



Cash Crop Cultivation as Poverty Reduction Strategy for Small-scale Farmers in Ghana: A Case Study of Smallholder Cashew Farmers in Wenchi Community, Bono Region.

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This document represents part of the author's study programme while at the International Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

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DEDICATION

To my dear mom, siblings and dear friends.

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LIST OF ACRONYMS

Std. Dev	Standard Deviation
MOFA	Ministry of Food and Agriculture
NGOs	Non-governmental Organisations
UN	United Nations
UNDP	United Nations Development Programme
SDGS	Sustainable Development Goals
MDGs	Millennium Development Goals
CDP	Cashew Development Project
EIAR	Ethiopian Institute of Agricultural Research
PARC	Pawe Agricultural Research Center
RCN	Raw Cashew Nuts
GDP	Gross Domestic Product
GSS	Ghana Statistical Service
GCA	Ghana Cashew Authority
ADRA	Development and Relief Agency
AGRA	Alliance for Green Revolution in Africa
VSLAs	Village Savings and Loans Associations (VSLAs)

ABSTRACT

This dissertation examines the recent transition of food crop cultivators to the cultivation of cash crops, such as cocoa and cashew, in the Bono regions of Ghana, as well as the underlying motivations behind this shift. The research also explores the means by which cashew cultivation can serve as potential poverty reduction strategy for small scale food crop farmers in Wenchi, a community located in Bono Region. Research questions were formulated to investigate the reasons behind small scale food crop farmers shift to cashew cultivation and the possible impacts or contributions the shift had on their livelihood and poverty reduction. Field notes, questionnaires were used to collected data and digitally organized and processed using excel and SPSS software.

It was discovered from the study findings that, the shift towards cashew production was motivated by the rising market demand for cashew products, profit in the business, its suitability to tough climate and available resource to support farmers.

Despite the fact that that, cashew production was revealed to have several benefits there were other setbacks that makes the shift difficult. It was however detected that this challenges didn't curtail the overall benefits of small scale famers shift to cashew production.

The research proposes strategies that back small-scale agriculturalists, like beneficial pricing strategies, tax advantages, advancements in crop varieties through research and development, and subsidies. Furthermore, the study indicates that embracing a comprehensive approach to reducing poverty, such as diversification, credit accessibility, training opportunities, establishing connections to markets, developing infrastructure, and promoting gender inclusivity, has the potential to eliminate poverty among cashew farmers who operate on a small scale.

RELEVANCE TO DEVELOPMENT STUDIES

This Research Paper holds significance in the field of Development Studies as it explores the socio-economic factors impacting small-scale farmers in Ghana. The paper specifically investigates the role of cash crop production, with a particular emphasis on cashew cultivation in the Bono Region, in alleviating poverty. Development Studies involves comprehending and tackling the obstacles encountered by developing nations. The objective of this study is to explore the impacts cash crop cultivation, notable cashew farming has on the lives of small-scale famers. This by so doing will help provide crucial insights into various sustainable development strategies tailored for small scale farmers. The study stressed the role of cash crop productions in alleviating famer poverty, as well as examining the correlation between agriculture, steady income generation and poverty reduction.

The study findings will contribute valuable knowledge in development studies, notably in matters relating to smallholder farmers and cash crop cultivation in Ghana. Knowledge and experiences gained from this research will provide policy makers, development stakeholders and practitioners with vital development information necessary to promote designing appropriate and effective development strategies that can aid the socio-economic growth as well as poverty reduction of small-scale famers in various farming communities of Ghana.

This dissertation in general offer a precise and comprehensive account of the socio-economic complexities of small-scale farmers in Ghana, using small-scale farmers transition to cash crop production in Bono Region, Wenchi community farmers. It highlights the potentials of cashew production as a means to alleviate the poverty levels of small scale farmers and goes along to make some recommendation to enhance the sustainable development in rural agriculture.

Key words: SDGS, Sustainable Development, Poverty Alleviation, SDGs, Agriculture, Cashew Production, Cash Crops, Food crops, Bono Region, Wenchi Municipality.

CHAPTER ONE (1)

PRELIMINARIES

1.1 Background

The Agricultural Sector in many developing countries has played the primary role in their economic growth notably those in Sub-Saharan Countries. In Ghana like many other developing African Countries, agriculture is recognized at the economic backbone employing a significant proportion of its citizens. Wrigley-Asante et al (2017) has asserted the immense benefits of agriculture to the social and economic development of numerous households within the country. Furthermore, Danso-Abbeam (2020) reported that cash crop like cocoa had significant impact on cocoa farmers wellbeing in Kuamsi and other regions where it is cultivated. As per the Ministry of Food and Agriculture (MOFA, 2018) report, the Agricultural sector of Ghana accounted for approximately 45% of the country's employment and remained the primary sector through which the country earn more income through export. The Alliance for Green Revolution in Africa (AGRA) (2018) further asserts “that agriculture “remains the primary source of employment” in developing countries worldwide. The agriculture sector significantly contributes to the Ghanaian economy, plays a critical role in alleviating poverty, and is a vibrant driver of the country's financial transformation.

Smallholder Agriculture has been instrumental in sustaining the livelihoods of farmers in many underdeveloped economies. According to Karama et al. (2019), smallholder Agriculture is unequivocally the primary economic activity for most people in sub-Saharan Africa, and smallholder family farmers, who constitute the predominant share of the agricultural landscape, heavily rely on it. (Kamara et al., 2019). The primary objective of subsistence farming is to produce food crops to feed the increasing global population (Food and Agriculture Organisation (FAO), 2017). Despite significant progress in agricultural output in sub-Saharan Africa in recent years, the area still faces the highest levels of food insecurity globally (OECD-FAO Agricultural Outlook 2016: p. 59-95).

Cash crops are plants that are grown primarily to generate revenue through their sale. These crops are often purchased by parties outside of the farming industry. The term "cash crops" is used to distinguish commercial crops from those grown for subsistence. The latter are typically used to feed the producer's household or livestock. While cash crops were once a minor but important part of a farm's overall production, modern agricultural practices, particularly in industrialized nations prioritize crops that generate revenue (Britannica, 2022)

There are many investment opportunities within the agricultural sector that can help resolve existing issues in Ghana. One such option is investing in agricultural inputs, such as high-quality seeds and agrochemicals like fertilizers, pesticides, and herbicides. Additionally, investing in the processing of agricultural products, particularly in the floriculture sector, is recommended due to Ghana's favourable climate and topography. There are ample opportunities to cultivate various “cash crops, including cocoa, cashew, palm oil, pineapples, cotton, bananas, citrus fruits, coconuts, tobacco, and fresh vegetables” as stated by Hasmiu et al. (2022). Recognizing the significance of investors in assisting farmers who encounter financial challenges is crucial. These investors have the capacity to provide aid to individual farmers or even groups of farmers, thus facilitating the advancement of cash crops and the agricultural sector as a whole. Furthermore, there are some investments opportunities within the agro-processing industry such as processing raw cash-crop which will add value to them. This is advantageous as it can help limit or stall post-harvest losses, stimulates consumers interest for domestically produced products and price stability for products.

Crop Yields in Africa according to Peprah et al (2018) is adversely affected by fluctuating rainfall pattern, inadequate or absence of modern agricultural technologies and climate change. This situation causes a decline in crop yields affecting mostly small scale farmers, plunging them into poverty. In

their research, Babu et al (2014) stated that, the shift from food crop to cash crops cultivation by small-scale farmers is due to the challenging factors of climate change and they hope to even out their earning through cash crop cultivation. According to Id et al. (2018), cash crop production of cash has the capacity to alleviate small scale farmers poverty level as well as transform their lives and wellbeing. Boafo and Lyons (2018) asserted that, the shift from traditional food crop farming is obvious which according to Reddy et al (2018) is pinned on the notion of cash crop ability to generate substantial income and reduce extreme poverty. Monteiro et al. (2017) stated that cashew farms can become a source of sustainable income for generating wealth particularly for farmers who farm on small scale. Cashew is portrayed as an ideal source of substantial income for small-scale farmers due to the fact that majority of cashew producers globally fall within the small scale range. Monteiro et al. (2017) emphasize further that cashew nut production is a lucrative avenue for these farmers.

According to a study by Dubbert (2019), smallholder farmers in Bono/Bono East and Ahafo Regions and some areas in Northern Ghana cultivate their cashew on plots from 0.8 to 3 hectares. This lands were originally used for food crop production but the need for alternative crop cultivation led these farmers to shift to cashew cultivation. The Development and Relief Agency (ADRA) (2022) has indicated that, producing cashew on a larger scale in Ghana will transform the Ghanaian economy positively and increase the amount of foreign exchange. Compared to cocoa beans, cashew nuts are easier to process, requiring only harvesting and drying of the nuts, as opposed to cocoa processing which involves harvesting, fermentation, and drying (Boafo, 2019). This and other reasons account for the growing popularity of cashew farming among smallholder farmers.

Introduced into Ghana in the 1960s, the cashew tree has become an important Agro-forest tree. According to Ackah et al. (2020), Ghana exported its first cashew nuts (15 metric tons) in 1991, and since then, production and exports have increased significantly. Akyereko et al. (2022) report that in 2019, Ghana exported 171,924 metric tons of cashew nuts. As a result, Ghanaian farmers, through the Ghana Cashew Authority (GCA), have recognized the importance of cashew production.

Poverty alleviation strategies vary widely from person to person and from community to community (Amofah & Agyare, 2022). However, Amofah and Agyare (2022) suggest that poverty alleviation strategies should be based on lower-level essential criteria. For many smallholder farmers in Ghana and other developing countries, producing cash crops helps to reduce poverty (Reddy et al., 2018). Rural poverty in Ghana is endemic, government and non-governmental organizations have adopted various strategies to alleviate it. According to Ansah et al. (2020), Ghana eliminated extreme poverty and hunger in 2015, which was a great achievement because Ghana was the first among African countries to realize the 'Millennium Development Goals (MDGs)' and achieve near-total poverty elimination in line with SDG number 1. However, poverty remains a fundamental challenge in Ghana. Poverty refers to insufficient quantity or the lack of basic necessities such as food, income, water, shelter, and health for sustainable wellbeing. A 2019 survey by the Ghana Statistical Service (GSS) found that poverty levels were slightly above 23% at the time of the survey. In rural areas of Ghana, poverty is even more severe, with 67.7% of the rural population considered poor (GSS, 2019). Therefore, a range of approaches should be adopted to alleviate poverty among rural people in Ghana.

Poverty in rural development studies according to Haider et al. (2017) arises from a variety of factors, such as disparities in the availability and management of resources. However, it is important to acknowledge that poverty can persist in agricultural development endeavors due to different social, cultural, political, and economic inequalities. Likewise, according to Pal and Kar (2012), farmers' poverty poses a significant hindrance to the effort of cultivating diverse crops. It was observed by Gentle and Maraseni (2012) that, the presence of different limiting factors makes it nearly impossible for small scale farmers to diversify their source of income. Some of these obstacles include restricted land ownership, overexploitation of forest and forage, decline in livestock population. As a result,

several household are unable to engage in alternative income-generating activities, which could have positively aided them improve their overall wellbeing.

Individuals with substantial wealth on the hand who owns irrigated lands is capable of diversifying their farming by cultivation a wide range of vegetable and crops. However, those with limited resources focused on cultivating high-value crops and vegetables. In McCord et al. (2015) opinion, the level of crop diversity correlates to household income and wealth of farmers. McCord's study revealed that, the levels of crop diversity is linked with famer wealth and income level.

Scaling up productions of high-value crops poses a great challenge to many farmers due to inadequate funds which is required to source the necessary farming inputs such as irrigation facilities, seeds land and fertilizers. The importance of easy access to specialized inputs for high-value crop cultivation is necessary which according to Birthal et al. (2013) is the primary obstacle for poor farmers in India. Despite the fact that, cash crop cultivation is a profitable, limited capital is a primary setback for farmers looking to venture or expand their operation. This is as a result of farmers inability to obtain credit or lack of personal savings. Additionally, financially challenged farmers find it very difficult to adapt irrigational practices, which is crucial in high-value crop cultivation because of the costs involve to procure needed irrigational inputs and training costs. According to Namara et al (2013), in Sub-Saharan Africa, private smallholder irrigation technology is mostly accessible to a number of wealth farmers. It has been proven that an effective method of improving crop yield and reducing poverty is utilizing agricultural technology in farming as in the case of pigeon pea cultivators. It is asserted by Asfaw et al. (2012) that, farmers who adapt and effectively utilize agricultural technologies have a poverty ratio 14.6% lower than farmers who don't. This finding portrays the potential ability of agricultural technology as a factor for farmer poverty reduction.

The eradication of extreme poverty worldwide by 2030 for all individuals is a vital objective outlined in the Sustainable Development Plan for 2030. According to the World Bank (2020), between 2015 and 2018, the global poverty rate saw a steady decline, decreasing from 10.1% in 2015 to 8.6% in 2018. However, the influx of coronavirus global pandemic resulted an increase in the global hardship and poverty (The World Bank, 2020). Over the last two decades, there has been a positive improvement in the measures to mitigate the poverty levels globally until the emergence of the coronavirus pandemic. In a period when countries were recovering from the pandemic, the case became worse as the Russian-Ukraine war brought most international business transactions to a halt. The 2020 SDG report in Ghana projected that, given the two major global crises, poverty levels will be on the rise (Ghana SDG Report, 2020)

Efforts to reduce poverty among people is known as poverty alleviation. The UN and the World Bank have been leading the way in promoting strategies for poverty alleviation, particularly in developing countries (Amofah & Agyare, 2022). The "Sustainable Development Goals (SDGs), formerly known as the Millennium Development Goals (MDGs)", comprehensively include various strategies for poverty alleviation, with the goal of eradicating extreme poverty globally by 2030 being one of their key mandates (United Nations-UN, 2017). It's no surprise that the first two goals of the SDGs are "No Poverty" and "Zero Hunger."

Amofah and Agyare (2022) have demonstrated that the implementation of a cooperation strategy has proven effective in reducing poverty. It is highlighted by Owusu (2021) and Amofah & Agyare (2022) about the collaborated efforts between the Agriculture sector and household which greatly enhanced their wellbeing. It is reported by the Food and Agriculture Organization (FAO, 2018) that, adoption of knowledge sharing, good practices and cooperation in rural areas of Ghana and other African countries proved successful in poverty reduction of farmers especially smallholder farmers.

1.2 Problem Statement

Cash Crops like cashew and its cultivation is relevant to the economic growth of farmers and countries in general. Despite its significance, limited research has been conducted on cashew production, particularly, among small-scale farmers (Ateah et al., 2023). Sanyang and Kuyateh (2018) suggested that it is evaluating the potentials of cashew cultivation, its processing and marketing while addressing the challenges producers face is essential. Sanyang and Kuyateh (2018) study in Northern Gambia specifically focused on cashew cultivation and its potential/ability to improve the living conditions of small-scale farmers in the region. In another study, Monteiro et al. (2017) examined the importance of cashew cultivation and the positive socio-economic impacts it has on peasant farmers. Ateah et al. (2023) conducted a study within Transitional Zone of Ghana to ascertain the effects of cashew cultivation on small scale farmers in that region. Mariwah et al (2015) conducted a study on the current transitioning of smallholder food crop cultivators to cashew producers in the Bono region. The study was aimed to ascertain the reason behind the shift and the findings from their study revealed that the potential of cashew to provide higher profit and its market demand is the sole reason behind the shift. However apart from their study there is limited research on small-holder crop farmers shifting to cash crop cultivation notable cashew, the challenges faced and the extent to which cashew production can help alleviate the poverty level of smallholder farmers in the Bono Region.

This research therefore aims to explore the existing research gaps and study the potential of cashew farming as a means of reducing the poverty level of farmers in Ghana.

1.3 Main Research sObjectives

The study probed the shift in farming practices among food crop cultivators in the Bono-Regions of Ghana towards cashew production. This dissertation sought to explore the underlying motivations behind this shift and determine whether the transition to commercial cashew production can serve as a viable strategy for poverty alleviation in the Wenchi Municipality.

1.4 Main Research Question

How can cashew as a commercial cash crop product be used as poverty alleviation strategy among smallholder farmers in Wenchi Municipal of the Bono-Region.

1.4.1 Specific Research Questions

1. What evidences suggest that smallholder farmers are shifting from crop farming to cashew farming?
2. What is the effect of the shift to cultivating cashew in the lives and wellbeing of smallholder farmers?
3. How has cashew production help in poverty alleviation among small-scale/peasant farmers?

1.5 Significance/Relevance Of The Study

This research in particular has the capacity to make significant contributions to our understanding of farming practices and poverty reduction in the Bono regions of Ghana. Given the recent shift towards cash crop production, particularly cashew farming, it is crucial to comprehend the factors driving this change. Such comprehension will facilitate informed policymaking and the development of programs that promote sustainable agriculture and enhance the livelihoods of farmers in the area. The study's findings will provide valuable insights into the obstacles and opportunities associated with transitioning to commercial cashew production. Additionally, they will aid in assessing the potential

impact of this transition on reducing poverty, specifically in the Wenchi Municipality within the Bono Region.

The findings of this study will be of great value in shaping agricultural policies that support small-scale farmers and address poverty. Furthermore, the findings will contribute to already existing literature in this field of study. Ultimately, this research holds the potential to influence future research endeavors, policy formulation, and program interventions aimed at promoting rural development not only in Ghana but also in other regions.

1.6 Delimitations

This research aims to explore the factors that contribute to the transition of small-scale farmers in Wenchi and neighboring communities in the Bono Region of Ghana from subsistence farming to cultivating cashew crops. In addition, it will focus on investigating how cashew production can be utilized as a poverty alleviation strategy for smallholder farmers. The study will be specifically concentrated on the smallholder cashew growers in Wenchi, Bono Region of Ghana.

1.7 Limitations

There was limited time and funds due to which only a three communities were selected also due to the language barrier between the Research Assistant and community members, a translator was involved to translate, this situation led to some degree of distortion in the information collected.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section reviews and discusses secondary sources connected to commercial cash crop production, sustainable agriculture, and cashew production in Africa and Ghana. Additionally, it delves into poverty alleviation strategies and the implementation of cash crop production as a means to alleviate poverty. The primary focus of this review is on academic materials such as articles, journals, books, and publications that are relevant to the main thesis topic. The chapter provides a thorough theoretical framework and critically analyses why this framework was chosen and its relevance to the thesis topic.

2.1 Commercial Cash Crop Production

A comprehensive understanding of the effects of large-scale agriculture on the growing human populace and global climate change in rural communities is of utmost importance.

Many countries with predominantly agrarian economies are gradually shifting towards commercial agriculture. Governments are investing in agriculture to boost GDP contribution, productivity, exports, and job creation. This shift is aimed at promoting economic growth, reducing poverty, eliminating food insecurities, and supporting sustainable development. The contribution of agriculture to GDP varies greatly among African countries, 50% in Chad down to 3% in South Africa and Botswana (OECD-FAO Agricultural Outlook report, 2016). According to Statista in 2022, the agricultural sector contributed approximately 18.78% to Ghana's Gross Domestic Product (GDP).

According to the OECD-FAO Agricultural Outlook report (2016), the yields of maize in Sub-Saharan Africa lie within the range of 2.3 to 6.8 metric tons per hectare. The yields vary significantly across countries, with South Sudan recording less than 2 metric tons per hectare, while Kenya and Ethiopia producing over 6 metric tons per hectare. These observations point towards the variation in Sub-Saharan Africa agricultural productivity, hence, the need to develop location-specific strategies to improve crop yields.

According to Binswanger and von Braun (1991, p. 57–80), the optimistic viewpoint posits that technology and commercialization have a positive impact on agricultural growth, employment generation, and food supply expansion, all of major contributors to poverty alleviation. The viability of oil palm production in tropical Asian nations, including Malaysia, Indonesia, Sumatra, and Papua New Guinea, has been documented to have significant implications for wealth accumulation and economic development (Clay, 2004). However, it is essential to acknowledge that this agricultural practice also challenges traditional livelihoods and biodiversity conservation (Clay, 2004, pp. 203–235).

In Uganda, the central government actively endorses commercial agriculture to reduce poverty and generate wealth. Globally, there has been a noticeable shift towards favouring sugarcane cultivation over other conventional crops such as coffee and cotton, as well as plantation forests (Freitas et al., 2021). This shift is driven by the perception that sugarcane is more profitable (Mwavu & Witkowski, 2010, p. 60).

The increasing emphasis on commercial farming of cash crops such as cocoa, oil palm and cotton within rural communities has led to a rise in the value of arable land and a desire to enhance crop yields. However, this has also resulted in the further depletion of green vegetation and a decline in the amount of land utilized for cultivating food crops (Mwavue et al., 2016, pp. 191-201). The limited availability of land for agricultural purposes poses a significant concern, particularly given the difficulty in boosting crop production to meet the growing demand of most Ghanaians. Poverty, hunger, and climate change further compound this challenge, all of which impede African agriculture (Mwavu et al., 2016).

It is crucial to recognize that food production relies on various factors, including environmental elements such as changes in "land use," "biogeochemical cycles, climate patterns, and biodiversity." Socio-economic conditions also is a vital factor in food production (Liverman & Kapadia, 2010, p. 76). These factors can have substantial implications for food security and nutrition, especially in rustic regions.

Food security encompasses the state wherein people consistently have access to the necessary economic, social and physical means to acquire ample and nourishing food that aligns with their cultural preferences and fulfills their dietary requirements for a wholesome and dynamic life (Latham, 1997, p. 54). It pertains to the assurance of a reliable food supply that can sustain individuals and communities in meeting their nutritional needs and promoting overall well-being. According to the International Food Policy Research Institute (IFPRI) (2002, p. 154), this term also includes acquiring sustenance without relying on emergency food provisions, engaging in scavenging, theft, or other comparable coping mechanisms. Food insecurity continues to pose a significant challenge for economically disadvantaged households, resulting in adverse health outcomes, educational barriers, and impeding socioeconomic progress (Kung'u, 2007, pp. 105-113).

The potential impact of promoting cash-crop cultivation on the well-being of households has been a prominent subject of discussion within "food policy in numerous developing countries" (Weber et al., 1988, p. 76; Tankari, 2017, p. 34). A multitude of research has provided evidence supporting the favourable influence of cash crop farming on the economic well-being of households. Huang et al. (2016, p. 54) showed that the cultivation of cash crops significantly enhances the economic well-being of households. An illustrative example comes from Christiansen et al.'s (2006, p. 26) study on coffee growers in Tanzania.

Kennedy et al. (1992, p. 62) conducted a study wherein they noticed that participation in cash crop projects resulted in an increase in household income across nations in Southeast Asia and Africa. According to Finnis (2006, p. 51), it was noted that farmers who engaged in the cultivation of cash crops in southern India had notable increases in both economic and social advantages. In a similar vein, it was seen in Malawi that households that chose to engage in the cultivation of cash crops had significantly higher levels of income compared to those who did not participate in cash crop farming (Masanjala, 2006, p. 29).

Encouraging the cashew crops can significantly increase the income of farmers engaged in agriculture. Studies have shown that growing cash crops can produce higher economic output per unit of land utilized than staple crops (Cuong, 2009, p. 43). The insufficiency or sufficiency of water and land resources, level of technological advancements, and amount of labour input are the key factors determining this. In addition, cultivating cash crops helps households diversify their income sources, strengthening their ability to withstand economic and climate-induced disturbances such as market fluctuations, droughts, and harsh temperatures. Barbieri et al., (2017, p. 91) confirm that diversification methods like mixed-cropping and crop rotations contribute to improving the flexibility of agricultural production within households. However, it is essential to note that transitioning to cash crop cultivation may lead to decreased food crop production.

Furthermore, it is essential to note that the advantages resulting from the production cashew also have a positive effect on non-cash crop farmers due to the employment opportunities generated. Cash crop production requires a significant amount of manual labour, which is the main reason for its labour-intensive nature (Irz et al., 2001, p. 67). The findings of Poulton et al. (2008, p. 32) also confirm that the cultivation of cash crops demands huge amount of capital. The heightened labour requirements in the cultivation of high-value cash crops have the potential to increase the average salary among farmers who do not engage in cash crop farming. Furthermore, implementing cash crop

growing options alleviates financial limitations faced by households, empowering them to access improved resources for their agricultural activities (Govereh & Jayne, 2003, p. 62). According to Li et al. (2020, p. 56), this phenomenon subsequently boosts their ability to embrace technology that increases production and implements enhanced agronomic practices. By Li et al. (2020, p. 42), the cash flow created by farmers offer them the prospect to invest in and improve their farm management practices. This results in the promotion of agricultural innovation, which ultimately leads to increased crop yields.

However, it is essential to critically examine the alleged beneficial effects of cashew growing on the economic benefits of households (Masanjala, 2006, p. 82). Recent research has brought attention to cases in which the cultivation of cash crops could have improved socioeconomic conditions more effectively. The economic well-being of households, particularly those in specific developing nations that are most disadvantaged, is frequently hindered by significant hurdles to entrance (Kuma et al., 2019, p. 29). The results from this study suggests that the promotion of cash crop production has resulted in minimal improvements in the living conditions of the most impoverished households. Additionally, marginalised groups frequently encounter obstacles that hinder their involvement in these cash crop programmes (Ding et al., 2020, p. 65).

In China, prior scholarly articles about cash crop cultivation have predominantly concentrated on two principal domains. A particular body of work has explored the concepts and theoretical underpinnings related to the decision-making processes of farmers regarding the cultivation of cash crops, as well as the operational “mechanisms that are involved” in this context (Liu et al., 2021, p. 53). Su et al. (2016, p. 42) and Li et al. (2018, p. 94) examined the effect of cashew production on household labour distribution, subsequent determinations on household migration, and a range of non-economic consequences.

Many people believe that growing cash crops can improve the financial stability of households. However, most supporting evidence comes from observations, making it difficult to establish a direct causal link. It is still unclear whether cash crop cultivation can be effective at the household level and under what specific conditions it can lead to positive outcomes. While there have been studies conducted on what impacts cash-crop production has on households, including those by Masanjala (2006), and Jones & Gibbon (2011), more research is needed to determine its exact impact.

2.2 Sustainable Agriculture

The role played by Agriculture in supplying food and resources for the ongoing population growth in Africa including Ghana is very crucial. Despite these impact, the sector is faced with several challenges which hinders its capacity to expand to meet the future demands. The weather conditions, decline in. However, agriculture faces numerous challenges threatening its capacity to expand in producing on a large scale. These challenges include climate change, rapid decline biodiversity, deforestation, excessive ploughing, among others have contributed to losing the soil nutrients for crop cultivation. (Beus & Dunlap, 1990, p. 590).

The recent agricultural practices have made a significant contribution towards the emergence of multiple problems (Koochafkan, Altieri, & Gimenez, 2012, p. 61-75). It is imperative to acknowledge that the current state of affairs is far from ideal and requires immediate attention. The effects of these practices have harmed the environment and have compromised the sustainability of the agricultural industry. Therefore, it is crucial to implement sustainable agricultural practices that are not only environmentally friendly but also economically viable.

Considering the challenges facing sustainable agriculture, there has been a growing emphasis on sustainable development since the 18th century (Tait & Morris, 2000, p. 247). This shift in focus has led to a promotion of agricultural practices that are environmentally harmonious and promote

responsible resource use. The need for sustainable agriculture is becoming increasingly apparent as we strive to meet the pleas of a growing populace while preserving the planet for future generations. We must continue to develop innovative solutions for the challenges of sustainable agriculture, ensuring that we can meet present needs without compromising the future. Culleton, Tunney & Coulter (1994, p. 36-47) revealed that, the “definition of sustainable agriculture” is ambiguous just as the concept of “sustainable development”. This ambiguity has given rise to a diverse array of discourses, perspectives, or paradigms related to sustainable agriculture (Tait & Morris, 2000, p. 260), making discussions and practical implementation of this concept exceptionally complex.

Moreover, this ambiguity allows the concept to be exploited by vested interests seeking to utilize it for their objectives (Constance, 2009, pp. 48-72). In order to provide an apparent understanding and resolution to the topic of sustainable agriculture, several scholars have provided meanings as evidenced by (Goldman, 1995, p. 291) and (Hansen, 1996, p. 117).

"For a farm to be sustainable, it must produce adequate amounts of high-quality food, protect its resources and be both environmentally safe and profitable. Instead of depending on purchased materials such as fertilizers, a sustainable farm relies as much as possible on beneficial natural processes and renewable resources drawn from the farm itself" (Reganold et al., 1990, p. 112).

Sustainable Agriculture involves "management procedures that work with natural processes to conserve all resources, minimize waste and environmental impact, prevent problems and promote agroecosystem resilience, self-regulation, evolution and sustained production for the nourishment and fulfilment of all" (MacRae et al. 1989, p. 173).

The intricate and contentious nature of the concept, coupled with its adaptation to specific contexts, renders a precise and universally applicable definition unattainable (Pretty, 1995, p. 1247). The influx of diverse meanings, explanations, and applications of the term may possibly lead to a situation where these definitions complement one another, coexisting and potentially providing mutual support. Conversely, there is also the possibility of negative interactions between definitions, where the objectives of one definition run counter to those of another. The term 'sustainable agriculture' is often surrounded by ambiguity and confusion due to multiple conflicting schools of thought. Some scholars argue that there are two main paradigms of sustainable agriculture (Rezaei-Moghaddam & Karami, 2008, p. 407), while others suggest that there are even more (Pretty, 1997, pp. 7-32).

2.3 Cashew Production In Africa

The tree crop cashew (*Anacardium occidentale* L.) is a highly useful crop which has been widely disseminated from its native Brazil to various regions of tropical South America, Asia, Central America and Africa (INC, 2015). In the 16th century, traders from Portugal introduced the cashew crop to India and Africa to help control degrading the land (Jaeger, 1999, p. 45). Despite its original purpose, cashew is now extensively grown across Asia, Africa, and South America for the production of nuts, which are utilized for food, medicine, and income generation (ACA, 2010, p. 75; Judge & Azam-Ali, 2001, p. 23). Cashew is notable for its adaptability to a broad range of ecological conditions, thriving in warm regions with annual rainfall ranging from 1000 to 3000 mm. Additionally, it shows strong resilience in seasonally wet and dry tropical climates.

Cashew trees perform optimally in soils that are well-drained and have a light texture, with minimal inputs. Each cashew tree has the potential to yield an average of 50 to 75 kg of apples and nuts per annum, which translates to an output of up to 4 kg of cashew kernels. Notably, cashew trees have a lifespan of 50 to 60 years and typically commence fruiting in their third to fifth year. It is imperative to provide appropriate care for these trees to ensure maximum productivity.

The global production of raw cashew nuts (RCN) has experienced a substantial increase over the years, rising from 0.29 million tons in 1961 to 4.9 million tons in 2016. This surge in production has resulted in a shift in the capacities of different countries (ACA, 2016, p. 89). Africa, in particular, has witnessed a remarkable growth in cashew production, with the volume increasing more than fourfold from 400,000 MT to an estimated 1,800,000 MT during the same period. Until the 1980s, India held the position of the top cashew producer, alongside Mozambique, Tanzania, Brazil, and Cote d'Ivoire, which collectively accounted for the majority of RCN production until the mid-1970s. Notably, African countries like Mozambique and Tanzania dominated the global cashew production, contributing to 68 percent of the total during that period. However, the past three decades have witnessed a transformation in the landscape of global cashew production, with Asian countries emerging as the primary cashew producers (ACA, 2016). Leading the cashew production in West Africa are Nigeria and Cote d'Ivoire, both experiencing significant growth during the early 2000s (ACA, 2010, p. 73; 2014, p. 61). Monteiro et al. (2017, p. 67) indicated that "Cote d'Ivoire" has surpassed India to become the "largest producer of raw cashew nuts". Other West African countries including Senegal, Ghana and Benin, have also witnessed significant production increases, primarily attributed to expanded cultivation areas supported by government initiatives and numerous NGOs (Monteiro et al., 2017, p. 67). Alternatively, leading cashew processing countries like India and Vietnam face declining RCN production due to labour costs and competition with other crops. However, this situation presents a significant market opportunity for raw cashew nuts in other countries. In East Africa, Tanzania and Mozambique have seen a recovery in cashew production since the 1990s, driven mainly by growing demand and a favourable market for raw cashew nuts. It's worth noting that cashews are now being cultivated in 36 countries worldwide, which have sufficiently warm and humid conditions. The African Cashew Alliance (ACA, 2010, p. 62) highlights that changing industry conditions make African cashews a promising investment choice.

The increasing purchasing power of emerging economies, which use cashews in various food products, further amplifies the already vast global demand. Africa's strategic proximity to the world's largest cashew product markets, namely the USA and Europe, is a clear advantage. Therefore, it is imperative to expand cashew production within Africa. Notably, Western Africa has received significant attention from both the government and external supporters due to recent progress (ACA, 2016, p. 97).

Cashew has substantial potential in many countries where it is not traditionally grown, and there needs to be more emphasis on its production development. In Ethiopia, the crop was introduced to farmers and research activities such as adaptation and maintenance efforts only in 2013 at the Pawe Agricultural Research Center (PARC), which is one of the national research centres under the Ethiopian Institute of Agricultural Research (EIAR). PARC observed impressive crop performance with nut yields reaching up to 3.81 kg per tree from five-year-old cashew trees (PARC, unpublished). Although cashew is still unfamiliar to many parts of the country, similar experiences have been noted in Tanzania, Mozambique, and Kenya. There has been some change in recent times, but there is still a significant knowledge gap about the importance of cashews from the perspective of both the government and producers, not only in Africa but mainly in Ethiopia.

Land security is critical for the success of cashew farming. Moreover, establishing stronger market connections could help further bolster this situation, as evidenced by recent research that tied the growth of cashew farms to the conservation of ownership over unused land (Ollenburger et al., 2016, pp. 58-70).

2.4 Cashew Production In Ghana

The consumption of cashew expanded substantially by 25% worldwide from 2011 to 2015, and the top 20 consuming nations are expected to experience additional expansion (Alasalvar, Salvadó, & Ros, 2020, p. 56). This increase was primarily attributable to the numerous health benefits of cashews. The increasing prevalence of alternative milk products, including cashew milk, and the shift in consumer preferences towards tree crops such as cashews significantly contribute to the high demand for cashews, especially in developed economies (Intelligence, G. 2016, p. 80). The substantial demand for cashews is substantially influenced by this shift in consumer preferences towards tree commodities such as cashews (Intelligence, G. 2016). Recent interest has been focused on the expansion of the cashew industry as a result of its crucial contribution to the promotion of non-traditional agricultural exports (Wongnaa & Ofori, 2012, p.s 73-80). ¹It is worth mentioning that in 2016, approximately 53% cashew nut exports accounted for the total revenue generated from non-local agricultural exports in Ghana, totalling 371.1 million dollars (ISSER, 2012, p. 156). Furthermore, cashews have become the second most significant cash commodity on the African continent, establishing Ghana as a significant participant in this sector (Rabany, Rullier, & Ricau, 2015, p. 72). This demonstrates the increasing significance of cashews.

Ghana's first recorded exports of unprocessed cashew kernels weighed 15 metric tonnes in 1991. According to Peprah, Amoako, Adjei, & Abalo (2018, pp. 355-377), this quantity had increased substantially to 3,571 metric tonnes by 1997. On the contrary, the initial declaration of unprocessed cashew nut exports from the United States in 1991 comprised 15 metric tonnes. In 1998, the Ghanaian MoFA recognised cashews as a prospective non-conventional export product. Therefore, the Cashew Development Project (CDP) was instituted in 2002 with the intention of improving and harmonising operations in the cashew industry (Sarpong, 2011, p. 62). Cashews hold significant value as an export commodity for Ghana. According to Sarpong (2011, p. 62), the unprocessed cashew nut production peaked at almost 34,633 tonnes in 2006 and subsequently escalated to 81,190 tonnes in 2008. This signifies a substantial growth within the sector. Based on data from the Ministry of Food and Agriculture (MoFA, 2016, p. 213), the value of Ghana's exports exceeded \$200 million to the economy in 2015, totalling approximately 232,834 tonnes. Ghana possesses a total of 13,600,000 hectares of arable land, as reported by MoFA. Presently, farming activities are limited to 634,930 hectares (4.66 percent) of this land area (MoFA, 2016, p. 213). Notwithstanding the notable advancements that have been achieved, it remains imperative to confront concerns pertaining to productivity and efficiency in the agricultural domain to guarantee the sustainable utilisation of resources and to accomplish the Sustainable Development Goals (SDGs) (World Bank, 2011, p. 143).

As stated by the World Bank (2011, p. 143), there exists a significant correlation between the agricultural sector's performance and the economic prosperity of developing countries. Moreover, productivity growth is a critical determinant in the advancement of per capita income and overall socioeconomic welfare, as stated by the World Bank. Consequently, it is critical to optimise the utilisation of existing resources and implement recently developed technologies to increase total factor production. Doing so will foster a consistent income stream and contribute to the overall welfare of producers. Sustainability concerns encompass a range of socioeconomic and environmental issues that affect future generations as well as the present (Hopwood, Mellor, and O'Brien, 2005, p.s 38-52). As discussions regarding agricultural policy have become more focused on the efficient distribution of resources, a number of agricultural sector participants have begun to examine the feasibility of conducting an evaluation of agrarian practises. In recent times, Ghana has devoted considerable

¹ The price of "raw cashew nuts per kilo is between 15 GHC i.e. about (1.28\$) to 20 GHC i.e. about (1.70\$)"

attention to enhancing the efficacy and productivity of its agricultural sector. This is partially attributable to the sector's contemporary accumulation of inefficiencies.

As per a report published by the World Bank (2013, p. 242), the Ghanaian Agriculture sector is primarily characterised by suboptimal yields of staple and cash commodities. Furthermore, according to a report by World Development Indicators (2011, p. 191), it is projected that cereal production in Ghana will amount to 1.7 t/ha. This figure is below the average regional yield of 2 t/ha and falls short of the prospective yields that could exceed 5 t/ha. This suggests that Ghana's cereal production is falling short of its maximum capacity. Moreover, according to a report by COCOBOD (Ollendorf, Sieber, & Lohr, 2023, p. 212), Ghana is anticipated to produce between 400 and 450 kg/ha of cocoa annually, which is among the lowest in the world. Ghana is therefore categorised among the nations with the least productive cocoa crops. Conversely, the worldwide demand for cashew output has experienced a growth of 6.1%. Furthermore, substantial expansion in consumption demand is anticipated by 2025 (Fitzpatrick, 2017, p. 74).

Notwithstanding these advancements, Ghana's agricultural output as a whole has increased only moderately since 2016, “from 530 kg/ha in 2010 to approximately 638 kg/ha” (Danso-Abbeam G et al, 2021). This indicates a growth of approximately 26%. The reason for this modest development may be ascribed to the increased efficiency that producers are required to employ the resources at their disposal. The average cashew harvest in Ghana is reported to be 0.5 t/ha by the MOFA (2016, p. 252). This figure significantly falls short of the prospective yield of 1.8 t/ha. As of now, Ghana's cashew harvest has amounted to a mere 27.78% of its maximum yield. To find solutions to the limitations of utilising natural resources in a sustainable and efficient manner, addressing inefficiencies in agricultural productivity is an initial and critical step. Ghana might encounter challenges in attaining its developmental objectives and fulfilling the Sustainable Development Goals (SDGs) if these productivity gaps are not remedied.

The implementation of unconventional export commodities, including cashews, is being bolstered by substantial assistance from the central government of Ghana. Despite having a lengthy and distinguished history as a prized plant, the cashew tree has only recently become a significant commodity for tropical trees in the twenty-first century. The edible seeds of cashews are the product of their cultivation. Mitchell and Mori (1987, p. 76) assert that the earliest documented accounts of cashews originated in Brazil. Cashews, scientifically referred to as *Anacardium occidentale* linn, are a significant tree-nut commodity that ranks third in global trade at the present time (MOFA, 2007, p. 235). A species of the genus *Anacardium* comprises cashews.

The initial records indicate that Ghana commenced exporting cashew nuts in 1991, with 15 metric tonnes of the product being exported abroad. As of 1997, the aggregate value of exports had risen to 3,571 metric tonnes. In 2002, Ghana exported 3,893 metric tonnes of cashews with a total value of \$1,450,306, as reported by the Ghana Export Promotion Council. This export quantity peaked at 6,338 metric tonnes in 2003, with a corresponding value of \$1,598,636. This marked a substantial increase of 79.15% compared to the preceding year. The annual export of raw nuts peaked at an impressive 47,000 ²metric tonnes in 2006, generating foreign exchange revenues of approximately 23 million US dollars.

2.5 Poverty Alleviation Strategies

Poverty is a complex phenomenon with multiple dimensions, but it is usually measured using economic indicators related to income and consumption (World Bank, 2015, p. 342). Amartya Sen's

² One Metric Tonne is Equal to 1000kg and in 2021 1tonne of cashew was priced at \$1,258 (GH13,00-14,000) approximately.

approach to measuring poverty, known as the capability approach, provides a unique point of view. It explains poverty not solely as a matter of real earnings but as the failure to attain specific essential capabilities (Sen, 1976, pp. 219-231). It is important to recognize that income conversion into actual abilities varies based on societal contexts and individual beliefs (Sen, 1985, pp. 669-231). The UNDP also highlights the significance of the capabilities approach to measuring poverty, aligning with Amartya Sen's framework (UNDP, 2014, p. 156).

The United Nations' first sustainable development goal is to eliminate poverty and ensure no one is left behind. Participatory and community-driven approaches are used in development initiatives and poverty alleviation programs worldwide to reduce poverty in disadvantaged communities (Chakrabarti & Dhar, 2013, p. 76). Economic growth is vital in poverty alleviation by creating productive employment opportunities and lifting people out of financial hardship (Bhagwati, Panagariya, 2012, p. 82). Bhagwati and Panagariya (2012, p. 88) posit that economic growth does not only produce the cash necessary to extend poverty alleviation programmes, but it also enables governments to devote funds for the critical needs of individuals experiencing poverty. These essential requirements include healthcare, education, and housing.

Since the 1970s, the struggle against poverty on a worldwide scale has been an important topic of discourse in the context of international relations. The UN the SDGs in 2015, with the primary objective of Goal 1 being to "end poverty in all its forms everywhere" (UN, 2016, p. 235). The SDGs were designed to be accomplished by the year 2030. An investigation that was conducted out by Alkire et al. (2014, p. 65) found that 85% of the population that is poor and lives in rural communities did so across 105 countries.

According to the IFAD (2010, p. 175), smallholder agriculture, which refers to producers who have less than two hectares of land and little assets, is seen as a potential pathway out of poverty for a significant amount of individuals living in remote/rural areas. It has been argued by Losch, Fréguin-Gresh, and White (2011, p. 56) and Warr (2003; p. 23) that expansion in the agricultural sector has a far greater capacity to alleviate poverty than development in other industries. The Food and Agriculture Organisation (FAO) emphasises the considerable role that small-scale farmers play in the production of most of the food that is consumed in the underdeveloped countries. On the other hand, they typically contend with far higher levels of poverty and food insecurity than either the urban poor or the general population (FAO, 2011, p. 153).

The World Bank (2008) proclaimed that, the extension and development of the agricultural sector play an significant role in breaking the cycle of poverty in many developing nations. Mixed cropping is considered to be a promising pathway among the strategies proposed within agriculture to alleviate poverty (FAO, 2011, p. 51; Perz 2004, p. 64). According to Mugendi Njeru (2013, p. 42), this strategy is considered ecologically sustainable, cost-effective, and notably helpful for minimising uncertainties, particularly for small-scale producers. According to Adjimoti, Kwadzo, Sarpong, and Onumah (2017, p. 74), one prevalent meaning of crop diversification is the practise of adding additional crops to a cropping system that already exists. According to Clements et al. (2011, p. 87), crop expansion is linked to substituting low-value products with high-value products. These high-value products are typically 'fruits and vegetables' that are targeted for the foreign market. Mixed farming, which integrates crops and livestock, is a type of diversification Bacon et al., (2014, p. 41), "the integration of crops and trees", which is known as "agroforestry" Altieri et al. (2015, p. 76), or the cultivation of cash crops.

Several studies such as Harris & Orr (2014, p. 34) and Oladele (2011, p. 61) have focused on analysing the relationship amid mixed cropping and the alleviation of poverty, specifically examining its impact on rural incomes and the generation of employment opportunities.

Despite this, a number of researchers, including Narayan, Chambers, Shah, and Petesch (1999, p. 45), have argued that the effectiveness of programmes designed to alleviate poverty should not be judged solely based on income. Schleicher et al. (2017, p. 51) urge for a broader perspective on poverty, one that encompasses environmental factors that are presently excluded from existing techniques. This would be an advance over the current state of affairs. The UN defines poverty as a lack of vital services including education, social discrimination and starvation (United Nations, 2015, p. 153). This definition is included within the framework of the agenda for sustainable development.

2.6 Using Cash Crop Production As A Poverty Alleviation Strategy

There are multiple established methods to improve the financial stability of a household through cultivating cash crops.

Studies have shown that cultivating cash crops can significantly boost agricultural income for households (Cuong, 2009, p. 56). Rather than relying solely on staple crops, farmers who prioritize cash crops can often achieve a greater economic yield per unit of land, factoring in crucial variables like land availability, water resources, technology, and labour input.

Promoting cash crop production is crucial as it provides households with an opportunity to diversify their livelihoods. In doing so, it enhances their resilience to various types of shocks, be it economic or climate-related. Households with diversified income sources are better equipped to manage shocks, such as market price fluctuations, droughts, high and low temperature. According to Barbieri et al. (2017, p. 34) have proven that modernization in crop production, such as mixed-cropping and crop rotations, can significantly strengthen households' agricultural output, thereby increasing their resilience.

Thirdly, the returns from cash crop cultivation extend to “non-cash-crop farmers” through employment effects, given the labour-intensive nature of “most cash crop production” (Poulton et al., 2008, p. 63). It's exciting to note that non-cash crop farmers can earn a higher wage, thanks to the growing labour demand in high-value cash crop cultivation.

Furthermore, providing opportunities for cash crops means that families face fewer financial constraints, which in turn allows them to acquire better inputs for crop cultivation (Govereh & Jayne, 2003, p. 42). This increased financial capacity enables them to embrace yield-boosting expertise and effective agronomical practices (Li M et al., 2020, p. 41), resulting in higher yields. With the additional income from cash crops, farmers can invest in and improve their farm management, leading to agricultural innovation and further increases in yield.

Nevertheless, there are valid justifications to raise doubts about the unequivocally helpful impact of growing cash crop on the economic welfare of households (Orr, 2000; Masanjala, 2006, p. 43). Kuma et al. (2019) have revealed instances where cash crop production could not uplift the economic benefit of family homes, especially those at the lowest income levels in certain developing nations, often due to significant entry obstacles. These studies found that the promotion of cash crop cultivation scarcely improved the living standards of the most impoverished households, with these vulnerable groups frequently being overlooked or constrained from participating in such cash crop initiatives (Ding et al., 2020, p. 85).

In China, earlier cash-crop researches focused more on farmers' decision-making and the driving mechanisms (Liu et al., 2021, p. 43). Su et al. (2016) and Li et al. (2018) explored how growing cash crops affects labour distribution, migration choices, and non-monetary consequences like environmental impacts. Consequently, the extent to which cash crop production can yield optimal outcomes at the micro-household level and the conditions under which it does so remain to be determined (Masanjala, 2006, p. 90; Jones & Gibbon, 2011, p. 37).

CHAPTER THREE

METHODS AND METHODOLOGIES

3.0 Introduction

The chapter focused on the Theoretical Frameworks that were relevant to the study topic, these include The Sustainable Livelihood Theory and the Theory of Political Economy. The chapter also delved into Sampling and Sampling procedures – where the target population was defined; respondents; and also indicating the sampling methods used in the process of knowledge inquiry. The chapter has gone further to delved into the Analytical methods used to analyse the data collected on field and it ended with the Study area.

3.1 Theoretical Framework

3.1.1 Sustainable Livelihood Approach

The “Sustainable Livelihood Approach” has gained popularity among development practitioners and researchers since the late 1990s. It was notably a key concept in the strategy of the UK's Department for International Development during the initial years of the UK New Labour government. The 1997 White Paper on International Development articulated the need to prioritise sustainable livelihoods, asserting that governments should redirect their international development endeavours towards eradicating poverty and promoting inclusive economic growth that benefits marginalised populations.

This objective can be achieved by providing assistance for global sustainable development objectives and implementing policies that foster “sustainable livelihoods” for impoverished individuals, advance “human development”, and preserve the natural environment (DFID, 1997: p. 6). In their seminal work preceding the White Paper, Chambers and Conway (1992) provided a comprehensive definition of sustainable livelihood. They conceptualised it as the amalgamation of asset, capabilities and activities necessary to sustain livelihoods.

Additionally, a sustainable livelihood must provide opportunities for future generations, contribute net effects to other households at “local and global scales, and demonstrate both short and long-term” sustainability (Chambers & Conway, 1992, p. 7). The primary focus of this research is to establish how the production of cashew as a commercial cash crop product can be used as a poverty alleviation strategy among smallholder farmers and this framework underpins the basic principles that affects the basic livelihood of people by putting the social and economic activities and wellbeing of people at heart as well as being responsive and participatory in addressing the priorities of people. This study utilises the Sustainable Livelihood Framework as a conceptual framework for guidance.

The principal focus of this study is to elucidate the Sustainable Livelihood Framework as it pertains to the comprehension of livelihood systems among small scale farmers (Kamwi et al., 2018). The framework positions individuals living in rural poverty as the focal point of a complex network of interconnected notions that influence their ability to provide a sustainable means of living for themselves and their families. The underlying premise of its construction is predicated upon the notion that the acquisition of livelihood assets is important in order to attain a specific livelihood outcome.

3.1.2 Theory Of Political Economy

The field of Political Economy centres its attention on the intricate interplay among individuals, governments, and public policy. In a publication by Hannu Nurmi in 2017, It additionally delineates the policies implemented by governments that exert an influence on their own national economies. Political economists analyse the practical implementation and functioning of economic ideologies, such as capitalism, socialism, and communism, within real-world contexts. Every economic theory aims to allocate scarce resources for maximum welfare. These concepts can be examined from both a theoretical perspective and through their practical application. Public policy is formulated and

executed based on the principles and tenets of many economic theories. Political economists examine both the fundamental origins of these policies and their subsequent outcomes (ibid 2017).

Political economy is a field of study that seeks to analyse and understand the complex interconnections and dynamics of people, governments, and policy. The utilization of political economics frameworks in the analysis allowed for the identification of smallholder farmer beliefs and conditions within broader socio-political contexts. Political economy is a field of study that focuses on the analysis of bureaucracies and institutional processes that are necessary for societal transformation. It seeks to understand how the policies and practices of these institutions can create limitations on individuals' self-perception, identities, and contributions (Angels and Hills, 2009). The reason is to ascertain the roles or responsibilities government/states plays in enacting and implementing policies within their respective countries that improves their citizenry wellbeing.

Small scale farming in local economies plays a significance role as well as contributes greatly to the success of global agribusiness (Dürr, 2016). Smallholder Agriculture promotion is recognized as an efficient strategy for improving food security and reducing poverty as well as promoting “the development of a more efficient sustainable food system” (Dürr, 2016, Farhall and Rickards, 2021). The Field of Agricultural Political Economy is dynamic and continuously transforming due to factors such as, livelihood diversification, rising commercialization, new global chain emergence, technological advancement, globalization and many other factors (Sachs et al., 2019). Today small-scale farming despite its vitality to global agribusiness is hindered by financial inadequacy or absences, small land sizes, limited access to modern market and fluctuating market prices (Fan and Rue, 2020). Furthermore climate change adversely affects crop growing seasons as well as its yield (Cohn et al., 2017) which all poses a serious setback to the success of farmers.

3.2 Description Of Study Area

The Bono Regions currently is recognized as a major hub in cashew cultivation in Ghana, hence the ideal choice as focus area for this study. Wenchi Municipal is located in Westewrn Bono and specifically will be the community under study. It is located in north-east of Sunyani, the Bono Region Capital This area lies in the northeastern part of Sunyani, which serves as the capital of the Bono Region. With a land area of 3,494 km the geographical coordinates of the study location range between latitudes 7°30' and 8°05' North, longitudes 2°15' West and 1°55' East.. The district is geographically adjacent to Techiman Municipal, which serves as the capital of the Bono East Region, in the western direction. To the northwest, it shares boundaries with Kintampo North Municipal. Tain District lies to the east, while Sunyani Municipal is situated to the south. The municipal capital of Wenchi is located at a distance of 29 kilometres from Techiman. The Wenchi Municipal district holds the distinction of being the largest of the various districts within the Bono Region. According “to the 2021 population and housing census”, the Wenchi Municipal area is home to a total population of 124,758 individuals. Among the overall population, males account for 60,960 individuals, representing 48.9% of the total, while females account for 63,798 individuals, constituting 51.1% of the total. Moreover, it is noteworthy to know that majority of the overall population, specifically 57.8%, is actively involved in agricultural activities.

Wenchi Municipality is recognised as a significant region for staple food production in the Bon Region due to its excellent moist-equatorial climate, good soil type, and ample agricultural space. The land tenure structure exhibits a high level of satisfaction among both land users and landowners, thereby significantly motivating aspiring farmers to participate in the cultivation of staple crops. “The land tenure system in Ghana for cashew production encompasses different types of land ownership, including leasehold, stool, family, state, and customary lands (Richard K.B Et al)”. However the land use for cashew cultivation in Wenchi are mostly customary land leased to farmers to farm by the chief

or custodian of the land. The primary agricultural produce comprises of several crops, such as Cereals, Root and Tubers, Legumes, Vegetables, fruits cash/tree crops. The primary livestock species encompassed in this category are cattle, sheep, goats, pigs, and poultry.

3.2 Methods And Materials

This section comprises of Research design; and the sample and sampling techniques of the target population; the respondents; the sample size and the sampling methods with reasons of it been used.

3.2.2 Research Design

This pertains to a complete research protocol outlining the methodologies employed in the execution of my study. According to Nel-Kotze, Gerber-Nel, and Cant (2003), it is imperative that research be conducted in a systematic and impartial manner to guarantee the absence of bias in the produced data.

The research employed a Mixed Method Approach, incorporating both quantitative and qualitative approaches. Key informants' interviews and semi-structured questionnaires were utilised to gather data from smallholder farmers. According to Babbie (1990), the utilisation of this particular design is motivated by the objective of quantitatively or numerically describing the patterns, attitudes, or viewpoints of a given community through the examination of a representative subset of such population. In this regard, both semi-structured questionnaires and interviews were employed as data collection methods to gather necessary information pertaining to the research issue from the participants residing within the Municipality.

3.2.3 Sampling Techniques

Kumar, Day, and Aakar (2004: p. 73) define research design as the comprehensive plan that guides the execution of a research study in order to achieve its objectives. In essence, it refers to the blueprint, structure, or metaphorical representation of constructing a residential dwelling. According to Nel-Kotze, Gerber-Nel, and Cant (2003), it is crucial for research to be done in a systematic and impartial manner in order to acquire unbiased results. Specifically, the study focused on small-scale cashew farmers in Bono Region, specifically, Wenchi municipality serving as a representative case study. The study also employed a survey methodology.

According to Babbie (1990), the utilisation of this particular design is motivated by the objective of quantitatively or numerically describing the patterns, attitudes, or viewpoints of a given community through the examination of a representative subset of such population. The researcher produced both semi-structured questionnaires and interviews to gather necessary information on the issue being studied from the participants involved.

3.2.4 Sampling Procedure

The study employed the following procedures to collect data:

Purposive sampling: The utilisation of this was done deliberately. Upon conducting a thorough examination of the population statistics pertaining to the designated research area, it became apparent that the regional economy is predominantly characterized by agricultural activities, which engage around 57.8% of the local inhabitants. This number is derived from the total population count of 124,758 individuals, as recorded during the 2021 population and housing census. Cashew is a prominent cash crop in the Municipality, and several cashew processing industries are situated within the Wenchi Municipal area. Additionally, this methodology was employed to gather data from key individuals inside the Municipal Assembly and the Ministry of Food and Agriculture (MoFA) office, in addition to the participants. The selection of communities was conducted purposively based on their distinctiveness as significant and prominent cashew production regions, as well as their role as a central centre for the cashew market. Consequently, these communities were deemed appropriate for investigating the impact of cashew production on farming households.

Simple Random Sampling: A random sampling technique was employed to choose a sample from the designated study area. According to the 2021 Population and Housing Census report, the Municipality consists of more than ninety-five (95) settlements, with the primary communities predominantly located in the urban and peri-urban regions such as Wenchi and its surrounding communities. Additionally, there are numerous rural communities situated on the outskirts of the Municipality. The present study employed the Lottery technique to choose three communities, namely Wenchi, Awisa, and Amponsakrom, in a random manner. Data collection was conducted in these communities using a specifically created questionnaire. Utilising the approach, the investigation focused on a cohort of 60 participants, with an equal distribution of 20 individuals from each neighbourhood, serving as the designated sample size for the study. Additionally, the research investigation found two primary informants, resulting in a total sample size of 62 individuals.

3.3 Data Collection Procedure

The information gathered from the study area was both primary and secondary. The primary data was gathered from smallholder cashew farmers. Among the primary data collection procedure included.

Interview: this was used to obtain an in-depth data or information from respondents concerning their views on cashew production, economic benefits, challenges, and ways to improve production to help alleviate poverty among smallholder cashew farmers. Overall 3 people (1 MOFA staff and 2 Community Leaders) were interviewed by the Research Assistant.

Key informant interview: Open-ended questions were employed to collect data regarding the efficacy of cashew production within the Municipality. Engaging with key informants was crucial in gaining a comprehensive understanding of the social dynamics and procedures within the distinct communities. This allowed for a deeper knowledge of how to effectively communicate with community members regarding sensitive problems that are specific to each community. 2 community leaders and 1 MOFA staff was interviewed, due to time constraint and funds. It was also hard to meet more community elders because it was the raining season and community members were all busy in their farms.

Semi-structured questionnaire: this method was used to generate data involving structured questions and open-ended questions from respondents about some issues that can be measured or statistically represented.

3.4 Data Collection Instruments

Field notes: field notes were used to gather data from respondents on the field. The research assistant kept record of findings and data during the course of the research in a personal field note book. This information includes the responses of interviews from key-informants.

Questionnaire Checklist: this instrument aided in administering questions and generating responses from respondents.

CAPI: Computer Assisted Personal Interviewing was also used to collect data from respondents.

3.5 Data Collection and Their Sources

Both Primary and Secondary source was used to gather data for this study. The primary data were gathered via questionnaires and key informant interviews using semi-structured questionnaires and interview guides for both the respondents it was however impossible to meet a suitable MOFA respondent for the interview, so no secondary data from that office was acquired. Observations were made by the research assistant based on the objectives of the study. A field notebook was kept by the research assistant where he recorded vital data gathered. Field notes were used to record the key informant interviews. The secondary source included review of daily news publications and articles on smallholder cashew production in Ghana. A total of 60 respondents were surveyed using questionnaire and 3 key informants were interviewed. A research assistant was hired to collect data using

questionnaire developed by the researcher, which was then transformed into Computer-Assisted Personal Interview (CAPI), using google forms. The role of the Research Assistant was purposely to collect data and input them into an already generated SPSS Template by the researcher which was then analysed by the researcher. The questionnaire was both CAPI (Digital) and printed forms. In remote areas where there were no internet signal or connectivity the research assistant gathered data using the printed form and where there was internet signal and connectivity the research assistant uses the CAPI (Google formed generated questionnaire) to take the data.

3.6 Data Organization And Quality Assurance

The primary data attained for this study were all gathered by the research assistant, who administered the questionnaire, and interview guide. The responses were edited by correcting the apparent errors that transpired in the field. Consequently, the responses were coded and serialized for stress-free identification. A template was developed using the IBM (SPSS) software and pre-tested by entering a few of the finalized responses and analysed before embarking on the real data entry. This process was meant to ensuring that the template was suitable and complete enough to capture all the data obtained from the field for purposes of data analysis.

3.7 Analytical Method

The data attained were examined SPSS and Microsoft EXCEL software. Descriptive statistical tables were created for the various study variables. The researcher systematically interpreted the tables and represented the information in graphs and charts, giving significances to them.

The qualitative data produced from the key informant interview were manually presented in written form and interpreted. Below are the descriptions of how the software were used in analyzing the data obtained from the field.

SPSS: This statistical package was used for entering and coding of the data obtained from the field. In doing so, the names such as the names of the respondents and other properties of the variables were first defined and then entered the specific values into each variable for each independent source on their respective rows. The variable view column was used to add additional information to the already entered facts. This was also used to identify more detailed facts for what each of the variable entered represents with the aid of the string.

EXCEL: This instrument was used in calculating and illustrating the data entered and coded with the aid of the SPSS. It was used for the analysis and presentation of the coded data in frequency distribution tables, charts and graph forms. This was done through the fill in of the information from the SPSS.

ANALYSIS OF KEY INFORMANT INTERVIEWS: Key-informants interviews were presented unchanged nor edit. Their original opinion and words and how they expressed their views were captured in the field note book by the research assistant, which is presented and discussed in a similar manner without distorting the original opinions of the key-informants.

3.8. Ethical Consideration

Ethics of conducting research were duly adhered to. The community member who aided the research assistant made formal introduction to every farmer interviewed. He further explains the reason behind their visit and the purpose of the research. The farmers were duly informed that the data is collected mainly for academic dissertation purposes and not for anything commercial and that their profile will remain unaffected. No formal recommendation letter from ISS was needed hence it was not served and furthermore study participants were assured that they are free to pause or exit the research process completely without any implications.

CHAPTER FOUR

PRESENTATION OF RESULTS, ANALYSIS AND DISCUSSION

4.0 Introduction

This section presents the study's results, analysis and its discussion. This section encompasses the interpretation of findings which includes demographic information of the participants including employment status, religion, and household size. The research aims to uncover the reasons behind small-scale farmers' shift from food crop cultivation to cashew cultivation, assess the transformative impact of cashew production on the lives of smallholder farmers, and establish the role of cashew production in alleviating poverty among subsistence farmers in the Wenchi Municipality of the Bono Region in Ghana.

4.1 Background of Respondents

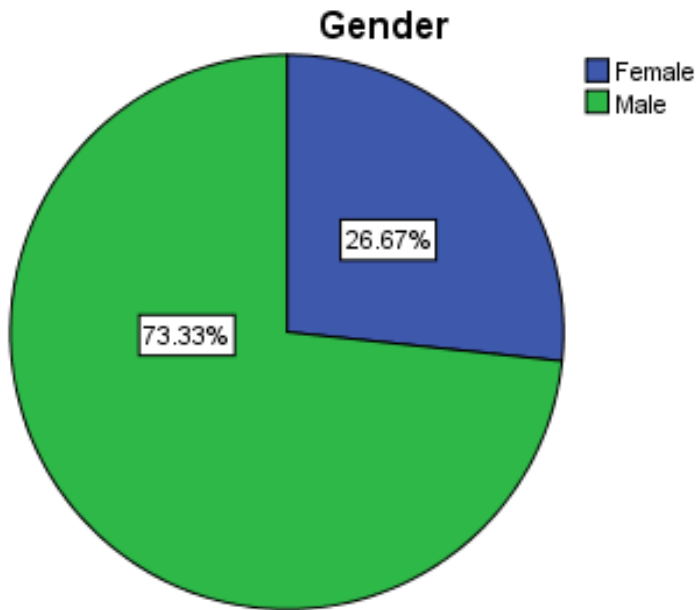


Figure 4.1: Gender distribution of respondent

Source: Field Data (2023)

From Figure 4.1, it was found that sixteen (16) participants representing 26.7% were females, with the remaining forty-four(44) of the participants representing 73.3% were males. The statistics indicated that majority of respondents used for the study were males. The male dominance in the sector of cashew production may be accredited to their ownership/control of assets and livelihood. The inclusion of both genders indicated that the data gathered was not gender-bias. Clearly, the majority (73.3%) of respondents are males. Which could be due to male dominance in the working sector of Ghana (Ghana Statistical Service, 2021).

Table 4. 1 Characteristics of Respondent's by age group

		Frequency	Percent
Valid	<30	18	30.0

	30-60	37	61.7
	61>	5	8.3
	Total	60	100.0

Source: Field Data (2023)

Table 4.1 shows that, 30% of respondents are less than 30 years. 61.7% of respondents are between the ages of 30-60 years and 8.3% of respondents are above 60 years. Clearly, the majority (61.7%) of respondents are between the ages of 30-60 years. The variable of age holds significant importance within demographics as it plays a vital role in discerning the composition of the labour force and dependent population within a specific economy. The analysis aids in identifying the economically engaged demographic within the Wenchi Municipal area. The study's findings additionally indicate that greater percentage of the respondents belong to the active working age group in Ghana. This could be due to the youth dominance in the working sector of Ghana (Ghana Statistical Service, 2021).

Table 4. 2 Respondent Educational background

		Frequency	Percent
Valid	Primary	11	18.3
	Middle school/JSS/JHS	19	31.7
	SSS/SHS	5	8.3
	Tertiary	8	13.3
	Never been to school	17	28.3
	Total	60	100.0

Source: Field Data (2023)

The researcher sought to know the educational qualification of respondents as presented in Table 4.3 is evidence that 18.3% of the participants had primary school as their current educational level, 31.7% of participants had Middle school as their current level of education. 8.3% of the participants had Senior High School as their current level of educational. 13.3% of the participants had Tertiary education as their current qualification and 28.3% of the respondents had never been to school. It can clearly be seen that the about 28.3% of respondents had never received any formal education. This shows that most of the participants are not educated and hence their sole source of livelihood is through farming.

Table 4. 3 Marital Status

		Frequency	Percent
Valid	Married	38	63.3
	Single	13	21.7
	Divorced	6	10.0

	Widow/ widower	3	5.0
	Total	60	100.0

Source: Field Data, (2023)

Table 4.4 shows that, 63.3% of participants are married. 21.7% of participants are single. 10% of the respondents are divorced and 5% of respondents are widows or widowers. Clearly, the majority (63.3%) of respondents are married.

Table 4. 4 Employment status

		Frequency	Percent
Valid	Employed	5	8.3
	Unemployed	30	50.0
	Self employed	25	41.7
	Total	60	100.0

Source: Field Data, (2023)

The research sought to find out from respondents their job management level and from Table 4.5 it is evidence that 8.3% of respondents employed in formal institutions, 50% of the respondents were unemployed (without any formal job or sole entrepreneur) and 41.7% of respondents were self-employed (sole entrepreneurs). A majority (50%) of respondents are not employed in any formal institution and hence farming is their work to earn a living in the municipality.

4.2 Identifying what accounts for the shift by small-scale farmers from food crop cultivation to cashew cultivation in Wenchi-Bono Region of Ghana.

Table 4. 5 Food crop cultivation practices

Food crop cultivation	Mean	Std Dev.
Sourcing		
Household size	1.33	0.510
What type of crop have you historically grown on your farm (provide appendix) of correlation	2.28	1.519
Have you noticed any changes in the type of crops that have been growing in your community over the past decade	1.03	.181
What factors influenced your decision to shift from food crop farming to cash crop farming	1.85	.860
How do you perceive profitability of cash crops compared to food crops	1.28	.454
Have changes in market demand played a role in your decision to switch to cash crops	1.05	.220

What challenges have you faced in transitioning from food crops to cash crops	2.63	1.518
Are there any government policies or initiatives that have encouraged or discouraged the shift to cash crops	1.57	.500
Have the shift to cash crops impacted your household income and overall economic situation	1.00	0.000
Do you think the shift to cash crops had any impact on food security in your community	1.03	.181
Do you have access to fertilizers, seeds, and other inputs to aid cash crop production	1.72	.454
Have you received any training or support to help you with the transition to cash crops	1.65	.481
Have the availability of agricultural technology influenced your decision to switch crops	1.47	.503
Do you believe the shift to cash crops is a long-term trend in Ghana's agricultural sector	1.05	.220

Keys: Std Dev. = Standard Deviation

Source: Field Data (2023)

This report presents the findings of a study that examined the transition from food crop cultivation to cash crop farming in the context of Ghana's agricultural sector. The study evaluated factors affecting the transition and its impact on farmers' livelihoods and food security.

To gather the data for this dissertation, famers who shifted from growing food crops to cash crops were surveyed. Farmers were questioned on several variables including but not limited to their household data, farm size, reason behind them shifting, profits and loses involve, government policies and supports, resource availability, food security, income among many other. Using mean scores and standard deviation the degree of impacts and variation in responses were analyzed and computed to make findings comprehensible.

4.2.1 Summary of Findings

Household Size: a mean of 1.33 was attained for this variable with a standard deviation of 0.510 for household size, this suggested that the study participant farmers had averagely smaller households.

Historical Crop Type: a mean of 2.28 was attained when respondents were asked which crops they historically grew on their farms before the shift to chase cultivation. The means score suggest that variability in crop choices among respondents was present until they transitioned.

Changes in Crop Types: Respondents reported a mean score of 1.03 with a low Std Dev of 0.181 when asked about changes in the types of crops growing in their community over the past decade, suggesting that changes were generally observed.

Factors Influencing Shift: The mean score for factors influencing the decision to move from food crop farming to cash crop farming was 1.85, with a Std Dev of 0.860, indicating a diversity of reasons cited by farmers ranging from Market demand, Profitability, Resource availability, Climate suitability. But

most farmers picked Profitability and Market demand as the influencing factor for their shift to cash crop.

Profitability Perception: Farmers perceived cash crops to be more profitable compared to food crops, as indicated by a mean score of 1.28 with a low Std Dev of 0.454.

Market Demand: Participants reported a mean score of 1.05 with a low Std Dev of 0.220, suggesting that changes in market demand played a role in the decision to switch to cash crops.

Challenges Faced: Farmers reported facing various challenges in transitioning from food crops to cash crops, with a mean score of 2.63 and a high Std Dev of 1.518, indicating the complexity of challenges.

Government Policies: The mean score for this variable is 1.57, standard deviation 0.500. This revealed that farmers didn't shift because of government policies.

Impact on Income: this variable had a mean score of 1.00 showing farmers all agreed the shift has positive impact on their income and economy, no standard deviation.

Food Security: this has a mean score of 1.03 and std of 0.181 showing that the farmers believed the shift to cash crop positively impacts their food security.

Access to Inputs: the responses from farmers showed that they had average access to fertilizers, seeds and other inputs as it scored a mean of 1.72 and std of 0.454.

Training and Support: this scored a mean of 1.65 and std of 0.481 which also showed there was some moderate support and training for farmers.

Agricultural Technology: this scored a mean of 1.47 and std of 0.503 which shows agricultural technology availability also influenced farmers decision to shift to cashew production.

Long-Term Trend: the mean score of this factor is 1.05 and std of 0.220 which also shows that majority of farmers see the shift to cash crop (cashew production) as long term plan for the Ghanaian economy.

The study findings indicates that when it comes to the Ghanaian farmers transitions from the food crop to the cash crop production it is due to some factors such as profit, market demand of products, government policies and support as well as access to products and inputs. The findings of this study suggest that the transition from food crop cultivation to cash crop farming is a complex phenomenon influenced by various factors, including profitability, market demand, government policies, and access to support and inputs. Thought this transitioning is deemed to support food security and income but it has challenges. Further research and targeted interventions can help address the challenges and maximize the benefits of the transition for smallholder farmers.

4.3 Determining how cashew production transform the lives of smallholder famers in Wenchi-Bono Region of Ghana. Table 4.6 Cashew production practices

Cashew production	Mean	Std Dev.
Sourcing		
How long have you been involved in cashew production?	1.52	0.720
What is the size of your cashew farm? (In hectors)	1.30	0.696
Have you noticed any changes in your income since you started growing cashews?	1.03	.181
How has cashew production affected your household's financial situation	1.40	.494
Have you been able to invest in any other income-generating activities due to cashew production	1.05	.220

Have there been any improvements in your living conditions such as housing, education, or healthcare because of cashew production	1.00	0.00
What challenges have you encountered in cashew production	3.60	2.264
Have you received any training or support related to cashew farming techniques or market access	1.77	.427
Have there been any changes in your local community's infrastructure or services due to increased cashew production	1.05	0.220
Have there been any changes in gender role or dynamics within your household or community due to cashew production	1.80	.403
Do you believe that sustainable cashew production practices are being followed in your community	1.23	.427
Do you foresee a good future for cashew production in your community	1.02	.129

Keys: Std Dev. = Standard Deviation

Source: Field Data (2023)

This report presents the findings of a study conducted to assess the impact of cashew production on smallholder farmers and their communities. The research investigated cashew farming within a local agrarian society and its effects on their social dynamics, income and livelihood.

To gather data for this study, a questionnaire and short interviews were administered to smallholder participant farmers who were engaged in cashew farming. The survey/brief interviews questions centered on varied variables such as farm size, living conditions, sustainability, gender dynamic household situations and income, future prospects of cashew farming among many others. The Mean and standard deviation scores of responses from farmers were analyzed and assessed so as to ascertain the level of impact and variation in cashew farming.

4.3.1 Summarizes of findings

Experience in Cashew Production: when this variable data was analyzed, it revealed a mean of 1.52 and std dev of 0.720 which implies that respondents had average experience in cashew farming.

Farm Size: a mean of 1.30 and std deviation of 0.696 was recorded using farmers responses, which suggests that there were variation in farm sizes, which was majorly small to average sizes. The findings indicated that there was a range of farm sizes among cashew farmers. The participants disclosed that the cultivation of cashews necessitated substantial financial investment and strict adherence to sound agricultural methodologies. As a result, farmers gradually expand the size of their farms in accordance with their financial capacity. The findings additionally indicate that a significant proportion of farmers (80%) possessed farm size holdings within the range of 1-10 hectares.

Income Changes: A majority of respondents (mean score of 1.03 with a low Std Dev of 0.181) reported noticing changes in their income since they started growing cashews.

Financial Impact: Respondents reported a mean score of 1.40 with a Std Dev of 0.494 when asked about how cashew production had affected their household's financial situation, indicating a generally positive impact.

Investments in Other Activities: Farmers reported that they had been able to invest in other income-generating activities due to cashew production, with a mean score of 1.05 and a low Std Dev of 0.220.

Improvements in Living Conditions: The mean score for improvements in living conditions (housing, education, healthcare) due to cashew production was 1.00, suggesting a unanimous agreement on this positive impact.

Challenges Faced: Respondents reported facing various challenges in cashew production, with a mean score of 3.60 and a high Std Dev of 2.264, indicating the complexity and diversity of challenges.

Training and Support: Farmers reported receiving training or support related to cashew farming techniques or market access, with a mean score of 1.77 and a low Std Dev of 0.427.

Community Infrastructure: the mean scored is 1.05 and std is 0.220 which shows that respondents the shift to cashew farming has brought about some change in local community infrastructure and services.

Gender Dynamics: this factor scored a mean of 1.80 and std of 0.403 which shows that the shift to cashew has some impact on gender dynamics in households.

Sustainability: this factor scored a mean of 1.23 and a std of 0.427 which shows that some sustainability cashew production process is followed by farmers.

Future Prospects: a mean score of 1.02 and std of 0.129 shows that majority of farmers agree that they see a very good future prospect in cashew production.

The study findings shows cash crop farming is positively impacting the small holder farmers and their family and households in Wenchi. The findings showed the shift brought about increase in income, good and sustainable livelihood and good future prospects. However, there are some factors which poses a challenge such as gender dynamics in household and the community. Generally, the findings shows the importance of cashew production in improving the people of Wenchi livelihood as well as promoting sustainable agriculture in the municipality.

4.4 Establishing The Fact that cashew production can help reduce poverty among small-scale/peasant farmers in Wenchi.

Table 4.7 Poverty alleviation in Wenchi

Poverty Alleviation	Mean	Std Dev.
Sourcing		
Is there any positive change in income levels of smallholder farmers since they started engaging in cashew production	1.00	0.00
What is your average annual income from cashew production	1.88	.865
What is your total yield/output (number of bags) per annum	1.70	1.078
What are the reasons behind the positive impact on cashew production on poverty alleviation among smallholder farmers	3.00	2.115
Do you have ready markets for the sale of cashew	1.08	.279
Are there storage/warehouse facilities available to prevent post-harvest loss	1.93	.252
Are there any cashew processing factories in your community	2.00	0.00
Which other livelihoods are you engaged in	1.40	1.251
Are there any cases in your community where cashew production did not lead to poverty alleviation	1.13	.343

Do you believe that increasing the involvement of smallholder farmers in cashew production could further enhance poverty alleviation efforts	1.07	.252
Are there any specific government policies or programs that have contributed to the growth of the cashew industry and subsequently aided poverty reduction	1.85	.360
Do you belong to any union of cashew farmers	2.00	.000

Keys: Std Dev. = Standard Deviation

Source: Field Data (2023)

This report presents the findings of a study conducted to assess the impact of cashew production on poverty alleviation among smallholder farmers. The study investigated various aspects related to cashew farming and their role in improving income levels and reducing poverty in the surveyed community.

Data for this study were collected through a questionnaire survey administered to smallholder farmers involved in cashew production. The survey included questions related to income levels, market access, processing facilities, government policies, and other relevant factors. Mean scores and standard deviations were calculated to analyse the responses and assess the level of impact and variation.

4.4.1. Summary findings

Positive Change in Income Levels: Respondents reported a mean score of 1.00 with a Std Dev of 0.00, indicating that there was a unanimous agreement that engagement in cashew production has led to a positive change in their income levels. This reflects a strong perception among farmers that cashew farming has improved their financial situation.

Average Yearly Income: here a mean of 1.88 and 0.865 was recorded and indicates that farmers admitted their annual income has increased moderately due to cashew production..

Total Yield/Output: Farmers reported a mean score of 1.70 with a Std Dev of 1.078 for the question about total yield/output (number of bags) per annum. This suggests that while there is a perceived increase in income, there is some variability in terms of production levels among respondents.

Reasons for Positive Impact: Respondents indicated a mean score of 3.00 with a Std Dev of 2.115 when asked about the reasons behind the positive impact of cashew production on poverty alleviation. The wide standard deviation suggests a diversity of reasons cited by farmers, including market access and favourable cashew prices.

Ready Markets: Farmers reported a mean score of 1.08 with a low Std Dev of 0.279, indicating that there is a consensus that ready markets are available for the sale of cashew in the community.

Storage/Warehouse Facilities: The mean score for the availability of storage/warehouse facilities was 1.93, with a low Std Dev of 0.252, suggesting that respondents generally have access to facilities to prevent post-harvest losses.

Cashew Processing Factories: Respondents reported a mean score of 2.00 with no Std Dev, indicating that there is agreement that there are cashew processing factories in the community.

Alternative Livelihoods: The mean score for engagement in other livelihoods was 1.40, with a Std Dev of 1.251, indicating that some farmers are engaged in additional income-generating activities.

Negative Impact Cases: Respondents reported a mean score of 1.13 with a low Std Dev of 0.343 when asked about cases where cashew production did not lead to poverty alleviation, suggesting that such cases are relatively rare.

Belief in Further Enhancement: Farmers expressed a strong belief in the potential of increasing the involvement of smallholder farmers in cashew production to enhance poverty alleviation, with a mean score of 1.07 and a low Std Dev of 0.252.

Government Policies: Respondents indicated that specific government policies or programs have contributed to the steady growth of the cashew industry and subsequently aided poverty reduction, with a mean score of 1.85 and a low Std Dev of 0.360.

Union Membership: this factor mean is 2.00 which indicates that farmers agreed to belonging to various unions of cashew farming.

From this study the findings show cashew production is good with a positive impact on poverty alleviation among smallholder cashew farmers in the study scope area. The fact that the cashew farming provided increased income as well as available market and some processing facilities are the core factors behind the shift from food crop to cash crop. But there is some difference in production level and reasons behind the positive income suggested by farmers such as individual and local factors. In totality the potential of cashew production in reducing poverty is true and research should be geared towards how targeted interventions can improve the production. Further research and targeted interventions can build on these insights to maximize the positive impact of cashew production on smallholder farmers' livelihoods.

4.5 Correlation Analysis

		FoodCrop_Cashew	Cashew_Transform_Smallholder	Cashew_Poverty_Alleviation
FoodCrop_Cashew	Pearson Correlation	1	-.014	.164
	Sig. (2-tailed)		.915	.211
	N	60	60	60
Cashew_Transform_Smallholder	Pearson Correlation	-.014	1	.293*
	Sig. (2-tailed)	.915		.023
	N	60	60	60
Cashew_Poverty_Alleviation	Pearson Correlation	.164	.293*	1
	Sig. (2-tailed)	.211	.023	
	N	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

Note: Variables and what they denotes

Variable- FoodCrop_Cashew denotes (**Cashew Production**), Variable- Cashew_Transform_Smallholder (**Smallholder Farmers Transformation from food crops to Cashew production**) and Variable- Cashew_Poverty_Alleviation denotes (**The Role of Cashew production in poverty Alleviation**)

This table presents the findings of a correlation analysis conducted to investigate the relationships between cashew production (FoodCrop_Cashew), its impact on smallholder transformation (Cashew_Transform_Smallholder), and its role in poverty alleviation (Cashew_Poverty_Alleviation). The analysis is to determine the presences of any statistically significant correlation between the variables. Using the Pearson Correlation Coefficient (r) and a two tailed significance level of 0.05 , the correlation analysis was computed for each variable using dataset of 60 farmer participants.

From the table the correlation between “Cashew Production and Cashew_Transform_Smallholder” is -0.014, which is shows a negative correlation., This indicates there is a negative and less significant linear relationship between cashew production and the transformation of smallholder farmers.

Also, the correlation between “Cashew_Transform_Smallholder and Cashew_Poverty_Alleviation” is 0.293, which is a moderately positive correlation. This association holds substantial statistical significance at the 0.05 level (two-tailed), demonstrating a significant positive connection between the up-liftment of small-scale farmers through cashew production and the mitigation of poverty. This implies that as small-scale farmers undergo further transformation as a result of engaging in cashew production, the probability of reducing poverty in the Wenchi Municipality increases.

The correlation between the variables "FoodCrop_Cashew and Cashew_Poverty_Alleviation" is 0.164, indicating a moderate yet positive correlation. However, this correlation is not statistically significant at the 0.05 level (two-tailed), implying that there is no strong evidence to support a significant linear relationship between cashew production and poverty alleviation. Thought there is weak correlation among the variables above, there is a positive correlation between smallholder farmers transformation and poverty alleviation which suggest that cashew production could potentially have a positive impact in terms of reducing small-scale farmers poverty levels in Wenchi Communities.

4.6 Regression Analysis

Using regression analysis, two independent variables i.e. “Cashew_Poverty_Alleviation and Cashew_Transform_Smallholder” and dependent variable “Food_crop_cashew” was used to carry out the regression. This was done to ascertain if the predictor variables has any influence on the dependent variables.

4.6.1 Hypothesis

The hypothesis formulated is that cashcrops (Cahsew) cultivation has a positive relationship with poverty alleviation of stallholder farmers in Wenchi Municipality. A regression analysis was performed to determine the extent of influence the independent variables “Cashew_Transform_Smallholder and Cashew_Poverty_Alleviation” has on the dependent variable, “FoodCrop_Cashew”. Below is the summary of findings.

Model Summary^b							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.176 ^a	.410	.640	.19059	.031	.015	2

Coefficients ^a				
Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

		B	Std. Error	Beta		
1	(Constant)	1.324	.229		5.773	.000
	Cashew_Transform_Smallholder	-.063	.126	-.068	-.499	.062
	Cashew_Poverty_Alleviation	.159	.118	.184	1.348	.018

The coefficient of determination (R Square) is 0.41, indicating that only approximately 41% of the variability in FoodCrop_Cashew can be explained by the independent variables in the model.

The adjusted R Square is 0.640, which is a measure of how well the independent variables explain the variance in the dependent variable after adjusting for the number of predictors. In this case, the adjusted R Square suggests that the model's explanatory power is strong.

The standard error of the estimate is 0.19059, representing the average error between the predicted and observed values of FoodCrop_Cashew.

The F Change statistic is 0.015, with a degree of freedom equal to 2, suggesting that the addition of these variables to the model significantly improve the model's fit.

Table 4.6.2 displays unstandardized coefficients (B), standard errors, and other predictor statistics. The constant term (intercept) has a coefficient of 1.324 with a standard error of 0.229. This value represents the estimated mean of FoodCrop_Cashew when all predictor variables are set to zero.

For Cashew_Transform_Smallholder, the coefficient is -0.063, with a standard error of 0.126. However, the beta (standardized coefficient) is -0.068, indicating a very weak negative relationship.

For Cashew_Poverty_Alleviation, the coefficient is 0.159, with a standard error of 0.118. The beta (standardized coefficient) is 0.184, suggesting a weak positive relationship.

The regression analysis reveals that the model, which includes Cashew_Transform_Smallholder and Cashew_Poverty_Alleviation as predictor variables, effectively explain the variation in FoodCrop_Cashew production. With the average R squared value, it implies that the variables explains the transition of farmers from food crop to cash crop (cashew) production.

In addition, the p value is under 0.05 which indicates according to the ANOVA that the model perfectly fit the hypothesis also the coefficient of the intendent variables demonstrate some credible relationship to the dependent variables.

4.7 Discussion

Variables and factors considered relevant in the cashew production cycle such as age, gender roles, educational level, household size, farm size, yields, household size, sustainability and poverty reduction efforts as well as agrarian policies and their implication on existing socioeconomic practices development planning is briefly highlighted here. Per findings from the analysis 60% of respondent fall under smallholder farmers due to the size of their farms. Farmers farm size is around 1-10 hectares producing a yield of 1 to 10 bags annually. Also findings revealed that cashew is capital intensive and most farmers do not have adequate capital to properly manage larger farms for larger yield and profit. The findings indicated that a significant level of financial investment is required in the production of cashew, resulting in a higher number of farmers falling into this category due to insufficient funds to support larger farm sizes. Nevertheless, one of the primary respondent stated emphatically that possessing a smaller farm size may also result in enhanced farm management. During his explanation, he stated;

“When you look at all the different scales of farmers, farmers that have small and medium farms are able to take care of their farms well than those with bigger farms. I’m saying this because if you have a farm without good maintenance practices and money, your farm will not do well but farms can best be managed when they are small even with less money and loans are not easy to come by” (Key Informant Interview, Opinion Leader – Awisa, Wenchi Municipal, 2023).

Increased financial capacity enhances their adoption of yield-boosting technologies and effective agronomic practices. The current study’s findings correspond to Li M et al. (2020, p. 61) which clearly established that increased cash income enables farmers to invest in and improve their farm management practices, resulting in significant agricultural innovation and higher yields. The results also indicate disparities based on gender. A higher proportion of male farmers (73%) engage in cashew production compared to their female counterparts (27%). However, it is important to acknowledge that the involvement of women in this business is noteworthy and demonstrates considerable potential. The study reveals noteworthy levels of women's participation across various industrial scales. In light of the prevailing conditions surrounding gender and development, it is noteworthy to observe an increasing number of women engaging in cashew production, thereby challenging the dominance of their male colleagues who predominantly possess control over key productive assets, including land.

What is of major concern is the less optimal level of productivity observed among smallholder farmers in Ghana. It was revealed from the study findings that, small-scale farmers in Wenchi harvest mostly 1-10 bags per hectare. However, the Asian development bank (ABD, 200) asserted that, 20-30 bags of cashew nut is the optimal yield expected to be harvested on a hectare of land when good cultivation practices are followed. This findings aligns with Ren et al (2019) report that, decline in productivity has to do with farm sizes in certain circumstances and farm sizes are very necessary in promoting increased productivity and general agricultural development.

The fact that small-scale farmers engaged in different livelihood activities is another area that can be investigated. Apart from cashew cultivation, farmers in Wenchi also engaged in other petty jobs as complimentary sources of income to help cushion the financial burdens of their households. The other livelihood activities/practices in which cashew farmers are involved in include food crop farming (87%), Groceries (3.3%), Dress making and Tailoring (5%), Livestock rearing (31.7%), Masonry (3.3%), Carpentry (10%) and Agro-chemicals (3.3). Farmers combine cashew with food crop farming, trade and “non-farm” artisanal works. One of the key opinion leaders gave this narration;

“Farming is the main occupation here. Food crop production and livestock rearing are common, just a few of us are into trading and store businesses. I personally have an agro-chemical and grocery store which also contributes to my livelihood so it’s not only cashew. But I get more money in cashew than my store” (Key Informant Interview, Opinion leader and cashew farmer, Amponsakrom – Wenchi Municipal, 2023).

The basic objective of this method is to ensure sustenance, generate financial gains, and alleviate poverty. In order to delve deeper into the diversification patterns, it is observed that artisanal occupations such as carpentry, masonry, and dressmaking/tailoring, as well as food crop cultivation, do not significantly contribute to the financial gains of the cashew production enterprise. Instead, these vocations serve to supplement household consumption for the sake of sustenance. These findings substantiate that of Kuma et al that, food crop production alone failed to uplift the economic welfare of households, particularly those at the lowest income levels in certain developing nations, often due to significant entry barriers (Kuma et al., 2019, p. 54). These studies found that the promotion of cash crop cultivation can improved the living standards of the most impoverished

households, but financial constraints and limited support is the major setback. According to the MOFA officer interviewed, He said

“Ghana Cashew Authority (GCA) together with the government has put in place some policies like the Cashew Development Project,, there is however limited funds from Government to fully realize the goals of the project and financial support for farmers are also limited, which all affects the overall cashew productivity level”.

The findings provide a chance to inform evidence-based policy development aimed at promoting the growth of the cashew industry within the framework of decentralisation and local administration. According to Otoo (2017), Act 462, also known as the local Governmental Act, grants Metropolitan, Municipal, and District Assemblies the authority to serve as the central entities responsible for formulating development policies and plans within the framework of local governance at the district level. As revealed in this study, the global agricultural sector is predominantly made of smallholder farmers and to foster the overall development of the agricultural sector, it is essential to direct interventions and programmes to aid these farmers overcome various obstacles limiting their progress. These programmes can be increased rate of investment in smallholder agribusiness and financial and input assistances to such farmers.. farmers should also be encourages to establish Village Savings and Loan Association (VSLAs) to create a platform for self-aid as well as enabling such farmers to get access to formal loan and funding services from banks, governments and NGOs. Stakeholders must make sure that these investment opportunities be complemented with extension support services to help farmers effectively manage their farms. It is also crucial that policies and programmes be put in place to foster women participation in cashew cultivation, this initiative will help promote gender equality in the agrarian community of Wenchi.

Finding from this research suggest there is predominant male farmers than females in the study area however more females are beginning to express more interest in cashew cultivation and introducing some educational and awareness initiatives can go a long way to boost female participation and this can help alleviate poverty level of women in local communities as it moves them beyond subsistence farming. Adopting a gender-based development policies can be used to shape the actions of developmental stakeholders, NGOs and other national bodies in their bid to promote the involvement of females in Wenchi community in cashew farming.

It can be concluded from the findings and conversations with respondents shifting from cash crop to cashew production was considered a viable poverty reduction option to small scale farmers in Wenchi community.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This section deals with the conclusion and recommendation of this study. It summarizes the research findings, offers brief recommendations and some suggestions for future researchers in the same field or topic.

5.1 Conclusion

In summary, the objective of this study was to explore the means by which small-scale farmers in Ghana can improve their livelihood and poverty situation through a shift from food crop production to commercial cash crop production, notably cashew cultivation. Throughout the research the following key insights were drawn.

To begin with, cash crop production, especially cocoa and cashew among many others, has been recognized as an agrarian occupation for reducing poverty among small-scale farmers. By empowering small-scale farmers via providing them with valuable inputs and products to grow or farm different cash crops like oil palm, coffee, cocoa, cashew etc. can help farmers to make enough money to help reduce their poverty levels and improve their livelihood as well as provide them with long-term economic stability.

Also, it was revealed that, crucial in this approach is recognizing the difficulties and complexities that will likely affect farmers' productivity, such as climate change, market instability and resource scarcity are factors that need to be overcome. These challenges can, however, be addressed and create innovative opportunities for farmers if suitable policies and support are introduced.

Additionally, to attain the objectives of reducing poverty among small-holder farmers through cash crop cultivation, it is essential that cooperative strategies among agrarian stakeholders be enhanced. Ensuring that there is good collaboration among Government bodies, NGOs, TNCs and small-scale cash croppers will help bring about innovative and improved farming practices and high yield.

Finally, this study can be used as the basis for future researches related to similar fields in Ghana and beyond. It is believed that the discoveries and suggestions presented in this thesis will serve as motivation for future research, the formulation of policies, and implementing projects that can enhance the livelihoods of smallholder farmers as well as promote economic well-being for people in those areas. Through sustained effort and commitment, the vision of poverty alleviation can be turned through commercial cash crop production into a tangible reality for the benefit of all, through government putting in place strategic policies that protect cash crop farmers and ensure appropriate return for their work.

5.2 Recommendation

Based on the findings from this study, the following are some recommendations proposed:

- Access to finance and credit should be made available to smallholder farmers in the municipality. This can help them invest more in their cashew production and expand their operations.
- The ministry of food and agriculture directorate in the Municipality should promote crop diversification to encourage smallholder farmers to diversify their cash crop production beyond just one crop. This can reduce vulnerability to market fluctuation and enhance income stability.

- Organizing regular comprehensive and capacity building training for small-scale farmers on contemporary farming techniques, pest and diseases control/management as well as post-harvest handling. This will go a long way to increase crop yield and general productivity.
- The Ministry of Food and Agriculture Directorate within the Wenchi Municipality should put in place favourable platforms to create strong market linkages between smallholder cashew farmers and internal clients. This can be achieved through cooperatives, farmer associations and partnerships between local and foreign markets.
- It is imperative that the MOFA put in place agricultural policies which are gender inclusive to enhance women participation in cash crop production.
- The Government of Ghana should enact and implement policies as well as offer subsidies on all products and services which will aid small-holder farmers in cash crop productions; tax exclusion, farm input subsidies and agricultural extension services.
- The adoption of a gender-based affirmative action plan has some potentials to affect the overall direction and objectives of diverse development actors, including NGO and private organizations as they work towards promoting gender equality in the agricultural sector especially for small scale farming.
- Poverty Alleviation through implementing a comprehensive strategy income diversification, enhancing access to credit, providing training opportunities, establishing market connections, developing infrastructure, and promoting gender inclusivity in both food crop and cash crop production are factors which can promote poverty eradication especially among small scale farmers.

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APPENDICES

Appendix A: Dissertation Questionnaires

TOPIC: COMMERCIAL CASH CROP PRODUCTION AS POVERTY ALLEVIATION STRATEGY FOR SMALLHOLDER FARMERS IN GHANA: THE CASE STUDY OF CASHEW FARMERS IN THE WENCHI MUNICIPALITY OF THE BONO REGION.

I am a student pursuing my master's degree and as part of my study, I am seeking information from you for my student dissertation. Information taken from you is purely for academic work and shall be treated with strict confidentiality. Participation is voluntary and you deserve the right to decline taking part. Thank you.

Questionnaire number..... Date.....

Name of Respondent:

Name of community/ Town:

Respondent's contact:

Background information of respondent:

1. Gender	a) Female b) Male
2. Age of respondent	a) <30 b) 30-60 c) 61>
3. Level of education	a) Primary b) Middle school/JSS/JHS c) SSS/SHS d) Technical/Vocational e) Tertiary f) Never been to school
4. Marital status	a) Married b) Single c) Divorced d) Separated. e) Widow/Widower
5. Employment status	a) Employed b) Unemployed c) Self employed
6. Religion	a) Christianity b) Islam c) African tradition d) Others.....

7. Household size	a) <5 b) 5-10 c) >10
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To identify what accounts for the shift by small-scale farmers from food crop cultivation to cashew cultivation in Wenchi-Bono Region of Ghana.

8. What type of crop have you historically grown on your farm?

- a) Maize
- b) Cassava
- c) Rice
- d) Yam
- e) Cocoa
- f) Others (specify)

9. Have you noticed any changes in the type of crops that have been growing in your community over the past decade?

- a) Yes
- b) No

10. What factors influenced your decision to shift from food crop farming to cash crop farming? (You can choose multiple)

- a) Market demand
- b) Profitability
- c) Resource availability
- d) Climate suitability

11. How do you perceive profitability of cash crops compared to food crops?

- a) Higher profitability
- b) Average
- c) Lower profitability

12. Have changes in market demand played a role in your decision to switch to cash crops?

- a) Yes
- b) No

13. What challenges have you faced in transitioning from food crops to cash crops? (You can choose multiple)

- a) Market uncertainties
- b) Adapting to new cultivation techniques
- c) Shift in labor requirement
- d) Soil quality
- e) Pests and diseases

14. Are there any government policies or initiatives that have encouraged or discouraged the shift to cash crops?

- a) Yes
- b) No

If yes, name some

15. Have the shift to cash crops impacted your household income and overall economic situation?

- a) Yes
 - b) No
16. Do you think the shift to cash crops had any impact on food security in your community?
- a) Yes
 - b) No
17. Do you have access to fertilizers, seeds, and other inputs to aid cash crop production?
- a) Yes
 - b) No
18. Have you received any training or support to help you with the transition to cash crops?
- a) Yes
 - b) No
19. Have the availability of agricultural technology influenced your decision to switch crops?
- a) Yes
 - b) No
20. Do you believe the shift to cash crops is a long-term trend in Ghana's agricultural sector?
- a) Yes
 - b) No

To determined how cashew production transform the lives of smallholder famers in Wenchi-Bono Region of Ghana.

21. How long have you been involved in cashew production?
- a) <5 years
 - b) 6-10 years
 - c) 11-15 years
 - d) 16-20 years
 - e) >20 years
22. What is the size of your cashew farm? (In hectors)
- a) <10
 - b) 11-20
 - c) 21-30
 - d) 31-40
 - e) 41-50
 - f) >51
23. Have you noticed any changes in your income since you started growing cashews?
- a) Yes
 - b) No
24. How has cashew production affected your household's financial situation?
- a) Higher income/revenue
 - b) Average income earnings
 - c) Worsen financial situation.
25. Have you been able to invest in any other income-generating activities due to cashew production?
- a) Yes
 - b) No
 - f) GHS 41,000 - GHS 50,000

- g) > GHS 51,000
35. What is your total yield/output (number of bags) per annum?
- <10 bags
 - 11-20 bags
 - 21-30 bags
 - 31-40 bags
 - 41-50 bags
 - >51 bags
36. What are the reasons behind the positive impact on cashew production on poverty alleviation among smallholder farmers? (You can choose multiple).
- Income generation
 - Diversification of income source
 - Employment opportunities
 - Infrastructure development
 - Empowerment of women
 - Skills enhancement
 - Investment in education and health
 - Rural development
37. Do you have ready markets for the sale of cashew?
- Yes
 - No
38. Are there storage/warehouse facilities available to prevent post-harvest loss?
- Yes
 - No
39. Are there any cashew processing factories in your community?
- Yes
 - No
40. Which other livelihoods are you engaged in? (You can choose multiple)
- Food crop farming
 - Groceries store
 - Dressmaking/Tailoring
 - Masonry
 - Livestock rearing
 - Other cash crop farming except cashew
 - Carpentry
 - Agro-chemical products
41. Are there any cases in your community where cashew production did not lead to poverty alleviation?
- Yes
 - No
42. Do you believe that increasing the involvement of smallholder farmers in cashew production could further enhance poverty alleviation efforts?
- Yes
 - No

43. Are there any specific government policies or programs that have contributed to the growth of the cashew industry and subsequently aided poverty reduction?

- a) Yes
- b) No

44. Do you belong to any union of cashew farmers?

- a) Yes
- b) No

THANK YOU FOR YOUR CORPORATION.

Appendix B: Picture of Some Chashew Farms

