# AFEX 2024 Wet Season Crop Production Report

KENYA

AFEX

What you'll find

# Inside

# Executive Summary

Agriculture is a pivotal driver of Kenya's economy contributing over 70% of informal rural employment. Despite this, agricultural productivity remains heavily reliant on rainfed farming, with average farm sizes ranging from 0.2 to 3 hectares. Notably, productivity for staple crops falls below potential levels. Despite strong governmental commitments to agricultural development, sector growth has been sluggish, leading to increased reliance on food imports to meet the demands of a growing population and highlighting a structural imbalance in key food staples.

Kenya's dependence on rainfed agriculture, combined with unpredictable weather patterns intensified by climate change, has left millions vulnerable to food shortages. This issue is particularly pronounced in the Arid and Semi-Arid Lands (ASALs), which frequently experience droughts, adversely impacting livelihoods, income, and food security. The escalating crisis necessitates urgent action to safeguard the country's food security.

The AFEX Crop Production Survey 2024 provides a comprehensive analysis of the current agricultural production season, focusing on key commodities critical to Kenya's food security and economic development. While there were some positive developments, such as increased use of high-yielding seeds and herbicides this season, fertilizer usage declined.

Persistent challenges, including excessive rainfall, limited access to inputs, and financing constraints, threaten to compromise yields and worsen food security prospects.

Maize production is forecasted to decline modestly by 1%, primarily due to challenges related to fertilizer usage. Despite government subsidy programs, high fertilizer costs, have resulted in decreased fertilizer application for maize cultivation. Given Kenya's dependency on maize imports from neighbouring countries, this slight decline in production is particularly concerning, as maize is a critical component of the nation's strategic food reserve. Any shortfall poses a significant threat to national food security.

Although Kenya has the potential to achieve food self-sufficiency, it remains a net food importer, even in regions where domestic production is feasible. Challenges such as inadequate infrastructure, insufficient investment, post-harvest losses, and climate change continue to impede progress in enhancing local production.

To strengthen Kenya's food system, increased investment in agro-processing and infrastructure—especially storage facilities—is essential. Such investments can boost agricultural productivity by increasing cultivated acreage, reducing post-harvest losses, and enabling Kenya to fulfil its food security objectives.

In conclusion, the AFEX Crop Production Survey presents a clear call to action for stakeholders, including farmers and policymakers. By addressing the challenges in maize production, reducing import dependency, and adopting inclusive agricultural strategies, Kenya can progress toward a future where food security is a reality for all its citizens.

# Kenya

## Farmers Sample

**4,402**

farmers across key maize-producing counties including Uasin Gishu, Trans Nzoia, and Narok

- **2,509** Non-AFEX farmers
- **1,893** AFEX farmers

## Factors affecting the 2024/2025 agricultural performance

High Input cost

Excess rainfall

High cost of labour

Limited access to input financing

# Introduction

The AFEX Crop Production Survey, guided by the pivotal commodity of maize—the cornerstone of AFTL Kenya's operations—was conducted across key agricultural counties in Kenya.

This report aims to serve as a valuable resource for essential stakeholders, including farmers, processors, and government bodies, offering insightful guidance for informed decision-making during the 2024/25 trading seasons.

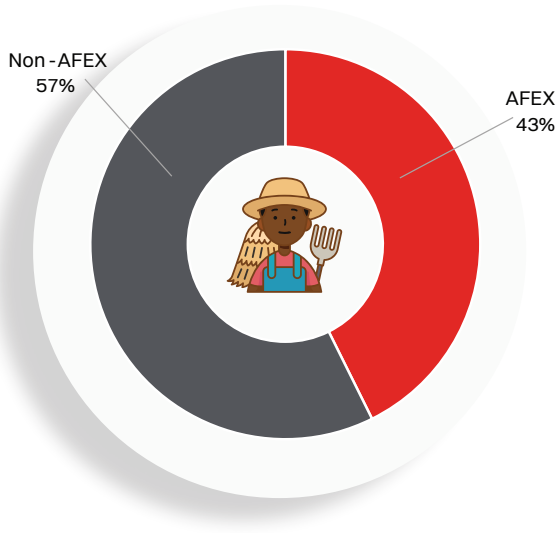
The primary objective of this survey is to explore Kenya's food security landscape and propose actionable recommendations to enhance the nation's crop production capacity. Our focus encompassed several key areas:

1. Understanding the planting behaviour of both AFEX and non-AFEX farmers during the 2024 wet season.
2. Forecasting the anticipated volume of production for the year.
3. Providing strategic recommendations to strengthen Kenya's capabilities in crop production.

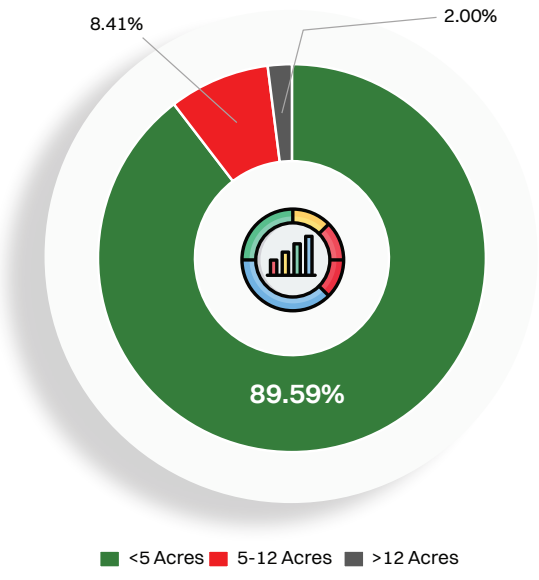
The survey involved a sample of 4,402 farmers, representing both AFEX and non-AFEX participants, selected through a rigorous random sampling process.

These farmers hail from major maize-producing regions in Kenya, known for their significant contributions to the country's maize supply. This strategic selection enabled a comprehensive assessment of various influencing factors, including farm size, input utilization, weather patterns, and other relevant considerations on production levels.

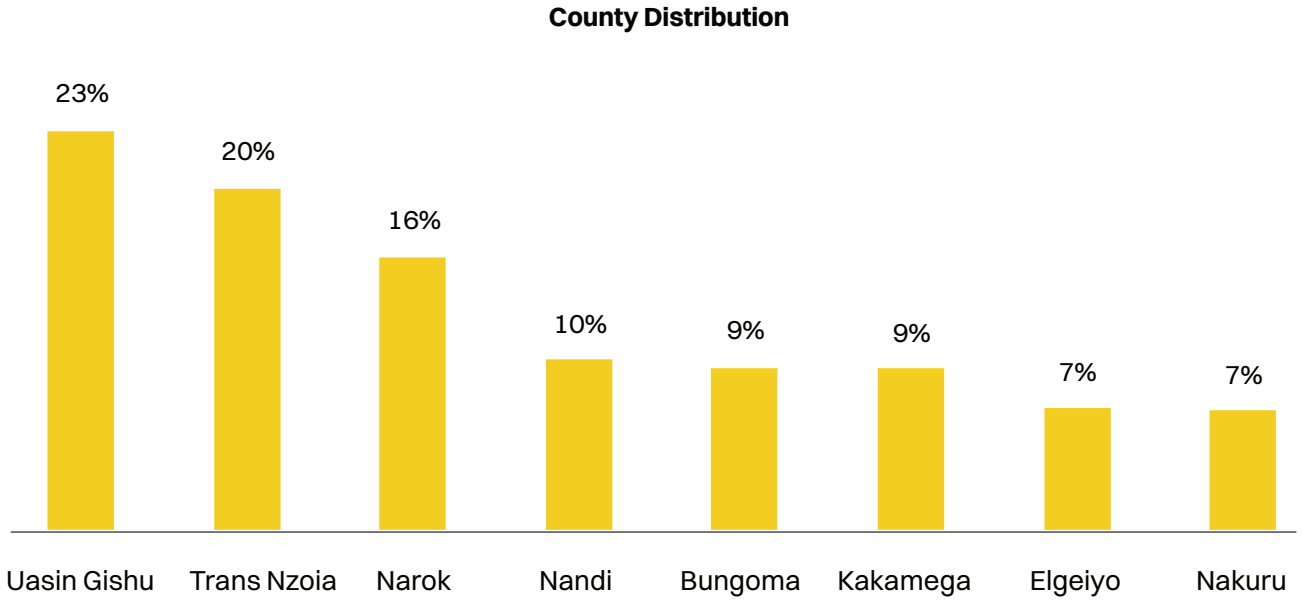
**Farmer Type**

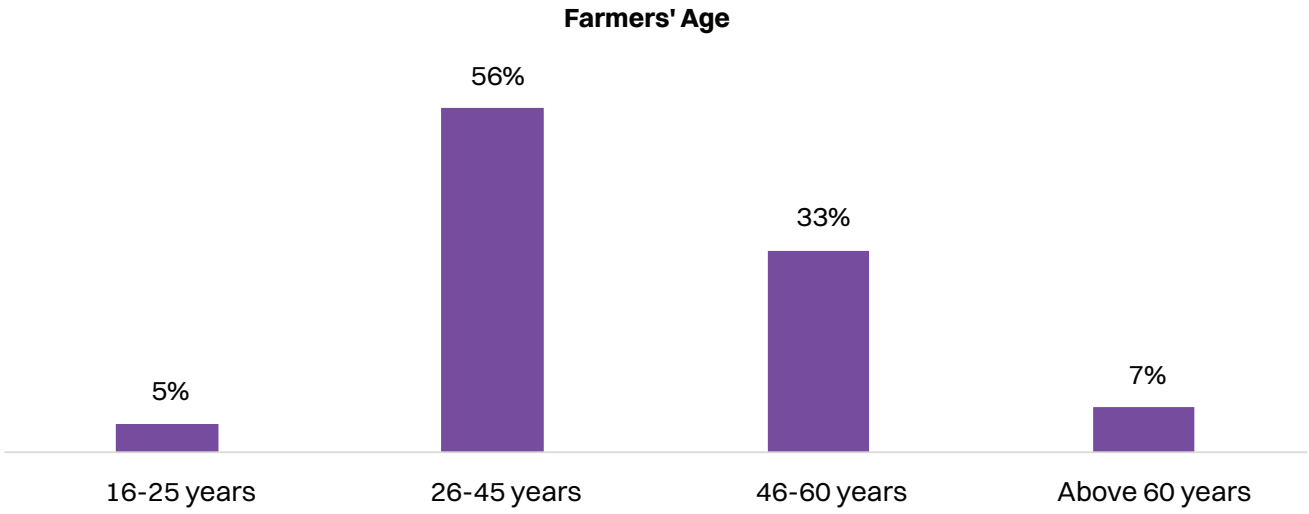



**Farm Size Distribution**




*Source: AFEX Research*




*Source: AFEX Research*

Farmers faced substantial challenges during the recent planting season, with excess rainfall, limited access to inputs, and financial constraints emerging as the top three factors hindering production. Additional issues, such as delayed rainfall and insufficient precipitation in regions like Bungoma and Nakuru, further complicated the situation. Addressing these challenges is crucial for enhancing farmers' productivity in the upcoming seasons.

# Commodity Overview

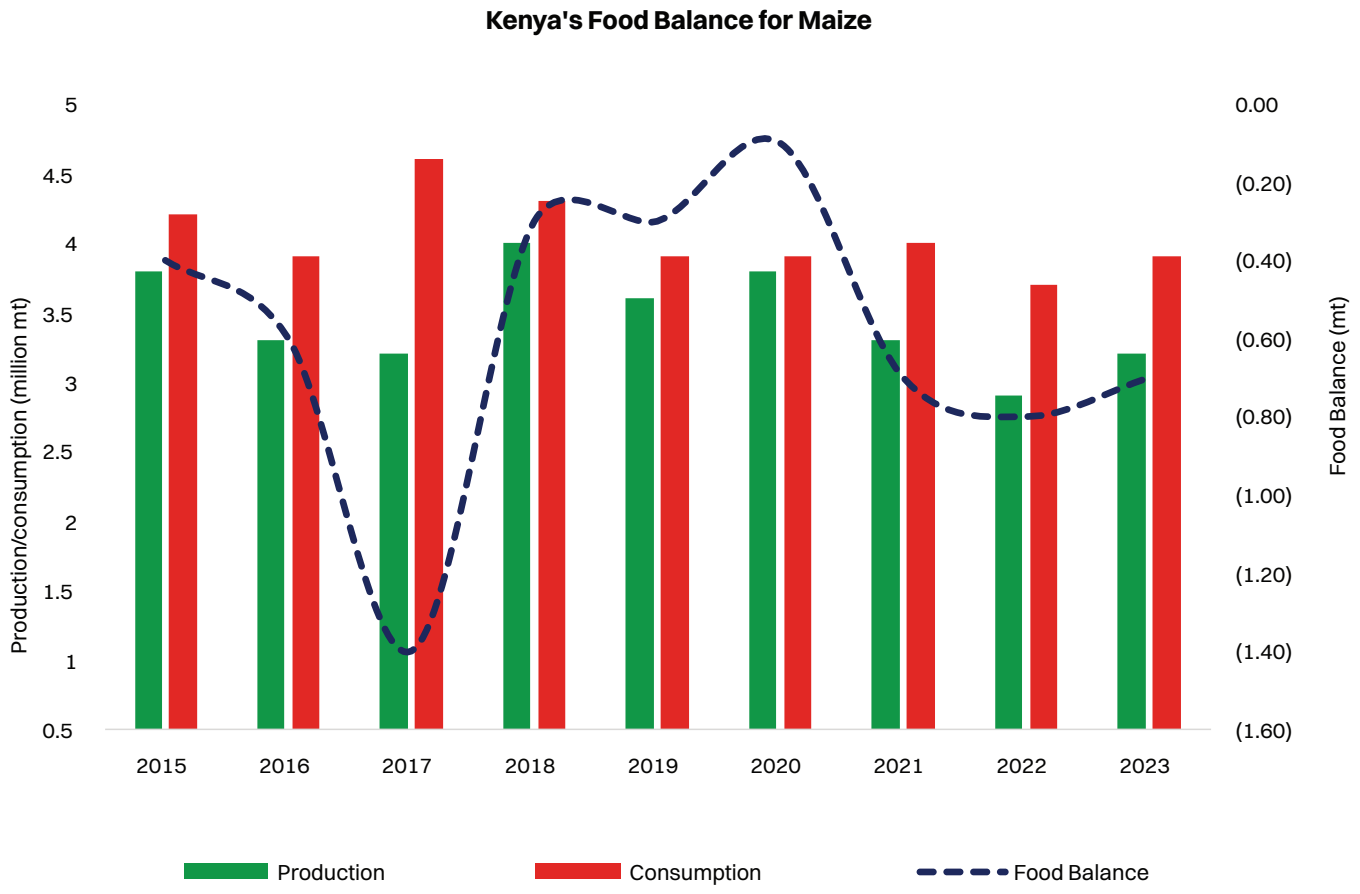
# Maize

Maize is a staple crop in Kenya, contributing approximately 3% to the agricultural GDP and accounting for 21% of the total value of primary agricultural commodities. It plays a crucial role in the country's agricultural sector, representing 20% of total production and providing 25% of agricultural employment. The majority of Kenya's maize production is concentrated in the Western and North Rift Valley regions, which collectively account for over 80% of the country's commercial output.

Maize is typically harvested twice a year: the primary crop is planted in March in the North Rift Valley and harvested between October and November, while other regions follow a bimodal cycle, with planting and harvesting occurring from July to August and December to February. Smallholder farmers, who often have limited resources, are responsible for over 80% of Kenya's maize production. This reliance on small-scale farming contributes to low yields.

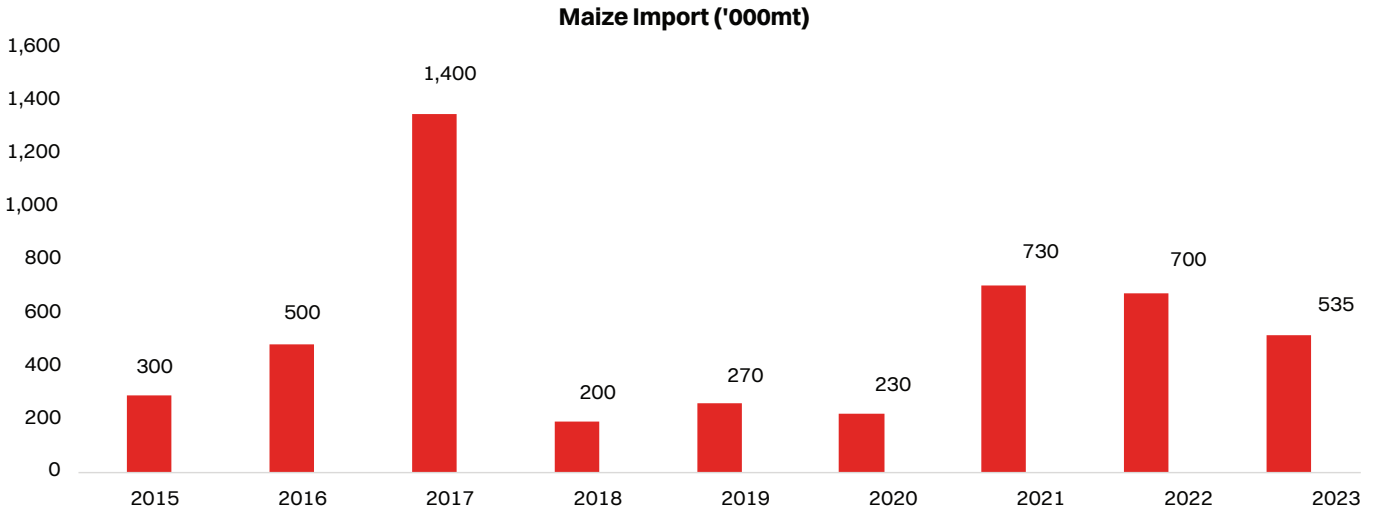
According to the FAO, maize constitutes over 78% of the country's total grain output by volume. However, the area cultivated for maize has not significantly increased in the past decade due to the costs associated with converting land from other crops to maize.

Expanding maize acreage often requires uprooting high-value, long-term crops such as tree nuts and sugarcane, which farmers are reluctant to replace due to their substantial income potential and the significant time and investment needed for planting.



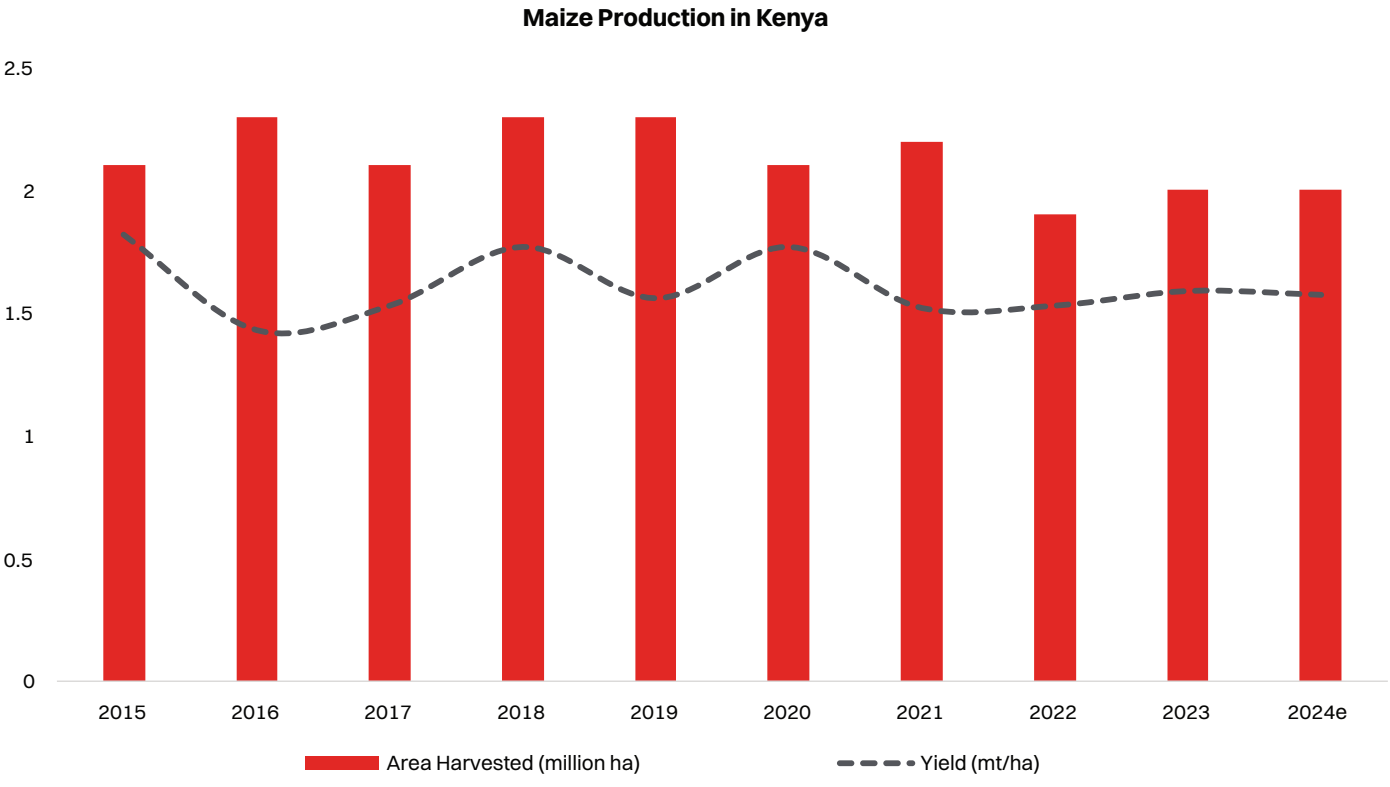

*Source: FAOSTAT, USDA, AFEX Research*

With annual per capita maize consumption at 74 kg, the country relies heavily on maize as a staple food. Over the past ten years, production has not kept pace with consumption due to Kenya's growing population, leading to a significant maize deficit that is met through imports from countries such as Tanzania, Zambia, Uganda, and South Africa. Imports primarily come from Uganda and Tanzania, where lower production costs and competitive access to Kenya's population centres make maize more affordable.




*Source: USDA, KNBS, AFEX Research*

Kenya's maize yields are impacted by several challenges, including dependence on rainfed agriculture, the use of low-quality, low-yield seeds, high post-harvest losses, and elevated production costs compared to neighbouring countries like Uganda. Additionally, porous borders facilitate illegal maize trade, further threatening local production.




*Source: FAOSTATS, USDA, AFEX Research*

Urgent interventions are needed to address the yield gap and enhance productivity. Comprehensive, sustainable, and economically viable support systems must be established to help farmers close this gap and ensure future food security.

## Input Usage

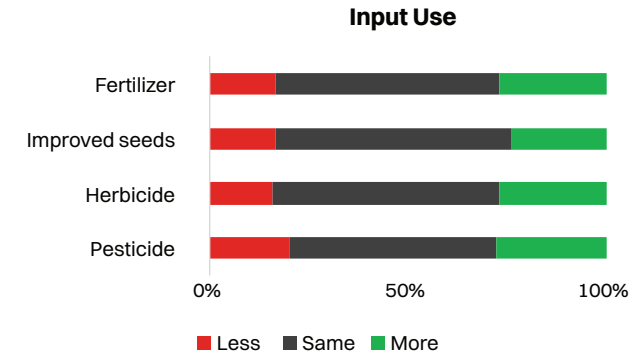
Results from the 2024 Crop Production Survey provide valuable insights into input usage and the challenges faced by farmers during the planting season. On average, there was a 4% decline in input usage compared to the previous season.

When comparing average inputs use between 2023 and 2024, fertilizer usage declined by 2%, despite the government's intensified subsidy program, which increased the distribution of fertilizer from 6 million bags in 2023 to 12 million bags in 2024. This initiative aimed to reduce costs and encourage fertilizer use to enhance yield.

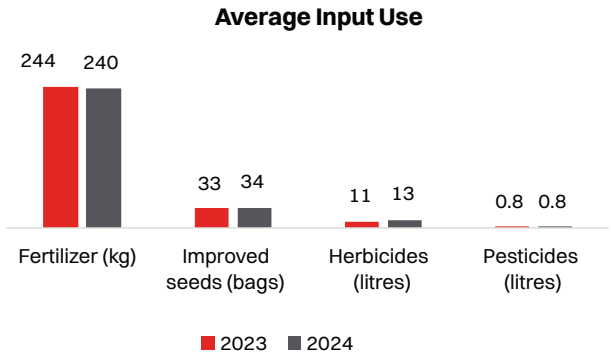
The primary threats to maize production for the 2024/2025 season are excessive rainfall (47%), limited access to inputs (43%), and inadequate access to finance (39%).

These challenges were identified as the top three obstacles faced by farmers during maize cultivation in 2024. Limited access to essential inputs such as improved seeds, fertilizers, and herbicides can significantly hinder agricultural output, underscoring the need for improved support mechanisms and infrastructure development within the agricultural sector.

Climate variability also poses a significant concern, with 24% of surveyed farmers citing delayed rainfall as a major issue. Regions such as Elgeiyo, Trans Nzoia, and Uasin Gishu were particularly affected by excessive rainfall, while Bungoma experienced the most significant rain delays. These climate extremes highlight Kenya's vulnerability to climate shocks and reinforce the urgent need for climate resilience in agricultural practices.




Source: AFEX Research

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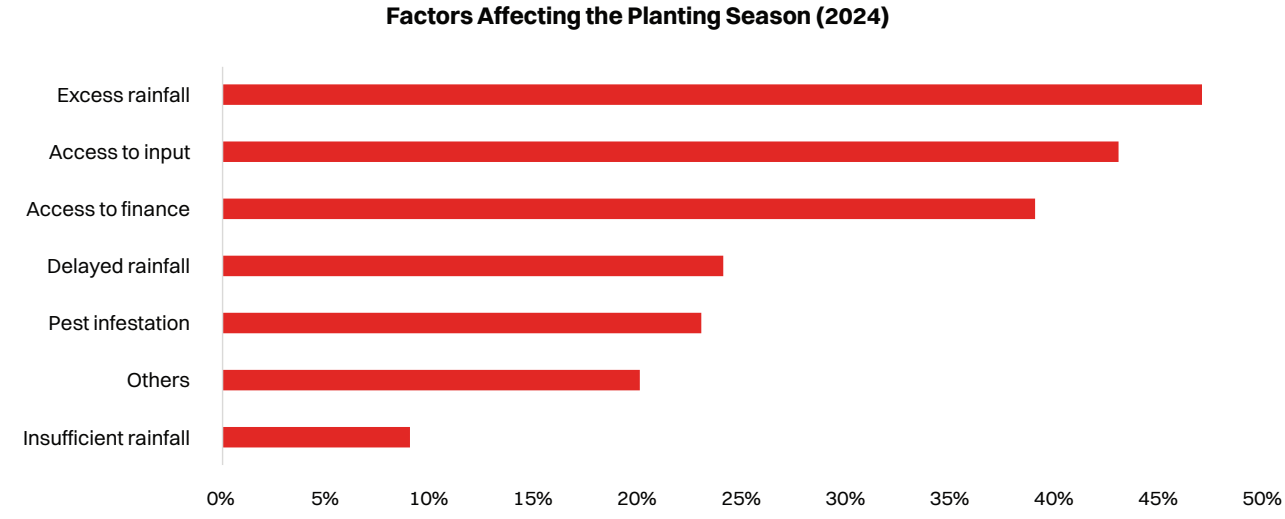
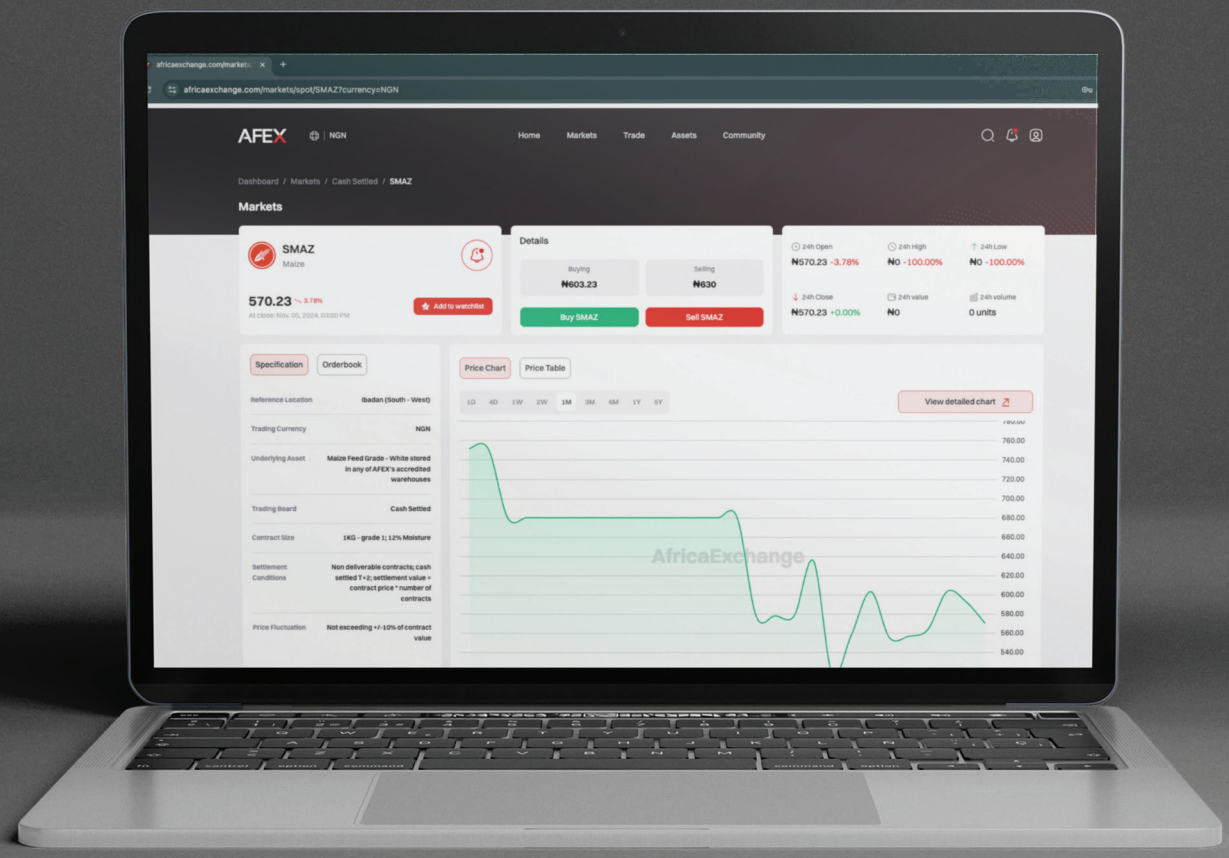



Source: AFEX Research

# Buy.
# Sell.
# Invest.

## Trade Commodities on Africa Exchange

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## Maize Production Projected Outlook

The maize production forecast indicates a 1% decline, with output expected to drop from 3.18 million metric tons in 2023 to 3.14 million metric tons in 2024.

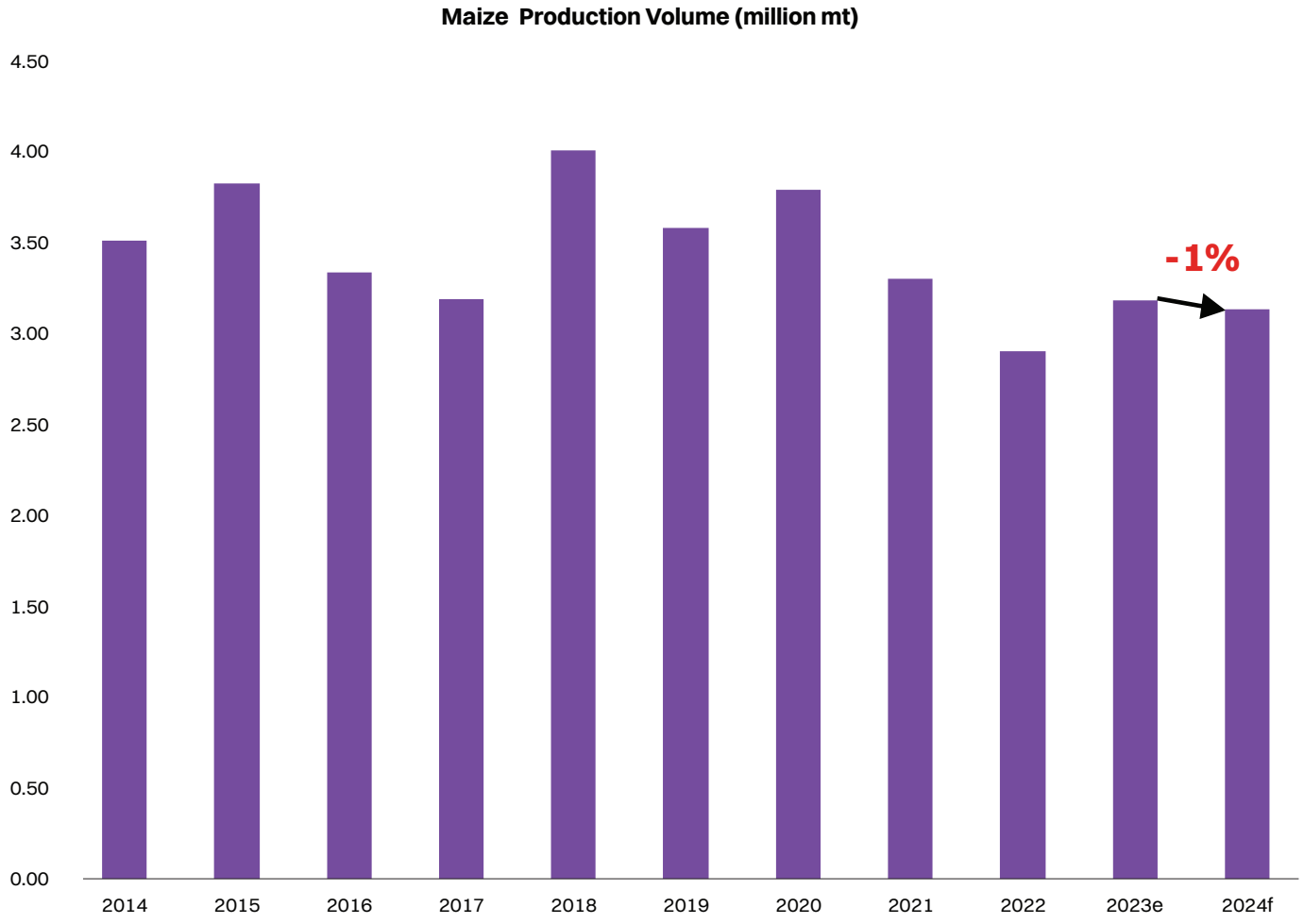
This forecast is primarily driven by decline in fertilizer usage. As a result, the projected maize deficit for the 2024/2025 season will exceed 700,000 metric tons, further intensifying the country's reliance on imports.

Survey analysis reveals that the farmers surveyed reduced their level of maize production compared to the previous season. This shift is largely attributable to a sharp drop in maize prices following a surge during the 2022/2023 season, which offset anticipated yield increases from improved inputs.

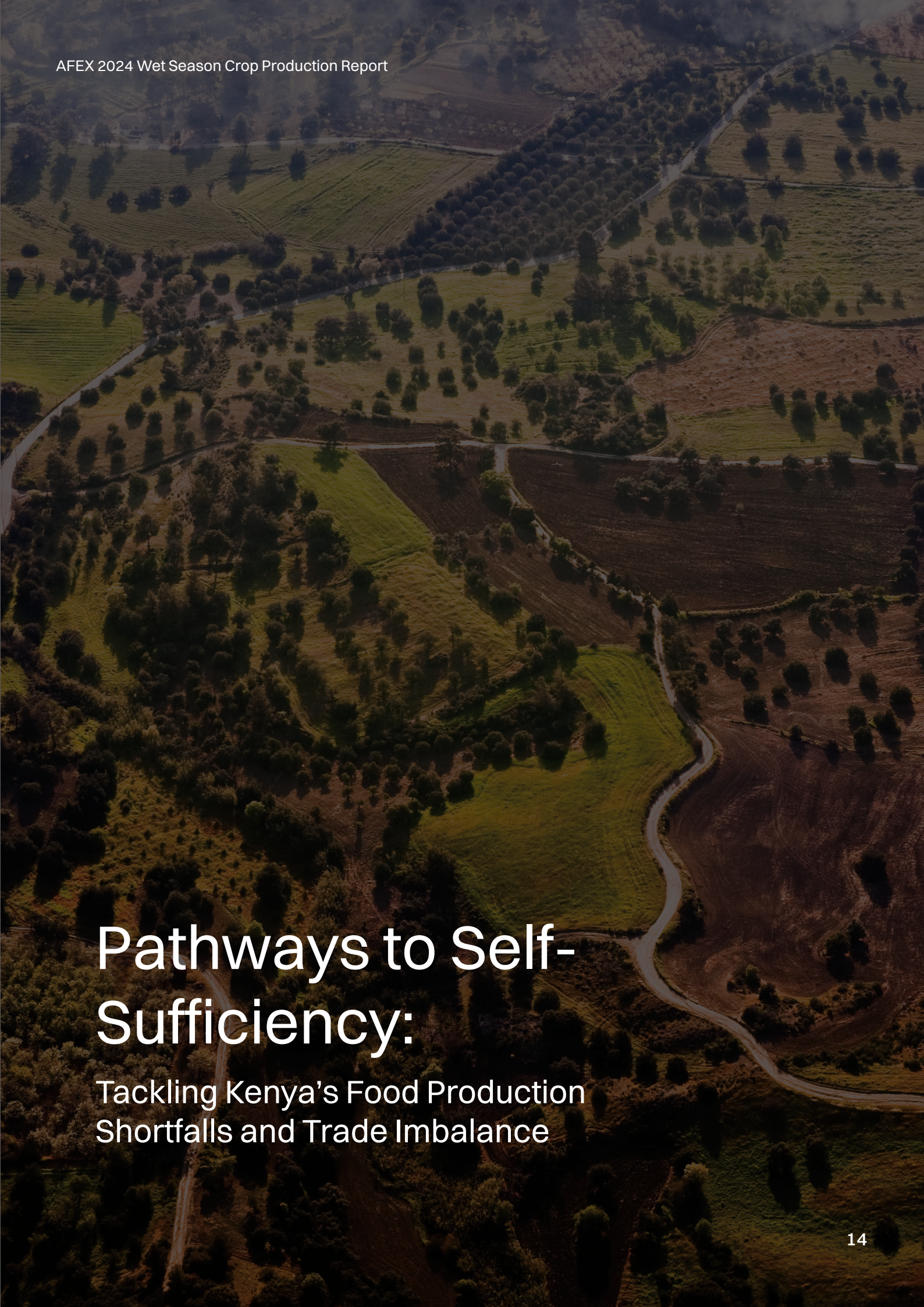
The price of maize fell by 29% in the 2023/2024 season, decreasing from KSh56.61/kg in 2022/2023 to KSh40.23/kg. This price reduction was driven by increased production during the 2023/2024 season, alongside sustained imports from Uganda and Tanzania.

Consequently, farmers who had hoped to benefit from the significant price spike in the 2022/2023 season were disappointed when the increased volume of maize in 2023/2024 contributed to the price decline.

Additionally, rising production costs, particularly for labour and fuel, have further diminished maize profitability. Fuel prices for ploughing increased by 25% year-on-year, reaching KSh4,000 per hectare in 2024. These higher costs have discouraged farmers from expanding their level of maize production, further constraining production growth.




*Source: FAOSTAT, AFEX Research*



# Pathways to Self-Sufficiency:

## Tackling Kenya's Food Production Shortfalls and Trade Imbalance

Kenya stands at a critical crossroads in its pursuit of food security, grappling with a high dependency on food imports. With an estimated population projected to reach 91.6 million by 2050, there is an urgent need to enhance food supply.

In 2022, Kenya's total cereal production was 3.8 million metric tons, resulting in a supply deficit of 3.9 million metric tons needed to satisfy both human and industrial consumption.

This shortfall has raised significant concerns about the nation's food security, with 1 million people currently facing acute food insecurity and over 70% of the population experiencing moderate or severe food insecurity, according to the World Bank's Integrated Food Security Phase Classification. Furthermore, Kenya ranked 90th out of 125 countries in the 2023 Global Hunger Index, with a score of 22.0, indicating that the country's level of hunger is serious.

Additionally, 38.6% of the Kenyan population lives below the poverty line. In 2021, approximately 39.2 million people (74% of the total population) could not afford a healthy diet, compared to a global average of 42%. The World Bank reported that the cost of a healthy diet in Kenya stands at US$3.19. Households in rural areas spend more than 60% of their income on food, while urban households allocate about 49% of their income to food expenses. Furthermore, caloric intake is low, averaging 2,201 calories per person per day, which falls short of the recommended 2,500 kcal/day.

The principal drivers of Kenya's food insecurity crisis are low agricultural productivity and rapid population growth. Several factors contribute to low productivity in Kenya's agricultural sector, including limited adoption of technological advancements, a small area cultivated, and climate change impacts, such as frequent droughts.

Notably, 80% of Kenya's land is classified as arid or semi-arid, while only 13% possesses high agricultural potential. This limited availability of high-potential agricultural land hinders the country's ability to increase domestic food production, contributing to widespread hunger and malnutrition, particularly in arid and semi-arid regions.

Rapid population growth exacerbates these food security challenges. Kenya's population has surged from 37.7 million in 2009 to over 52 million in 2024, with an annual growth rate of 2%. Projections suggest that by 2050, Kenya's population could nearly double, with 46% living in urban areas. This rapid increase places immense pressure on resources and further strains the country's already fragile food system.

## The Food Import Crisis

The positive effects of trade on food security are not always evident in low-income, food-deficit countries, which often rely heavily on imports to balance domestic supply with demand.

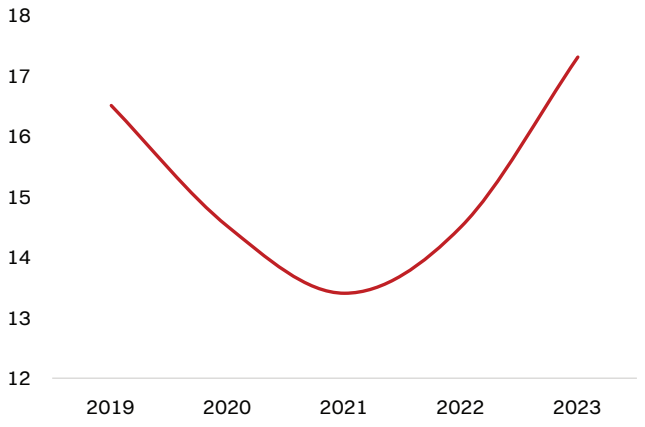
While international trade plays a crucial role in increasing access to a broader variety of foods than domestic production can offer and in stabilizing domestic markets by offsetting local supply shortages, it also exposes importing countries to risks associated with external shocks to global food availability. Furthermore, trade can undermine local production potential in food-deficit countries by lowering food prices, which exerts pressure on local farmers and hampers their competitiveness.

To meet its food demands, Kenya heavily relies on imports of essential food commodities such as maize, wheat, rice, and sugar, primarily sourced from Uganda and Tanzania. Kenya shares a unique trade dynamic with these neighbouring countries, serving as their leading importer of agricultural commodities, particularly maize.

According to the 2023 Economic Survey by the Kenya Bureau of Statistics (KNBS), the country's dependence on food imports has continued to grow, resulting in an escalating food import bill.

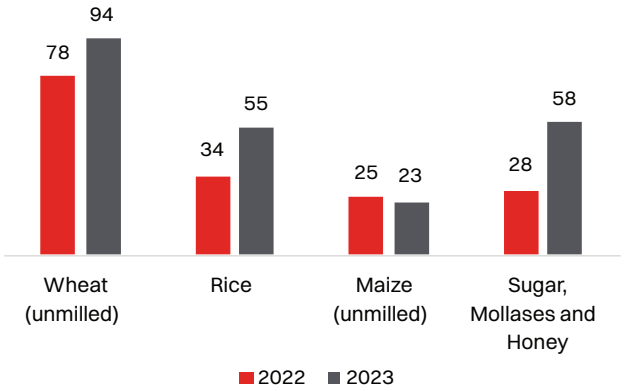
Notably, Kenya's import dependency ratio (IDR) worsened from 14.5% in 2022 to 17.3% in 2023. The volume of imported wheat, rice, wheat flour, and sugar surged by 21%, 38%, 20%, and 77%, respectively, in 2023. By the first seven months of 2024, Kenya's total food import bill had reached KSh163 billion (approximately $1.2 billion) (KNBS, 2024).

**Import Dependency Ratio**




*Source: KNBS, AFEX Research*

**Kenya's Food Import Value (KSh billion)**



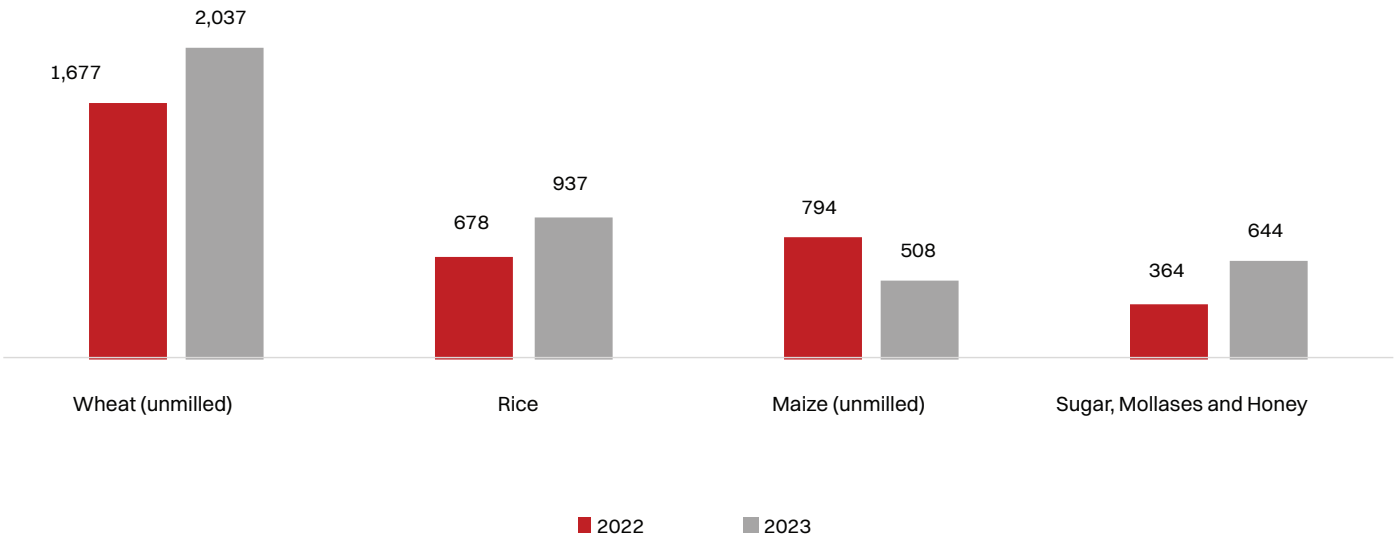

*Source: KNBS, AFEX Research*

This increasing reliance on imports is detrimental to Kenya's local agricultural sector. Production of commodities in Uganda and Tanzania is heavily subsidized, enabling them to sell their produce at lower prices.

This dynamic incentivizes Kenya to import these goods, given the geographical proximity to these countries. However, this situation creates competition for domestic producers, leaving many smallholder farmers in Kenya unable to compete with their counterparts across the border.

Consequently, numerous Kenyan maize processors now prefer sourcing from Tanzania and Uganda due to the lower prices, further complicating the challenges for local producers. As a result, many farmers struggle to achieve profitability, with some being forced to reduce production or exit the market altogether.

**Kenya's Food Import ('000mt)**




*Source: KNBS, AFEX Research*

While the availability of cheaply imported food may seem beneficial for Kenyan consumers, the reality is more complex. The advantage of low prices is heavily dependent on purchasing power, and the majority of Kenyans—especially those reliant on incomes tied directly or indirectly to low-profit, subsistence agriculture—lack sufficient income to benefit from these lower prices.

Addressing Kenya's high food insecurity is critical to achieving food security within the country, particularly by tackling the issue of low productivity, which is exacerbated by the escalating impacts of climate change. This approach is essential for narrowing the supply gap, reducing reliance on imports, and optimizing scarce resources.

## Pathways for Change

To address these challenges and reduce reliance on costly food imports, the Kenyan government has implemented programs aimed at increasing local agricultural productivity.

One such initiative is the national maize fertilizer subsidy program, overseen by the Ministry of Agriculture and Livestock Development (MoALD), which distributed approximately 6 million bags of subsidized fertilizer across 41 out of 47 counties in 2023, with an additional 12 million bags scheduled for distribution in 2024.

While these efforts are commendable, a larger issue persists: how can Kenya sustainably and nutritiously feed its growing population in the long term?

Beyond government initiatives, it is essential to strengthen household resilience by addressing key challenges such as climate-induced water stress and improving water-use efficiency, particularly in areas with low rainfall. Additionally, enhancing early warning systems will better prepare farmers for extreme weather events like droughts, enabling them to adapt and thrive amid climate uncertainty. Equally important is tackling the issue of food loss, as over 40% of produced food in Kenya is lost before it reaches consumers, resulting in annual losses amounting to KSh 72 billion (£0.48 billion).

Solutions include increasing funding for post-harvest infrastructure, promoting innovations in affordable local technologies—especially for cereal crops—to improve storage and extend shelf life, and fostering collaboration among various stakeholders in the value chain.

Investment in agro processing is imperative for adding value and improving the quality of primary products. This is particularly critical given the low processing levels, with only 16% of agricultural exports being processed, which limits the sector's ability to generate higher revenue. This lack of value addition also restricts income growth for farmers. Addressing this issue will unlock greater income opportunities for farmers and drive broader economic development.

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