limited, especially in rural areas, which leads to high transportation costs and post-harvest spoilage. The few existing processors often prefer importing crude oil due to unreliable local supply and quality concerns (Kaonga, Mwau, & Poulton, 2023).

Mannucci et al. (2023), in their article titled “Sustainable nutrition and the case of vegetable oils to match present and future dietary needs”, present a global review aimed at reconciling the nutritional role of vegetable oils with their environmental and sustainability implications. The primary objective of the study was to evaluate the complex trade-offs between health, sustainability, and dietary adequacy in the consumption and production of vegetable oils. While the research adopts a global scope, its insights offer valuable implications for Eastern and Southern Africa (ESA), a region where vegetable oils are both nutritionally vital and economically strategic.

The study identifies vegetable oils as central to global food systems, providing 20–30% of dietary energy in many countries and serving as critical sources of essential fatty acids and fat-soluble vitamins. However, the authors emphasize that different oils (e.g., palm, sunflower, soybean, and groundnut) exhibit vastly different environmental footprints and health implications. Despite the depth of analysis, Mannucci et al. (2023) identify a critical gap that limit the design and implementation of sustainable vegetable oil strategies. The study finds that many consumers receive conflicting information about which oils are “healthy” or “sustainable.” This challenge is pronounced in low-literacy regions such as parts of ESA, where clear, accessible dietary guidelines are essential but often lacking.

Hossain and Norain (2023), in their article titled “Impact of Edible Oil Import on GDP Growth in Bangladesh: A Panel Analysis”, aimed to assess the trend and effect of selected edible oil imports on GDP growth in Bangladesh. The study covered a period of 26 years (1995–2020), using secondary data obtained from the Bangladesh Bureau of Statistics and other official sources. The specific objectives were to evaluate trends in edible oil imports, establish the relationship between edible oil imports and economic growth, and determine the effect of such imports on GDP. Using a panel regression model, the study analyzed the relationship between the money value and quantity of imported edible oils and GDP. The model selection was validated through diagnostic tests including the Wald test and Hausman test, which led to the application of a fixed effects model. The oils considered in the analysis included palm oil, soybean oil, mustard oil, groundnut oil, and others, totaling eleven types. The analysis only considered two independent variables quantity and monetary value of oil imports while GDP is influenced by multiple other macroeconomic factors. This limits the explanatory power of the model.

Bachewe, Minten, and Tamru (2022), in their study titled “Towards Edible Oil Self-Sufficiency in Ethiopia: Lessons and Prospects”, sought to investigate the structure, challenges, and opportunities within Ethiopia’s edible oil sector, with a specific focus on self-sufficiency strategies. The study’s objective was to assess production patterns, processing industry dynamics, import trends, and government interventions, and to recommend pathways toward reducing dependency on imported edible oils. Using a mixed-methods approach comprising secondary data analysis, stakeholder interviews, and firm-level surveys—the study revealed Heavy Import Dependency, Underdeveloped Domestic Production, Processing Industry Challenges, and Price Volatility and Supply Gaps in Ethiopia’s edible oil sector: The study also highlights several systemic and knowledge gaps that constrain the transformation of the edible

oil sector which included: Lack of Coordinated Value Chain Development, Absence of Long-Term Production Incentives Weak Technological Adoption and Over centralized Imports and Price Controls.

2.4 Summary of Literature and Research Gaps

Table 2. 1 Summary of Literature and Research Gaps

Author(s)	Objectives/Purpose	Key Findings	Research Gaps	Focus of This Study
Omondi et al. (2024)	To quantify factors limiting soybean yield in Southern Africa using yield gap decomposition.	Variety choice, seed rate, and disease control explain majority of yield gaps. Proper management could close ~60% of yield losses.	Conducted outside Kenya; limited applicability to Kenyan conditions. Socio-economic adoption dynamics not assessed.	To analyze soybean yield constraints within Kenyan contexts, integrating both agronomic and socio-economic factors.
Mwangi et al. (2025)	To evaluate soybean selection in Kenya using multi-trait and G×E analysis.	G×E-informed varietal selection improved yield stability by 15.6%.	Based on trial environments; ignored smallholder realities and seed distribution issues.	To investigate farmer-level varietal performance and adoption barriers.
Joseph et al. (2025)	To assess effects of planting windows on sunflower yield under rain fed conditions in Tanzania.	Planting date deviations led to reduced yields and oil content.	Location-specific to Tanzania; socio-economic and extension factors not included.	To examine similar agronomic challenges in Kenya while incorporating farmer access to information.
Beteri et al. (2024)	To analyze climatic and environmental determinants of sunflower planting-season suitability.	Rainfall and temperature thresholds critical for sunflower viability.	Did not address farmer adaptation, socio-economic or market constraints.	To validate climatic suitability in Kenya while integrating farmer adaptation strategies.
Tibamanya (2022)	To explore drivers and barriers to adoption of improved sunflower varieties.	Key barriers: seed access, liquidity constraints, and risk aversion. Enablers: groups, demos, contracts.	Yield and livelihood impacts of adoption not assessed; limited gender analysis.	To investigate adoption Dynamics alongside Yield outcomes in Kenya
Kitilio (2022)	To document production characteristics and challenges in Western Kenya's sesame sector.	Low yields, poor access to certified seed, post-harvest losses, and weak markets identified.	Largely descriptive; lacked empirical trials and economic quantification of losses.	To combine field data with economic analysis of sesame sector constraints.

Odunga et al. (2025)	To map peanut value chain in the Lower Lake Victoria Basin.	Aflatoxin, weak aggregation, and low processing capacity hinder sector growth.	Recommendations broad; lacked cost-benefit and varietal innovation insights.	To examine varietal improvement in tandem with value-chain development.
Lokosou (2022)	To assess the impacts of improved groundnut varieties in West Africa.	Improved varieties increased yields and marketed surpluses.	Conducted outside Kenya; did not address aflatoxin or post-harvest issues.	To assess improved varieties in Kenya alongside aflatoxin control and market linkages.
Tuei (2023)	To explore the availability of vegetable edible oils in Kenya and assess their potential health implications.	Kenya relies heavily on imported palm oil; high intake of palm oil associated with health risks; local production is low; market dominated by a few processors.	Lack of comprehensive consumer data on oil preferences; limited health policy interventions; inadequate monitoring of oil adulteration and reuse.	Investigate policy, health, and trade aspects of edible oil consumption and production in Kenya for sustainable development.
Kaonga et al. (2023)	To assess market concentration, structure, and entry barriers in the vegetable oil sector across seven ESA countries.	High market concentration, pricing power among few firms, barriers to entry, and regional integration of dominant firms.	Weak competition enforcement, lack of regional coordination, insufficient transparency in pricing data.	Examine competition, pricing, and policy impacts in Kenya's edible oil market.
Mannucci et al. (2023)	To evaluate nutritional and environmental trade-offs of vegetable oil consumption globally.	Different oils have varied health and ecological impacts; lack of integrated metrics; palm oil has highest environmental footprint.	Poor data on non-palm oil crops, weak consumer guidance, lack of cultural context in dietary advice.	Assess how global health and sustainability concerns relate to Kenya's edible oil policies.
Hossain & Norain (2023)	To investigate the impact of edible oil imports on GDP growth in Bangladesh using panel analysis.	Oil imports negatively impact GDP due to rising foreign exchange costs; price volatility exacerbates economic pressure.	Limited variable scope, no sectoral disaggregation, and Bangladesh-specific findings.	Compare economic effects of edible oil imports on domestic production and pricing in Kenya.
Bachewee et al. (2022)	To evaluate Ethiopia's potential for edible oil self-sufficiency and the challenges of current policies.	Heavy import reliance, low domestic production, weak processing technology, ineffective policy interventions.	Lack of coordinated value chain development, outdated tech, poor market data.	Draw lessons for improving Kenya's edible oil self-reliance through policy and private sector development.
MoALD (2019)	To provide a 10-year strategy	Prioritized nine flagship interventions	No strategic focus on oilseeds in	Analyze policy omissions and

	(ASTGS) to transform Kenya's agriculture	and key value chains (maize, dairy, potatoes); oilseeds excluded	national frameworks	implications for oilseed development
KIPPRA (2022)	To assess the oilseed value chain in Kenya and propose policy options	Oilseeds face neglect in funding, extension, and research; counties inconsistently prioritize them	Lacks detailed analysis of how ASTGS and CIDPs impact oilseed planning	Evaluate oilseed policy treatment within national and county strategies
FAO (2021)	To analyze Kenya's oilseed value chain and identify bottlenecks	Weak seed systems, low productivity, poor farmer access to inputs	No deep policy linkage or institutional review provided	Connect value chain weaknesses to regulatory and policy gaps
IFPRI (2022)	To examine stakeholder engagement in agricultural policy in Kenya	Institutional fragmentation and poor coordination undermine implementation	Limited crop-specific analysis; lacks oilseed-specific focus	Focus on oilseed-specific institutional challenges and coordination failures
KALRO (2021)	To provide insights into oilseed research progress in Kenya	Poor adoption of improved varieties due to lengthy registration and low seed commercialization	Does not explore private-sector constraints or national policy barriers	Investigate seed policy impact on oilseed value chain actors
DAFF (2018)	To track soybean growth in South Africa through public-private models	Market-led interventions, research, and processing investments enabled growth	No contextual comparison with Kenya	Offer comparative insights for domestic policy benchmarking
Ministry of Agriculture-India (2023)	To provide agricultural production data and policy updates	India supports oilseeds through National Missions and subsidies; reduced import burden	Lacks regional analysis of impact beyond India	Contrast Kenya's policy gaps with India's proactive oilseed models
KNBS (2023); World Bank WITS (2024)	To provide economic and trade statistics	Kenya imports over 90% of edible oils (worth KSh 100+ billion annually)	Does not explain policy reasons for local production underperformance	Quantify the economic rationale for oilseed policy prioritization

2.5 Conceptual Framework

According to Lindgreen, Di-Benedetto, Brodie, and Jaakkola (2021), conceptual framework illustrates the relationship between the practices and the response variable.

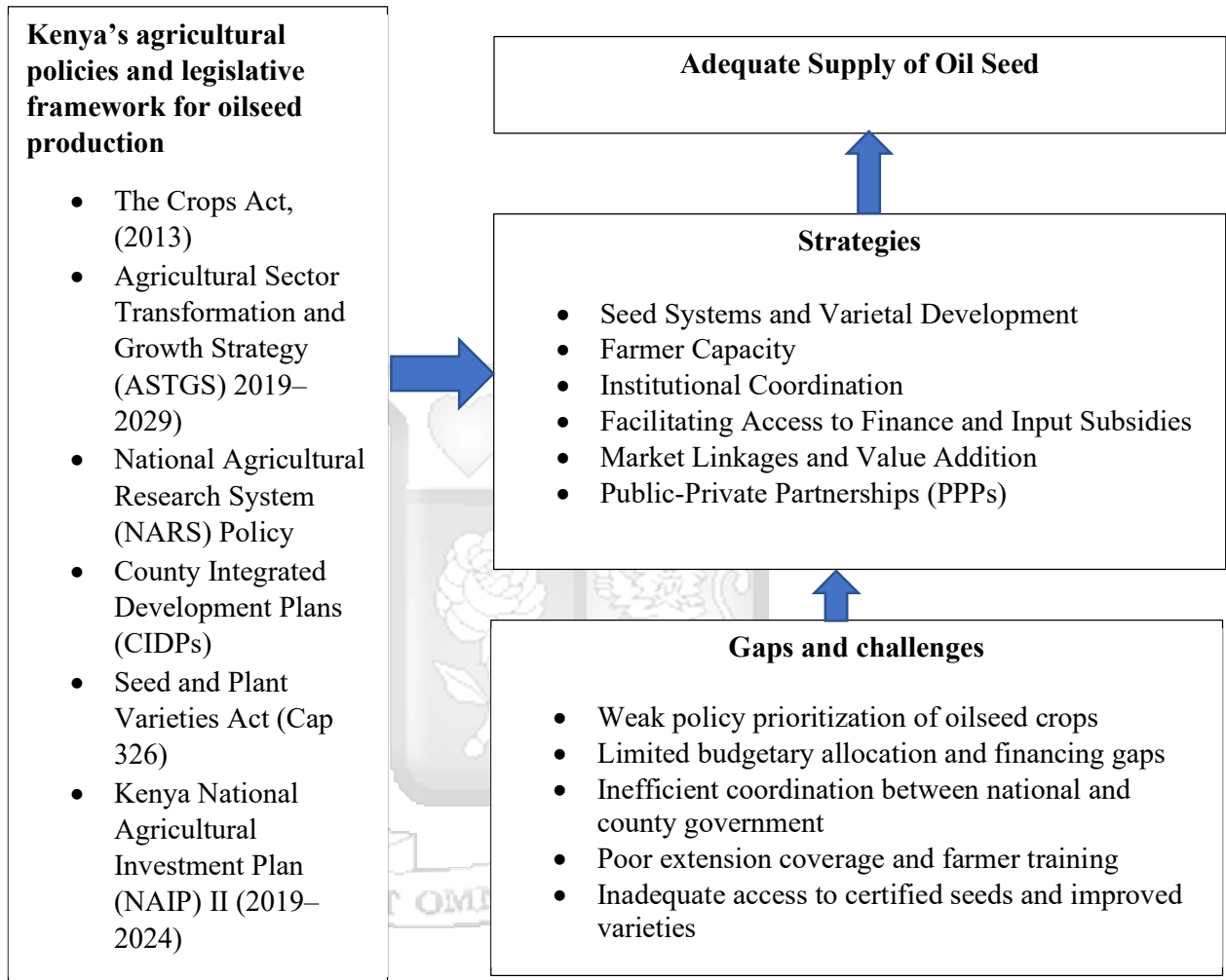


Figure 2. 1 Conceptual Framework

Source: Author, 2026

1.7 2.6 Chapter Summary

This chapter established the theoretical and empirical foundations that underpin the study's examination of Kenya's agricultural policy and legislative framework as it relates to oilseed crop production. The chapter was organised into four main sections: the theoretical framework, the empirical literature review, a summary of literature and research gaps, and the conceptual framework.

The theoretical framework drew on two complementary bodies of theory. Institutional Theory, as developed by Scott (2008) and building on the foundational work of Meyer and Rowan (1977), provided a lens for understanding how formal rules, informal norms, and organisational structures shape the behaviour of actors within Kenya's oilseed policy environment. The theory's three pillars; regulative, normative, and cultural-cognitive were applied to illuminate how institutional inertia, overlapping mandates, and historical preference for staple crops such as maize and tea have collectively marginalised oilseeds within Kenya's agricultural governance architecture. Policy Implementation Theory, introduced by Pressman and Wildavsky (1984) and extended by scholars including Mazmanian and Sabatier (1983), O'Toole (2000), and Matland (1995), complemented this analysis by focusing on the conditions necessary for effective policy execution. The theory directed attention to five key dimensions; policy clarity, institutional capacity, stakeholder involvement, inter-agency coordination and the political and social environment, each of which, the review demonstrated, is compromised within Kenya's oilseed subsector. Together, the two theories provided a robust and mutually reinforcing analytical scaffold for interpreting both the design failures and the implementation shortcomings identified in subsequent chapters.

The empirical literature review surveyed a wide body of regional and international studies relevant to the research problem. Evidence from sub-Saharan Africa consistently pointed to a recurring set of constraints across oilseed crops including limited access to certified seed, weak extension systems, poor market integration, environmental stresses and insufficient policy attention that closely mirror the challenges observed in Kenya. Studies on sunflower (Tibamanya, 2022; Beteri et al., 2024; Joseph et al., 2025), soybean (Omondi et al., 2024; Mwangi et al., 2025), groundnuts (Lokosou, 2022; Odunga et al., 2025), and sesame (Kitilio, 2022) collectively underscored that productivity shortfalls are driven not only by agronomic factors but also by structural and institutional deficiencies in seed systems, value chains, and policy frameworks. At the national level, studies by KIPPRA (2022), FAO (2022), IFPRI

(2022), and KALRO (2021) documented Kenya's specific challenges, including the exclusion of oilseeds from flagship policy instruments such as ASTGS and NAIP II, fragmented institutional mandates, and chronic underinvestment in research and extension. Comparative insights from Ethiopia (Bachewe et al., 2022), South Africa (DAFF, 2018), India (Ministry of Agriculture, 2023), and Bangladesh (Hossain and Norain, 2023) further contextualised Kenya's experience within a broader international landscape, highlighting both the scale of the import dependency challenge and the transformative potential of targeted policy intervention.

The summary of literature and research gaps, presented in Table 2.1, systematically mapped the focus, findings, and limitations of each reviewed source. A clear pattern emerged: while existing studies have made significant contributions to understanding oilseed constraints at the agronomic, value chain, and macroeconomic levels, most are conducted outside Kenya, lack crop-specific policy analysis, or fail to link value chain weaknesses to the institutional and regulatory environment. This study was positioned to address these gaps by providing a Kenya-specific, policy-focused appraisal that integrates institutional analysis with empirical evidence from key actors across national and county levels.

The chapter concluded with the conceptual framework, which synthesised the theoretical and empirical insights into a structured analytical model. The framework positioned Kenya's oilseed subsector as a system shaped by the interaction of formal policy and legislative structures, institutional behaviour and coordination mechanisms, and farm-level outcomes, thereby providing a coherent guide for data collection, analysis, and interpretation in the chapters that follow.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the research philosophy, research design and target population, sampling technique, sample size determination, data collection methods, data analysis and ethical considerations.

3.2 Research Philosophy

This is a belief about the way in which data about a phenomenon should be gathered analysed and used. It is the foundation of knowledge which assists the researcher to expose, understand and minimize research biases (Sekaran & Bougie, 2010). This study adopted the pragmatism approach. The pragmatism approach is based on the view that reality is dynamic and multiple, and that knowledge should be judged by its practical consequences and usefulness. It emphasizes methodological flexibility, allowing the researcher to draw on both qualitative and quantitative techniques depending on what best addresses the research problem. In this way, pragmatism is grounded on practicality, problem-solving, and methodological pluralism, focusing on generating findings that are relevant and applicable in real-world contexts (Morgan, 2014).

3.3 Research Design

To gain in-depth insights and provide a comprehensive understanding of the research topic, an exploratory qualitative approach was adopted. According to Boddy, (2019), “this research method often focuses on developing a depth of understanding rather than breadth, particularly when undertaken under a positivism paradigm or within the scope of depth psychology.”

The study design aimed to establish a systematic approach for addressing the research questions, objectives, problem of interest, target population, and sampling procedures (Garcia et al., 2019) giving more insights on the challenges affecting the implementation of the Crops Act (2013).

3.4 Population and Sampling

According to Cooper and Schindler (2014), “study's target population comprises respondents with characteristics or reliable understanding of the research problem.” Banerjee & Chaudhury (2010) refer to target population as “a specific subset or segment within the larger population

that is the primary focus of a study, intervention, or marketing strategy. “Target population alludes to the bigger population used by the researcher to make a conclusion on the results of the study. It is the entire group of people, things or objects the researcher has chosen to study” (Munyuko, 2015).

This study employed purposive sampling to select a sample that accurately represents the target population for both in-depth interviews and key informant interviews (Sarstedt et al., 2017). The researcher continued interviewing participants until data saturation was achieved, where adding more participants no longer provides new significant information. This concept is often referred to as the power of information (Baker & Edwards, 2012). While saturation is ideal, experts provide numerical guidance, suggesting an average sample size of 20 for a master’s thesis and 50 for a PhD (Baker & Edwards, 2012). Neuman (2003) argues that the most important element in qualitative research is saturation and not representativeness and the size of the sample is not statistically derived.

For this study, a total of 24 participants was enrolled. The study targeted four policymakers at the Ministry of Agriculture Livestock and Development, four AFA directors, four county agriculture officers, eight KENAFF officers and four KALRO officers. This sampling approach ensured a balanced representation of perspectives, contributing to a holistic understanding of the policy’s gaps and implementation challenges.

3.5 Data Collection Methods

A well-designed study with a representative sample size is essential for producing accurate results that reflect the target population. To ensure reliability, adequate time must be allocated for data collection, as insufficient or inaccurate data can undermine the validity of the findings (Kabir, 2016). While selecting an appropriate data collection method is a critical aspect of research planning, it alone does not guarantee the overall success of a research project (Olsen, 2012).

Data collection instruments refer to the tools used to gather information and the processes involved in their development (Saunders et al., 2014). Primary data was gathered through, key informant interviews by utilizing semi-structured questionnaires combined with interviews (Taherdoost, 2021). This study employed Key Informant interviews. By adopting a comprehensive data collection approach, the research aimed to provide valuable insights into human behavior, attitudes, and the key challenges being investigated.”

3.6 Research Quality-Validity, Reliability and Objectivity of the research

Reliability in this qualitative study was achieved using consistent interview guides across all respondents. By standardizing these tools, the research ensures that data collection is uniform and systematic, minimizing potential biases and enhancing the credibility of the findings (Creswell & Creswell, 2022). Validity was addressed by ensuring that the data collection instruments are directly aligned with the research objectives and have been reviewed by experts in Kenya's agricultural sector as well as oilseed crop production.

This expert review helps confirm that the instruments accurately measure what they are intended to measure and are relevant to the study's aims (Merriam & Tisdell, 2022). Triangulation was employed to enhance the credibility of the findings by combining data from multiple sources document analysis and semi-structured interviews. This approach helps to cross-verify information and provides a more comprehensive view of the research problem (Flick, 2022).

3.7 Data Analysis

Data analysis involved identifying patterns within the data and interpreting those patterns by explaining their underlying causes (Creswell, 2014). The data collected from the researchers' write-up was transcribed and organized following each interview. The data was then coded through the transcripts, while the researcher took note of key remarks and observations, which contributed to the development of themes. This process resulted in a list of guiding words that informed the researcher's interpretation. The codes were analyzed to determine if multiple codes describe the same phenomenon, if the codes relate to categories in the literature review, or if the interviewees perceive links between multiple codes. The coding units were categorized by assigning the relevant data to their respective codes until saturation was achieved. This enabled the researcher to generate general theoretical ideas based on the emerging patterns and relationships. Data from document analysis was integrated by identifying cross-cutting codes and themes, which were grouped under the same codes. Themes, patterns, and relationships were derived from the data.

The thematic analysis in this study adopted a deductive approach, where themes were derived from existing theories, policy frameworks, and past research on the Crops Act (2013). This approach ensured that data analysis was structured and theory-driven, aligning with key themes such as institutional capacity, production and market challenges. However, while the study is primarily deductive, it allowed for some inductive flexibility to capture emerging patterns and

unexpected insights from the data. This hybrid approach strengthens the analysis by ensuring that findings are both grounded in established knowledge and open to new contextual realities identified during data collection

3.8 Ethical Considerations

The study sought ethical clearance from NACOSTI (National Commission for Science, Technology, and Innovation) License Ref No. 541957 and the Strathmore Research Ethics Committee Approval - SU-ISERC 2989/25 before data collection began. Strict ethical guidelines were followed throughout the process, including obtaining informed consent from participants and providing clear pre-study briefings to explain the study's purpose and potential implications. Confidentiality and anonymity were prioritized, with participants' personal information protected through anonymization and coding systems. Participation was voluntary, and individuals were given the right to withdraw from the study without any negative consequences. To minimize harm, the research team monitored participants' well-being and offered support as needed. Transparency was maintained by clearly reporting data collection and analysis methods, acknowledging any potential biases or limitations, and ensuring proper attribution and permissions for any copyrighted materials. There were no conflicts of interest that could affect the study's objectivity. This ethical framework reflects the study's commitment to responsible and ethical research practices.



CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter represents research findings arranged according to the two research objectives: to appraise Kenya's agricultural policy and legislative framework and identify gaps and emerging issues affecting oilseed production and, to assess the challenges facing the oilseed crop subsector. The findings were derived from the qualitative data collected through key informant interviews with officers from the Ministry of Agriculture Livestock and Development, Agriculture and Food Authority (AFA), Kenya National Farmers' Federation (KENAFF), County Governments, and the Kenya Agricultural and Livestock Research Organization (KALRO).

The analysis is structured around key thematic areas, each supported by frequencies and proportional percentages. These themes capture the dominant trends and commonalities observed across all respondents and participating institutions.

4.2 Response Rate

Out of the targeted 24 key informants, 17 participated, representing 70.83% response rate. This high participation enhanced the reliability and validity of the qualitative findings and ensured representation across national government, county government, and farmer-based institutions.

4.3 Profile of Key Informants

A total of seventeen key informants participated in the study, drawn purposively from five institutions; two from AFA, two from County Governments, six from KENAFF, five from MoALD, and two from KALRO, with direct mandates over Kenya's oilseed agricultural policy and production landscape. To protect the identity and confidentiality of participants, each informant has been assigned a unique code (KII01 through KII017) in accordance with the ethical requirements of this study. All quotations and references to individual responses throughout this chapter use these codes exclusively.

The informants represented a cross-section of professional roles in senior roles within their institutions, and levels of experience relevant to the research questions varying from 1 year to 23 years.

4.4 Appraisal of Kenya's Agricultural Policy and Legislative Framework Affecting Oilseed Production

Table 4. 1 Policy gaps and Legislative Framework Affecting Oilseed Production

Main Theme	Specific Areas Identified	AFA	COUNTY	KENAFF	MINISTRY	KALRO	TOTAL	Percent (%)
2.3 Policy prioritization and strategic positioning gaps	Low prioritization of oilseed crops	2/2	1/2	3/6	3/5	1/2	10/17	59
	Lack of strategic focus	1/2	1/2	4/6	4/5	2/2	12/17	71
	CIDP omission	1/2	1/2	2/6	3/5	-	7/17	41
Policy implementation and intergovernmental/ Institutional coordination gaps	Weak implementation	1/2	2/2	2/6	3/5	1/2	9/17	53
	Poor national-county coordination	2/2	1/2	2/6	4/5	1/1	10/17	59
	Overlapping mandates	-	1/2	2/6	2/5	1/2	6/17	35
	Limited stakeholder involvement in policy	1/2	2/2	1/6	2/5	1/2	7/17	41
	Resource limitations	1/2	1/2	1/6	3/5	1/2	7/17	41
Seed System Policy and Regulatory Weaknesses	Seed legislation weaknesses	1/2	1/2	2/6	2/5	1/2	7/17	41
	Lack of oilseed-specific seed strategy	1/2	1/2	1/6	3/5	1/1	7/17	41
	Regulatory enforcement gaps	1/2	1/2	2/6	3/5	-	7/17	41
Market and trade framework gaps	Absence of price regulation	1/2	-	2/6	2/5	2/2	7/17	41
	Weak market governance	1/2	-	2/6	2/5	1/2	6/17	35
	Policy gaps enabling cheap imports	1/2	-	-	3/5	1/2	5/17	29
Policy level research, innovation and extension gaps	Underfunded/ Low R&D investment	1/2	2/2	5/6	4/5	2/2	14/17	82
	Slow variety development	-	-	2/6	2/5	2/2	6/17	35
	Weak national extension policy support	1/2	1/2	2/6	3/5	2/2	9/17	53
Financing and resource allocation gaps	Limited national and county funding	1/2	2/2	5/6	4/5	2/2	14/17	82
	Inadequate budget prioritization for oilseeds	1/2	1/2	2/6	2/5	1/2	7/17	41

4.4.1 Policy Prioritization and Strategic Positioning Gaps

Across all institutions, respondents reported that oilseed crops remain moderately or weakly prioritized within policy documents such as ASTGS, NAIP II and the Crops Act 2013. Most attention continues to be channeled toward maize, tea, coffee, dairy, and horticulture, with oilseeds often categorized under “industrial crops” receiving secondary attention. This misalignment contributes to low production, weak farmer mobilization, and minimal private-sector investment.

A significant proportion of respondents (71%) reported that although various policies acknowledge the importance of oilseed crops, the country lacks a clear, overarching national strategy specifically dedicated to the oilseed value chain. In the absence of such a unified strategic framework, oilseed-related initiatives remain fragmented and poorly coordinated across institutions. This gap has contributed to limited and inconsistent investments in critical areas such as research, seed system development, and value chain strengthening. Respondents also noted that without strategic direction, extension services for oilseed crops remain inadequate, leaving farmers with minimal technical support. Furthermore, despite the high suitability of arid and semi-arid lands (ASALs) for oilseed production, these regions remain largely underutilized due to the absence of a targeted national agenda. Across all stakeholder groups, there was a strong and recurring call for the establishment of a comprehensive National Oilseed Development Strategy to guide policy implementation, resource allocation, and long-term sectoral growth.

Although County Integrated Development Plans (CIDPs) are central to guiding agricultural investments at the county level, respondents observed that most CIDPs either omit oilseed crops entirely or allocate only minimal resources to them. This omission reflects the broader trend of low prioritization of the oilseed subsector within county planning frameworks. Only a few counties such as Busia, Homabay, and Siaya were cited as having taken deliberate steps to promote crops like sunflower and sesame. However, even in these counties, the level of support remains limited and largely small-scale, with most initiatives dependent on external funding from donor-supported programs such as the National Agricultural Value Chain Development Project (NAVCDP). As a result, the development of the oilseed value chain at the county level remains inconsistent and significantly constrained by inadequate and unsustainable resource allocation.

“Oilseed crops are not yet fully prioritized. The focus is still on traditional crops such as tea, coffee and maize...” KII011

“...Oilseed crops are moderately prioritized, often overshadowed by staple and cash crops like maize and tea”. KII09

4.4.2 Policy Implementation and Intergovernmental Coordination Gaps

Despite the existence of strong policy frameworks such as the Crops Act (2013) and the Seed and Plant Varieties Act Cap 326, respondents consistently reported that implementation remains weak across the oilseed subsector. The gap between policy formulation and execution is largely attributed to systemic constraints including inadequate funding, insufficient staffing, and ineffective monitoring and enforcement mechanisms. County agricultural officers emphasized that many of these policies “remain on paper,” noting that they rarely translate into practical, farmer-oriented interventions that would meaningfully support oilseed production.

A related and equally significant concern raised was the persistent lack of coordination between national and county governments. These disconnects manifest in several critical areas, including seed distribution and certification, dissemination of research findings, delivery of extension services, and market regulation. For instance, although KALRO continues to develop improved oilseed varieties, counties often lack the logistical, financial, and human resource capacity to distribute these varieties to farmers at scale. As a result, the benefits of research fail to reach end-users effectively.

Further complicating the institutional landscape is the issue of overlapping mandates. There is considerable confusion regarding the roles and responsibilities of various institutions such as the Ministry of Agriculture and Livestock Development (MoALD), AFA, KALRO, KEBS, KEPHIS, and county agriculture departments. This ambiguity leads to duplication of efforts, bureaucratic delays, and gaps in service delivery particularly in areas such as seed approval, extension support, and value chain oversight. The lack of clear demarcation in institutional roles undermines efficiency and slows down decision-making processes essential for advancing the oilseed value chain.

In addition to fragmented institutional roles, respondents highlighted limited stakeholder involvement in policy formulation and implementation. Smallholder farmers, cooperatives, local processors, and private seed companies who are central actors in the oilseed value chain

are not adequately engaged in policy-making forums or consultation processes. As a result, policy decisions often fail to reflect ground realities, leading to strategies that are misaligned with farmer needs and market conditions. The lack of structured platforms for multi-stakeholder dialogue also restricts opportunities for collaborative planning, knowledge exchange, and co-creation of solutions. Consequently, many policies regarding oilseed crops are perceived as top-down directives that do not address the specific challenges faced at farm and county level.

Compounding these challenges are widespread resource constraints at both national and county levels. Respondents reported chronic budget limitations that restrict investment in key functions such as oilseed research, seed certification systems, extension services, and broader value chain development initiatives. These financial limitations impede the ability of institutions to implement targeted programs, enforce regulatory standards, and support farmers effectively. Overall, the findings highlight that without adequate resources and stronger institutional coordination, even well-designed policies struggle to achieve their intended impact within the oilseed subsector.

“Coordination is weak. There is often a disconnect between national research institutions (like KALRO) providing seeds and the county's extension system, leading to poor dissemination and adoption...” KII07

“There is definitely a gap. If all stakeholders are brought together to sit with both county and national government, the pain points would be addressed, and the industry would grow”. KII015

4.4.3 Seed System Policy and Regulatory Weaknesses

The findings reveal significant weaknesses within Kenya's seed system for oilseed crops, pointing to structural, regulatory, and institutional gaps that undermine the availability and quality of planting materials. Respondents highlighted that existing seed legislation does not adequately address the specific needs of oilseed crops. As the Crops Act (2013) stipulates, *“The Authority shall promote the development of scheduled crops by providing for incentives to growers, facilitating marketing, and regulating the production, processing, and distribution of such crops.”* Despite this clear legislative intent, oilseeds have not received the same prioritization as staple or export crops such as maize, tea, and coffee. This gap highlights the disconnect between policy provisions and actual implementation. Current laws and regulatory

frameworks tend to favor staple crops such as maize and wheat, leaving oilseeds insufficiently supported in areas such as breeder seed development, seed multiplication, and commercial seed distribution. According to the Agricultural Sector Transformation and Growth Strategy (ASTGS 2019-2029) and the National Agricultural Investment Plan (2019-2024), maize, wheat, and rice are prioritized with billions of shillings allocated annually for subsidies, research, and extension. In contrast, oilseeds receive less than 5% of public agricultural research resources (NARS Policy 2012), and the only structured financing initiative, the Edible Oil Crops Promotion Project (2023-2027) has a budget of KSh 981 million over five years. This imbalance has created a system in which oilseed crops receive limited attention and investment, ultimately restricting farmers' access to improved varieties.

Compounding these challenges are widespread regulatory enforcement problems. Fake, uncertified, and substandard seeds remain prevalent in many oilseed-producing regions. Respondents attributed this issue to weak inspection capacity among regulatory agencies, particularly KEPHIS, whose presence is limited in remote and rural areas where oilseed crops are commonly grown. Additionally, poor monitoring of agro-dealers allows counterfeit seeds to circulate unchecked. These enforcement gaps further erode farmer confidence in the formal seed system and contribute to persistently low productivity within the oilseed subsector.

The findings indicate that Kenya's seed system is not equipped to effectively support the development of oilseed crops, and significant policy, regulatory, and institutional reforms are required to strengthen seed production, distribution, and quality assurance.

"Hybrid seeds are expensive. Farmers end up recycling seed." KII02

"Availability of seeds has been a challenge facing production of oil crops". KII012

4.4.4 Market and Trade Policy Framework Gaps

The absence of price regulation emerged as another major concern across respondents, who noted that farmers remain highly vulnerable to exploitative middlemen due to the lack of a structured pricing framework for oilseed crops. Without mechanisms such as minimum price guarantees or price stabilization instruments, farm-gate prices fluctuate unpredictably, leaving producers with little or no bargaining power. These irregular price shifts discourage investment in oilseed production and contribute to inconsistent supply, as many farmers perceive the enterprise as high-risk and minimally rewarding.

Weak market governance further hinders the development of the oilseed value chain. Respondents highlighted that the sector lacks essential market-support structures such as aggregation centers, functional cooperatives, and clear contract-farming regulations. In the absence of coordinated marketing systems, farmers are often forced to sell their produce individually, which significantly limits their negotiating strength and lowers their returns. The lack of organized marketing channels also reduces transparency in pricing and makes it difficult to enforce quality standards or traceability within the value chain.

Policy gaps that allow cheap edible oil imports especially crude palm oil into the country also pose a major challenge to the competitiveness of domestic oilseed production. Stakeholders pointed to low import tariffs, inadequate enforcement of import quality standards, and the absence of quotas or restrictions as key factors fueling the heavy inflow of inexpensive imports. These imported oils, which often retail at lower prices than locally produced alternatives, distort market dynamics and diminish incentives for local farmers and processors to expand production or invest in value addition. Without stronger trade and market policies, domestic oilseed production will continue to struggle against this unfair competition.

“Frequent price fluctuations and lack of structured markets discourage investment in oilseed farming. Farmers struggle with limited access to reliable buyers and aggregation centers, while cheap edible oil imports mainly palm oil undermine competitiveness...” KII016

“Price fluctuations and lack of guaranteed markets” KII017

4.4.5 Policy level research, innovation and extension gaps

Agricultural research, innovation, and extension services form the backbone of productivity improvements, climate resilience, and food security. However, findings reveal significant policy-level gaps that undermine the potential of these systems.

One of the most pressing challenges identified is the chronic underfunding of agricultural research institutions. Oilseed crop research in Kenya is primarily undertaken by Kenya Agricultural and Livestock Research Organization (KALRO) under the National Agricultural Research System (NARS) Policy (2012) and the Crops Act (2013). Despite this mandate, the extent of research remains minimal, with oilseeds receiving less than 5% of public agricultural research funding (FAO, 2022; KIPPRA, 2022). KALRO has developed improved sunflower and soybean varieties, but adoption is low due to weak breeder-seed systems, poor distribution, limited extension outreach, and regulatory bottlenecks such as lengthy certification under the

Seed and Plant Varieties Act (Cap 326). County governments, through their CIDPs, rarely allocate resources for oilseed-specific extension, leaving farmers without adequate technical guidance.

Limited financial resources constrain the capacity to conduct comprehensive studies, invest in modern laboratories, and attract qualified researchers. As a result, research agendas are often reactive rather than proactive, focusing on immediate production challenges rather than long-term sectoral development. This underfunding also slows down the adoption of modern technologies, leaving farmers reliant on outdated practices that reduce competitiveness. Research institutions struggle to produce improved, resilient, and high-yielding varieties quickly enough to respond to emerging challenges, including climate variability, pest outbreaks, and market demands. Farmers, therefore, have limited access to improved seed, which directly affects productivity and income. Slow variety development also hampers the country's ability to compete with imported products that may be better adapted or more productive.

Further, the agricultural extension system, which bridges research findings to practical farmer adoption, is weakened by the lack of strong national policy support. Existing extension frameworks are fragmented, with limited coordination between national, county, and local stakeholders. This fragmentation results in inconsistent messaging, inadequate training programs, and poor dissemination of innovations to end-users. Another major constraint in agricultural extension is the limited number of extension officers, with many counties having very few personnel tasked with covering vast geographical areas. This shortage significantly reduces the frequency and quality of interactions between farmers and extension services, limiting access to expert guidance. Consequently, farmers often receive inadequate training in critical areas such as crop management, mechanization, pest control, and post-harvest practices. The combined effect of too few officers and insufficient training hampers the adoption of improved technologies and best practices, restricting productivity and overall sector growth.

“The oilseed subsector has received limited policy attention and research investment compared to staple crops” KII016

“The main challenges include inadequate research support, poor seed distribution systems, and limited farmer awareness.” KII09

4.4.6 Financing and resource allocation gaps

The findings revealed that limited national and county funding for oilseed development, together with inadequate budget prioritization, reflects a broader policy neglect of the sector. Kenya's financing and resource allocation policies reveal a stark imbalance between staple crops and oilseeds. Under the National Agricultural Investment Plan (NAIP II 2019-2024) and the Agricultural Sector Transformation and Growth Strategy (ASTGS 2019-2029), maize, rice, and horticulture are prioritized, with maize alone receiving over 30% of crop-specific allocations, while oilseeds attract less than 5% of agricultural research and development funding (FAO, 2022; KIPPRA, 2022). Export crops such as tea and coffee also benefit from consistent financing due to their foreign exchange contribution. In contrast, oilseed crops lack dedicated budget lines, with most interventions donor-driven and poorly integrated into national frameworks.

At the county level, the situation is similar. While agriculture is a major focus in County Integrated Development Plans (CIDPs), oilseeds are rarely prioritized with concrete budgets or measurable targets. Counties such as Bungoma, Busia, and Nakuru have initiated small-scale sunflower and soybean projects, but these remain isolated and underfunded compared to staple crop programs that receive structured subsidies and aggregation support. This underinvestment exacerbates structural and financial challenges, constraining the ability of farmers to access essential resources and support services.

These financial limitations make it difficult for farmers to adopt improved technologies, purchase quality inputs, or expand production, leaving the sector underdeveloped despite its potential economic and food security contributions. The findings further indicate that rising production costs including fuel, inputs, and labor complicate these challenges, reducing profitability and discouraging investment in modern farming practices. Without targeted financial support, risk mitigation mechanisms, and strategic policy interventions, oilseed farmers remain highly vulnerable to climate shocks and market fluctuations. This vulnerability limits not only individual farmer resilience but also the sector's overall capacity to contribute meaningfully to national food security, economic growth, and the broader development of agricultural value chains.

*“Oilseeds are mentioned in the NAIP and AFA Crops Directorate but funding is limited”
KII010*

“...Low production resulting from high cost of farm inputs”. KII012

4.5 An assessment of the challenges facing the oilseed crop subsector.

Table 4. 2 challenges facing the oilseed crop subsector

Main Theme	Specific Areas Identified	AFA	COUNTY	KENAFF	MINISTRY	KALRO	TOTAL	%
Agronomic and environmental production challenges	Pests and diseases	-	-	2/6	1/5	1/2	4/17	24
	Climate variability	2/2	-	2/6	4/5	2/2	10/17	59
	Soil infertility	-	1/2	1/6	3/5	1/2	6/17	35
	Poor agronomic practice adoption	1/2	-	2/6	2/5	1/2	6/17	35
Input access and production resource challenges	High cost of inputs	1/2	1/2	2/6	3/5	1/2	8/17	47
	Limited access to certified seeds	1/2	1/2	4/6	4/5	2/5	12/17	71
	Weak distribution of seeds	1/2	-	2/6	2/5	-	5/17	29
Seed access and variety adoption challenges	Poor availability of improved varieties	-	-	2/6	2/5	2/2	6/17	35
	Reliance on recycled seeds	2/2	-	3/6	3/5	1/2	9/17	53
	Weak linkages to seed suppliers	-	-	1/6	2/5	1/2	4/17	24
Market and value chain operational challenges	Price volatility	1/2	-	2/6	2/5	2/2	7/17	41
	Middlemen	1/2	1/2	3/6	-	-	5/17	29
	Lack of structured markets	1/2	1/2	3/6	2/5	1/2	8/17	47
	Limited processing capacity	1/2	1/2	2/6	2/5	1/2	7/17	41
	Quality issues	1/2	1/2	4/6	3/5	1/2	10/17	59
Field level institution and extension challenges	Few extension officers	1/2	1/2	4/6	3/5	2/2	11/17	65
	Limited farmer training and knowledge	1/2	2/2	4/6	2/5	2/2	11/17	65
	Weak cooperative organization	1/2	-	2/6	2/5	1/2	6/17	35
Farm level financial and economic constraints	Limited credit access	1/2	-	1/6	2/5	1/2	5/17	29
	High production costs	1/2	1/2	1/6	2/5	1/2	6/17	35
	Lack of insurance	-	-	1/6	2/5	1/2	4/17	24

4.5.1 Agronomic and environmental production challenges

The study revealed that agronomic and environmental constraints play a significant role in limiting the productivity and stability of oilseed crop production in Kenya. Climate variability emerged as one of the most substantial challenges, with respondents consistently noting that unpredictable weather patterns characterized by erratic rainfall, prolonged droughts, and occasional flooding have made oilseed farming increasingly risky. These climatic stresses disrupt planting calendars, hinder germination, reduce flowering and seed-setting, and expose crops to water-related stress at critical growth stages. The vulnerability of most oilseed-

growing regions, particularly the arid and semi-arid lands (ASALs), intensifies the impact of climate change, leading to frequent crop failures and reduced household incomes among smallholder farmers.

Pest and disease pressures further compound these environmental challenges. Key pests and diseases such as the groundnut rosette virus, aphids, rust, and aflatoxin contamination were identified as major causes of yield loss, particularly in areas where farmers lack adequate knowledge of integrated pest management practices. Limited access to extension services and improved pest-control technologies means that farmers often rely on ineffective or outdated methods, allowing pests and diseases to spread rapidly and compromise the quality and quantity of harvested produce.

Soil fertility problems also emerged as a critical constraint. Many of the regions where oilseeds are grown have inherently poor soils with low organic matter, nutrient deficiencies, and signs of degradation due to continuous cultivation without adequate replenishment. Respondents noted that soil testing services are limited or inaccessible for most smallholder farmers, making it difficult for them to apply appropriate fertilizers or soil amendments. As a result, crops are grown under suboptimal soil conditions, leading to poor germination, stunted growth, and low yields.

Additionally, the adoption of recommended agronomic practices remains low. Farmers often lack adequate training and technical knowledge in essential aspects such as proper spacing, timely fertilization, pest and disease management, and post-harvest handling. This knowledge gap leads to inefficient crop management, post-harvest losses, and reduced oil quality. Poor storage methods and improper drying practices were cited as contributing factors to seed contamination and deterioration, further reducing market value. The combined effect of these agronomic and environmental challenges demonstrates that without targeted interventions focusing on farmer training, climate-smart technologies, soil management, and pest control, the productivity of oilseed crops is likely to remain low and inconsistent.

“Climate change and variability: Unpredictable and erratic rainfall patterns, rising temperatures, and frequent droughts or floods are major constraints, as most farming is rain-fed.” KII011

“Soil infertility and degradation further reduce yields, while pests and diseases such as aphids, rust, and aflatoxin contamination threaten both quantity and quality.” KII016

4.5.2 Input/seed access & production resource and variety adoption challenges

The findings indicate that farmers face substantial constraints in accessing essential inputs required to sustain and expand oilseed production. One of the most significant barriers is the high cost of inputs, particularly certified seeds, fertilizers, and agro-chemicals. Respondents consistently reported that these inputs are priced beyond the reach of many smallholders, forcing them to either reduce the acreage planted to oilseeds or rely on inferior alternatives. This cost burden not only suppresses overall production levels but also discourages farmers from adopting improved varieties and modern agronomic practices that could enhance yields and profitability.

Another critical challenge is the limited availability of certified oilseed varieties. Interviewees noted that very few seed companies are actively engaged in the production or distribution of certified oilseed seeds, resulting in a chronic shortage across many regions. Even where demand exists, certified seed varieties are rarely found in local agro-vet outlets, limiting farmers' access to quality planting materials. County-level seed distribution programs, which could fill this gap, were described as inconsistent and irregular, often depending on external projects rather than coordinated county investment. This scarcity of certified seeds forces many farmers to rely on recycled or uncertified seeds, undermining productivity and exposing them to risks of poor germination and low oil content.

Seed distribution channels for oilseeds were described as unreliable, with most farmer supplier interactions being informal and inconsistent. Without structured supply mechanisms, farmers struggle to plan for timely access to quality seeds or to obtain technical guidance on variety selection. This lack of organized market linkages undermines farmers' ability to transition from informal seed systems to formal, quality-assured seed sources. Strengthening seed access and variety adoption requires not only improved availability of certified seeds but also robust institutional linkages, targeted extension support, and a more coordinated national seed strategy for oilseed crops.

The issue is further complicated by weak seed distribution systems. Even when improved varieties are developed by research institutions, they do not reach farmers reliably due to logistical constraints, inadequate distribution networks, and insufficient private sector

participation. Farmers in these regions often travel long distances to access limited seed sources or depend on informal networks with no guarantee of seed quality. These systemic weaknesses in input supply chains contribute to persistent low yields, limited adoption of new technologies, and an overall stagnation of the oilseed subsector.

“Certified seeds are scarce, often expensive, and not well-adapted to local agro-ecological zones” KII09

“Certified oilseed seeds in Kenya are available to some extent and show moderate adaptation to local agro-ecological conditions, but their high cost and limited supply constrain widespread access”. KII016

4.5.3 Market and value chain operational challenges

The study findings highlighted significant market and value chain challenges that continue to undermine the competitiveness and profitability of oilseed production in Kenya. One of the most prominent issues raised by respondents was the pervasive price volatility experienced by farmers. Oilseed prices fluctuate frequently due to the influence of brokers, the absence of structured marketing systems, and intense competition from imported edible oils. This instability creates uncertainty for farmers, discourages investment, and limits the predictability of returns from oilseed farming. Without mechanisms to stabilize prices or regulate buyer behavior, farmers remain exposed to inconsistent and often unfavourable market conditions.

Closely linked to price volatility is the widespread exploitation by middlemen, a challenge that persists due to limited farmer access to organized marketing channels. Many producers operate in isolation, lacking access to aggregation centers, cooperatives, or contract-farming arrangements that could strengthen their bargaining power. As a result, farmers frequently rely on brokers who determine prices unilaterally, often offering low farm-gate prices that do not reflect production costs or market value. The absence of collective marketing structures therefore leaves oilseed farmers vulnerable and limits their ability to negotiate fair prices.

Another major constraint is the limited processing capacity within oilseed-growing regions. Few counties have operational processing plants, forcing farmers to transport their produce over long distances to reach processors. This not only increases the cost of marketing but also reduces the margins farmers earn. The lack of local processing infrastructure also restricts opportunities for value addition, leading to the sale of raw seeds rather than refined products, which diminishes overall profitability within the value chain.

Quality issues further heighten the challenges within the oilseed market. Respondents noted that poor post-harvest handling practices often result in contaminated or poorly dried seeds, which negatively affects extraction efficiency and reduces the quality and marketability of oil produced. Inadequate storage facilities, limited training on post-harvest management, and the absence of quality control mechanisms contribute to the production of substandard oilseed products. These quality shortcomings not only lower prices but also restrict access to high-value markets, thereby limiting the economic potential of the oilseed subsector.

“Competition from imports reduce the demand for locally produced oil seeds’ KII01

“Low farm gate prices and unstructured market linkages which demoralizes farmers”. KII012

4.5.4 Field level institution and extension challenges

The study also revealed substantial institutional and extension-related challenges that significantly hinder the development of the oilseed subsector. Respondents consistently emphasized that the number of extension officers available across counties is far below what is required to adequately support farmers. In many regions, a single officer is responsible for vast geographical areas, making it difficult to provide regular field visits, technical guidance, or timely advisory services. This shortage not only limits farmers’ access to critical agronomic information but also weakens the overall effectiveness of government-led agricultural programs.

Adding to the complexity of this issue is the limited level of farmer training reported across all stakeholder groups. Many oilseed farmers lack sufficient knowledge on essential aspects of crop production, including modern crop management practices, pest and disease control, efficient fertilizer application, and appropriate post-harvest handling techniques. The absence of structured, oilseed-specific capacity-building programs has contributed to low adoption of improved practices and technologies, thereby constraining yields and overall productivity. Respondents noted that even when new information or technologies become available through research institutions, weak extension linkages mean that dissemination to farmers is slow or inconsistent.

Furthermore, the institutional landscape is characterized by weak or poorly functioning farmer cooperatives and producer organizations. Most oilseed farmers operate individually rather than through collective structures, which limits their bargaining power, restricts access to credit, and reduces opportunities for bulk marketing or collective processing. The lack of strong cooperative institutions also makes it difficult for farmers to engage in contract farming

arrangements, negotiate better prices, or attract private-sector investment. Overall, these institutional and extension challenges represent significant barriers to coordinated value chain development and highlight the need for strengthened farmer organizations and enhanced public-sector capacity.

“Farmers have inadequate knowledge on production, handling and marketing of edible oil crop”. KII012

“Farmers generally have moderate to low knowledge of best practices in oilseed production, post-harvest handling, and marketing, often relying on traditional methods and facing significant knowledge gaps and resource constraints”. KII011

4.5.6 Farm level financial and economic constraints

Oilseed farmers face significant financial and economic constraints that limit their ability to invest in production and improve productivity. One of the most prominent challenges is limited access to credit. Financial institutions, including banks and microfinance organizations, often perceive oilseed farming as a high-risk enterprise due to frequent price fluctuations, unpredictable yields, and the absence of crop insurance. As a result, farmers struggle to secure affordable loans needed for purchasing inputs, adopting new technologies, or expanding production. This lack of accessible financing contributes to low investment levels at the farm level and reinforces the subsistence orientation observed in much of the oilseed subsector.

High production costs further constrain farmers ability to increase output. Rising prices of essential inputs such as certified seeds, fertilizers, pesticides, fuel, and labor significantly reduce profitability. For many smallholder farmers, these costs are prohibitive, forcing them either to cultivate small acreages or rely on cheaper but less productive alternatives such as recycled seeds. The financial burden of these inputs, coupled with the absence of subsidies or targeted support programs, continues to restrict the competitiveness of local oilseed production.

Reinforcing the severity of these challenges is the lack of crop insurance tailored to oilseed farmers. Without insurance cover, producers remain highly vulnerable to climatic shocks such as droughts, floods, and pest outbreaks. This vulnerability discourages farmers from expanding production or investing in improved practices, as any adverse event could result in total loss without compensation. The absence of risk-mitigation mechanisms thus perpetuates uncertainty, limits farmer confidence, and undermines long-term sustainability within the oilseed value chain.

“Access to credit and insurance services remains minimal, particularly for smallholders”
KII016

“...Limited access to credit and finance” KII07

4.6 Chapter Summary

This chapter presented findings from seventeen key informant interviews conducted with officers from MoALD, AFA, KENAFF, County Governments, and KALRO, structured according to the study's two specific objectives. The informants were drawn purposively from institutions with direct mandates over oilseed policy and production, and represented a diverse range of professional roles, experience levels, and institutional perspectives. Thematic analysis guided by Institutional Theory and Policy Implementation Theory, while remaining open to inductively emerging themes was used to organize the data into a coherent set of findings.

Under the first objective, the analysis identified six interconnected policy and legislative gaps that collectively explain why Kenya's oilseed sector remains underperforming despite the existence of a formal regulatory architecture. The most widely reported themes; underfunded research and development, and limited national and county financing, each cited by 82 percent of respondents underscore the systemic marginalization of oilseeds in Kenya's agricultural budgeting. The absence of a dedicated national oilseed strategy, cited by 71 percent of respondents, emerged as the most critical structural gap, as its absence cascades into every other failure area: fragmented seed systems, poor institutional coordination, weak market governance, and insufficient extension support. Poor national-county coordination (59 percent) and low overall policy prioritization (59 percent) further confirm that the challenge is not merely one of policy design but of institutional alignment and implementation commitment at both levels of government.

Under the second objective, five thematic challenge areas were identified at the farm and subsector levels. Limited access to certified seeds (71 percent) and shortage of extension officers and farmer training gaps (each 65 percent) emerged as the most pressing operational challenges. These findings are consistent with and directly traceable to the policy gaps identified under Objective One, demonstrating that farm-level constraints are not isolated agronomic or market problems but downstream manifestations of institutional neglect and policy inaction. Climate variability (59 percent) and quality issues in the value chain (59

percent) also represent significant and interconnected challenges that require both technical and policy responses.

Taken together, the findings from both objectives paint a coherent picture of a sector trapped in a self-reinforcing cycle of low productivity and limited investment, sustained by a policy environment that has yet to treat oilseeds as a strategic national priority. The following chapter discusses these findings in relation to the existing literature and theoretical frameworks, draws conclusions, and advances recommendations for policy reform, institutional strengthening and future research.



CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents a discussion of the key findings from the study, linking them to existing literature and theoretical perspectives. The discussion underscores the significance of the study's findings by illustrating how the identified policy gaps and subsector challenges shape the performance and competitiveness of oilseed production in Kenya. The chapter presents the conclusions derived from the findings and provides targeted recommendations for policymakers, county governments, industry actors, and future researchers working to enhance the oilseed crop subsector.

5.2 Discussion of Findings

The discussion aims to interpret the findings and articulate their significance in the context of what is already known about the research problem, while also presenting the new understanding or insights gained. It is structured according to the study's two specific objectives.

5.2.1 Appraisal of Kenya's agricultural policy and legislative framework for oilseed production and identification of gaps and emerging issues.

The findings showed that oilseed crops suffer from low prioritization within national and county policy agendas, reflected in a lack of strategic focus and the omission of oilseed crops in key planning instruments such as the CIDPs. The study also identified major weaknesses in policy implementation, including poor national-county coordination, overlapping institutional mandates, limited stakeholder involvement in policy processes, and persistent resource limitations that hinder effective execution. Seed system policies were found to be inadequate, with weaknesses in seed legislation, the absence of an oilseed-specific seed strategy, and gaps in regulatory enforcement. The market and trade framework was also characterized by the absence of price regulation, weak market governance structures, and policy loopholes that allow cheap imports to undermine domestic production. Furthermore, the study highlighted underfunded research and development, slow progress in developing improved oilseed varieties, weak extension support, and chronic underinvestment at both national and county levels. Collectively, these findings demonstrate that the existing policy and legislative framework is fragmented, weakly implemented, and insufficiently aligned to the needs of the

oilseed subsector, revealing both structural gaps and emerging issues that require coordinated reform.

The findings strongly support the propositions of both Institutional Theory and Policy Implementation Theory regarding how institutions shape policy outcomes. Consistent with Institutional Theory, the results show that although Kenya has comprehensive policies such as the Crops Act (2013) and the Seed and Plant Varieties Act (Cap 326), their practical effect on the oilseed subsector remains limited because “*many of these policies remain on paper*” and do not translate into concrete farmer support due to inadequate funding, weak enforcement structures, and unclear institutional mandates. This aligns with the regulative and normative pillars of Institutional Theory (Scott, 2008; Pressman & Wildavsky, 1984), which argue that organizations may have formal rules, but their behavior is ultimately shaped by norms, priorities, and historical path dependence.

The results are consistent with Policy Implementation Theory, which emphasizes clarity, capacity, coordination, and stakeholder involvement as conditions for effective policy execution (Mazmanian & Sabatier, 1983). The constraints identified reflect exactly what the theory predicts; poorly coordinated and under-resourced institutions cannot effectively operationalize policy, even where frameworks exist (O’Toole, 2000; Pressman & Wildavsky, 1984).

As demonstrated in the study, availability of certified seed remains limited, forcing many farmers to rely on uncertified or recycled seed, which ultimately contributes to low productivity and inconsistent quality across oilseed value chains a situation that mirrors the constraints highlighted by FAO (2022) and KIPPRA (2022). The study further shows that KALRO and other institutions within Kenya’s National Agricultural Research System continue to prioritize staple and export crops such as maize and tea, thereby allocating minimal resources to oilseed research and development an institutional pattern that aligns with the observations made by FAO (2022) regarding historical underinvestment in oilseed improvement.

While the literature reviewed consistently points to broad challenges such as limited access to improved varieties, weak seed systems, and institutional fragmentation across oilseed value chains in SSA (Omondi et al., 2024; Tibamanya, 2022; Kitilio, 2022), the findings of this study reveal several context-specific divergences. First, unlike much of the literature which focuses on generic seed-access challenges, the study uncovers policy-specific gaps, particularly the absence of a dedicated national seed strategy for oilseed crops a nuance not explicitly

addressed in the earlier studies. Unlike prior literature which emphasizes agronomic and market-related constraints, this study identifies unique institutional coordination failures, including overlapping mandates between MoALD, AFA, KEPHIS, KEBS, KALRO and counties, which result in duplication and unclear accountability an issue not fully captured in earlier empirical works. Third, although literature commonly mentions seed shortages, this study goes further by documenting systemic regulatory enforcement failures, including circulation of counterfeit seed due to weak inspection capacity, a nuance absent in most reviewed studies under chapter two. Whereas prior research like that by (Lokosou, 2022), broadly associates low productivity with poor seed access, the present study highlights county-level variation in prioritization, showing that some counties entirely ignore oilseeds in planning an institutional dynamic not previously emphasized.

An important implication emerging from these findings under objective one, is that the findings provide a clearer understanding of why Kenya's oilseed sector continues to underperform despite having an extensive policy framework. While previous research focused on broad systemic constraints in the region, this study demonstrates that Kenya's challenge lies in institutional misalignment, fragmented governance, and weak implementation structures, offering fresh implications for both theory and practice.

Practically, policy re-prioritization is needed: a dedicated national oilseed strategy, mandatory county integration of oilseed targets preferably with conditional matching grants, and clear budget-to-policy pipelines to translate national goals into county budgets and M&E frameworks. Creating a cross-agency oilseed taskforce will help to streamline mandates (MoALD, AFA, KALRO, KEPHIS, county reps) breaking overlaps and push a time-bound roadmap for seed systems, extension and processing.

The study suggests the institutionalization of stakeholder engagement platforms so that farmers, processors, and private seed firms shape policy and implementation. The national government can coordinate with county governments to create dedicated budget lines and performance-linked funds for oilseed R&D, certified seed multiplication, and extension to break the cycle of resource scarcity. The implementation of the reforms should be done in small set of counties to act as treatment centers and compare adoption rates, certified seed uptake, and value-chain investments against control counties. Such quasi-experimental approach would move beyond correlation to demonstrate causality answering whether governance reform is the necessary precondition for the technical gains advocated in the literature.

Seed legislation weaknesses, the lack of an oilseed-specific seed strategy, and regulatory enforcement gaps have deep and practical implications. They show that the bottleneck to varietal innovation and adoption is institutional, not only technical, and that current legal and regulatory arrangements actively disincentivize both public and private investment in oilseed varietal development and commercial seed systems. The findings signal streamlining variety registration for oilseeds with conditional release pathways linked to post-release monitoring, and development of a national oilseed seed strategy that aligns KALRO breeding pipelines with private-sector multiplication incentives and county demand projections. The strengthening of regulatory enforcement capacity of KEPHIS inspection networks, agro-dealer oversight, and market surveillance to eliminate counterfeit seed and rebuild farmer trust can also be employed. Introducing public-private risk-sharing instruments that match grants, innovation vouchers, or advance-purchase commitments can help reduce breeder/seed firm hesitancy to invest in oilseed varieties.

Gaps in the market and trade framework, specifically the absence of price regulation, weak market governance, and policy loopholes that allow cheap imports, together create a distorted and unstable operating environment that undermines both producer viability and long-term sector competitiveness. Without price regulation or transparency mechanisms, farmers face extreme price volatility and are easily exploited by dominant buyers, reducing incentives to invest in productivity. The findings signal strengthened market governance through transparent price information systems, enforced grading and quality standards, and the introduction of seasonal safeguards that prevent import surges during harvest periods.

Underfunding in research, innovation, and extension creates a system where farmers lack access to improved seed varieties, modern technologies, and timely agronomic guidance. Slow variety development limits the availability of climate-resilient, pest-resistant, and high-yield crops, reducing productivity and competitiveness. Weak national extension support combined with too few extension officers and limited farmer training means that knowledge gaps persist, adoption of best practices remains low, and farmers rely on outdated or informal sources of information. Overall, these weaknesses slow agricultural innovation, widen the productivity gap between smallholders and commercial farms, and reduce the sector's ability to respond to climate change, market demands, and emerging threats. The findings strongly support the view of strengthening the research–innovation–extension pipeline by increasing public investment in agricultural R&D, accelerating the release of improved and climate-resilient varieties, and

rebuilding the extension system through targeted recruitment, digital advisory tools, and partnerships with private-sector and NGO service providers.

Limited national and county funding, combined with weak budget prioritization for oilseeds, creates chronic underinvestment in research, extension, processing, and market infrastructure. This leaves the value chain reliant on outdated technologies, low productivity systems, and fragmented marketing channels. As a result, farmers struggle to access quality inputs or support services, processors face inconsistent raw material supply, and the sector remains uncompetitive against imported products. The research underscores the establishment of performance-based budgeting, ensuring counties direct resources toward high-impact interventions such as seed development, mechanization, and aggregation centers. By aligning public funds with measurable outcomes and crowding in private capital, the sector can unlock consistent raw material supply, reduce import dependence, and stimulate sustainable growth.

5.2.2 An assessment of the challenges facing the oilseed crop subsector.

The oilseed sector faces a combination of agronomic, institutional, financial, and market-related constraints that significantly limit productivity and competitiveness. Farmers contend with frequent pest and disease outbreaks, erratic climate conditions, soil degradation, and low adoption of good agronomic practices, all of which weaken yields. These challenges are compounded by high input costs, limited access to certified seeds, and weak seed distribution systems, leading many farmers to rely on recycled or poor-quality varieties. Seed access is further constrained by the limited availability of improved varieties and weak linkages between farmers and seed suppliers.

On the market side, producers struggle with price volatility, dependence on middlemen, unstructured markets, inadequate processing capacity, and persistent quality issues, all of which reduce profitability and value addition. Institutional shortcomings including too few extension officers, limited training opportunities, and weak farmer cooperative structures restrict farmers' access to technical support and collective bargaining power. Financial constraints such as limited credit, high production costs, and lack of insurance further prevent farmers from investing in improved technologies and better practices, keeping the sector trapped in a low-productivity cycle.

The challenges identified in the oilseed sector reflect both institutional and policy implementation dynamics. From the Institutional Theory perspective, constraints such as weak extension services, limited farmer training, under-resourced cooperatives, and poor seed

distribution systems highlight how formal and informal institutional structures shape farmer behavior and sector performance (W. Richard Scott, 2008). From the Policy Implementation Theory perspective, the findings reveal gaps in translating policy into actionable support. Challenges such as high input costs, price volatility, and inadequate financial mechanisms indicate that even when policies exist, their design and implementation fail to provide practical, on-the-ground support for stakeholders (Matland, 1995; Hill & Hupe, 2002).

The findings align with Bachewe, Minten, and Tamru (2022), as the observed weak processing capacity, reliance on informal markets, price volatility, and underinvestment in oilseed value chains in Kenya closely mirror the systemic challenges identified in Ethiopia. Both contexts highlight that limited technological adoption, weak incentives, and insufficient coordination along the value chain constrain domestic oilseed production and undermine efforts to achieve self-sufficiency. These results are consistent with Mannucci et al. (2023), as low farmer awareness, limited extension support, and weak knowledge dissemination in Kenya reflect similar gaps in sustainable vegetable oil strategy implementation in Eastern and Southern Africa. The observations correspond with Hossain and Norain (2023), as Kenya's reliance on imported edible oils and policy gaps enabling cheap imports mirror the economic impacts of edible oil imports on domestic production and market dynamics identified in Bangladesh.

The literature review might suggest that cheap edible oil imports could benefit the domestic market by lowering consumer prices, based on the findings of similar studies, such as Hossain and Norain (2023) in Bangladesh, however, the findings from this study differ. A more plausible explanation is that in Kenya, these imports undermine local production, reduce farmer incentives, and exacerbate value chain inefficiencies. This contrast may be explained by context-specific factors: unlike Bangladesh, Kenya's oilseed sector suffers from weak market governance, limited processing capacity, and fragmented extension services, which prevent farmers from competing effectively. Additionally, policy neglect and low prioritization of oilseeds in national and county plans reduce the ability of local producers to respond to market signals, unlike contexts where imports are accompanied by strong domestic support systems.

Similarly, the findings indicate extremely low adoption of improved seed varieties and agronomic practices. The results might suggest that farmers are resistant to innovation. However, studies such as Mannucci et al. (2023) and Bachewe et al. (2022) show that adoption is often constrained by access to information, extension support, and inputs rather than reluctance. In Kenya, the contradiction can be attributed to underfunded research, a weak

extension network, and limited availability of certified seeds, which prevent farmers from accessing and implementing innovations despite potential willingness.

Pests, diseases, climate variability, soil infertility, and low adoption of good agronomic practices collectively limit crop yields and reduce overall productivity in the oilseed sector. Frequent pest and disease outbreaks can destroy significant portions of the harvest, while erratic rainfall or droughts caused by climate variability exacerbate yield losses and increase production risk. Soil infertility, particularly in areas with poor nutrient management, further constrains crop growth and quality.

The low or lack of adoption of recommended agronomic practices such as proper spacing, fertilization, and integrated pest management reduces the effectiveness of available technologies and inputs, perpetuating low productivity. Together, these factors reduce farmers' profitability, limit the availability of raw materials for processors, and undermine the competitiveness of the domestic oilseed sector. These challenges highlight the need for integrated solutions that combine climate-smart agriculture, soil fertility management, pest control programs, and robust extension services. Policy interventions should not only provide inputs but also ensure knowledge transfer, risk mitigation tools like crop insurance, and incentives for adopting best practices.

Limited access to inputs and production resources including high costs of fertilizers, pesticides, and other essential materials combined with poor availability of certified seeds, weak seed distribution networks, and reliance on recycled or low-quality seeds, severely constrain productivity in the oilseed sector. Weak linkages between farmers and seed suppliers further exacerbate the problem, restricting timely access to improved seeds and innovative technologies. Collectively, these constraints limit potential yields, reduce competitiveness, depress profitability, and perpetuate low adoption of modern agronomic practices, ultimately stalling growth and value addition along the oilseed value chain.

The study urges an integrated approach where, first, national and county governments and development partners subsidize or provide targeted financing for key inputs like fertilizers, pesticides, and certified seeds to reduce cost barriers for smallholder farmers. Second, investment in robust seed systems is essential, including expanding certified seed production, strengthening distribution networks, and supporting private-sector and cooperative seed enterprises to ensure timely and reliable supply. Third, improving linkages between farmers, research institutions, and seed suppliers through farmer cooperatives, digital platforms, and

extension services can enhance awareness and adoption of improved varieties. Finally, complementary measures such as training farmers on best agronomic practices, promoting on-farm seed quality management, and encouraging and providing climate-resilient varieties will maximize the benefits of improved inputs. Collectively, these interventions not only enhance productivity but also strengthen resilience, value addition, and competitiveness across the oilseed value chain.

Market and value chain operational challenges such as price volatility, dependence on middlemen, lack of structured markets, limited processing capacity, and persistent quality issues significantly constrain the growth and profitability of the oilseed sector. Price fluctuations reduce farmers income stability, discouraging investment in improved production practices or higher-yielding varieties. Heavy reliance on middlemen and informal marketing channels limits farmers' bargaining power, often resulting in unfair prices and reduced profit margins. The absence of structured markets and aggregation systems further fragments the value chain, making it difficult to link producers with processors or bulk buyers. Limited processing capacity restricts opportunities for value addition, increases post-harvest losses, and often forces farmers to sell raw produce at lower prices.

Additionally, inconsistent quality standards undermine competitiveness in both domestic and regional markets, reducing consumer trust and demand. These operational weaknesses hinder the development of a resilient, efficient, and profitable oilseed value chain. The findings suggest the potential for establishing structured markets and aggregation centers that can reduce reliance on middlemen, improve price transparency, and enhance farmers bargaining power. Strengthening processing capacity through investments in local mills and value-addition facilities can reduce post-harvest losses, improve product quality, and stimulate local employment. Complementary measures, such as introducing quality standards, certification systems, and market information platforms, can also increase consumer confidence and facilitate access to both domestic and regional markets. Additionally, supporting farmer cooperatives and producer organizations to collectively negotiate prices and coordinate supply can enhance efficiency and stability along the value chain.

With too few trained extension personnel, farmers lack access to timely technical advice on best agronomic practices, pest and disease management, and post-harvest handling. This knowledge gap contributes to low productivity, poor crop quality, and minimal adoption of improved seed varieties or modern technologies. Weak cooperatives further restrict farmers

collective bargaining power, limiting access to inputs, credit, and market opportunities. These institutional shortcomings undermine value chain efficiency, reduce profitability, and perpetuate low adoption of innovations, keeping smallholder farmers trapped in cycles of low productivity and income insecurity. The study advocates for complementary digital extension platforms, farmer field schools, and targeted training programs that can disseminate technical knowledge efficiently, promote adoption of best practices, and improve crop quality. By combining human resource investment with institutional strengthening, these interventions can enhance productivity, increase farmer incomes, and build a more resilient and inclusive oilseed value chain.

Limited access to credit, high production costs, and the absence of crop insurance severely constrain farmers ability to invest in improved inputs, technologies, and practices. Without affordable financing, smallholder farmers are unable to purchase quality seeds, fertilizers, or pesticides, which limits yields and reduces profitability. High production costs further erode margins, discouraging investment in productivity-enhancing measures. The lack of insurance exposes farmers to financial risks from crop failure due to pests, diseases, or climate shocks, making them risk-averse and less likely to adopt new technologies. Collectively, these financial and economic constraints perpetuate low productivity, trap farmers in cycles of poverty, and weaken the resilience and competitiveness of the oilseed sector.

The study encourages exploration of expanded access to affordable credit through rural microfinance, cooperative-based lending, or government-subsidized loan schemes that can enable farmers to invest in improved inputs and technologies. Introducing crop insurance programs, including yield-based insurance, can reduce financial risk and encourage adoption of modern agronomic practices. Additionally, promoting cost-reducing technologies like input bundling, or community-level input procurement can lower production costs and improve profitability. By combining financial access, risk mitigation, and efficiency-enhancing measures, these interventions can strengthen farm-level resilience, increase yields, and enhance the overall competitiveness of the oilseed value chain.

5.3 Conclusion

The study sought to examine Kenya's agricultural policy and legislative framework in relation to oilseed crop production. Its primary aim was to appraise existing policies and laws governing oilseed production in order to identify gaps, overlaps, and emerging issues that affect

implementation. In addition, the study aimed to assess the range of challenges faced by the oilseed sub-sector

The findings reveals that Kenya's oilseed sector faces multifaceted challenges across agronomic, institutional, financial, and market dimensions, which collectively limit productivity, profitability, and competitiveness. Farmers contend with pests, diseases, soil infertility, climate variability, and low adoption of improved agronomic practices, while access to certified seeds, inputs, and modern technologies remains constrained. At the institutional level, limited extension services, weak cooperatives, and fragmented policy implementation hinder knowledge transfer and collective action. Market and value chain weaknesses including price volatility, overreliance on middlemen, unstructured markets, limited processing capacity, and inconsistent quality further reduce incentives for investment and value addition. Financial constraints such as limited credit access, high production costs, and lack of insurance exacerbate farmers vulnerability, trapping the sector in a cycle of low productivity and reduced resilience.

Addressing these challenges requires integrated, context-specific interventions that strengthen institutions, markets, and financing mechanisms while promoting agronomic and technological adoption. Targeted investment in extension services, farmer training, cooperative strengthening, and robust seed systems can improve knowledge transfer and innovation uptake. Simultaneously, structured markets, enhanced processing capacity, and quality assurance frameworks can stabilize prices, increase profitability, and foster value addition. Finally, accessible credit, insurance, and cost-reduction measures can mitigate financial risks and enable sustainable investment at the farm level. By tackling these systemic constraints in a coordinated manner, Kenya's oilseed sector can unlock its potential, improve farmer livelihoods, and contribute more significantly to national food security and economic development.

5.4 Recommendations

To address the identified gaps, this study recommends the development of a National Oilseed Development Strategy (2026–2036) to systematically integrate oilseeds into Kenya's agricultural planning, budgeting and implementation frameworks. The strategy should prioritize increased public agricultural research and development (R&D) expenditure, with at least 15% of the agricultural development budget earmarked for oilseed-focused breeding, seed

multiplication, and varietal improvement, in line with national and continental agricultural development commitments.

In addition, the seed certification and variety release framework should be reformed to reduce approval timelines for oilseed varieties while maintaining regulatory quality standards. Extension service delivery should be strengthened through full implementation of the Kenya Agricultural Sector Extension Policy (2023), with targeted support to oilseed-producing regions.

The study further proposes the establishment of a National Oilseed Development Fund with an indicative annual allocation of KSh 5 billion, benchmarked against existing agricultural commodity funds and proportionate to Kenya's edible oil import bill. The Fund would support seed system development, farmer aggregation, processing infrastructure, and structured market development through public-private partnerships.

Finally, enhanced national-county coordination, structured market systems, and targeted investment in domestic processing capacity are necessary to reduce import dependency, strengthen value addition, and improve the competitiveness and sustainability of Kenya's oilseed subsector. These measures directly support the study's justifications by lowering reliance on imports, improving food and nutrition security, stabilizing foreign exchange reserves, and fostering climate-resilient livelihoods, thereby providing a coherent pathway for transforming the oilseed subsector into a driver of sustainable agricultural and economic development.

5.5 Limitations to the Study

While this study provides valuable insights into Kenya's agricultural policy and legislative framework in relation to oilseed crop production, the study faced some limitations.

Regional variability across Kenya, including differences in agro-ecological conditions, access to inputs, and market structures, may limit the generalizability of the results to all oilseed-producing areas. Additionally, rapid changes in policy, funding allocations, or institutional mandates mean that some findings reflect a snapshot in time and may evolve as new programs or regulations are introduced.

The inability to interview international partners such as the World Bank. While their perspectives could have provided comparative insights and global best practices, the focus on

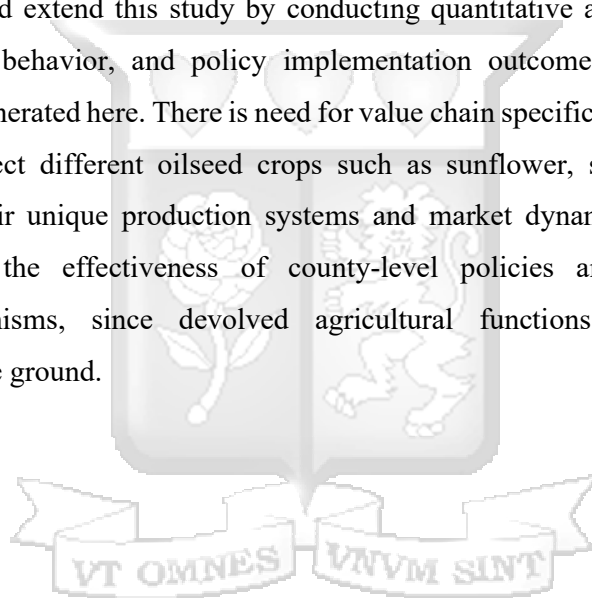
national stakeholders ensured that the findings remained highly contextualized and directly relevant to Kenya's policy and institutional realities

The qualitative approach offers depth but does not quantify the extent of challenges, and reliance on self-reported data introduces potential biases

However, despite these limitations, the study effectively addressed its research questions, aligned with existing literature, and provided valuable policy recommendations for improving agricultural policy and legislative framework in relation to oilseed crop production.

5.6 Areas for Further Research

Future research should extend this study by conducting quantitative assessments of oilseed productivity, market behavior, and policy implementation outcomes to complement the qualitative insights generated here. There is need for value chain specific analyses that examine how policy gaps affect different oilseed crops such as sunflower, soybean, sesame, and groundnuts given their unique production systems and market dynamics. Further research could also explore the effectiveness of county-level policies and intergovernmental coordination mechanisms, since devolved agricultural functions significantly shape implementation on the ground.



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APPENDICES

2.4 Appendix 1: Interview Guide

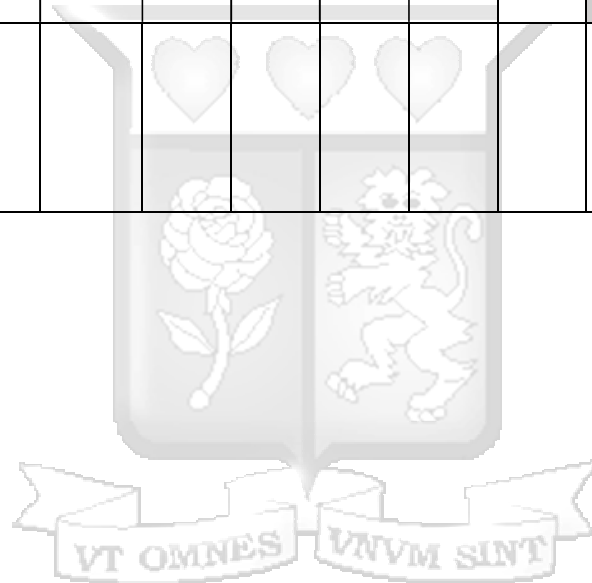
This questionnaire is intended to collect insights from stakeholders involved in oilseed crop development in Kenya. Responses will help identify key policy gaps and practical challenges hindering the growth of the oilseed sector.

1. To what extent do you think oilseed crops (e.g., sunflower, soybean, and sesame) are prioritized in Kenya's national agricultural policies (e.g., ASTGS, NAIP II)?
2. Are oilseed crops included in your county's Integrated Development Plan (CIDP)? If so, what kind of support has been allocated?
3. What factors affect the production of oilseed crops in Kenya?
4. How effective is the coordination between national and county governments in supporting oilseed production in your area?
5. What role has the Agriculture and Food Authority (AFA) played in regulating or promoting oilseed crops, and how effective has it been?
6. Are certified seeds for oilseed crops easily accessible, affordable, and adapted to local conditions in your area?
7. What challenges have you or your institution experienced in introducing or accessing improved oilseed crop varieties (e.g., sunflower, sesame)?
8. What type of extension services related to oilseed farming are available in your area, and are they adequate?
9. How knowledgeable are farmers about best practices in oilseed production, post-harvest handling, and marketing?
10. What challenges do farmers and processors face in accessing markets or value addition facilities for oilseed crops?
11. What do you believe are the most critical investments or policy reforms needed to unlock the potential of oilseed value chains in Kenya?

Participants will be provided with a summary of the key findings, via email or a printed brief. Participants can indicate their preferred feedback method during the interview or by contacting the investigator

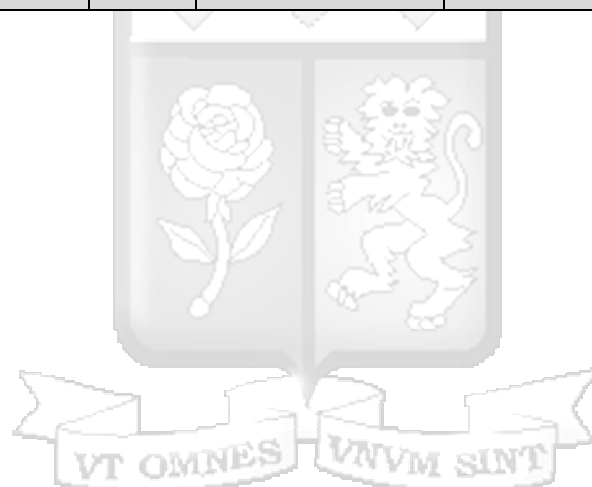
2.5 Appendix 2: Time Schedule

	Monthly Activities	June	July	Aug	Sep	Oct	Nov	Dec	Jan 26	Feb 26
1	Development of proposal									
2	Literature review									
3	Presentation of proposal									
6	Data collection									
7	Data analysis									
8	Report writing/presentation of findings									



2.6 Appendix 3: Budget

Personnel	No.	Rate Per day	No Of Days	Total
Research Assistant	2	5,000	6	60,000
Data Analyst	1	7,000	5	35,000
Local Transport		12,000	5	60,000
Printing & Photocopy		-	-	30,000
NACOSTI				1,000
Miscellaneous				4,000
Total				190,000



2.7 Appendix 4: NACOSTI License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 541957	Date of Issue: 23/July/2025
RESEARCH LICENSE	
	
This is to Certify that Ms.. Stella Samperu of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: AN APPRAISAL OF KENYA'S AGRICULTURAL POLICY AND LEGISLATIVE FRAMEWORK AFFECTING OIL SEED CROP PRODUCTION for the period ending : 23/July/2026.	
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2.8 Appendix 5: Ethics Approval



5th September 2025

Ms Samperu Stellah,
stellah.samperu@strathmore.edu

Dear Ms Samperu,

**RE: An Appraisal of Kenya's Agricultural Policy and Legislative Framework
Affecting Oil Seed Crop Production**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2989/25**. The approval period is from **5th September 2025 to 4th September 2026**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".

Mr Ambrose Rachier,
Chairperson; SU-ISERC