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The Effects of Agriculture Management on Farm Productivity - A Case study of Small-Scale Farmers in Zone three (3) Chipata.

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Abstract-

The research was on the Effects of Agriculture Management on Farm Productivity - A Case study of Small-Scale Farmers in Zone three (3) Chipata. 80% percent of the rural population depends on agriculture-related activities for their livelihood (GRZ, 2011). Agriculture management and training impacts productivity and cooperative performance, unfortunately, much of agriculture management and training is done among medium and larger scale farmers.

The objectives of the study are 1. To determine the level of agricultural management knowledge among small scale farmers in cooperatives. 2. To ascertain agricultural management trainings for productivity among small scale farmers in cooperatives. 3. To identify cooperative management challenge and failures among small scale farmers.

Methodology research design was descriptive, qualitative and convenience in nature, using of a structured questionnaire on 55 and 53 responded. Findings found poor accounts recording and keeping, lack of simple accounts, poor knowledge sharing, poor agriculture productivity and lack of leaders in trainings with extension officer's training.

Conclusion, there is need for agricultural trainings, accounts training, communication skills, and leadership programs are required.

The recommendation, is fast track education for small scale farmer's, learning simple preparation of budgets and cash flow statements, learning communication skills, and leadership trainings. Much is explained the report.

***Key Words**: Small Scale farmers, Knowledge Management, Cooperatives.*

INTRODUCTION.

The Chapter address the background, statement of the problem, research objectives, conceptual framework and ethical consideration.

BACKGROUND

Zambia is a country of amazing land provision that is fertile and majority of it if used effectively can realize potential benefit to the farmer and the economy as a whole. Given the vast resource endowment in terms of land, labour, water and fertile soils, Zambia has the potential for expansion in agricultural production. Therefore, the growth of the agricultural sector is cardinal in attaining the vision for Zambia which is to become "a prosperous middle-income nation by 2030. This resulted into It is for this resulted into the Zambian government to set the sector's vision in its Sixth National Development Plan (SNDP) as "an efficient, competitive, sustainable and export-led agriculture sector that ensures food security and increased income by 2030" with the goal "to increase and diversify agriculture production and productivity so as to raise the share of its contribution to 20 percent GDP," (GRZ, 2011). According to Hambulo (2009), 90 percent of the people are dependent on agriculture, as their main source of livelihood.

However, according to Mbozi (2009), despite the high investment by food support program (FSP) and Non-Governmental Organisations on agriculture, the rate of increase in agricultural production does not seem to correlate with the cost of programme investment. Though controversial, agricultural subsidies could be an effective tool to bringing economic and social changes to a developing country, this is because they act as social safety net transfer from wealthy urbanites to poor rural dwellers (Morris et al. 2007). Despite Zambia's agricultural potential that could help grow the economy and reduce poverty, not much has been done in practice. This could be true given that the sector's contribution to the Gross Domestic Product (GDP) has hovered around 20% (CSO 2010) yet it could have been more.

In addition, over 80 percent of the rural population depends on agriculture-related activities for their livelihood (GRZ, 2011), however, small-scale farmers who's dependent on agriculture activities still remain poor because of low productivity (CSO, 2000). Despite agriculture growth, poverty rates have remained persistently high at 77.9 per cent in rural areas as compared to their urban counterparts at 27.5 per cent in 2010 (GRZ, 2013).

Therefore, increases in rural incomes are expected to result in overall poverty reduction and food security but low productivity prohibits farmers from earning significant returns from their enterprises and hence reduces farm incomes (GRZ 2006). Uninformed, most agricultural policies in the continent would have been deployed on an experimental basis, even those proposed by the World Bank (Havnevik et al. 2007) and as such, they needed to be evaluated from time to time to assess their effectiveness, and this may apply at a country level. Hogan (2011) points out the information gap that farmers' management practices are based on a complex set of economic and noneconomic goals which are relevant to them at a given time and location. Hence, in order to

better understand the management practices of farmers, it is important to identify the agriculture management knowledge and assess their relevance in the given context.

It is estimated that 500 million small-scale farmers worldwide support some 2 billion people that is one-third of humanity (Wegner and Zwart, 2011). These farmers account for large shares of global agricultural output, and the livelihood and food security of many millions of rural households.

About 4% of the farms are in the "medium-scale" category (Zulu et al, 2007). The agriculture sector in Zambia contributes 18% to the country's GDP and the sector also accounts for 67% of total employment and 25% of total exports (PRSP, 2006). A lot has been researched on agriculture that relates to poverty alleviation, land size, maize prices and women in agriculture, but the research identifies the gap of agriculture management discipline in the management aspects of agriculture among small scale farming to the farm productivity.

To this reason, agricultural management is vital and understanding of management practices gives better production. It is, therefore, essential to consider the agricultural management on farm productivity- a case study of Small-Scale Farmers in Zone three (3) Chipata.

STATEMENT OF THE PROBLEM.

The realization of the need to the effects of agriculture management on farm productivity drives the study, and agriculture management has the ability to transform the agriculture for high productivity with applied skill, knowledge and competency, necessary to perform effectively on agriculture production. Unfortunately, much of agriculture management and trainings is done among medium and larger scale farmers and this has led to government continuous spending and not transforming the small-scale farmer's mindset, therefore, revolution of mind with agriculture management will change agriculture to a more productivity among small scale farmers. **RESEARCH OBJECTIVES.**

GENERAL OBJECTIVE.

The main objective is to access the relationship on agriculture management on farm productivity among small scale farmers in Cooperatives.

SPECIFIC OBJECTIVES

1. To determine the level of agricultural management knowledge among small scale farmers in cooperatives in Zone (3) three Chipata.
2. To ascertain agricultural management trainings for productivity among small scale farmers in cooperatives in Zone (3) three Chipata.
3. To identify cooperative management challenges and failures among small scale farmers in Zone (3) three Chipata.

RESEARCH QUESTIONS

1. What level of agricultural management knowledge do small scale farmers have and do apply in their farming among cooperatives in Chipata Zone (3) three?

2. Do small scale farmers have agricultural management trainings for productivity within cooperatives in Zone (3) three Chipata?
3. To what extent do cooperatives have management challenges and failure among small scale farmers in Zone (3) three Chipata?

SIGNIFICANCE OF THE STUDY.

The study will also contribute to the attaining of the Millennium development Goals in their efforts to ensure achievement of better living standards and human development.

CONCEPTUAL FRAMEWORK.

The conceptual framework gives the guide for answering the research questions, and helps to develop awareness and understanding of the situation under scrutiny and to communicate. It forms part of the agenda for negotiation to be scrutinized and tested, reviewed and reformed as a result of investigation (Guba and Lincoln, 1989).

Agriculture being seen as a business changes the perception and view of small scale farming, thus it can also be explained from entrepreneurship skills and models to farming business, as De Wolf and (Schoorlemmer 2007) define an entrepreneurial farmer as a person who is able to create and develop a profitable farming business in a changing business environment. And thus, the concept embracement revolutions of small-scale farming, (Capitanio and Adnolfi 2010) note that many farmers are quite entrepreneurial if one accepts that it means creatively determining how, and then acquiring additional income from strategic farm development, or services, retail or wholesale new entries undertaken to entrepreneurial opportunities.

Farmers Agricultural Management Knowledge in Cooperatives.

Management capacities can be defined as "having the appropriate personal characteristics and skills to deal with the right problems and opportunities in the right moment and in the right way" (Rougoor et al., 1998; Rougoor, 1999; Trip, 2000). Knowledge management is vital in applying in agricultural, and the importance of knowledge management are crucial to understand organization and goals of agricultural knowledge management. Agriculture as a business factor is regulated by natural factors and dependent on season and climatic cycle; and agriculture is becoming more knowledge intensive, changing rapidly, and making farm management more complex and therefore, skills and knowledge are critical for farmer's success.

Cooperatives Agricultural Management Trainings and Productivity

To improve agricultural production, It important to understand the value of these factors that they need to be improved: Soil (land) needs inputs like fertilizer, improved seed, and chemicals for better agricultural production, but without availability of trained labour as well as improved hand tools help to foster good agricultural practices and agriculture production (Mushobozi & Santacoloma, 2010) productivity cannot be attained. Information training that is understood helps to broaden the scope and knowledge systems represent information sources that are accessible to a farming family and generally include an understanding of the farmer's specific

context and needs repeated interactions. "Often there is a higher degree of trust between farmers and the entities in their local Agricultural Knowledge Systems than between farmers and more distant entities, such as national ministries or global organizations." (Islam, 2010)

Cooperative Management Challenges and Failures

Banaszak (2008) identifies four factors that contribute to cooperative success as leadership strength, group size, business relationship amongst member's selection. Cook and Burress (2009) identifies in term of financial performance, such as net margins, member commodity prices and sales growth. The success or failure factor of cooperatives have been classified as external and internal, as internal including leadership and management skills.

ETHICAL CONSIDERATION

Businesses are commonly encouraged to engage in ethical practices, not only to be morally correct, but having ethical codes. It is notably that ethics differ in approach in life based on the subject matter. In business we can rely on the rules of right conduct we use every day-life, though business can have a limit applicability of the general ethical perceptions (Boatright, 2003)

METHODOLOGY.

Aims to address the effects of agriculture management on farm productivity – A Case study of Small-Scale Farmers in Zone three (3) Chipata. Base on the nature of study that is social in nature, qualitative research was adopted and convenience sampling was chosen for those available for data collection. Research design used was descriptive, and questionnaires were used to collect data. 55 respondents were selected from 500 population group (Mugenda & Mugenda, 2009). MS EXCEL was used to analyze data; response had a 96%.

Education.

The accessing of education levels, never been to school 8 (15%), Pre-School 2 (4%), Primary 17 (32%), Secondary 20 (38%), and tertiary 6 (11%)

Table 1. Sample distribution by education level

Educational Level	Frequency	Percent
Never been to School	8	15.1
Pre-school	2	3.8
Primary	17	32.1
Secondary	20	37.7
Tertiary	6	11.3
Total	**53**	**100**

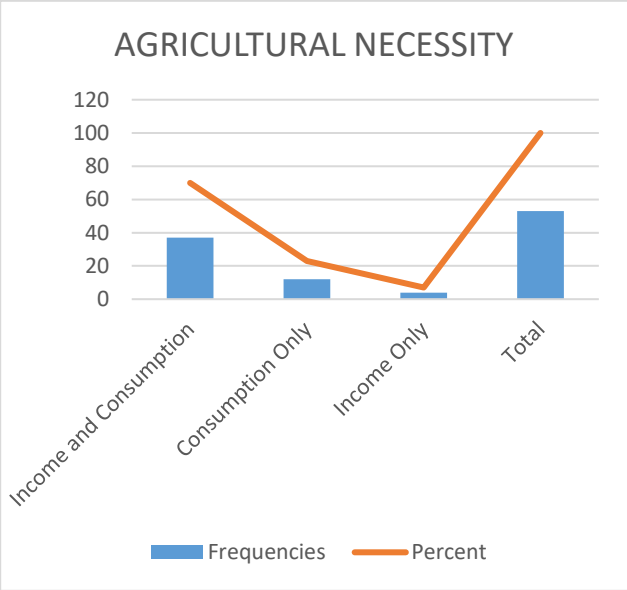
The findings are averaged in the table to the above inform.

Findings of Research Questions- Farmers Agricultural Management Knowledge in Cooperatives.

Agricultural Necessity

Analysis was done to understand why agriculture is necessary, and its priority on 53 respondents: 37 (70%) considered agricultural as an income and consumption importance, 12 (23%) considered agriculture only for consumption and 4 (7%) looked at agriculture only for income purpose.

Graph 1. Shows the sample of agricultural necessity by small scale farmers.



Small Scale farmer's perception of farming as a business.

The study reviewed that 44 (83%) ascertain that agriculture is a business and 9 (17%) viewed agriculture not as business. Below is the Table 2:

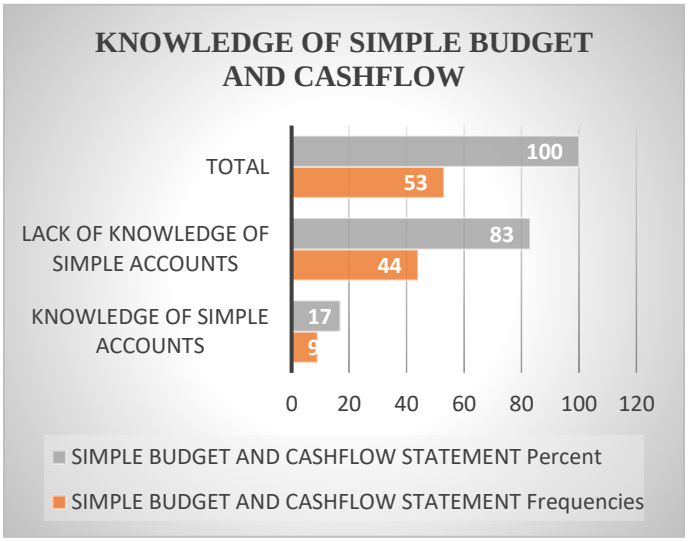
Table 2. Small Scale farmer's perception of agriculture as a business

Small Scale	Frequency	Percent
Agriculture as a Business	44	83
Agriculture not as a Business	9	17
Total	**53**	**100**

Simple preparation of the budget and cash flow.

The study analyzed the knowledge level of the small-scale farmers in the importance of their understanding in budget preparation and cash flow knowledge 9 (17%) had knowledge of budget and cash-flow, 44 (83%) had no knowledge of simple budgeting and cash flow preparation. Below is the graph 2:

Graph 2. Shows the sample of knowledge of simple budgeting and cash flow.

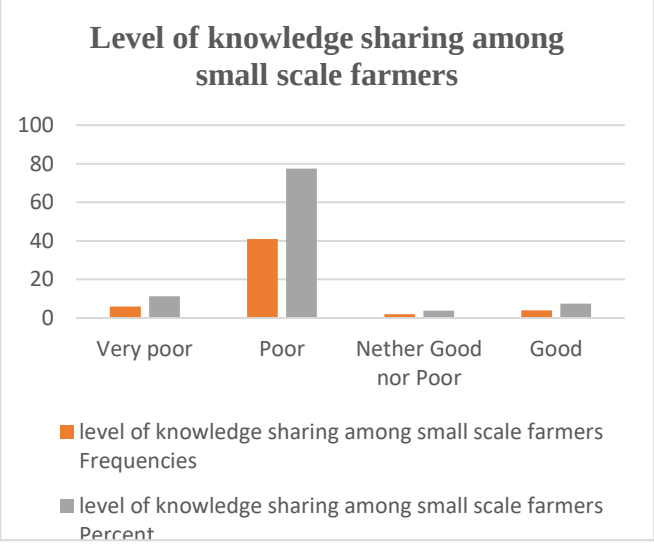


The general consideration of simple budget and cash flow, was considered to be less understood and applied. In that 83% had no knowledge of simple accounts.

Level of Knowledge sharing among small scale farmers.

The study reviewed on 53 participates, 6 (11.3%) was very poor, 41 (77.4%) was poor, 2 (3.8%) was neither good nor poor and 4 (7.5%) was good.

Graph 3. Level of Knowledge sharing among small scale farmers.



Research Question 2- Cooperatives Agricultural Management Trainings and Productivity

Importance of training in cooperatives.

The study showed that 100% of the farmers are willing to learn.

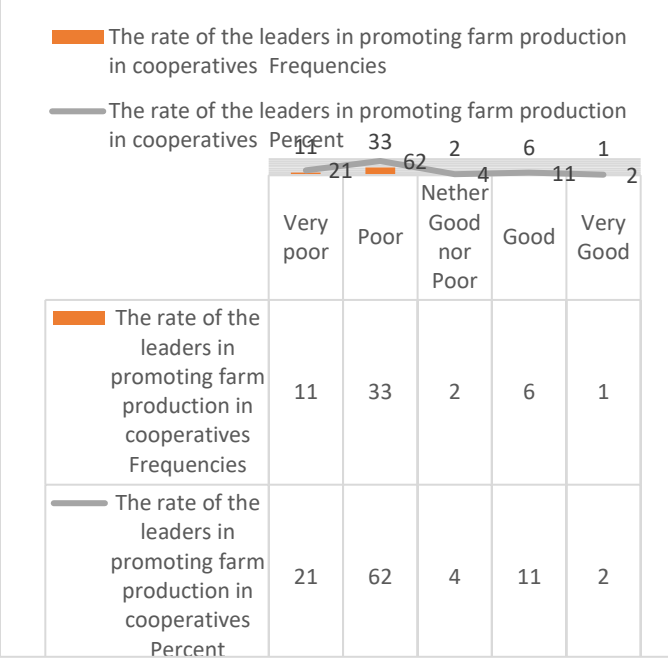
Table 3. Small Scale farmer's importance of training in cooperatives

Small Scale	Frequency	Percent
Importance of training in cooperative	53	100
Total	**53**	**100**

Rating of the leaders in promoting farm production in cooperatives.

The importance of leadership was accessed in the leaders concern in the promoting of productive among cooperatives, on 53 farmers: 11 (21%), rated very poor, 33 (62%) rated poor, 2 (4%) rated neither good nor bad, 6 (11%) rated good and 1 (2%) rated very Good. Below is Graph 4:

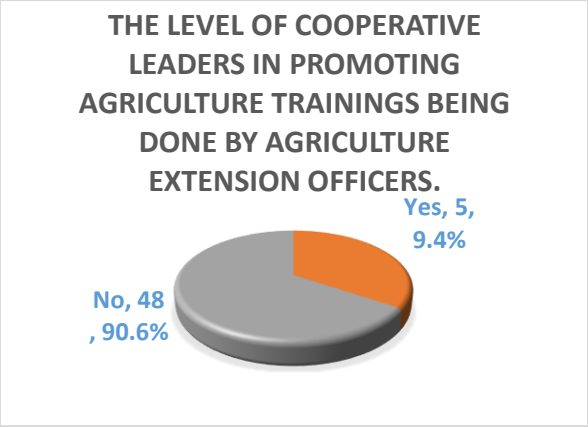
Graph 4. Rating of the leaders in promoting farm production in cooperatives.



The level of cooperative leaders in promoting agriculture trainings being done by agriculture extension officers.

The studied reviewed that: 5 (9.4%) average of 9% agreed to that leaders organize trainings, 48 (90.6%) average of 91% indicated that leaders do not organize trainings done by agriculture extension officers.

Pie Chart 1. The ability of cooperative leaders in promoting agriculture trainings to be done by agriculture extension officers.

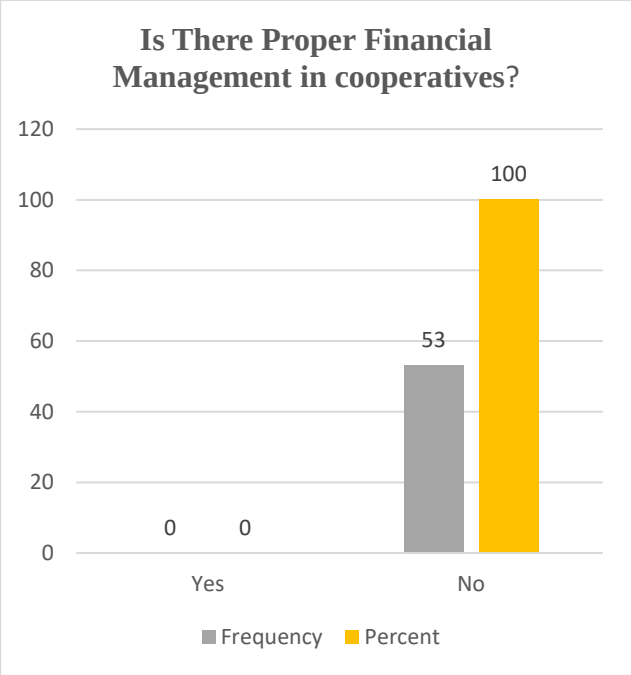


The findings, indicate that, 91% of the leaders do not promote the importance of agriculture training by extension officers of agriculture.

Research Question 3- Cooperative Management Challenges and Failures

Is there proper financial management in cooperatives?

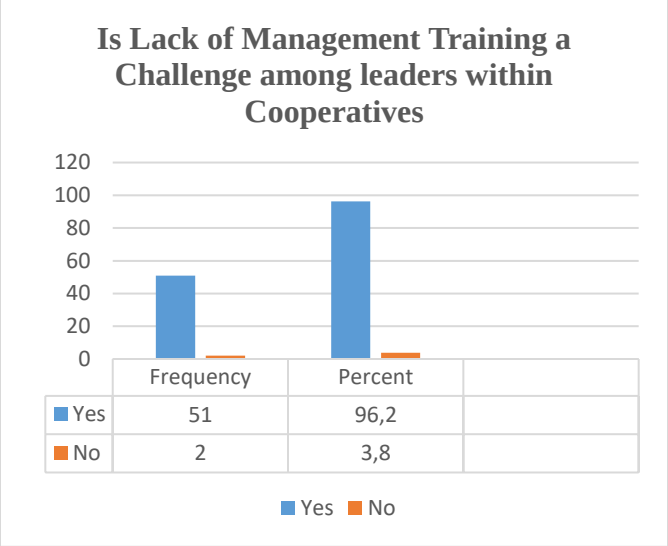
In understanding the effectiveness of cooperative financial management, 53 farmers were interviewed and a 100% response was noted that there is no proper financial management. The graph below was presented: Below is **Graph 5.**



Lack of management training a challenge among leaders within cooperatives.

The study reviewed that, 2 (3.8%), showed that management training was not necessary, and 51 (96.2%) showed that management training is required among leaders in cooperatives.

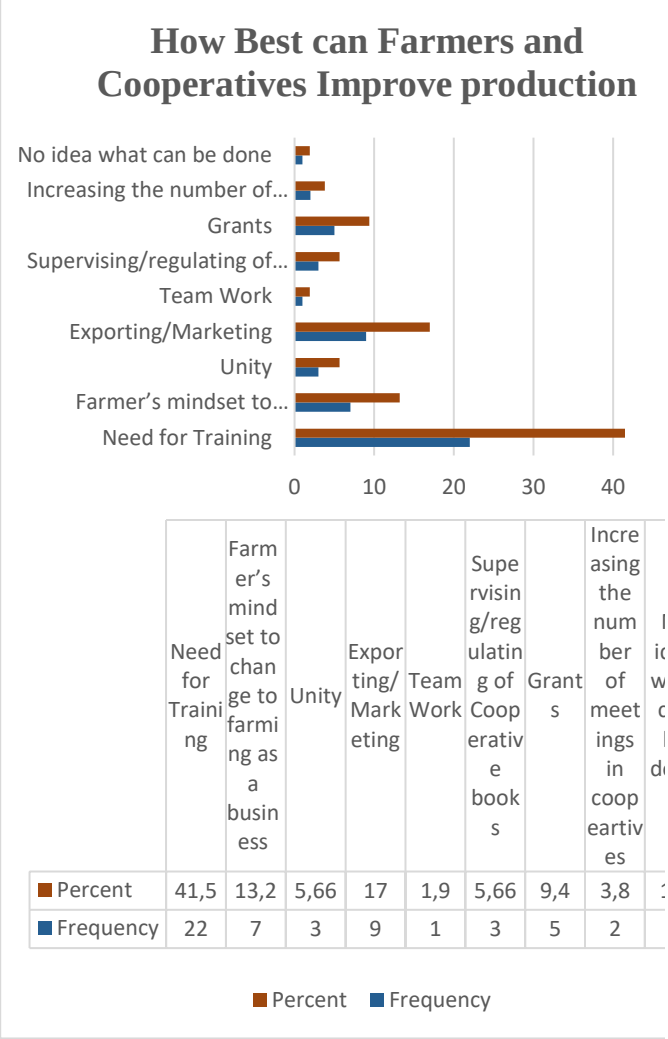
Graph 6. Is lack of management training a challenge among leaders within cooperatives?



How best can farmers and cooperatives improve production as a way to make them self-sufficient than depending on government subsidies?

Different perception of how to improve production and make farmers self-sufficient were noted that 22 participates (41.5%) **need for training**, 7 (13.2%) reviewed that **farmer's mindset to change to farming being a business,** 3 (5.7%) suggests **unity** is required in cooperatives, 9 (17%) showed that **cooperatives should be allowed easily export** their produce, 1 (1.9%) need for **teamwork,** 3 (5.7%) **government to regulate cooperatives books**, 5 (9.4%) government to offer grants in agricultural and water pumps, 2 (3.8%) **cooperatives to increase the number of meetings** they meet, 1 (1.9%) had **no idea what should be done**

Graph 7: How best can farmers and cooperatives improve production as a way to make them self-sufficient than depending on government subsidies



	Need for Training	Farmer's mindset to change to farming as a business	Unity	Exporting/ Marketing	Team Work	Supervising/regulating of Cooperative books	Grants	Increasing the number of meetings in cooperatives
Percent	41,5	13,2	5,66	17	1,9	5,66	9,4	3,8
Frequency	22	7	3	9	1	3	5	2

Findings:

The level of education from primary to tertiary gives, Primary 17 (32%), Secondary 20 (38%), and tertiary 6 (11%) that will require learning lessons that can be categorized to suit the level of education. The agricultural necessity reviews that consumption is the major reason where small scale farmer's go into farming, 83% see farming as a business, which contradicts with the agricultural necessity as it was reviewed that consumption is the major focus then income, 83% shows that there is lack of knowledge of simple accounts, 11.3% indicates very poor, 77.4% indicates poor knowledge sharing, that reviews poor level of knowledge sharing, 100% has showed that training is needed in cooperatives,

Leaders in promoting farm production in cooperatives has reviewed that, 11 (21%), rated very poor, 33 (62%) rated poor, 2 (4%) rated neither good nor bad, 6 (11%) rated good and 1 (2%) rated very Good, 91% has indicated that there is lack of cooperatives leader's organizing trainings with agricultural extension officer's, 100% reviews no financial management in cooperatives, 96.2% ascertain that lack of leaders trainings affects their leadership, 41.5% showed the highest score of farmers view on how best can farmers and cooperatives improve production as a way to make them self-sufficient than depending on government subsidies and seconded by 13.2% change of farmer's mindset.

CONCLUSION.

Training is needed among small scale farmers, and change of mindset to farming being a business should be balanced with business principles in farming, simple budgeting is lacking and poor knowledge is affecting development, and their lack of agriculture extension officers training in the cooperatives and building relationship is vital agricultural development, cooperatives have 100% poor financial management, and leaders having no leadership training is challenging their leading role in cooperatives, and transformation of small scale farming will require training as the major perception view of farmer's.

A common finding is that the poverty reducing powers of agriculture declines as countries get

richer (Christiaensen and Demery, 2007. Interestingly, using a similar method of analysis for China Ravallion and Chen (2007) estimate that agricultural growth had four times greater impact on poverty reduction than growth in the secondary and tertiary sectors. In the past, agriculture had the task to provide people with food and huge parts of society lived on farming (Robinson & Sutherland, 2002). However, the structural change in agriculture throughout the past century, which was caused by a "technical agricultural revolution", changed the whole agrarian sector tremendously (Henkel, 2012).

RECOMMENDATION

1. Due to lack of academic trainings in agriculture, there is need for fast track approach to education small scale farmers of agriculture and new methods of development by educating them in their cooperatives
2. Every activity has costs that it incurs and thus it is vital that, Ministry of Agriculture, Farmers Union, take upon themselves in helping small scale farmers in learning simple preparation of budgets and cash flow statements for better application of understanding of income and expense.
3. Leaders challenges in promoting farm productivity requires leadership training not only for leaders but also the members in the cooperatives to be leadership oriented as a way of not only self-centeredness but community oriented.
4. Government to give authorization permits for all agricultural growing small-scale farmers for free export to other Countries by cooperatives, for it will help create crop diversification and small-scale farmer's expansion and having a business mindset than depending only on government subsidies.

Future Research

Farmers (capabilities, involvement so on) which might affect performance and productivity, and also the potential of managerial perceptions of farmer efficacy to affect self-efficacy in training and development.

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