

**BINDURA UNIVERSITY OF SCIENCE EDUCATION**  
**FACULTY OF AGRICULTURAL AND ENVIRONMENTAL SCIENCE**



**AN ANALYSIS OF THE CONTRIBUTION OF MAIZE CONTRACT FARMING ON  
HOUSEHOLD FOOD SECURITY AND POVERTY ALLEVIATION IN  
MASHONALAND CENTRAL, BINDURA DISTRICT.**

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**Dissertation submitted in partial fulfilment of the requirements for the Bachelor of Science  
Honour`s in Agriculture Economics and Management degree**

**MAY2024**

## **Documentation certification**

The undersigned certifies having read the following research paper by Faith Dziya and recommending it be submitted to the department of Agricultural Economics and management in partial fulfilment of the requirements of the Bachelor of Science Honours Degree in Agricultural Economics and management.

AN ANALYSIS OF THE CONTRIBUTION OF MAIZE CONTRACT FARMING ON HOUSEHOLD FOOD SECURITY AND POVERTY ALLEVIATION IN MASHONALAND CENTRAL, BINDURA DISTRICT.

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## **DECLARATION**

‘The impact of Contract farming on household food security and poverty alleviation in Bindura district is my own work ‘I, Faith Dziya, hereby declare. It is submitted as part of the requirements for the Agricultural Economics and Management Bachelor of Science with Honors. I, the undersigned, guarantee that this thesis is my own original work that no other university has requested it for a degree or examination, and that, to the best of my knowledge, all sources have been properly referenced.

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**Signature:** 

## **DEDICATION**

My loving parents, siblings, and friends who have been so encouraging throughout my time at Bindura University of Sciences Education deserve a special thanks for their support. I dedicate this thesis to them. Without their support and kindness, I would not have been able to finish this degree program.

## **ACKNOWLEDGEMENT**

First and foremost, I want to give God the Almighty my profound gratitude and praise for being my constant protector in daily life. For providing helpful information, BUSE and the department of agricultural economics and management are also appreciated. Without forgetting my supervisor, DR. V.MUNYATI, I would like to convey my sincere appreciation and thank you for devoting your limited time to my job; your support and supervision were very valued. More gratitude is extended to the DZIYA Family for the spiritual and monetary assistance they provided in the program's success. I want to express my gratitude to my friend, Panashe Sande for supporting me through good and terrible times. Without your help, this effort would not have been completed, thus I sincerely thank you everyone for your assistance. May God sanctify you all and expand your spheres of influence.

## **ABSTRACT**

Maize is a staple crop in Zimbabwe and hence bears important implications for poverty alleviation and food security attainment. Maize production, productivity and profitability are crucial for food insecurity alleviation both at household and national level. In the recent past a lot of factors have negatively affected maize productivity and profitability. Some notable changes in the agrarian sector, macroeconomic challenges and climate variability are some of the problems that can be blamed for the poor performance of the Zimbabwean agricultural sector specifically maize. In the past three decades, the government of Zimbabwe has experienced a decline and unsustainable production. This thesis was aimed at analyzing the impact of maize contract farming on household food security and poverty alleviation with the aim of getting a wide understanding of the present state of events and therefore recommends measures to improve the current status. This study therefore gathered data from Bindura district of Zimbabwe from 121 smallholder maize farmers. Primary data was collected through a structured questionnaire. Descriptive statistics, such as frequencies and percentages, was used to analyse survey responses regarding farmers' access to essential resources

**Keywords:** Government command agriculture program, Contract farming, Smallholder farmers, Household Food security, Poverty Alleviation.

## **ABBREVIATION AND ACRONMYS**

FAO.....Food and Agriculture Organizations

IFAD.....International Food for Agriculture Development

RBV.....The Resource Based View

FIES.....The Food Insecurity Experience Scale

HFIES.....Household Food Insecurity

FCS.....Food Consumption Score

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

Agriculture, acknowledged as the cornerstone of numerous economies, assumes a pivotal role in tackling prevalent global challenges like food security and poverty alleviation. With the world population steadily increasing and climatic conditions undergoing substantial changes, the urgency for sustainable agricultural practices has reached unprecedented levels. Statistically, the Food and Agriculture Organization (FAO) reported that over 820 million people globally suffered from chronic undernourishment in 2018, highlighting the critical need for strategies to bolster food production (Veronice et al., 2022). Moreover, the International Fund for Agricultural Development (IFAD) reported that approximately 80% of the world's poor reside in rural areas, with their livelihoods linked to agriculture (FAO, 2017).

Contract farming has emerged as a notable and effective mechanism aimed at augmenting the productivity and income of smallholder farmers. Under this arrangement, farmers enter into contractual agreements, gaining access to essential resources such as inputs, technical support, and assured markets for their produce (Uledi, 2019). This collaborative approach not only fosters a symbiotic relationship between farmers and agribusinesses but also serves to mitigate risks associated with agricultural activities. In the specific context of Zimbabwe, the Government Command Agriculture Program stands out as a pivotal initiative. Designed to harness the advantages inherent in contract farming, this program is strategically focused on bolstering maize production (Söderberg, 2023). By providing farmers with a structured framework, technical support, and a guaranteed market for their maize, the program seeks to enhance both agricultural productivity and the economic well-being of smallholder farmers.

Engaging in contract farming provides a multitude of advantages for smallholder farmers, significantly impacting their overall livelihoods. One pivotal benefit is the enhanced access to credit, which enables farmers to invest in essential resources such as quality seeds, fertilizers, and modern farming equipment. This access not only improves agricultural practices but also contributes to increased yields and productivity (Mazwi et al., 2019). Moreover, contract farming

facilitates the adoption of improved agricultural technologies, empowering farmers with knowledge and tools to optimize their farming techniques. The stability offered by a predetermined market for their produce is another crucial advantage (Nemuramba, 2017). Smallholder farmers, by participating in contractual agreements, secure a reliable market outlet, shielding them from the vagaries of unpredictable market conditions and the uncertainties brought about by weather fluctuations.

Zimbabwe's Command Agriculture Program stands as a pivotal government-led initiative designed to tackle the challenge of dwindling agricultural production and bolster national food security (Mazwi et al., 2019). Initiated in 2009 against a backdrop of declining agricultural output, the program has undergone significant expansion to encompass a diverse array of crops, notably maize, wheat, soybeans, and cotton (Matema, 2021). The roots of this initiative delve into the recognition of the imperative to revitalize the agricultural sector as a linchpin of the nation's economic stability and the well-being of its populace. At its core, the Command Agriculture Program operates by allocating specific production targets to participating farmers while concurrently equipping them with vital resources such as seeds, fertilizers, and essential agricultural machinery (Makuwerere, 2021). This comprehensive support is integral to alleviating the challenges that previously impeded agricultural productivity (Chitapi, 2020). By mandating specific production goals, the government endeavors to ensure the optimal utilization of arable land and the efficient cultivation of various crops essential for the country's sustenance.

In exchange for the support extended by the government, participating farmers commit to delivering their harvest to the state at a predetermined fixed price. This symbiotic arrangement not only guarantees a market for the farmers but also establishes a stable pricing mechanism, offering a degree of financial predictability crucial for the economic sustainability of agricultural enterprises (Makuwerere, 2021). The fixed-price structure acts as an assurance for farmers, mitigating market uncertainties and incentivizing them to invest in their farming activities with confidence. Overall, Zimbabwe's Command Agriculture Program exemplifies a strategic governmental intervention aimed at rejuvenating the agricultural sector, promoting food security, and fostering economic stability (et al., 2019). By addressing the multifaceted challenges faced by farmers and aligning their efforts with national production goals, the program emerges as a critical component in the broader strategy for agricultural development in Zimbabwe. It is

against this background that this research aims to investigate the contribution of the government's command agriculture to food security and poverty alleviation amongst small holder farmers.

## **1.2 Statement of the problem**

This research aims to address the critical problem of food insecurity and poverty in Zimbabwe, particularly within the context of the Government Command Agriculture Contract Program focused on maize cultivation. Despite the implementation of such agricultural interventions, a comprehensive understanding of the program's actual impact on household food security and poverty alleviation remains lacking (Nemuramba, 2017). The existing literature reveals gaps in assessing the effectiveness of the contract farming model in the Zimbabwean context, specifically regarding smallholder farmers' access to resources, market stability, and the overall socio-economic implications (Matema, 2021; Mazwi et al., 2019; Muzangwa, 2022). Therefore, this study seeks to fill these gaps by examining the extent to which maize contract farming, as facilitated by the Government Command Agriculture initiative, contributes to enhancing household food security and alleviating poverty in Zimbabwe, ultimately providing valuable insights for policymakers and stakeholders involved in agricultural development programs.

## **1.3 Research questions**

1. How does government maize contract impact smallholder farmers' access to essential resources in Bindura District?
2. What is the effect of government maize contract on the agricultural productivity of participating farmers in Bindura District?
3. What challenges do farmers encounter in accessing contract arrangements under government maize contract arrangement in Bindura District?
4. How does command agriculture contribute to food security and poverty alleviation among smallholder farmers in Bindura District?

## **1.4 Objectives of the study**

### **1.4.1 Main objective**

The main objective of this study is to comprehensively assess the impact of the Government Command Agriculture Contract Program on household food security and poverty alleviation among smallholder farmers in Bindura District, Zimbabwe.

### **1.4.2 Specific objectives**

1. Evaluate the effectiveness of command agriculture in improving smallholder farmers' access to essential resources in Bindura District
2. Assess the effect of command agriculture on the agricultural productivity of participating farmers in Bindura District
3. Identify the challenges faced by farmers in accessing contract arrangement under the command agriculture in Bindura District
4. Analyse the contribution of command agriculture to food security and poverty alleviation amongst smallholder farmers in Bindura District

## **1.5 Hypothesis**

1. Null Hypothesis (H<sub>0</sub>): The Government Command Agriculture Contract Program in Bindura District has no significant impact on household food security among smallholder farmers.

Alternative Hypothesis (H<sub>1</sub>): The Government Command Agriculture Contract Program in Bindura District has a significant impact on household food security among smallholder farmers.

2. Null Hypothesis (H<sub>0</sub>): The Government Command Agriculture Contract Program in Bindura District has no significant impact on poverty alleviation among smallholder farmers.

Alternative Hypothesis (H<sub>1</sub>): The Government Command Agriculture Contract Program in Bindura District has a significant impact on poverty alleviation among smallholder farmers.

## **1.6 Justification**

This study holds paramount significance for various stakeholders, policymakers, smallholder farmers, and the government. For stakeholders and policymakers, the findings will offer crucial insights into the effectiveness of the Government Command Agriculture Contract Program, aiding in informed decision-making and policy formulation for sustainable agricultural development. Smallholder farmers stand to benefit by gaining a better understanding of the challenges and opportunities within the program, potentially leading to improved access to resources and increased productivity. Moreover, the government can use the study's outcomes to refine and optimize the implementation of the Command Agriculture initiative, ensuring it aligns with broader goals of enhancing food security and poverty alleviation among the rural populace. Overall, this research contributes valuable knowledge to empower stakeholders, inform policies, and enhance the well-being of smallholder farmers while promoting the overall success of government-led agricultural initiatives.

## **1.7 Scope**

The scope of this study encompasses an in-depth examination of the Government Command Agriculture Contract Program within the geographical confines of Bindura District, Zimbabwe. The research focuses specifically on smallholder farmers participating in the program, delving into the impact of command agriculture on their access to essential resources, agricultural productivity, challenges faced in contract arrangements, and its overall contribution to household food security and poverty alleviation. The temporal scope of the study spans from the initiation of the Command Agriculture Program in Bindura District to the present, allowing for a comprehensive analysis of its evolution and effectiveness over time. This research does not extend beyond the specified geographical and temporal boundaries, ensuring a focused and detailed exploration of the program's implications for smallholder farmers in Bindura District.

## **1.8 Delimitation**

This study is delimited to Bindura District in Zimbabwe, specifically focusing on the Government Command Agriculture Contract Program and its impact on smallholder farmers

within this geographic boundary. The research does not extend its investigation to other districts or regions in Zimbabwe. Additionally, the study is delimited to the timeframe from the initiation of the Command Agriculture Program in Bindura District to the present, excluding any periods before or after this timeframe. The focus is primarily on maize cultivation under the program, and other crops within the initiative are not included in the analysis. Furthermore, the research does not encompass an assessment of alternative agricultural programs or interventions in Bindura District, maintaining a concentrated examination of the specified government-led initiative and its effects on household food security and poverty alleviation among smallholder farmers.

### **1.9 Limitations**

Several limitations should be acknowledged in this study. Firstly, the research relies on data collected from smallholder farmers in Bindura District, which may introduce a potential bias due to the specificity of the sample group. Additionally, the study's findings might be influenced by external factors such as economic changes, policy shifts, or unforeseen events that occurred during the research period. The reliance on self-reported data from farmers might introduce response bias or recall inaccuracies. Furthermore, the study may face constraints in obtaining comprehensive historical data on the Command Agriculture Program in Bindura District, limiting a thorough analysis of its evolution. The study's scope is also restricted to the selected crops, primarily maize, and does not encompass a broader evaluation of other agricultural commodities under the program. Despite these limitations, efforts were made to ensure the robustness and reliability of the research findings within the defined scope and constraints.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Agriculture, serving as the backbone of many economies, plays a critical role in addressing global challenges such as food security and poverty alleviation. In the pursuit of sustainable agricultural practices, government-led initiatives, particularly contract farming programs, have gained prominence worldwide (Makuwerere, 2021). In this context, Zimbabwe, like many other African nations, has implemented the Government Command Agriculture Contract Program, focusing on maize cultivation as a strategy to enhance agricultural productivity and alleviate poverty. This study aims to investigate the impact of the program on household food security and poverty among smallholder farmers in Bindura District, Zimbabwe.

#### **2.1 Conceptualisation of key terms**

##### **2.1.1 Government Agriculture Contract Program**

The agricultural revitalization initiative, introduced in Zimbabwe in 2009, represents a pivotal governmental effort directed towards breathing new life into the country's agricultural sector. By adopting a structured framework, this initiative aims to empower farmers by assigning them specific production targets, furnishing them with essential resources, and guaranteeing a stable market for their produce. This multifaceted approach, as delineated in studies by Muzangwa (2022), Muzeza et al. (2023), and insights from Nemuramba (2017), is strategically designed to tackle the entrenched challenges plaguing Zimbabwe's agricultural landscape. Through the amalgamation of targeted policies and interventions, the initiative aspires to catalyze heightened levels of productivity, bolster sustainability practices, and foster a more robust economic foundation within the agricultural domain. Consequently, it endeavors to not only uplift the livelihoods of farmers but also contribute significantly to the broader socio-economic development agenda of the nation.

(Muzangwa, 2022; Muzeza et al., 2023; Nemuramba, 2017).

### **2.1.2 Smallholder Farmers**

Small-scale agricultural producers, who frequently work with constrained land and resources, constitute the fundamental fabric of Zimbabwe's agrarian scenery. Recognizing their experiences and navigating the challenges they encounter is paramount for crafting impactful agricultural policies. As emphasized by Yaro et al. (2017), delving into the realities faced by these producers unveils critical insights necessary for formulating strategies that resonate with their needs and aspirations. By comprehensively understanding their circumstances, policymakers can tailor interventions that address pertinent issues such as access to inputs, market dynamics, and resilience against environmental fluctuations (Uledi, 2019). This approach not only acknowledges the pivotal role played by small-scale producers in driving agricultural production but also underscores the importance of fostering an inclusive and sustainable agricultural ecosystem that empowers these stakeholders to thrive amidst evolving socio-economic landscapes.(Yaro et al., 2017).

### **2.1.3 Household Food Security**

Household food security, which revolves around guaranteeing consistent access to an adequate, safe, and nutritious food supply, stands as a central focus of this investigation. Delving into the nexus between the Command Agriculture Program and the attainment of this fundamental requirement at the household level constitutes the primary objective of this study. Drawing insights from research conducted by Makuwerere (2021), Matema (2021), and Mazwi et al. (2019), the study seeks to unravel the extent to which the Command Agriculture Program contributes to bolstering household food security. By examining various facets such as program implementation strategies, impact on agricultural productivity, and implications for food availability and accessibility, the study endeavors to shed light on the efficacy of this initiative in alleviating food insecurity challenges among Zimbabwean households. Through a comprehensive analysis, it aims to provide valuable insights that can inform policy interventions aimed at fortifying food security measures and ensuring the well-being of households across the nation.(Makuwerere, 2021; Matema, 2021; Mazwi et al., 2019).

#### **2.1.4 Poverty Alleviation**

Poverty alleviation according to Greenberg (2005) is any process which seeks to ease the level of poverty in a community, or amongst a group of people or countries. Riddell and Robinson (1992:12), defines poverty alleviation as, an intervention aimed at a sustained improvement in the economic status of the poor, by raising incomes and creating new opportunities for employment, which in turn bring about increased consumption, savings and investment. The difference between poverty alleviation and poverty reduction is that, poverty alleviation concentrate on those assets and resources that have bearing on the livelihoods of the poor. Poverty reduction on the other hand focuses on knowledge and rights (Greenberg, 2005).

Addressing poverty encompasses a multifaceted objective that entails enhancing income levels, living standards, and overall well-being (Chitongo & Chitema, 2021). This study endeavours to scrutinize the role of the Government Command Agriculture Contract Program in ameliorating the economic circumstances of smallholder farmers who partake in the initiative. By investigating the program's mechanisms, outcomes, and implications on participants' livelihoods, the study aims to offer insights into its effectiveness as a poverty alleviation strategy. Leveraging the findings outlined by Chitongo & Chitema, (2021), the research seeks to unveil the extent to which the Command Agriculture Contract Program contributes to uplifting smallholder farmers from impoverished conditions, thereby fostering economic empowerment and resilience within vulnerable communities. Through a comprehensive analysis of program dynamics and socio-economic impacts, the study aspires to inform evidence-based policy interventions aimed at addressing poverty disparities and promoting inclusive economic growth in Zimbabwe.

#### **2.2 Contract farming in Improving Access to Essential Resources**

Contract farming serves as a pivotal mechanism in significantly improving smallholder farmers' access to essential resources, thereby enhancing their agricultural capabilities. Through contractual agreements, farmers gain reliable and consistent access to a spectrum of critical resources, including high-quality seeds, fertilizers, and modern agricultural equipment. This direct provision of essential inputs alleviates the financial burden on farmers, who might otherwise face challenges in acquiring these resources independently (Muzeza et al., 2023). Moreover, contracts often come with technical support, providing farmers with knowledge and

guidance on optimal farming practices. The structured nature of contract agreements ensures a predictable supply chain for these resources, reducing uncertainties that farmers may face in obtaining inputs (Veronice et al., 2022). Overall, by establishing a symbiotic relationship between farmers and agribusinesses, contract agriculture acts as a catalyst for bolstering smallholder farmers' access to essential resources, fostering sustainable agricultural practices, and ultimately improving overall productivity.

Furthermore, the integration of contract farming into agricultural systems can have profound implications for poverty alleviation efforts. By providing smallholder farmers with access to essential resources and technical support, contract agriculture contributes to enhancing their productivity and income levels. This, in turn, can lead to improvements in living standards and overall well-being among rural communities (Chitongo & Chitema, 2021). The reliable income generated through contract farming arrangements empowers farmers to invest in education, healthcare, and other essential needs, thereby breaking the cycle of poverty and promoting economic resilience.

Moreover, the role of contract agriculture extends beyond individual farmer benefits to encompass broader socio-economic impacts, particularly in the context of household food security. By facilitating access to essential resources and technical assistance, contract farming programs such as the Government Command Agriculture Contract Program play a crucial role in bolstering household food security (Makuwerere, 2021; Matema, 2021; Mazwi et al., 2019). These initiatives enable participating farmers to increase their agricultural productivity, thereby ensuring a steady supply of food for their families and communities. Additionally, by promoting sustainable farming practices and improving market linkages, contract farming contributes to enhancing the resilience of households against food insecurity challenges.

In addition, contract farming emerges as a valuable tool in improving smallholder farmers' access to essential resources, enhancing productivity, and contributing to poverty alleviation and household food security (Veronice et al., 2022). Through structured agreements that provide inputs, technical support, and market linkages, contract agriculture creates mutually beneficial relationships between farmers and agribusinesses, fostering sustainable agricultural practices and socio-economic development in rural areas. As evidenced by empirical studies and policy initiatives such as the Government Command Agriculture Contract Program, harnessing the

potential of contract farming can yield transformative outcomes for smallholder farmers and rural communities alike.

### **2.3 Effects of government contract farming on Agricultural Productivity**

The Government Command Agriculture Program significantly contributes to improved productivity by providing a structured and comprehensive support system to smallholder farmers in Zimbabwe. Under this initiative, farmers receive essential resources such as seeds, fertilizers, and equipment, accompanied by clear production targets. This direct provision of inputs and the establishment of specific goals help streamline the agricultural process, allowing farmers to optimize their farming practices (Matema, 2021). Moreover, the program mitigates financial constraints by offering these resources at subsidized rates, making them more accessible to farmers. The fixed-price mechanism established by the government ensures a stable market for the produce, providing farmers with economic predictability. By aligning these key elements—essential resources, clear production targets, and market stability—the Government Command Agriculture Program plays a crucial role in enhancing the overall productivity of smallholder farmers, contributing to increased yields and improved economic well-being in the agricultural sector.

Furthermore, the effects of government contract farming on agricultural productivity extend beyond immediate yield improvements to encompass broader socio-economic benefits. According to Veronice et al., (2022) by strengthening productivity among smallholder farmers, government input programs contribute to poverty reduction efforts by enhancing income levels and livelihoods within rural communities. The reliable access to essential resources and market stability provided by the program empowers farmers to expand their agricultural activities and invest in modern farming techniques, thereby driving sustained productivity gains (Chitongo & Chitema, 2021). These productivity enhancements not only strengthen food security but also stimulate economic growth in rural areas, creating employment opportunities and fostering inclusive development.

According to findings by Uledi, (2019) the structured nature of government contract farming initiatives facilitates the adoption of sustainable farming practices, which are essential for long-term agricultural viability and environmental conservation. Through training and technical

support components embedded within the program, farmers are equipped with the knowledge and skills necessary to implement eco-friendly farming methods, such as conservation agriculture and integrated pest management (Muzeza et al., 2023). This emphasis on sustainability not only enhances productivity in the short term but also safeguards natural resources and ecosystems, ensuring the resilience of agricultural systems against future challenges such as climate change.

Government agriculture productive programs stands as a vital instrument for enhancing agricultural productivity in most developing countries, with far-reaching implications for poverty alleviation, food security, and environmental sustainability (Uledi, 2019). By providing smallholder farmers with essential resources, clear production targets, and market stability, the program fosters increased yields, improved livelihoods, and sustainable agricultural practices. As evidenced by empirical studies and policy implementations, government contract farming initiatives have the potential to drive transformative changes in the agricultural sector, contributing to the broader socio-economic development goals of the nation.

## **2.4 Challenges in Accessing Contract Arrangements**

According to Uledi, (2019), access to the contract farming is confronted by a myriad of challenges that impact smallholder farmers in developing countries. One significant challenge arises from administrative complexities inherent in the program, including cumbersome application procedures and bureaucratic hurdles. Farmers often face arduous processes when attempting to enroll in the program, which can deter participation and hinder access to essential resources. Simplifying and streamlining administrative procedures is essential to alleviate these barriers and enhance the program's accessibility to smallholder farmers.

Communication gaps between government agencies and farmers represent another obstacle to accessing the government input programs according to Veronice et al., (2022). Limited dissemination of program information and unclear communication channels contribute to difficulties in understanding program requirements and accessing necessary support services. Improving communication strategies and providing targeted outreach initiatives can bridge these gaps, ensuring that farmers have access to timely and accurate information to facilitate their participation in the program.

Additionally, logistical challenges in the distribution of inputs pose significant barriers to accessing government initiated contract programs (Mazwi et al., 2019). Delays or unequal distribution of seeds, fertilizers, and other essential resources can hinder farmers' ability to cultivate their crops in a timely manner, affecting overall productivity. Enhancing distribution networks, improving transportation infrastructure, and implementing effective inventory management systems are crucial steps to address these logistical challenges and ensure equitable access to inputs for all participating farmers.

Furthermore, the rigidities of the program's contractual arrangements present challenges for smallholder farmers, particularly those with limited financial capacities. Meeting the stipulated production targets within the confines of the contract may prove daunting for some farmers, leading to concerns about feasibility and sustainability (FAO, 2017). Introducing flexibility in contractual arrangements, such as allowing adjustments based on farmers' capacities and local conditions, can mitigate these challenges and promote greater inclusivity in the program.

Overcoming these obstacles requires concerted efforts to streamline administrative processes and enhance communication channels between government agencies and farmers (Mazwi et al., 2019). Simplifying application procedures and providing clear guidelines can facilitate greater participation and uptake of the program among smallholder farmers. Moreover, improving the efficiency of input distribution mechanisms, such as implementing better transportation and storage infrastructure, can help alleviate logistical bottlenecks and ensure equitable access to essential resources. Additionally, flexibility in contractual arrangements, such as allowing adjustments to production targets based on farmers' capacities and local conditions, can enhance the program's inclusivity and relevance to diverse farming contexts.

Furthermore, Mazwi et al., (2019) suggests that capacity-building initiatives aimed at enhancing farmers' skills and knowledge can empower them to navigate contractual arrangements more effectively and maximize the benefits of the program. Providing training in agronomic practices, financial management, and market access strategies can equip farmers with the tools they need to succeed in contract farming arrangements (Yaro et al., 2017). Moreover, fostering partnerships between government agencies, non-governmental organizations, and agricultural extension services can facilitate the dissemination of information and support services to remote and

marginalized farming communities, ensuring that no farmer is left behind in accessing the opportunities provided by the Government Command Agriculture Program.

While challenges in accessing contract arrangements under the Government Command Agriculture Program persist, concerted efforts to address these obstacles can enhance the program's accessibility and effectiveness in benefiting smallholder farmers. By streamlining administrative processes, improving communication channels, and strengthening capacity-building initiatives, stakeholders can work together to ensure that the program remains a viable pathway for smallholder farmers to improve their livelihoods and contribute to sustainable agricultural development in Zimbabwe.

## **2.5 Contribution of government contract farming to Food Security and Poverty Alleviation**

The Government Command Agriculture Program makes a substantial contribution to both food security and poverty alleviation among smallholder farmers in Zimbabwe. By providing farmers with essential resources, including seeds and fertilizers, and establishing clear production targets, the program enhances agricultural productivity, leading to increased yields and improved food availability (Matema, 2021). The fixed-price mechanism ensures a stable market for farmers' produce, providing economic predictability and augmenting their income. This, in turn, directly addresses poverty concerns by enhancing the economic well-being of participating farmers (Mazwi et al., 2019). The program's holistic approach, combining resource provision, production guidance, and market stability, not only fosters food security at the household level but also contributes significantly to the broader goal of poverty alleviation, creating a more resilient and economically empowered farming community.

Furthermore, by improving farmers' access to essential resources and technical support, the Government Command Agriculture Program enhances their capacity to produce food sustainably. Through training programs and extension services, farmers acquire knowledge and skills in modern farming techniques, leading to more efficient use of resources and reduced environmental impact (FAO, 2017). Sustainable farming practices promote long-term food security by preserving natural resources and enhancing agricultural resilience to climate change and other external shocks (Yaro et al., 2017). Thus, the program's emphasis on sustainability not only ensures food security in the present but also safeguards it for future generations.

Moreover, the government contract programs play a crucial role in addressing food insecurity by promoting diversification in agricultural production (Mazwi et al., 2019). By encouraging farmers to cultivate a variety of crops, the program reduces dependence on single crops and enhances dietary diversity. This diversification contributes to improved nutrition and health outcomes, particularly in rural communities where access to diverse food sources may be limited (Makuwerere, 2021; Mazwi et al., 2019). In this way, the program contributes not only to food security in terms of quantity but also to its quality, addressing nutritional deficiencies and promoting overall well-being.

On the poverty alleviation front, the Government Command Agriculture Program directly impacts farmers' incomes by providing them with stable markets and fair prices for their produce (FAO, 2017). This income stability enables farmers to meet their basic needs, invest in their farms, and build savings for the future. Additionally, the program's focus on smallholder farmers, who often constitute the most vulnerable segments of society, helps to reduce inequalities and improve social equity within rural communities (Chitongo & Chitema, 2021). By lifting farmers out of poverty and enhancing their economic resilience, the program contributes to broader economic development and poverty reduction efforts in Zimbabwe.

Furthermore, by empowering smallholder farmers with access to resources, knowledge, and market opportunities, the government initiated contract arrangement helps to break the cycle of poverty and dependency (Mazwi et al., 2019). Through increased productivity and income generation, participating farmers are better equipped to improve their living standards, access education and healthcare, and contribute to the overall development of their communities. This empowerment of smallholder farmers not only alleviates poverty at the individual level but also fosters economic growth and prosperity at the community and national levels (Söderberg, 2023). Thus, the Government Command Agriculture Program serves as a catalyst for sustainable poverty alleviation, lifting marginalized farmers out of poverty and towards a brighter and more secure future.

## **2.6 Conceptual Framework**

The conceptual framework for this study is anchored in the premise that the Government Command Agriculture Contract Program serves as a multifaceted intervention contributing to

improved agricultural productivity, food security, and poverty alleviation among smallholder farmers in Bindura District, Zimbabwe. Drawing on the key concepts of contract farming, essential resources provision, and socio-economic outcomes, the framework posits that the program's success in providing farmers with critical resources, establishing clear production targets, and ensuring a stable market contributes directly to increased agricultural productivity. This, in turn, enhances food security at the household level and fosters poverty alleviation by augmenting farmers' income. The framework considers the potential challenges faced by farmers in accessing and participating in the program, recognizing their impact on the effectiveness of the intervention. By examining these interconnected elements, the study aims to provide a comprehensive understanding of the Government Command Agriculture Contract Program's influence on the socio-economic landscape of smallholder farmers in Bindura District

## **2.7 Theoretical Framework**

### **2.7.1 Contract Farming Theory**

Contract farming theory, pioneered by the economist Raymond F. Hopkins in the 1980s, forms a foundational framework for understanding the dynamics of the Government Command Agriculture Contract Program. According to Glover (1987 and 1990), the essence of contract farming is a commitment to the farmer to specify the amount of agricultural produce the agribusiness firm will buy at what price. Prichard and Connell (2011) argue that contract farming is a set of organisational practices designed by downstream agribusiness firms to manage upstream uncertainty and risk. The agribusiness firm provides fertilizer, seeds, insecticides, farm machinery and technical advice while the farmer provides land and labour (Glover, 1987 and 1990; Porter & Philips-Howard 1997). Typically, this theory suggests that contractual agreements between farmers and agribusinesses lead to a more organized and mutually beneficial relationship. The provision of essential resources by the government and the commitment of farmers to deliver their harvest at a fixed price align with the principles of contract farming, emphasizing the cooperative nature of such arrangements for enhanced agricultural productivity and economic stability. Hopkins proposed that contract farming serves as a mechanism to mitigate risks for both parties involved, as farmers receive guaranteed access to inputs and markets, while agribusinesses secure a stable supply of produce at predetermined prices. This

theory highlights the importance of structured agreements and cooperation in optimizing agricultural production and fostering economic development within rural communities.

Furthermore, contract farming theory underscores the role of contracts in facilitating technology transfer and knowledge sharing between farmers and agribusiness partners. Through contractual agreements, farmers gain access to technical assistance, training programs, and modern farming practices, which enhance their productivity and efficiency. Hopkins argued that these knowledge transfer mechanisms are essential for improving agricultural outcomes and promoting sustainable development in agrarian economies. In the context of the Government Command Agriculture Contract Program, the integration of technical support components aligns with the principles of contract farming theory, emphasizing the importance of capacity-building initiatives in maximizing the benefits of contractual arrangements for both farmers and agribusinesses.

Moreover, contract farming theory emphasizes the potential of contractual agreements to address systemic challenges such as market inefficiencies and income disparities within agricultural value chains. By establishing formalized relationships between farmers and buyers, contract farming promotes transparency, accountability, and fairness in transactions, thereby reducing the vulnerability of smallholder farmers to exploitation and market fluctuation (Mazwi et al., 2019)s. Hopkins's theory posits that by creating a conducive environment for collaboration and risk-sharing, contract farming can contribute to poverty alleviation and food security objectives by empowering farmers and enhancing their access to markets and resources. In essence, contract farming theory provides a theoretical framework for understanding the underlying principles and mechanisms driving the Government Command Agriculture Contract Program and its implications for agricultural development and rural livelihoods in Zimbabwe.

### **2.7.2 Resource-Based View (RBV) Theory**

The Resource-Based View (RBV) theory, developed by scholars such as Jay B. Barney and Birger Wernerfelt in the 1980s and 1990s, is pertinent to this study as it emphasizes the role of resources in achieving a sustainable competitive advantage. In the context of the Government Command Agriculture Program, the theory can be applied to analyze how the provision of essential resources such as seeds, fertilizers, and equipment enhances smallholder farmers' capabilities and contributes to increased agricultural productivity. RBV theory posits that firms or organizations can gain a competitive edge by effectively leveraging their unique resources and

capabilities, which are valuable, rare, inimitable, and non-substitutable. In the case of smallholder farmers participating in the Government Command Agriculture Program, access to these essential resources represents valuable assets that can enable them to achieve higher yields, improve their income levels, and enhance their overall well-being.

Moreover, RBV theory helps in understanding how access to these resources a source of competitive advantage for farmers can be, positively impacting food security and poverty alleviation. By providing farmers with essential resources through structured agreements, the Government Command Agriculture Program enhances their productive capacity and resilience to external shocks, such as adverse weather conditions or market fluctuations (Mazwi et al., 2019). This, in turn, contributes to increased food availability, improved household food security, and reduced vulnerability to poverty among participating farmers and their communities. RBV theory underscores the strategic importance of resources in driving sustainable competitive advantages, highlighting the significance of resource allocation and management practices in achieving desired outcomes in agricultural development initiatives such as the Government Command Agriculture Program.

Furthermore, RBV theory emphasizes the dynamic nature of resource-based advantages, suggesting that organizations must continually invest in and develop their resources to maintain their competitive position over time. In the context of the Government Command Agriculture Program, ongoing investments in agricultural research, infrastructure development, and capacity-building initiatives are essential for ensuring the long-term sustainability and effectiveness of resource provision mechanisms. By aligning resource allocation decisions with strategic objectives and market dynamics, policymakers can maximize the impact of the program on agricultural productivity, food security, and poverty alleviation goals. In essence, RBV theory provides a valuable theoretical lens for understanding the strategic significance of resource provision in driving sustainable competitive advantages and positive socio-economic outcomes in agricultural development initiatives such as the Government Command Agriculture Program.

### **2.7.3 Socio-Economic Development Theory**

The Socio-Economic Development Theory, originating from scholars such as Amartya Sen and Mahbub ul Haq, posits that agricultural interventions can play a pivotal role in driving socio-economic development at the community and household levels. In the context of this study, the

Government Command Agriculture Program is viewed as a catalyst for socio-economic development among smallholder farmers in Bindura District. By enhancing agricultural productivity and income levels, the program is expected to contribute positively to broader community development, aligning with the principles of socio-economic development theory. This theory aids in understanding the potential far-reaching impacts of the program beyond individual farm units. The theory underscores the interconnectedness between agricultural development and broader socio-economic progress, highlighting the importance of addressing rural poverty and inequality through targeted interventions that enhance agricultural productivity and promote inclusive growth.

Furthermore, the Socio-Economic Development Theory emphasizes the importance of addressing underlying structural constraints and disparities in access to resources and opportunities. In the context of the Government Command Agriculture Program, efforts to improve access to essential resources such as seeds, fertilizers, and technical support can help to level the playing field for smallholder farmers, particularly those from marginalized and disadvantaged communities (Mazwi et al., 2019). By promoting equity and inclusion in agricultural development initiatives, the program has the potential to empower vulnerable groups and reduce socio-economic inequalities within rural areas. This aligns with the broader objectives of socio-economic development theory, which seeks to create an enabling environment for sustainable and equitable development by addressing systemic barriers and promoting social justice.

Moreover, the Socio-Economic Development Theory underscores the importance of participatory approaches and community engagement in driving development outcomes. In the context of the Government Command Agriculture Program, involving local communities in decision-making processes and program implementation can enhance ownership and sustainability, ensuring that interventions are tailored to local needs and priorities. By fostering collaboration and partnership between government agencies, civil society organizations, and grassroots stakeholders, the program can leverage local knowledge and resources to maximize its impact on socio-economic development. This participatory approach is essential for building social capital, strengthening resilience, and promoting inclusive development outcomes that benefit all members of society. Thus, the Socio-Economic Development Theory provides a

valuable theoretical framework for understanding the transformative potential of agricultural interventions such as the Government Command Agriculture Program in driving socio-economic development and poverty alleviation in rural communities.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter contains the research methodology of the study. It begins with the brief description of the study area, which is Bindura, Matepatepa area and also the description of the research design which is descriptive. The section also contains the population and sampling procedure as well as the data collection which involves the employment of key informant interviews and structured questionnaires. In addition to these, the section also contains the data analysis framework and the ethical considerations which concludes the chapter.

#### **3.1 Brief Description of study Area**

The focal point of this study, Bindura, is a town located in the Mashonaland Central Province of Zimbabwe. Positioned within Agro ecological Region II, Bindura experiences a subtropical climate typified by distinct wet and dry seasons. The wet season spans from November to March, witnessing most of the region's annual rainfall, which typically ranges between 800mm to 1000mm. Peak precipitation occurs in December and January, sustaining agricultural activities throughout the year. Conversely, the dry season, lasting from April to October, brings reduced rainfall and is characterized by drier conditions. Temperature variations are also notable, with hot summers registering highs of around 30-35°C and cooler winters with daytime temperatures averaging between 18-25°C. These climatic conditions contribute to the region's suitability for various agricultural pursuits, including maize cultivation, which aligns with the objectives of the Government Command Agriculture Program. Moreover, Bindura's economic landscape extends beyond agriculture, encompassing diverse sectors such as mining, manufacturing, and commerce. As a significant economic hub within the province, Bindura plays a pivotal role in driving socio-economic development, contributing to the overall prosperity of the region.

#### **3.2 Research Design**

This study employs a descriptive research design to comprehensively analyse the impact of the Government Command Agriculture Contract Program on smallholder farmers in Bindura District, Zimbabwe. The descriptive research design involves systematically collecting,

organizing, and interpreting data to provide a detailed account of the characteristics, practices, and outcomes associated with the program (Mishra & Alok, 2022). The research utilized a combination of qualitative and quantitative methods, including surveys, interviews, and document analysis. Surveys were conducted to gather quantitative data on farmers' access to essential resources, agricultural productivity, and socio-economic outcomes. Additionally, qualitative methods such as interviews were employed to explore the challenges faced by farmers in accessing and participating in the program. By employing a descriptive research design, this study aimed to offer a comprehensive understanding of the Government Command Agriculture Program's dynamics and its implications for smallholder farmers in Bindura District.

### **3.3 Sampling Procedure**

The sampling procedure for this study involved the application of a purposive sampling method, targeting smallholder farmers in the Matepatepa area of Bindura District, Zimbabwe. Matepatepa was chosen due to its diverse mix of farmers who have participated in the Government Command Agriculture Program. The initial step involved obtaining a comprehensive list of farmers in the Matepatepa area who have received assistance through the program, revealing a total of 743 individuals. Utilizing the sample determination equation, the study aims to select a representative sample size to ensure meaningful insights. With an anticipated margin of error, confidence level, and population size in mind, the determined sample size is calculated to be 121 farmers. This purposively selected sample provided an insightful representation of the experiences, challenges, and outcomes associated with the Government Command Agriculture Program among smallholder farmers in the Matepatepa area, contributing to the overall richness of the study.

### **3.4 Data Collection Methods**

#### **3.4.1 Key Informant Interviews**

Key informant interviews were used as a crucial data collection method in this study to gain in-depth insights from individuals who possess significant knowledge and experience related to the Government Command Agriculture Program in Bindura District. Officials from agricultural extension offices, government authorities, and program coordinators served as key informants. These interviews are essential for obtaining contextual information, understanding the program's

implementation nuances, and identifying any challenges faced at the administrative and policy levels. Key informant interviews provide a qualitative depth that complements the quantitative data obtained from farmers, enriching the overall understanding of the program's dynamics (Pawar, 2020).

### **3.4.2 Questionnaires**

The use of questionnaires as a data collection method is justified by their effectiveness in gathering structured and standardized information from many smallholder farmers in the Matepatepa area. The questionnaires were designed to elicit quantitative data on farmers' access to essential resources, agricultural productivity, and socio-economic outcomes associated with the Government Command Agriculture Program. This method allows for systematic data collection, ensuring consistency in responses and facilitating statistical analysis. Additionally, questionnaires enable the collection of a broad range of data points, making it feasible to address multiple aspects of the research objectives efficiently (Bostley, 2019). The combination of key informant interviews and questionnaires ensures a comprehensive and well-rounded approach to capturing the diverse perspectives and experiences of stakeholders involved in the program.

### **3.5 Data Analysis Methods**

**Objective 1: Evaluate the effectiveness of the Government Command Agriculture Contract Program in improving smallholder farmers' access to essential resources in Bindura District.**

Descriptive statistics, such as frequencies and percentages, was used to analyse survey responses regarding farmers' access to essential resources. Cross-tabulations were utilized to identify patterns and associations between the type of resources accessed and demographic variables.

**Objective 2: Assess the effect of command agriculture on the agricultural productivity of participating farmers in Bindura District.**

Quantitative data on agricultural productivity, including production levels and yield quality, was analysed using statistical measures such as means, medians, and standard deviations. Comparative analysis between pre-program and post-program periods were conducted to

determine the impact of the Government Command Agriculture Program on farmers' agricultural output.

**Objective 3: Identify the challenges faced by farmers in accessing contract arrangements under the command agriculture in Bindura District.**

Qualitative data from key informant interviews were analysed using thematic content analysis to identify recurring themes and patterns related to the challenges faced by farmers in accessing contract arrangements. The findings were categorized, and key issues were extracted to provide a comprehensive understanding of the challenges.

**Objective 4: Analyse the contribution of command agriculture to food security and poverty alleviation among smallholder farmers in Bindura District.**

The Food Insecurity Experience Scale (FIES) responses was analysed using descriptive statistics to assess the level of food security among farmers. Likert scale responses for poverty alleviation were analysed using means and standard deviations. To ascertain differences before and after the Government Command Agriculture Program, paired t-tests were employed, comparing pre-program and post-program scores for both food security and poverty alleviation. This method aims to provide statistical evidence of the program's impact on the specified outcomes, enhancing the study's overall robustness.

### **3.6 Ethical considerations**

Ethical considerations in this study are paramount to ensuring the well-being and rights of all participants involved. In adherence to ethical principles, informed consent was sought from each participant, detailing the purpose, procedures, and potential risks and benefits of their involvement in the study. Participants have the right to withdraw from the study at any point without facing adverse consequences. Confidentiality was strictly maintained, with all data anonymized and stored securely to protect the privacy of participants. Additionally, the study prioritized the principle of non-maleficence, ensuring that no harm befalls the participants because of their involvement. The research also upheld the principles of beneficence, striving to maximize the benefits of the study while minimizing any potential risks. Ethical approval was sought from relevant institutional review boards, and the study was conducted in full compliance with the ethical guidelines and standards set forth in the research field

## CHAPTER FOUR

### RESULTS

#### 4.1 Demographic Characteristics of respondents

##### 4.1.1 Qualitative demographic characteristics

The results in Table 4.1 indicate that out of 121 respondents, 59.5% were male and 40.5% were female. In terms of education, most respondents had primary/secondary education (68.6%), followed by non-formal education (17.4%) and tertiary education (14.0%). Regarding marital status, the largest proportion of respondents were married (75.2%), while smaller percentages were single (10.7%), widowed (6.6%), or divorced (7.4%). Access to extension services was reported by 83.5% of respondents, while 16.5% indicated no access. These findings provide insights into the demographic characteristics and access to support services among the respondents, which are essential for understanding their perspectives and experiences in the context of the study on command agriculture.

*Table 4. 1 Demographic Characteristics of respondents*

| Variable                            | Category          | Frequency N=121 | Percentage |
|-------------------------------------|-------------------|-----------------|------------|
| <b>Sex</b>                          | Male              | 72              | 59.5       |
|                                     | Female            | 49              | 40.5       |
| <b>Education</b>                    | Non-formal        | 21              | 17.4       |
|                                     | Primary/secondary | 83              | 68.6       |
|                                     | Tertiary          | 17              | 14.0       |
| <b>Marital Status</b>               | Single            | 13              | 10.7       |
|                                     | Married           | 91              | 75.2       |
|                                     | Widowed           | 8               | 6.6        |
|                                     | Divorced          | 9               | 7.4        |
| <b>Access to Extension Services</b> | Yes               | 101             | 83.5       |
|                                     | No                | 20              | 16.5       |

#### 4.1.2 Descriptive socio-economic characteristics

The descriptive socio-economic characteristics of the respondents presented in table 4.2 reveal a diverse range of household sizes, with a maximum of 13 members and a minimum of 2, with a mean of 5.45 and a standard deviation of 6.888. Farming experience varies from 1 to 17 years, with an average of 6.77 years and a standard deviation of 1.554. Respondents reported an average of 2.11 years in government contract, with a maximum of 6 years and a minimum of 1 year, showing a standard deviation of 1.774. Land size ranged from 1 to 10 hectares, with a mean of 2.45 hectares and a standard deviation of 1.994. Household income varied widely, with a maximum of \$2500 and a minimum of \$556, and a mean of \$1245, with a standard deviation of \$2.445. These findings provide insights into the socio-economic characteristics of the respondents, including household size, farming experience, land size, years in government contract, and household income, which are crucial for understanding their economic status and capacity within the context of the study on command agriculture.

*Table 4. 2 Descriptive socio-economic characteristics of respondents*

| <b>Variable</b>              | <b>Max</b> | <b>Min</b> | <b>St. Deviation</b> | <b>Mean</b> |
|------------------------------|------------|------------|----------------------|-------------|
| Household size               | 13         | 2          | 6.888                | 5.45        |
| Farming Experience           | 17         | 1          | 1.554                | 6.77        |
| Years in government contract | 6          | 1          | 1.774                | 2.11        |
| Land size                    | 10         | 1          | 1.994                | 2.45        |
| Household income             | 2500       | 556        | 2.445                | 1245        |

#### 4.2 Effectiveness of command agriculture in improving smallholder farmers' access to essential resources

##### 4.2.1 Resources received from the government.

The results shown in table 4.3 regarding resources received from the program indicate that most respondents received seeds (93.4%), followed by fertilizers (84.3%), herbicides (81.8%), and extension services (80.2%). A considerable proportion of respondents also reported receiving machinery (71.9%), while fewer received fuel (62.8%) and packaging material (44.6%). These findings illustrate the distribution of program resources among respondents, highlighting the types of support received and their respective frequencies, which are essential for evaluating the

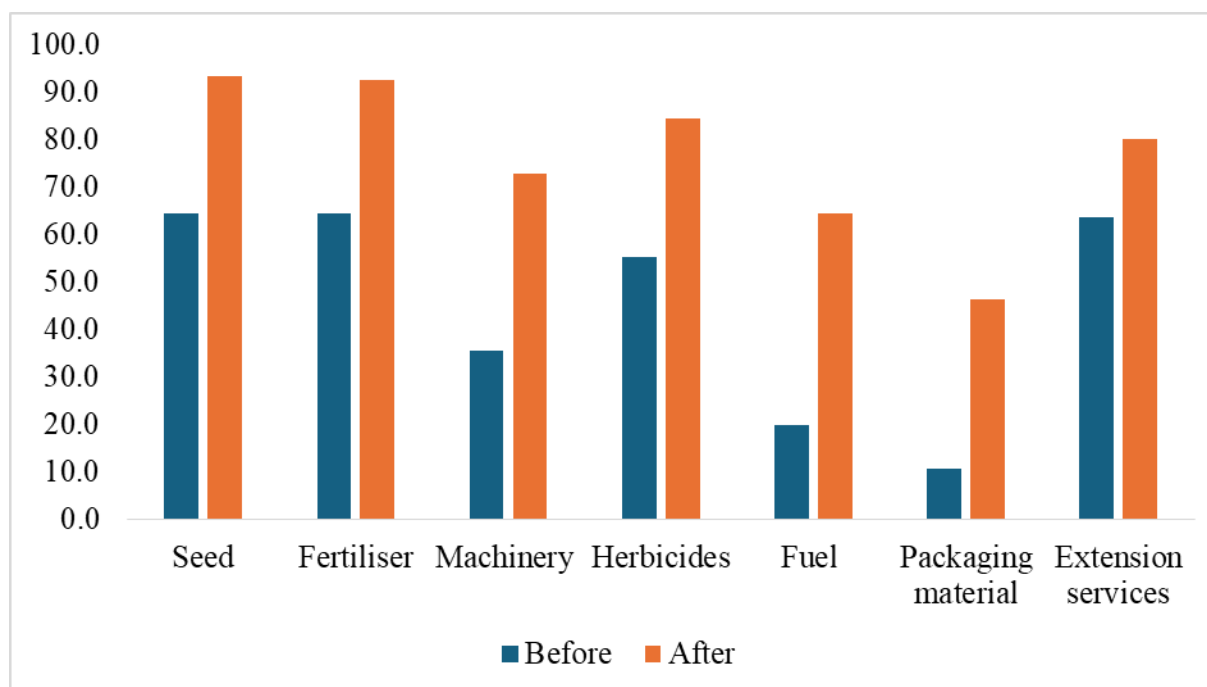
impact and effectiveness of the program in providing necessary agricultural inputs and services to participants.

*Table 4. 3 Resources Accessed through the government contract program.*

| <b>Resources Received from the program</b> | <b>Frequency</b> | <b>Percentage</b> |
|--------------------------------------------|------------------|-------------------|
| Seed                                       | 113              | 93.4              |
| Fertiliser                                 | 102              | 84.3              |
| Machinery                                  | 87               | 71.9              |
| Herbicides                                 | 99               | 81.8              |
| Fuel                                       | 76               | 62.8              |
| Packaging material                         | 54               | 44.6              |
| Extension services                         | 97               | 80.2              |

#### **4.2.2 Accessibility of essential resource**

The results presented in Figure 4.1 of the study depict changes in access to various resources before and after participation in the program. The data indicate significant improvements in access to most resources after program participation. Access to seeds increased from 64.5% before to 93.4% after, while access to fertilizers rose from 64.5% to 92.6%. Similarly, access to herbicides increased from 55.4% to 84.3%, and access to extension services increased from 63.6% to 80.2%. The most substantial improvement was observed in access to machinery, which increased from 35.5% before to 72.7% after program participation. Access to fuel also showed a notable increase, from 19.8% before to 64.5% after. However, access to packaging material exhibited a more modest improvement, increasing from 10.7% to 46.3%. These findings highlight the program's effectiveness in enhancing farmers' access to essential agricultural resources, thereby potentially contributing to improved productivity and livelihoods among participants.



*Figure 4. 1 Changes in access of essential resources*

#### **4.3 Effect of command agriculture on the agricultural productivity**

The paired T-test findings in table 4.4 indicate significant differences before and after program participation across various indicators. The mean income before participation was \$1525.5, with a standard deviation of \$3241.229. After participation, the mean income increased significantly, with a T-statistic of 3.992 and a p-value of 0.001. Similarly, the mean yield before participation was 5.67, with a standard deviation of 6.884. After participation, the mean yield increased significantly, with a T-statistic of 4.385 and a p-value of 0.001. Regarding land use, the mean before participation was 2.11, with a standard deviation of 4.665. After participation, the mean land use increased to 4.665, with a T-statistic of 1.222 and a p-value of 0.001. Additionally, crop diversity showed a significant increase, with the mean before participation at 2.12 and a standard deviation of 1.223. After participation, the mean crop diversity increased to 1.223, with a T-statistic of 2.976 and a p-value of 0.001. These findings underscore the positive impact of program participation on income, yield, land use, and crop diversity among participants.

*Table 4. 4 Effects of government contract program on productivity*

| <b>Pair</b>                                 | <b>Mean</b> | <b>Std.<br/>Deviation</b> | <b>T-statistic</b> | <b>df</b> | <b>Sig. (2-<br/>tailed)</b> |
|---------------------------------------------|-------------|---------------------------|--------------------|-----------|-----------------------------|
| Income before – Income after                | 1525.5      | 3241.229                  | 3.992              | 120       | 0.001                       |
| Yield before- Yield after                   | 5.67        | 6.884                     | 4.385              | 120       | 0.001                       |
| Land use before- Land use after             | 2.11        | 4.665                     | 1.222              | 120       | 0.001                       |
| Crop Diversity before- Crop diversity after | 2.12        | 1.223                     | 2.976              | 120       | 0.001                       |

#### **4.4 Challenges faced by farmers in accessing contract arrangement under the command agriculture.**

The table 4.4 below illustrates Bureaucratic hurdles which has a mean score of 3.8, indicating that respondents generally perceived these obstacles as moderate. Delays in payments had a slightly higher mean score of 4.0, suggesting a more significant concern among participants. Inadequate support services garnered a mean score of 4.2, indicating a relatively high level of dissatisfaction with available support. Limited access to inputs was perceived as a more pronounced challenge, with a mean score of 4.4. Market access challenges and infrastructure deficiencies both received mean scores of 3.8 and 3.6, respectively, suggesting moderate concerns among respondents. However, land tenure insecurity emerged as the most significant concern, with a notably lower mean score of 2.4, indicating widespread dissatisfaction and perceived vulnerability among participants. These findings highlight the varied nature and intensity of challenges faced by individuals accessing government contract programs, underscoring the need for targeted interventions and policy reforms to address these issues effectively.

Table 4. 5 Challenges faced under government contract program

| Challenges                     | SDA |      | DA |      | N  |      | A  |      | SA |      | Mean<br>Score |
|--------------------------------|-----|------|----|------|----|------|----|------|----|------|---------------|
|                                | N   | %    | N  | %    | N  | %    | N  | %    | N  | %    |               |
| Bureaucratic Hurdles           | 6   | 5.0  | 7  | 5.8  | 15 | 12.4 | 72 | 59.5 | 21 | 17.4 | 3.8           |
| Delays in Payments             | 10  | 8.3  | 11 | 9.1  | 12 | 9.9  | 23 | 19.0 | 65 | 53.7 | 4.0           |
| Inadequate Support<br>Services | 8   | 6.6  | 7  | 5.8  | 11 | 9.1  | 21 | 17.4 | 74 | 61.2 | 4.2           |
| Limited Access to<br>Inputs    | 3   | 2.5  | 8  | 6.6  | 9  | 7.4  | 15 | 12.4 | 86 | 71.1 | 4.4           |
| Market Access<br>Challenges    | 5   | 4.1  | 8  | 6.6  | 19 | 15.7 | 60 | 49.6 | 29 | 24.0 | 3.8           |
| Land Tenure<br>Insecurity      | 17  | 14.0 | 65 | 53.7 | 18 | 14.9 | 12 | 9.9  | 9  | 7.4  | 2.4           |
| Infrastructure<br>Deficiencies | 11  | 9.1  | 12 | 9.9  | 17 | 14.0 | 56 | 46.3 | 25 | 20.7 | 3.6           |

SDA=Strongly Disagree; DA=Disagree; N= Neutral; A= Agree; SA= Strongly Agree

## 4.5 Contribution of command agriculture to food security and poverty alleviation

### 4.5.1 Contribution to Food Security

The graph 4.2 below compares the prevalence of food insecurity and security before and after participation in command agriculture. Before command agriculture, 37.2% of respondents experienced food insecurity, while this percentage decreased to 17.4% after participation. Conversely, the proportion of respondents in moderate food security increased from 46.3% before command agriculture to 55.4% after participation. Additionally, the percentage of respondents classified as food secure also increased, from 16.5% before command agriculture to 27.3% after participation. These findings suggest a positive impact of command agriculture on food security, with a notable reduction in food insecurity and an increase in moderate food security and food secure households among participants.

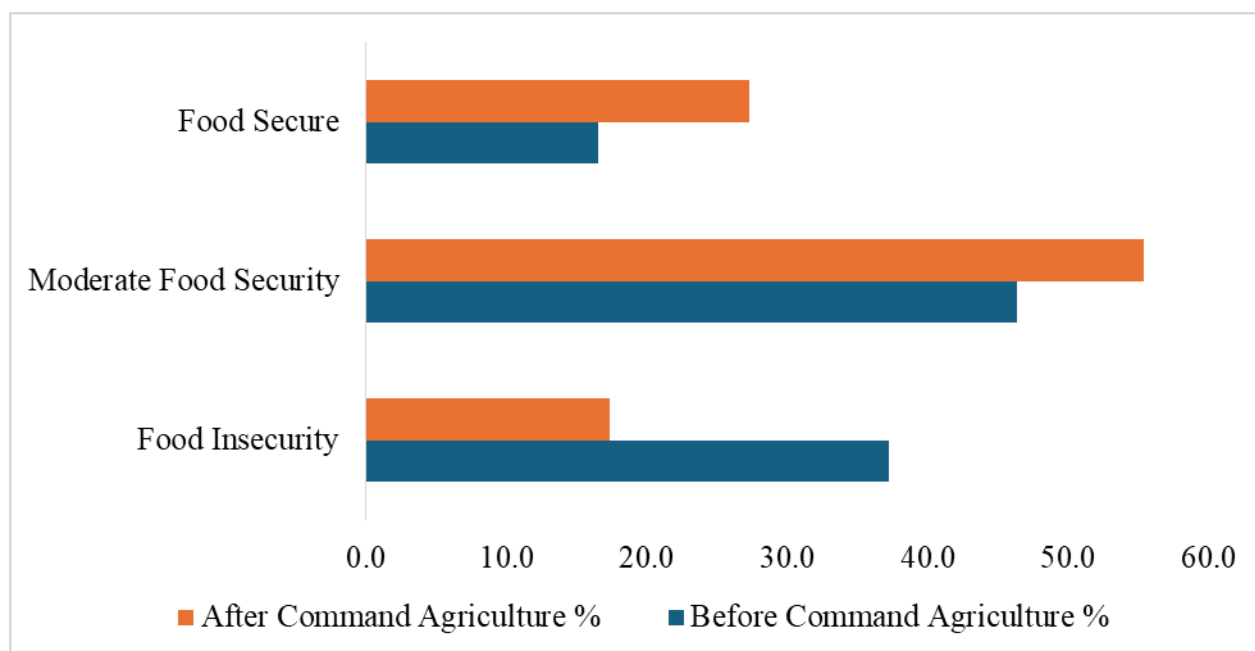


Figure 4. 2 Contribution of government contract program to food security

#### 4.5.2 Effects of participation on HFIES and FCS

The paired T-test findings shown in Table 4.5 indicate significant differences in Household Food Insecurity and Food Consumption Score before and after participation in the program. The mean Household Food Insecurity (HFIES) before participation was -3.527, with a standard deviation of 3.328. After participation, the mean HFIES decreased significantly to -9.117, with a T-statistic of -9.117 and a p-value of 0.001. Similarly, the mean Food Consumption Score (FCS) before participation was 13.534, with a standard deviation of 26.549. After participation, the mean FCS increased significantly to 4.385, with a T-statistic of 4.385 and a p-value of 0.001. These findings indicate an improvement in household food security and consumption scores after participation in the program, suggesting a positive impact on participants' overall food security status and dietary quality.

Table 4. 6 Comparison of HFIES and FCS before and after the program

| Pair                       | Mean   | Std. Deviation | T-statistic | df  | Sig. (2-tailed) |
|----------------------------|--------|----------------|-------------|-----|-----------------|
| HFIES before – HFIES after | -3.527 | 3.328          | -9.117      | 120 | 0.001           |
| FCS before- FCS after      | 13.534 | 26.549         | 4.385       | 120 | 0.001           |

### 4.5.3 Poverty Alleviation

Table 4.6 presents changes in income categories before and after participation in command agriculture. Before command agriculture, 55.4% of respondents were below the poverty line, which decreased significantly to 26.4% after participation. Conversely, the proportion of respondents near the poverty line increased from 26.4% before command agriculture to 37.2% after participation. Additionally, the percentage of respondents above the poverty line also increased, from 18.2% before command agriculture to 36.4% after participation. These findings indicate a positive impact of command agriculture on income levels, with a notable reduction in the proportion of households below the poverty line and an increase in households transitioning to higher income categories.

*Table 4. 7 Effect of government contract program on poverty*

| <b>Income Category</b> | <b>Before Command Agriculture %</b> | <b>After Command Agriculture %</b> |
|------------------------|-------------------------------------|------------------------------------|
| Below Poverty Line     | 55.4                                | 26.4                               |
| Near Poverty Line      | 26.4                                | 37.2                               |
| Above Poverty Line     | 18.2                                | 36.4                               |

Table 4.7 outlines changes in various poverty indicators before and after participation in command agriculture. In terms of asset ownership, there were significant increases in land ownership, rising from 62.8% before to 77.7% after participation. Similarly, ownership of cattle increased from 55.4% to 81.8%, while ownership of goats rose from 73.6% to 93.4%. Productive machinery ownership also notably increased from 19.0% to 43.8%, indicating improved access to productive resources. Additionally, improvements in housing infrastructure were observed, with ownership of improved housing infrastructure increasing from 36.4% to 63.6%. In terms of service access, there were significant improvements in access to quality health care (from 47.1% to 70.2%), household formal education (from 57.0% to 83.5%), and sanitation and clean water (from 28.9% to 63.6%). Financial indicators also showed positive changes, with increases in savings (from 28.1% to 40.5%) and investment (from 18.2% to 32.2%), while debt decreased slightly (from 68.6% to 42.1%). These findings suggest that participation in command

agriculture has led to notable improvements in asset ownership, access to essential services, and financial well-being among participants, contributing to poverty reduction and improved livelihoods.

*Table 4. 8 Effect of government contract program on Livelihood indicators*

| <b>Indicators</b>               | <b>Before Command<br/>Agriculture %</b> | <b>After Command<br/>Agriculture %</b> |
|---------------------------------|-----------------------------------------|----------------------------------------|
| <b>Asset ownership</b>          |                                         |                                        |
| Land                            | 62.8                                    | 77.7                                   |
| Cattle                          | 55.4                                    | 81.8                                   |
| Goats                           | 73.6                                    | 93.4                                   |
| Productive machinery            | 19.0                                    | 43.8                                   |
| Improved housing infrastructure | 36.4                                    | 63.6                                   |
| <b>Service Access</b>           |                                         |                                        |
| Quality health care             | 47.1                                    | 70.2                                   |
| Household formal Education      | 57.0                                    | 83.5                                   |
| Sanitation and Clean water      | 28.9                                    | 63.6                                   |
| <b>Financial</b>                |                                         |                                        |
| Savings                         | 28.1                                    | 40.5                                   |
| Debt                            | 68.6                                    | 42.1                                   |
| Investment                      | 18.2                                    | 32.2                                   |

## **4.6 Discussion**

### **4.6.1 Effectiveness of program to access to essential resources.**

The findings presented in Figure 4.1 illustrate significant improvements in access to various agricultural resources following participation in the program. Chigunhah, et al, (2018) reported substantial increases in access to seeds, fertilizers, and extension services among participants, supporting the notion that such programs effectively enhance resource access. Additionally, Mbizi, Sifile & Tendai, (2022) also noted consistent improvements in machinery access like the findings of this study. However, contrasting results were observed in a study by Maulu, et al, (2021), which found more modest improvements in access to agricultural inputs among program participants. These variations could be attributed to differences in program implementation

strategies, regional contexts, and participant demographics. Overall, while there may be some discrepancies among studies, the consensus suggests that government-sponsored agricultural programs can indeed enhance farmers' access to essential resources, thereby potentially boosting productivity and livelihoods in rural communities.

#### **4.6.2 Challenges affecting access to program.**

Several authors have explored challenges related to accessing government contract programs in agricultural settings. Chigunhah, et al, (2018) found similarities in bureaucratic hurdles and delays in payments, along with additional issues like inadequate infrastructure and limited market access. Mazwi, et al, (2019) noted that while such challenges were common, their severity varied based on program design and implementation strategies. Overall, while discrepancies exist among studies, there is agreement on the presence of challenges such as bureaucratic hurdles, payment delays, and limited access to inputs in government contract programs. Addressing these issues requires tailored interventions and policy reforms to ensure successful program implementation and impact in agricultural contexts.

#### **4.6.3 Influence of program to productivity**

The paired T-test findings reveal significant improvements in productivity indicators following participation in government command contract programs among farmers. These results align with previous research by Söderberg, (2023), who also observed notable increases in income and yield among participants in similar agricultural programs. Additionally, Makuwerere, (2021) found consistent improvements in land use practices and crop diversity among farmers engaged in government-sponsored initiatives. These findings collectively underscore the positive impact of program participation on various aspects of productivity, including income generation, yield enhancement, efficient land use, and diversified crop production. Such outcomes not only contribute to the economic well-being of farmers but also promote sustainable agricultural practices and food security within rural communities. Thus, these findings emphasize the importance of continued support and investment in government command contract programs to enhance agricultural productivity and livelihoods among smallholder farmers.

#### **4.6.4 Effect of program to food security and poverty alleviation**

##### **Food Security**

The comparison of food security status before and after participation in command agriculture illustrates significant improvements in food security outcomes among participants. These findings concur with research conducted by Musonza & Hlungwani, (2024), who similarly observed a decrease in the prevalence of food insecurity and an increase in food security among participants in government-sponsored agricultural programs. Moreover, Makuwerere, (2021) reported comparable findings, highlighting the positive impact of agricultural interventions on food security outcomes in rural communities. These consistent results underscore the effectiveness of command agriculture in alleviating food insecurity and promoting food security among participating households. By addressing underlying factors contributing to food insecurity, such as limited access to agricultural inputs and resources, command agriculture initiatives contribute to improved food security outcomes, thus enhancing the overall well-being of rural populations.

The paired T-test findings highlight significant improvements in Household Food Insecurity and Food Consumption Score (FCS) following participation in the program. These results are consistent with research conducted by Makuwerere, (2021), who also observed reductions in household food insecurity and improvements in dietary quality among participants in similar agricultural programs. Additionally, Mazwi, et al, (2019) reported comparable findings, indicating the positive impact of program participation on household food security and consumption patterns. These consistent results underscore the effectiveness of the program in enhancing food security outcomes and dietary quality among participating households. By addressing underlying factors contributing to food insecurity and improving access to nutritious food, the program plays a crucial role in promoting the overall well-being and nutritional status of households in rural communities.

##### **Poverty Alleviation**

Table 4.6 outlines changes in income categories before and after participation in command agriculture, revealing significant shifts in poverty levels among respondents. These findings align with research by Chigunhah, et al, (2018) who also observed reductions in poverty rates

and improvements in income levels among participants in government agricultural programs. Similarly, Mbizi, Sifile & Tendai, (2022) reported comparable results, indicating the positive impact of program participation on poverty alleviation and income generation. These consistent findings underscore the effectiveness of command agriculture in lifting households out of poverty and facilitating economic empowerment among rural communities. By providing access to resources and opportunities for income generation, command agriculture contributes to sustainable livelihoods and poverty reduction efforts, thereby enhancing the overall socio-economic well-being of participants.

Table 4.7 presents notable improvements in various poverty indicators before and after participation in command agriculture, highlighting the program's positive impact on socioeconomic well-being. These findings are consistent with research conducted by Mazwi, et al, (2019) who also observed significant increases in asset ownership and access to essential services among participants in similar agricultural initiatives. Moreover, Maulu, et al, (2021) reported similar outcomes, indicating improvements in asset ownership, service access, and financial well-being among program participants. These findings collectively underscore the transformative effects of command agriculture on poverty reduction and livelihood improvement, emphasizing the program's role in promoting sustainable development and economic empowerment within rural communities. By addressing key dimensions of poverty and enhancing access to resources and opportunities, command agriculture contributes to building resilient and thriving communities, ultimately fostering inclusive growth and prosperity.

#### **4.7 Summary of chapter**

The study's findings reveal significant positive impacts of participation in government command agriculture programs on various socioeconomic indicators among smallholder farmers in Bindura District. Paired T-test analyses demonstrate notable improvements in productivity measures such as income, yield, land use, and crop diversity after program participation. Moreover, participation in command agriculture is associated with substantial reductions in food insecurity levels, with a concurrent increase in moderate food security and food secure households. Furthermore, the program leads to significant improvements in household food insecurity and food consumption scores, indicating enhanced food security status and dietary quality among participants. Additionally, command agriculture positively influences income distribution, with a

notable decrease in the proportion of households below the poverty line and increases in households transitioning to higher income categories. Noteworthy improvements are also observed in asset ownership, access to essential services, and financial well-being among participants, contributing to poverty reduction and improved livelihoods. These findings underscore the effectiveness of command agriculture in promoting sustainable agricultural development, food security, and poverty alleviation within rural communities.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Conclusion**

- The study revealed a significant improvement in smallholder farmers' access to essential agricultural resources after participating in government command agriculture programs. Access to seeds, fertilizers, machinery, herbicides, and extension services notably increased post-participation, indicating the effectiveness of the program in enhancing resource accessibility.
- Participation in command agriculture led to substantial enhancements in agricultural productivity among smallholder farmers in Bindura District. Significant increases in income, yield per hectare, land use efficiency, and crop diversity were observed post-participation, highlighting the positive impact of the program on farmers' productivity levels.
- The challenges faced by farmers in accessing contract arrangements under command agriculture were identified and analysed. Bureaucratic hurdles, delays in payments, and inadequate support services emerged as prominent challenges, underscoring the need for streamlined processes and improved support mechanisms within the program.
- The contribution of command agriculture to food security and poverty alleviation among smallholder farmers in Bindura District was analysed. The study found a notable reduction in food insecurity levels and an increase in moderate food security and food secure households' post-participation, indicating the program's positive impact on enhancing food security outcomes. Additionally, improvements in income distribution, asset ownership, access to essential services, and financial well-being among participants contribute to poverty reduction and improved livelihoods within rural communities.

#### **5.2 Recommendations**

Based on the findings indicating challenges faced by farmers in accessing contract arrangements under command agriculture, it is recommended that relevant authorities streamline administrative procedures and payment systems to minimize bureaucratic hurdles and delays.

Additionally, efforts should be made to enhance support services provided to farmers, including timely technical assistance, training programs, and access to necessary inputs and resources.

To improve access to essential assets for smallholder farmers participating in command agriculture, it is recommended that authorities focus on enhancing resource distribution mechanisms and support services. This could involve establishing efficient supply chains for seeds, fertilizers, machinery, and other necessary inputs, ensuring timely delivery to farmers in remote areas. Additionally, initiatives such as subsidized or affordable credit schemes can facilitate farmers' access to productive assets, enabling them to invest in modern agricultural technologies and equipment.

Considering the positive impact of command agriculture on agricultural productivity and livelihoods, further research is recommended to explore the long-term sustainability and scalability of the program. Future studies could investigate the effectiveness of different program models, implementation strategies, and support mechanisms in diverse agricultural contexts. Additionally, research focusing on the socio-economic implications of command agriculture beyond productivity enhancements, such as its influence on rural development, income distribution, and environmental sustainability, would provide valuable insights for policy formulation and program improvement.



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## Research Instrument

### Questionnaire

#### Research Instrument: Management

My name is Faith Dziya,

I am a student at Bindura University of Science Education. I am doing Bachelor of Science Honours Degree in Agricultural Economics and Management. I am conducting a study entitled, **‘AN ANALYSIS OF THE CONTRIBUTION OF MAIZE CONTRACT FARMING ON HOUSEHOLD FOOD SECURITY AND POVERTY ALLEVIATION IN MASHONALAND CENTRAL, BINDURA DISTRICT’**, for this study to be successful you are required to complete this questionnaire.

Please do not write any personal information on the questionnaire such as your name, surname, address or phone number.

#### 1 What is your gender?

| Gender | Please tick in the provided space where it is appropriate to you |
|--------|------------------------------------------------------------------|
| Male   |                                                                  |
| Female |                                                                  |

#### 2 What is your Age?

| Age         | Please tick in the provided space where it is appropriate to you |
|-------------|------------------------------------------------------------------|
| 18-25 years |                                                                  |
| 26-35 years |                                                                  |
| 36-45 years |                                                                  |

|                    |  |
|--------------------|--|
| 46-55 years        |  |
| 56 years and above |  |

### 3 What is your highest academic qualifications?

| <b>Qualifications</b> | <b>Please tick in the provided space where it is appropriate to you</b> |
|-----------------------|-------------------------------------------------------------------------|
| No formal Education   |                                                                         |
| Secondary Education   |                                                                         |
| Diploma               |                                                                         |
| Degree                |                                                                         |
| Master's Degree       |                                                                         |
| Others                |                                                                         |

### 4. What is your marital status?

| <b>Status</b> | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|---------------|-----------------------------------------------------------------------------------------|
| Single        |                                                                                         |
| Married       |                                                                                         |
| Widowed       |                                                                                         |
| Divorced      |                                                                                         |

**5. What is your household size?**

| <b>Size</b> | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------|-----------------------------------------------------------------------------------------|
| 1-2         |                                                                                         |
| 3-4         |                                                                                         |
| 5-6         |                                                                                         |
| 7 and above |                                                                                         |

**Section B: Agricultural Information**

**6. Do you participate in maize contract farming?**

| <b>Item</b> | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------|-----------------------------------------------------------------------------------------|
| Yes         |                                                                                         |
| No          |                                                                                         |

**7. If yes, for how many years have you been involved in maize contract farming?**

| <b>Years</b>       | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|--------------------|-----------------------------------------------------------------------------------------|
| 1-2 years          |                                                                                         |
| 3-5 years          |                                                                                         |
| 6-10 years         |                                                                                         |
| 10 years and above |                                                                                         |

**8. What is the size of your land (in hectares)?**

| <b>Size</b>          | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|----------------------|-----------------------------------------------------------------------------------------|
| Less than 1 hectare  |                                                                                         |
| 1-2 hectares         |                                                                                         |
| 3-5 hectares         |                                                                                         |
| 5 hectares and above |                                                                                         |

**Section C: Contribution to Household Food Security**

**9. How often do you have enough maize to feed your household throughout the year?**

| <b>Item</b>      | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|------------------|-----------------------------------------------------------------------------------------|
| Always           |                                                                                         |
| Most of the time |                                                                                         |
| Sometimes        |                                                                                         |
| Rarely           |                                                                                         |
| Never            |                                                                                         |

**10. Has your household food security improved since you started contract farming?**

| <b>Item</b>                | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|----------------------------|-----------------------------------------------------------------------------------------|
| Significantly improved     |                                                                                         |
| Improved                   |                                                                                         |
| No change                  |                                                                                         |
| Deteriorated               |                                                                                         |
| Significantly deteriorated |                                                                                         |

**11. Do you receive any agricultural inputs (seeds, fertilizers, etc) from the government contracting program?**

| <b>Item</b> | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------|-----------------------------------------------------------------------------------------|
| Yes         |                                                                                         |
| No          |                                                                                         |

**12. If yes, how adequate are these inputs for your farming needs?**

**12. Do you receive any training or technical support from government contracting program?**

| <b>Item</b> | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------|-----------------------------------------------------------------------------------------|
| Yes         |                                                                                         |
| No          |                                                                                         |

#### **Section D: Contribution to Poverty Alleviation**

**13. What is your average monthly household income from maize contract farming?**

| <b>Income</b>   | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-----------------|-----------------------------------------------------------------------------------------|
| Less than \$100 |                                                                                         |
| \$100-\$200     |                                                                                         |
| \$201-\$300     |                                                                                         |
| \$301-\$400     |                                                                                         |
| \$400 and above |                                                                                         |

**14. How do you utilize the income earned from maize contract farming?**

| <b>Item</b>            | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|------------------------|-----------------------------------------------------------------------------------------|
| Food                   |                                                                                         |
| Education              |                                                                                         |
| Health                 |                                                                                         |
| Housing                |                                                                                         |
| Savings                |                                                                                         |
| Other (please specify) |                                                                                         |

**15. What are the main challenges you face in maize contract farming?**

| <b>Item</b>             | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------------------|-----------------------------------------------------------------------------------------|
| Poor input quality      |                                                                                         |
| Delayed payments        |                                                                                         |
| Low prices              |                                                                                         |
| Poor weather conditions |                                                                                         |
| Pests and diseases      |                                                                                         |
| Other (please specify)  |                                                                                         |

**16. Do you think maize contract farming is a viable long-term strategy for poverty alleviation in your household?**

| <b>Item</b>       | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|-------------------|-----------------------------------------------------------------------------------------|
| Strongly agree    |                                                                                         |
| Agree             |                                                                                         |
| Neutral           |                                                                                         |
| Disagree          |                                                                                         |
| Strongly disagree |                                                                                         |

#### **Section E: General Perception and Recommendations**

**17. What are your overall thoughts on maize contract farming in improving household food security and poverty alleviation?**

| <b>Item</b>   | <b>Please tick in the space provided below where you think it is appropriate to you</b> |
|---------------|-----------------------------------------------------------------------------------------|
| Very positive |                                                                                         |
| Positive      |                                                                                         |
| Neutral       |                                                                                         |
| Negative      |                                                                                         |
| Very negative |                                                                                         |

**18. What recommendations do you have to improve the maize contract farming system in Bindura District?**

.....  
 .....

**.Thank you very much for participating in the study.**

