Agriculture in Tanzania: A Catalyst for Economic Development and Poverty Reduction – Navigating Challenges in Promoting Agricultural Growth

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1.0 Introduction

The impact of agriculture on economic development and poverty alleviation has been a subject of debate for many years. While agriculture fosters economic growth, especially in developing countries like Tanzania, there are lingering questions about its effectiveness in addressing and reducing poverty. According to the National Bureau of Statistics of Tanzania (NBS)**,** in 2022, agriculture significantly contributes to Tanzania's economy, accounting for 28.4% of the country's Gross Domestic Product (GDP) and generating 30% of its export revenues (Chongela, 2015). Additionally, it employs 66.6% of the country's workforce (URT, 2022). Despite these contributions, nearly half of the population (49%) still lives below the poverty line, defined as $1.90 per person per day (Belghith *et al.* 2019).

This essay aims to shed light on the role played by agriculture in Tanzania, its impact on poverty reduction and overall economic development. The focus will be on analysing the challenges of promoting agriculture growth within its borders between 2002 and 2022. The choice to study Tanzania is deliberate since more than 80% of its population relies on agriculture as their source of livelihood (Sarris *et al.* 2016). However, despite this reliance on agriculture, the sector has experienced fluctuations in growth patterns over decades.

In this essay, I will adopt the definition of agriculture as *"the science and practice of producing crops, livestock and fisheries from the natural resources of the earth"* (Chongela, 2015:58). Firstly, I will explore the significance of agriculture in economic development and poverty reduction. Subsequently, my focus will narrow down to Tanzania, where I will highlight how agriculture has been instrumental in driving economic growth from 2002 to 2022 and facilitating efforts to overcome poverty. Lastly, I will examine the challenges that have hindered the progress of the agriculture sector during that period. To conclude, I will provide recommendations to enhance agriculture growth, improve quality of life, and ultimately reduce poverty.

2.0 Global Impact of Agriculture on Economic Growth and Poverty Reduction

Agriculture has an impact on both global economic growth and poverty reduction. According to the World Bank (2023), agriculture contributes around 4% to the Global GDP. Asia has been strong, with a GDP growth rate of 4.4 percent between 2012 and 2021, while Africa experienced a growth rate of 3.1 percent during the period (see Table 2.1). Sarris (2001) highlights countries like China, India, and Taiwan as examples of how agriculture influences economic growth. Factors such as resources, infrastructure, knowledge, skills, research and extension services, rural population density, education, and technological advancements play roles in their success.

However, there are differing views from Christiaensen and Martin (2018), who argue that while developing countries have witnessed economic growth, the share of agriculture in these economies has declined. The WMO (2022) emphasizes that climate change has affected productivity growth within agriculture since 1961 – this is despite it being Africa's backbone industry, employing over 55 percent of its workforce and serving as a cornerstone of its economy.

Table 2.1: Average annual growth rate of GDP (percent)

	1972–1981	1982–1991	1992–2001	2002–2011	2012–2021	1972–2021
Africa	3.8	2.3	2.8	5.2	3.1	3.4
Americas	3.6	2.7	3.4	2.2	1.8	2.7
Asia	4.9	5.2	4.2	5.8	4.4	4.9
Europe	3.1	2.4	1.9	1.6	1.2	2.0
Oceania	2.8	2.5	3.8	3.0	2.4	2.9
World	3.6	3.1	3.0	3.1	2.6	3.1

Source: FAO, 2023

The contribution of agriculture to the economy is undeniable; however, its role in reducing poverty is complex and subject to debate. According to Alain and Sadoulet (2010), agriculture growth reduces poverty 2.9 times more than growth driven by manufacturing and 1.8 times more than construction. This highlights the significance of promoting growth in agriculture for poverty reduction and underscores its ability to shape the socio-economic landscape. Ravallion and Datt's (1996) research sheds light on the role of agriculture in India. Over 40 years, from 1951 to 1991, their study reveals that agriculture was responsible for an 85 percent decrease in poverty in the country. These robust statistical findings support the argument that agriculture plays a role in lifting people out of poverty.

Nevertheless, Pauw and Thurlow (2011) present a different perspective. They argue that, despite experiencing economic growth, countries like Tanzania and Mozambique in Sub-Saharan Africa, have not witnessed reductions in poverty. It is important to note that more than 1.2 billion people globally live below the poverty line, with three-quarters residing in rural areas and heavily relying on agriculture (Sarris, 2001). This statistic serves as a basis for advocating for agricultural growth while emphasizing the need to understand its impact and address the challenges it faces.

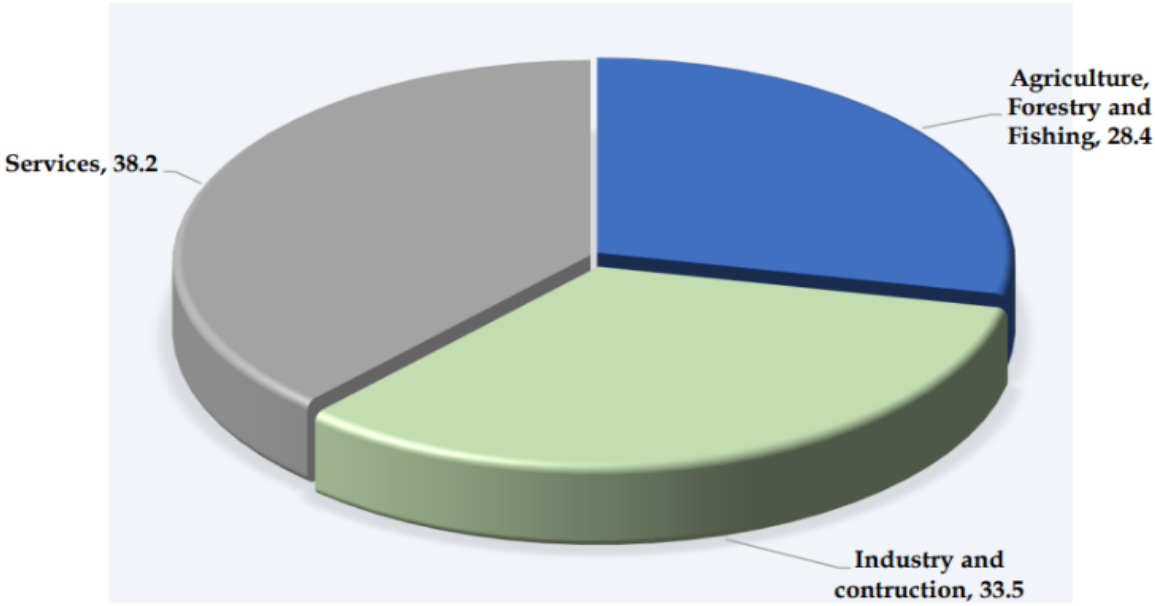
So, let us dive deeper into these aspects in the following section, using Tanzania as a case study.

3.0 Agriculture in Tanzania: An In-depth Analysis

3.1 Agriculture Contribution to Tanzanian's Economy (2002 to 2022)

Agriculture plays a role in shaping the economic landscape of Tanzania. According to the NBS, in 2022, agriculture contributed significantly, accounting for 28.4 percent of Tanzanian's GDP (refer to Figure 3.1). Its hierarchy ranks just behind the service sector (38.2%) and the industry and construction sector (33.5%).

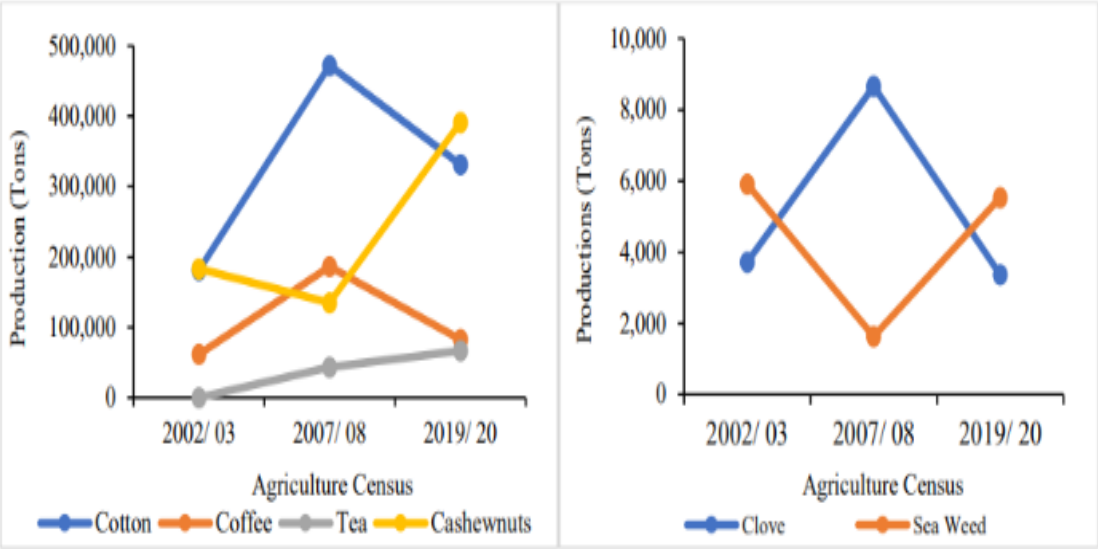
Figure 3.1: Distribution of GDP by Economic Activity at Basic Current Prices, Tanzania, 2022



Source: NBS (2022) The National Accounts Statistics of Tanzania 2016 - 2022 Publication

Expanding on this idea, studies conducted by Pauw and Thurlow (2011) indicate that Tanzania witnessed economic growth with an impressive average annual growth rate of 6.6% from 1998 to 2007. Notably, agriculture played a role in driving this economic growth. Aligned with these findings, Chongela (2015) underscores the significance of various crops, such as cashew nuts, cotton, coffee, tea, clove, and seaweed (refer to Figure 3.2), collectively contributing to 30 percent of total exports. Furthermore, it provides jobs for 75% of the Tanzania workforce and supplies about 65% of the raw materials required by the country's industries.

Figure 3.2: Cash Crops Production in 2002/03, 2007/08 and 2019/20 Agriculture Censuses, Tanzania



Key Message: *Production of cash crops (cashewnuts, cotton, coffee, tea, clove and seaweed) seem to fluctuate between the three Censuses likely driven by the world market demand and prices.*

Source: Taken from URT (2021) National Census of Agriculture Census

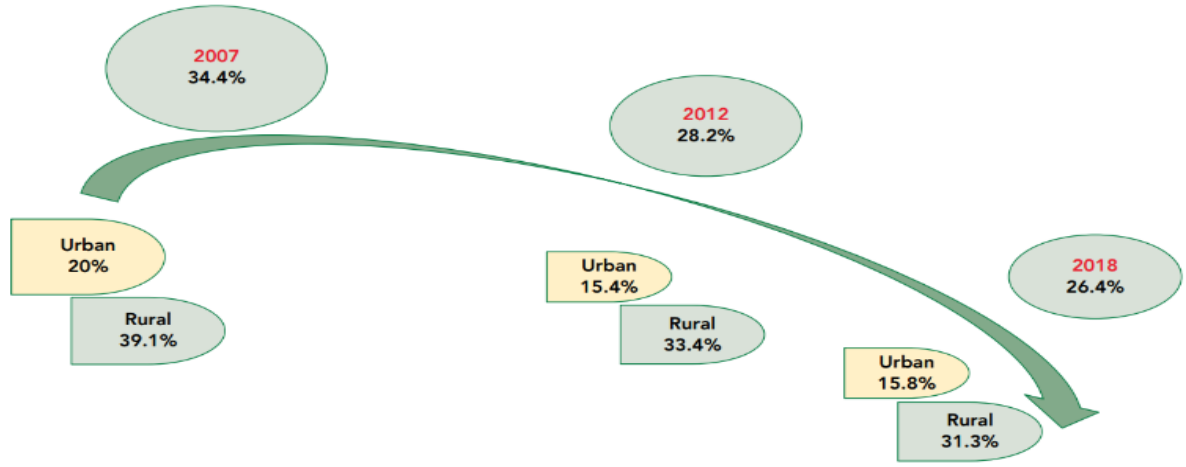
However, there has been a decrease in the contribution of agriculture to the GDP from 2013 to 2022, dropping by 2.3% to reach 28.4%. This shift contrasts with the period between 2003 and 2012 when agriculture held a share at 30.7%. According to data from the NBS for 2022, there was a growth of 3.3% in agriculture, a decline compared to the recorded growth rate of 3.9% in 2021.

The decline in performance during 2022 is due to weather conditions, particularly insufficient rainfall, in major production areas. These climatic and environmental factors significantly influenced the growth pattern of agriculture during that period. Also, emphasizing the importance of climate resilience in maintaining agricultural productivity, emphasizing the importance of climate resilience in maintaining agricultural productivity.

3.2 Agriculture Contribution to Poverty Reduction in Tanzania

The impact of agriculture on poverty reduction in Tanzania has been significant over the past two decades. According to the Tanzania Poverty Assessment Report of 2019, there has been an 8% decrease in poverty rates from 34.4% in 2007 to 26.4% in 2018 (see Figure 3.3). Additionally, the International Poverty rate, measured at $2.15 in 2017 PPP, declined from 44.7% in 2010 to 44.0%, highlighting the effectiveness of policies, including agricultural initiatives, in improving the standard of living.

Figure 3.3: Poverty Trends, National Poverty Line, 2007 -2018, Percent



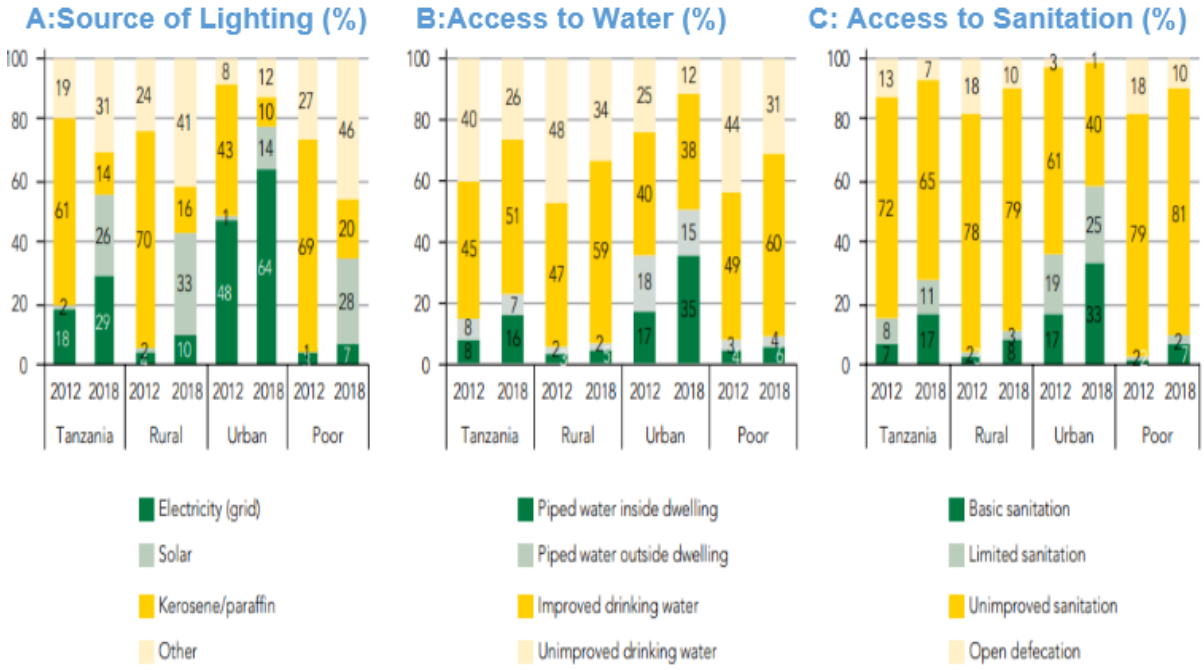
Source: The 2019 Tanzania Mainland Poverty Assessment by World Bank

Analysing socio-economic indicators from 2002 to 2022 reveals that, agriculture has played a role in reducing poverty levels in Tanzania. The World Bank (2019), provides data on improvements, such as increased access to safe drinking water, particularly in urban areas where the percentage of households with improved water sources has nearly doubled. As shown in Figure 3.4 (B), 26 percent of households still lack access to safe drinking water as of 2018, with urban households having a more favourable rate of only 12 percent compared to rural areas at 34 percent.

According to Figure 3.4 (C), in 2018, 65 percent of households in Tanzania used sanitation systems, with a significant challenge observed in rural areas where around 10 percent of households relied mainly on open defecation.

Also, there have been developments in food security, increased access to education, improved infrastructure like roads and markets, and better public transportation. These factors collectively contribute to improving the living standards of households.

Figure 3.4: Showing accessibility of Electricity, water and Sanitation



Source: World Bank (2019) - Tanzania Mainland Poverty Assessment - 2019

Although the unemployment rate increased from -12.4% in 2010 to -22.2%, the overarching patterns indicate that agriculture has been a catalyst for economic growth and poverty reduction in Tanzania. This is evident in the country's consistent average ranking of 160 in Human Development Indicators over the past two decades (see Table 3.1). These results underscore the necessity for ongoing investments and policy backing in the agricultural sector to serve as a pivotal force in consistently alleviating poverty within the nation.

Table 3.1: Tanzania: Socio-economic Development Indicators (2010-2022)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Population (Million)	45.1	46.4	47.8	49.3	50.8	52.5	54.4	56.3	58.1	59.9	61.7	63.6	65.6
Population growth (%)	2.6	2.9	3.0	3.1	3.2	3.4	3.5	3.4	3.2	3.1	3.1	3.1	3.1
Unemployment rate	-12.4	-12.6	-13.6	-14.8	-16.6	-16.6	16.6	16.6	-18.3	22.5	-27.7	24.7	-22.2
International Poverty rate ($2.15 in 2017 PPP)	-	44.7	-		-		-		44.9	44.3	44.6	44.3	44.0
HDI ranking	160	162	163	162	161	161	161	162	162	160	160	160	

Source: Taken from World Bank (2023): Macro Poverty Outlook for Tanzania: April 2023 - Datasheet.

Despite notable advancements, poverty reduction has not been at the recommended pace, as Saris et al. (2006) argued. For example, there was a decline of 0.3 percentage points per year between 2012 and 2018, compared to 1 percent point between 2007 and 2012. Pauw and Thurlow (2011) further point out that the national poverty rate decreased by 2.1 percentage points from 35.7% to 33.6% from 2001 to 2007. With the decline, non-poor and urban areas benefited more than the poor majority and rural (Levin and Mbamba (2004). Mashindano et al. (2011) underscore that the slow-paced progress in poverty reduction is attributed to the disconnection between economic growth and poverty alleviation, particularly within the sluggish pace of agriculture—a key sector in Tanzania's treble economic structure.

Mungunasi (2022), who shares the view of the World Bank, suggests that to reduce poverty, Tanzania should aim for a GDP growth rate of approximately 10 percent. If everything else remains the same, it could take 35 years for Tanzania to completely eradicate poverty if the poverty rate decreases by 0.75 percentage points each year. This imbalance highlights a challenge; while other sectors (service sector, industry, and construction) have experienced satisfactory growth, the agriculture sector, which supports a large portion of Tanzania's population, has not kept up. This misalignment calls for policies and interventions to ensure that they effectively contribute to reducing poverty by addressing the specific challenges facing the agriculture sector.

3.3: Key Challenges in Promoting Agricultural Growth

For the past two decades, Tanzania has witnessed various policies and initiatives implemented to promote agricultural development, acknowledging its pivotal role in the economy and poverty reduction. The Agricultural Sector Development Program (ASDP I&II), Kilimo Kwanza, the National Agricultural Input Voucher Scheme (NAIVS), the Southern Agricultural Development Zone of Tanzania (SAGCOT), the National Agricultural Policy of 2013, the Fertilizer Collective Procurement System (FBPS), Tanzania Development Vision 2025, and the ongoing program "Building a Better Tomorrow-Youth initiative for Agribusiness (BBT-YIA), which specifically targets over 1 million youth (refer to Table 3.2), are eight major initiatives in the last twenty years.

Table 3.2: Comprehensive Agricultural Development Initiatives in Tanzania (2002-2022)

Initiative	Description	Year Initiated
Agricultural Sector Development Program (ASDP I&II):	Enhancing agricultural productivity and livelihoods, ASDP focuses on comprehensive sector development, introducing policies and practices to improve farming conditions.	ASDP I launched in 2006 ASDP II launched in 2018
Kilimo Kwanza Program	To support commercial farming	2008
The National Agricultural Input Voucher Scheme (NAIVS)	Support farmers by distributing input vouchers to improve accessibility of inorganic fertilizer and improved maize and rice seed	2009
The Southern Agricultural Development Zone of Tanzania (SAGCOT)	To attract private investments in agriculture and public investments in infrastructure	2010
The National Agricultural Policy	Guiding agricultural development to promote sustainability, efficiency, and inclusivity in Tanzania's agricultural practices.	2013
The Fertilizer Collective Procurement System (FBPS)	Streamlines the procurement of fertilizers and regulating fertilizer prices	2014
Tanzania Development Vision 2025	Envisioning national development and outlines key strategies, including agricultural advancements, to propel Tanzania into a middle-income country by 2025.	1999 Reviewed between 2009 and 2011
Building a Better Tomorrow-Youth initiative for Agribusiness (BBT-YIA)	Focuses on empowering youth in agribusiness, offering training, resources, and support to over 1 million young Tanzanians for sustainable agricultural development.	2022

Source: Author's own

During this period, Tanzania has observed strides in agricultural growth, albeit at a measured pace, averaging growth of 4.4% (Pauw and Thurlow, 2011), a figure below the generally recommended 6% annual growth necessary for sustainable poverty reduction, as per the World Bank (2019). The growth figure in Tanzania's agricultural sector has consistently fallen below the recommended threshold, highlighting the challenges confronted by the country in promoting agricultural growth.

A major challenge to promoting agriculture in Tanzania is the restricted access to crucial resources, notably land. Despite having a vast expanse of arable land, totalling 44 million hectares, with the potential for agricultural production, less than a quarter of this land is currently cultivated, primarily under subsistence agriculture (URT, 2013).

The majority of smallholder farmers operate within the range of 0.2 to 2.0 hectares, a scale of production deemed too low to generate substantial income for effective poverty reduction and meaningful agricultural growth.

The inability to secure loans to finance agriculture growth (Chamberlin & Jayne, 2013), particularly among smallholder farmers due to the lack of collateral such as land, constitutes a significant challenge. The agriculture sector projects are perceived as high risk with low returns by commercial banks, as indicated by the ASR 2008/2009 report (URT, 2013). This limitation limits their ability to invest in modern farming techniques, quality inputs, and technology, constraining productivity and growth.

Agricultural trade restrictions and regulations, coupled with complex licensing requirements and high taxes, present formidable challenges, including significant post-harvest losses, as highlighted by AGRA (2022). This aligns with the perspective of the World Bank (2019), which contends that agricultural taxes, while contributing to local government revenue, significantly diminish agricultural income for farmers. The World Bank specifically identifies two crops, coffee and cashew, where official fees and taxes account for almost half of net revenue, exacerbating the challenges faced by farmers.

The slow adoption of modern farming technologies and practices poses a significant challenge, adversely impacting overall productivity for both large-scale and small-scale farmers. The application of agricultural technologies (AgTs), encompassing fertilizers, high-quality seeds, small-scale irrigation, drones, and GPS technology, has been instrumental in driving agricultural growth in developed countries like China. As highlighted by Jha et al. (2020) and Simtowe *et al.* (2011), these technologies are not widespread in Tanzania. Limited awareness of new technology and the unavailability of technologies when needed are reasons behind slow adoption (Kinuthia and Mabaya, 2017). While TARI's agricultural research centres, modern facilities like the IITA Research Centre, Horti Tengeru Tissue Culture, and Mar Bioscience Lab are valuable assets, their effectiveness hinges on proximity to farmers to ensure accessibility without escalating cost burdens. Addressing technological factors would further boost the agricultural sector and benefit small farmers and businesses.

Market constraints, such as inadequate infrastructure and a lack of market information, further impede the ability of Tanzanian farmers to connect with buyers and access lucrative markets (URT, 2013). The shortfall in infrastructure hampers the development of Agro-processing industries, restricting the capacity to add value to crop produce and limiting the creation of employment opportunities in these regions.

The impact of climate change on Tanzania's agricultural sector is two-fold. Firstly, unpredictable weather patterns and extreme events, like droughts and floods, jeopardize crop yields and food security (World Bank, 2021; Missanga & Rubanza, 2018). This environmental stress, as emphasized by Missanga & Rubanza (2018), hinders agricultural growth. Secondly, outbreaks of pests and diseases, such as fall armyworm and plant infections threaten crop yields (Mohamed and Teri, 1989). The increased costs associated with pest control measures and the resulting crop losses further undermine agricultural productivity and income for farmers.

The confluence of climate-related challenges and pest outbreaks creates a complex risk landscape for the growth of Tanzania's agricultural sector.

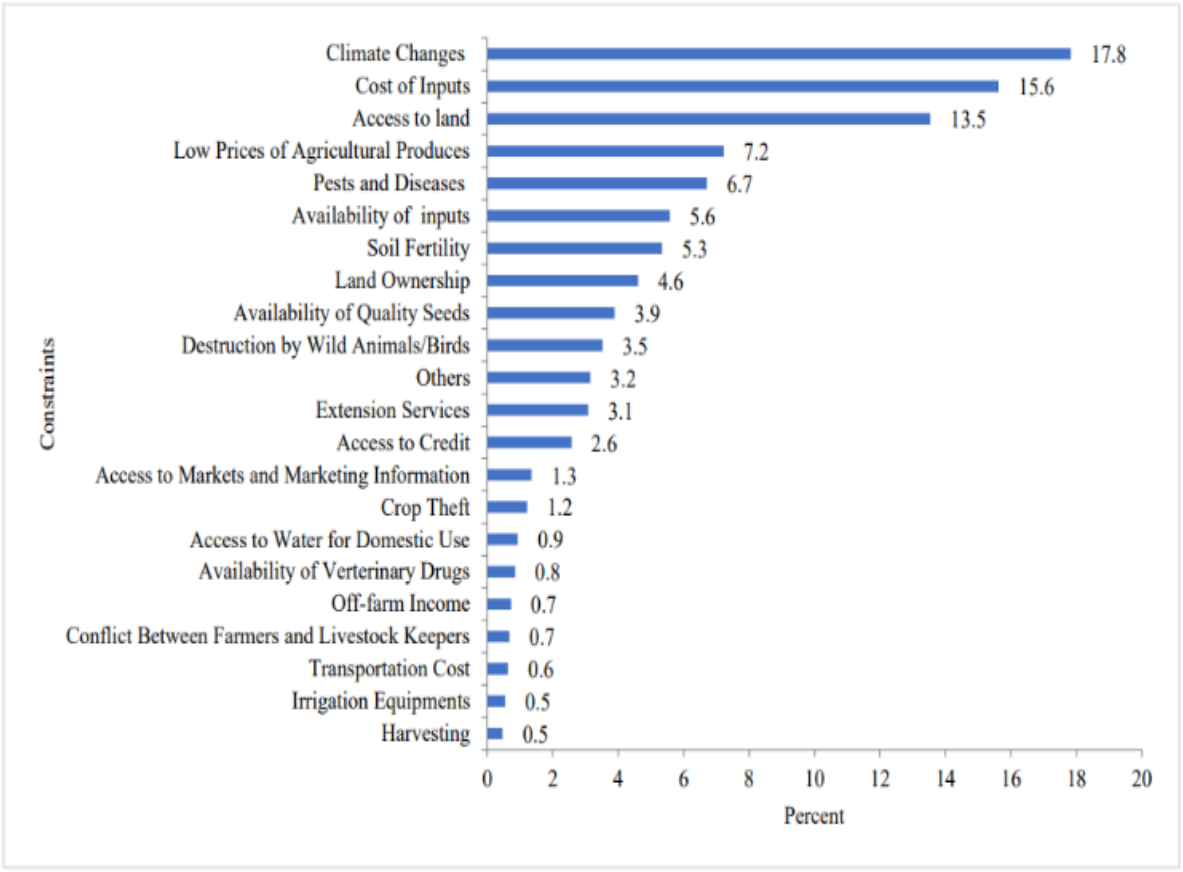
Table 3.3: Challenges in Promoting Agricultural Growth in Tanzania

Challenge	Description
Limited access to land	Smallholder farmers face barriers in accessing land, hindering significant income generation.
Limited access to loans and agriculture finance	Many farmers, especially smallholders, struggle to secure loans due to the absence of collateral, primarily land.
Agricultural Trade Restrictions and Regulations	Complex licensing requirements and high taxes contribute to agricultural challenges, affecting farmers' profits.
Slow Adoption of Modern Farming Technologies	The slow integration of modern farming technologies and practices hinders overall productivity, impacting both large-scale and small-scale farmers.
Market constraint and Inadequate Infrastructure	Limit the ability of Tanzanian farmers to connect with buyers and access lucrative markets.
Climate Change Impact	Unpredictable weather patterns and extreme events, such as droughts and floods, pose a serious threat to crop yields and livestock, impacting food security.
Outbreaks of Pests and Diseases	Pests and diseases like fall armyworm and plant infections threaten crop yields, leading to increased costs for pest control and crop losses.

Source: Author's own based on different readings

After outlining the seven challenges (see table 3.3) faced by the agriculture sector in Tanzania, it becomes clear that climate change (17.8%), limited land access (13.5%), pests and diseases (6.7%), expensive inputs (15.6%), and low market prices, for agriculture products (7.2%) stand out as the top five challenges, as indicated in the 2019/2020 current census report of agriculture, which outlines 21 constraints, with others aligning with the challenges discussed in this essay (refer to Figure 3.5).

Figure 3.5: Percentage of Major Agricultural Constraints Reported by Agricultural Households During 2019/20 Agricultural Year, Tanzania



Source: Taken from URT (2021) National Census of Agriculture Census

4.0 Conclusion

In conclusion, agriculture remains a catalyst in Tanzania's economy and poverty reduction, contributions to GDP, employment, and export revenues. Over the past two decades, agriculture has been instrumental in reducing poverty and shaping the socio-political landscape. However, Tanzania faces challenges in promoting agricultural growth. Limited access to resources, slow adoption of technologies, market constraints, and the increasing impact of climate change pose significant obstacles.

Targeted policies and interventions are necessary to align economic growth with poverty reduction goals. While initiatives like Kilimo Kwanza, ASDP I&II, NAIVS, and SAGCOT have progressed in addressing challenges facing the sector's advancement, collective effort is required. By overcoming these challenges, Tanzania can unlock the agriculture sector, promoting sustainable economic development and reducing poverty to a satisfactory level. Moving forward requires an approach incorporating technological advancements, infrastructure development, and climate resilience to ensure prosperity within Tanzania's agricultural landscape.

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