

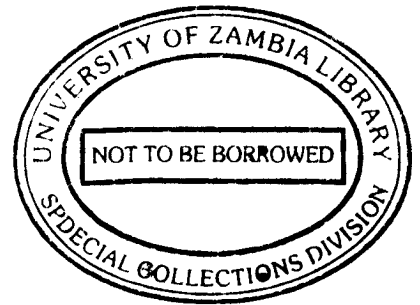
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RESPONSE OF SMALL-SCALE FARMERS TO MAIZE MARKETING FAILURES: A CASE STUDY OF CHISAMBA

A thesis presented to the Department of Agricultural Economics and Extension Education of the University of Zambia

BY

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In partial fulfillment of the requirements for the Degree of Bachelor of Agricultural Sciences

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LIST OF ACRONYMS

CLUSA	Cooperative League of United States of America
C.S.O	Central Statistics Office
F.A.O	Food Agricultural Organization
F.R.A	Food Reserve Agency
NAMBOARD	National Marketing Board
N.G.O	None Governmental Organization
SPSS	Statistical Package for Social Sciences
WFP	World Food Programme

ABSTRACT

RESPONSE OF SMALL-SCALE FARMERS TO MAIZE MARKETING FAILURES: A CASE STUDY OF CHISAMBA.

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Zambia is currently pursuing the agricultural market reforms necessitated by a deteriorating economic situation. This study examined how small-scale farmers in Chisamba area have responded to the problems of maize marketing failures.

The studies that have been done on the problems small-scale farmers face have not highlighted as to whether farmers have formed farmers groups to strengthen their bargaining position in negotiating for better prices for maize or whether farmers have crop diversified to high value crops to overcome maize marketing problems. A survey was conducted in which 124 farmers were interviewed. The data were analyzed using SPSS which generated descriptive statistics.

From the study it was found that small-scale farmers have by far and large responded favorably to the problems of maize marketing failures. Of the 124 farmers interviewed 108 (87%) of them belong to farmer groups. However, farmers are only using these farmer groups to buy cheap input and not to sale their produce. In addition to that 110 (89%) farmers are crop diversifying their crop base into high value crops (such as cotton, sunflower, paprika and soybeans) which have ready market from private sector.

In view of these findings, the study recommended that small-scale farmers may be better off focusing their efforts to growing crops that are on demand rather than putting more efforts on increasing the production of unprofitable crops like maize. Since the marketing of maize is currently problematic, it is suggested that extension workers should encourage small-scale farmers to give first priority to crops like sunflower, cotton and soybeans. This is because these crops have a reliable marketing support system through private sector-driven contract farming. Further, the government and NGOs involved in agriculture should impart marketing skills to small-scale farmers. This will enable small-scale farmers find markets for their produce before they engage themselves in producing products that at the end of the day will not be sold.

In addition, consolidation of agricultural reforms in Zambia should therefore focus on overcoming some of the problems facing small-scale farmers and encourage the formation of stronger farmer group which will help farmers in negotiating the prices and finding markets. Government should put a deliberate policy in place which will encourage farmers to be selling their produce through the farmer groups. This will reduce chances of farmers being exploited by the buyer.

CHAPTER ONE

INTRODUCTION

1.1 Introduction and Background

During the pre-reform period (before 1991), Zambian agricultural policies provided incentives for rural communities to produce enough for cash income and reduce poverty. During that time, the government was involved in the agricultural marketing of both inputs and farm produce through government supported cooperatives and other credit institutions. Since 1992 Zambia has been pursuing agricultural reforms, necessitated by deteriorating economic situation and donor demands, requiring total government withdrawal from direct involvement in agricultural marketing. However, while pursuing the overall policy of liberalization, the government has continued to participate in agriculture markets though at reduced scale. Government participation has been necessitated, to a greater extent, by the duality of the agricultural sector and perceived imbalances in agricultural service delivery and the limited capacity of the private sector to serve the small-scale farmers with location disadvantage (Mwanaumo, 1999). The reforms and changes in the agricultural sector were expected to improve farm productivity, reduce poverty through farmer participation in product markets and improve the effectiveness of delivery of services. It was also intended to enhance private sector participation. However, rural communities have experienced a consistent decline in the provision of agricultural services. A poverty and vulnerability study conducted in Mumbwa and Katete showed that social economic conditions in rural areas have deteriorated and rural communities are unable to support their families because they cannot increase their farm income (Banda, 1997).

While liberalization is perceived to have widened the choice of the market, small-scale farmers have been disadvantaged in the sense that they have no access to market information and credit compared to commercial farmers. Moreover relatively few farmers produce surplus for the market and only those able to produce surplus have benefited from higher producer prices. It's because of this that most small scale farmers, who produce 80% of the country's food, are concerned about uncollected maize at the end of each marketing season. This will discourage farmers in growing maize resulting in

perpetual hunger and poverty (Macedes, 1997). Many maize traders have taken advantage of the desperation of small scale farmers to buy maize at a very low price since farmers would want to sale their produce as fast as possible because of lack of storage facilities (Mwanaumo, 1999). Under the current agriculture policy reforms, small-scale farmers have not benefited as expected since it is very difficult for rural farmers to sell farm produce to generate income they need. This is partially the problem for the remote area where the private sector is not able to service the farming community due to lack of capacity to do so (Banda, 1997). Formal market systems are lacking in most rural areas and the urban traders take advantage of the vulnerability state of small-scale farmers by purchasing the output at very low prices and most of them exchange with second hand clothes (FAO/WFP, 2002). The observations above symbolize market failures.

1.2 Problem Statement

Marketing of agricultural commodities has suffered setbacks since NAMBOARD ceased its operation following the policy of liberalization. Liberalization is perceived to have brought in many participants in the sector. However the buying capacity of existing private institution is low due to the financial constraints. A number of studies have been done to estimate the impact of the liberalized market on maize. Mwakololo (1997) concluded that farmers have been abandoning maize due to cost of production. Hakulipa (1994) concluded that the system has failed to bring many participants into the system and this has resulted in farmers having difficulties in finding markets for their produce.

However these studies did not show that farmers have formed groups to strengthen their bargaining position in negotiating for better prices of maize. They also did not show that farmers have crop diversified to overcome the failures of maize marketing system.

1.3 Rationale

Small-scale agriculture still remains the avenue for economic development, contributes towards food security and serves as a source of employment and income for the rural households. Therefore it is important to investigate how farmers have responded to the problems of maize marketing failures. This study will be beneficial to other small-scale

farmers who are facing similar problems in marketing their maize in that they will be able to copy strategies other farmers are using and provide the basis for future investment. The study will also assist the planners and policy markers, as they will be able to make well-informed decisions on how well they can formulate policies that can help farmers overcome the problems they are facing.

1.4 Objectives

1.4.1 General Objective

The general objective of the study was to examine how small-scale farmers of Chisamba have responded to the problems of maize marketing failures.

1.4.2 Specific Objectives

The specific objectives were:

- To determine whether small-scale farmers of Chisamba have formed farmer groups to strengthen their bargaining position in negotiating for better prices of maize.
- To determine whether small-scale maize farmer of Chisamba have crop diversified into high value cash crops to overcome maize marketing inefficiencies.

1.5 Hypotheses

- Farmers have not formed farmer groups to strengthen their bargaining power to help them in selling their produce.
- Maize farmers have not crop diversified into production into high value crops.

1.6 Study Limitations

The major limitation of this study was the difficulties of covering all key farmers in the area due to limited time and resources. In addition to that farmers experienced difficulties in recalling the exact land allocated to different crops far beyond five years since most of them do not record this information. Another major limitation in undertaking the research was transportation. This is because rural households are spicily situated and as such there were a lot of traveling just to contact a handful of households.

1.7 Organization of the Thesis

This thesis opens with chapter one which highlights the background information about the subject. It covers problem statement, rationale, objectives of the study and hypothesis. Chapter two covers literature review, chapter three looks at the methodology used for the study. This encompasses description of the population, data collection procedure, sampling design, survey process types of data collected and data analysis. Chapter four covers findings and discussion of the study while chapter five looks at conclusions and recommendations based on the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews some of the relevant research papers which were related to the area of study undertaken in this study. The research papers highlighted some of the ways in which farmers have been responding to the marketing problems and some of the gaps that have not been tackled.

2.2 Market Reforms in Agriculture

Agricultural reforms in Zambia are aimed at fully liberalizing markets to enhance private sector participation through free market development, reduce government role in commercial activity and improve and strengthen the sector's delivery system. Various studies have come up with different findings and conclusions on the impact of the reforms in agriculture.

Diarria (1994) who concluded that the reforms have greater marketing flexibility to farmers and that farmers use price differentials to choose what crop to plant, when and where to sell their crops and in what forms. The research further goes on to say that rice farmers increased their price by more than 14% by processing their own paddy and selling milled rice instead of just selling to millers.

Banda *et al* (2005) concluded that market reforms led to interesting dynamics in cotton farming, during the phase of market failure, farmers were pushed back into subsistence and productivity in cotton declined.

Mwefyeni (2003) recommended that government and other stakeholders need to promote other non-maize food crops that buyers are responding to, to avoid misallocation of scarce resources in maize even in areas, which could do better in other food crops.

Tetti *et al* (2000) concluded that the reforms allowed farmers to potentially employ a wide range of marketing strategies to maximize their returns to crop production compared

to the pre-reforms period when they received a fixed price no matter where and when the crop was delivered to the state marketing board.

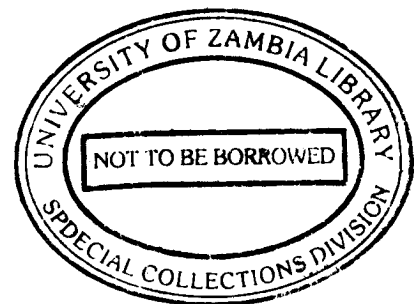
Tembo (1994) highlighted that maize growers in Kaoma and some rice farmers in Litiwa have indicated they will reduce area under maize and rice cultivation and increase area under cultivation of alternative crops which need less of the expensive inputs. Mwanaumo (1999) concluded that farmers are growing different crops suited to their area to ensure food security and that there is internal trade in roots and tubers.

Mwakololo (1997) concluded that some farmers were responding to the problems of marketing by channeling their efforts from maize to banana cultivation and dairy husbandry which were relatively profitable, required little amount of input and labor.

Mweetwa (2004) concluded that organized farmers' are also able to strengthen their bargaining position by acting as local monopoly during sale of produce, or as a monopsony during input procurement". He further observed that, "in the absence of organized groupings small-scale farmers do not have supply control, access to information, and availability of financial resources to have significant market power".

Another research carried out by food security research project (2003) based on the improving the transfer of agricultural market information in Zambia , found out that small- scale farmers have enormous problems in pricing their produce. The report further indicated that even though farmers have a good idea of the costs they incur in the production process, they still have problems negotiating for a good price with the traders (buyers).

However the researches reviewed above did not show whether maize farmers have formed farmer groups to strengthen their bargaining position in negotiating for better prices maize. These farmer groups help farmers to have a strong bargaining power when selling their produce and when buying inputs. They also did not show that farmers have crop diversified to overcome the failure of maize marketing system. Crop diversification is important because farmers tend to have a variety of crops to sale just in case maize has no ready market.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research methodology used for the study. It begins by outlining the description of the study area background. The data collection procedures which encompass sampling design (sample selection), survey process and types of data collected are outlined. Lastly the section outlines the data analysis.

3.2: Description of the Population Sample

The respondents were drawn from small-scale farmers in Chisamba constituency, which is in Chibombo district. The area was selected because it has a large number of small-scale farmers and most of them are involved in maize production. This area has a population of about 16,666 people of which 3,441 households are engaged in agriculture (CSO 2000). Using CSO definition, a household is a group of people who live and eat together. These people may or may not be related by blood but commonly provide for the livelihood and have one person they regard as the head of the household.

3.3 Data Collection Procedure

It was important to pretest the questionnaire in the study area to assess the validity of the instrument in collecting the relevant data. This was done with a few group of people in the study area. In this regard informal interviews were conducted to obtain information that was relevant to be included in the questionnaire.

3.3.1: Sampling Design

A sample of 124 small-scale farmers was picked using simple random sampling. Simple random sampling was used because it's convenient and not biased as compare to other methods. A sampling unit was the household head.

3.3.2: Data Collection

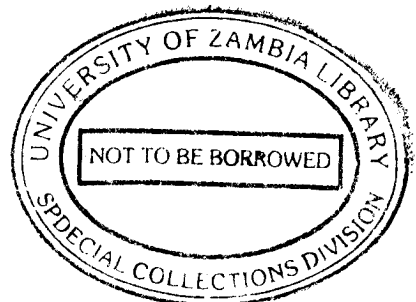
The data was collected through the use of a guided structured questionnaire. This produces high response rate than self-administered questionnaire in a situation where respondents may be illiterate especially in rural areas. The questionnaire contained both close ended and open-ended questions. Personal interviews were employed and the researcher was completing the questionnaire on behalf of the respondent. The advantage of this was that ambiguous questions were clarified on the spot.

3.3.3: Survey Process and Type of Data Collected

The researcher took part in the data collection with the help of the agricultural extension officer and the cooperative chairperson. The data collected consisted of primary data only. During the interview data on (i) demographic characteristic was collected and this looked at the sex of the household head, age of the household head, marital status, number of members and level of education of the household head. (ii) Crop diversification by looking at farm sizes, number of years Farmers have been involved in farming, cropping pattern, types of crop grown, buyers of the crops, benefits farmers get from those crops and reasons for growing the crops. (iii) farmer group formation by looking at existence of farmer groups in the area, membership to the existing groups, reasons for forming the groups, benefits farmers get from the groups and reasons for joining these groups. See appendix on the types of data collected.

3.3.4: Data Analysis

The questionnaires were coded, entered into SPSS which generated frequency tables from which pie charts bar charts and graphs were generated. Statistical package for the social sciences (SPSS) software was selected because of its diversity in handling both parametric and non-parametric statistical analysis. Descriptive statistics were employed in data analysis and description. Chi-square was used. Chi-square compares the observed (facts) and expected (theoretical) frequencies in order to assess whether the facts support the theoretical considerations.



CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the study. The data were analyzed using the bar charts, graphs and pie charts. The analysis covers demographic characteristic of the respondents, crop diversification and farmer group formation. Conclusions and recommendations on crop diversification and farmer group's formation were drawn from analysis.

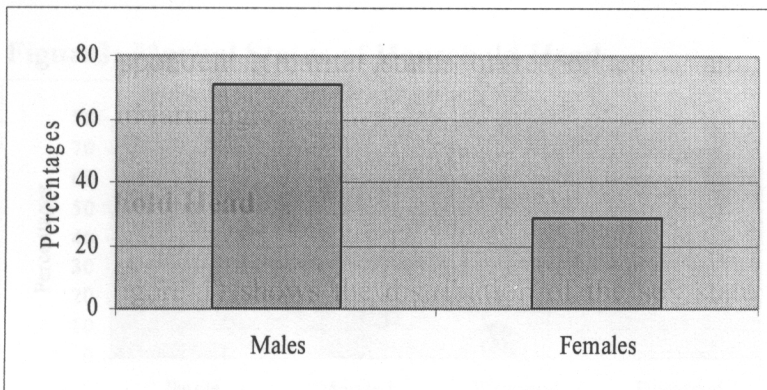
4.2 Demographic Characteristic of the Survey Sample

This section deals with the background information of the respondent. It covers sex of the respondents, age of respondents, marital status of respondents, family size, level of education and duration in farming.

4.2.1 Sex of the Household Head

The schedule below (Figure 1) shows the distribution of the sex status of the farmers interviewed. The majority (71%) were males, while the remaining 29% were females. This simply means that men are more involved in rural agriculture as compared to women in Chisamba.

Figure1: Sex of the Household Head

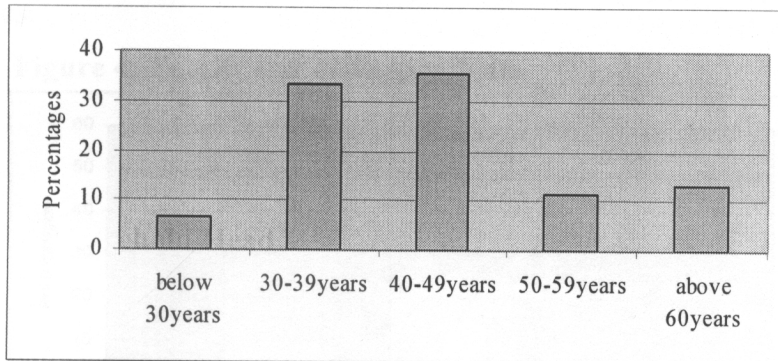


Source: Own Survey Data

4.2.2 Age of the Household Head

With regard to age of the household head, Figure 2 below shows that the majorities (35.5%) were between 40 and 49 years of age, and the smallest number (6.5%) were below 30 years. This shows that majority of the household heads are young and still have energy for on farm activities.

Figure 2: Age of the Household Head

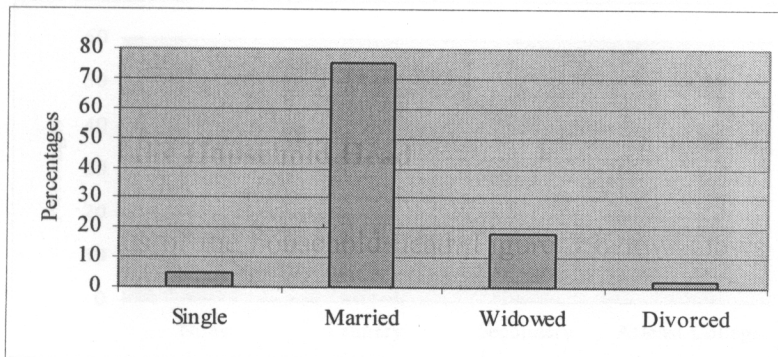


Source: Own Survey Data

4.2.3 Marital Status of the Household Head

In terms of marital status of the household head, Figure 3 below shows that 75 % were married, 18% were widowed, 5% were single and 2% of the farmers were divorced. This is an indication that married people are more actively involved in rural agriculture compared to other categories of the farmers and this can be attributed to the number of responsibilities married people have in terms of feeding the families.

Figure3: Marital Status of Household Head

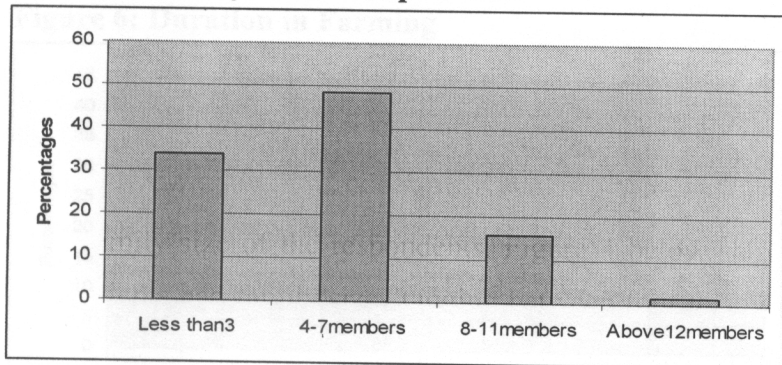


Source: Own Survey Data

4.2.4 Family Size

With respect to the family size of the respondents, Figure 4 below shows that majority (48.6%) of the respondents had family sizes ranging between four to seven children. The smallest (1.6%) had family sizes of twelve and above. This clearly demonstrates that households with larger families are more actively involved in agriculture owing to the fact that a large family provides more cheap labor towards farming activities compared to smaller families.

Figure 4: Family size of Respondents

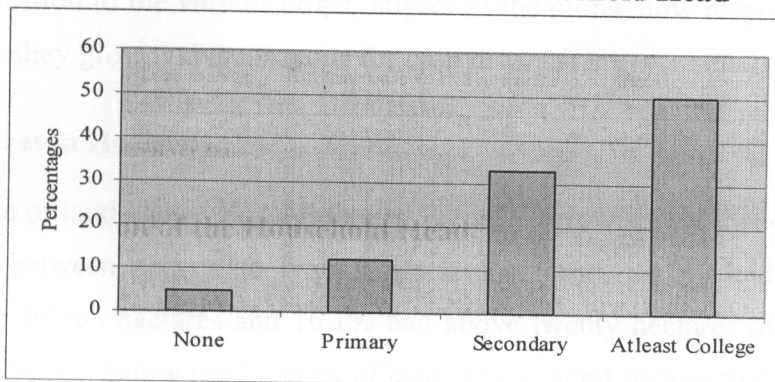


Source: Own Survey Data

4.2.5 Level of Education of the Household Head

In terms level of education of the household head, Figure 5 below shows that 4.8% had never attended school, while a larger number 50% reached college and above. The trend in the education distribution can be attributed to the fact that the majority of these farmers decided to take up farming as an activity after retirement.

Figure 5: Level of Education of the Household Head

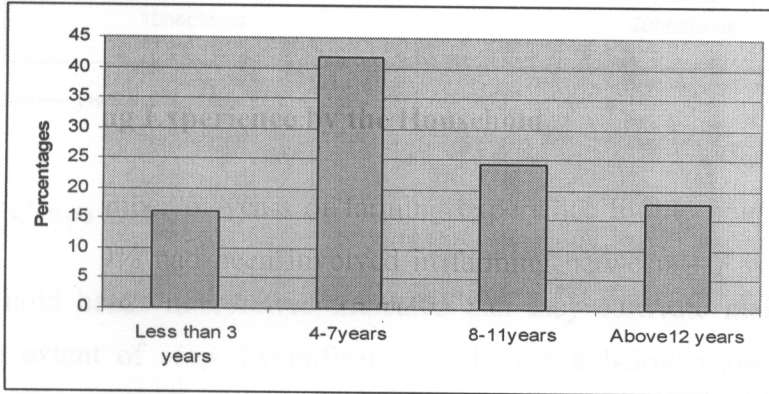


Source: Own Survey Data

4.2.6 Years of Farming Experience by the Household

With regard to the number of years of farming experience by the household, Figure 6 below shows that 41.9% had been involved in farming between 4-7 years, 24.2% had been farming between 8-11 years, and 17.7% had been involved in farming for twelve years and above. The remaining 16.1% had been farming for a period of three years or less. From these statistics it can be observed that majority of farmers have been involved in agriculture for a good number of years.

Figure 6: Duration in Farming



Source: Own Survey Data

4.3 Crop Diversification

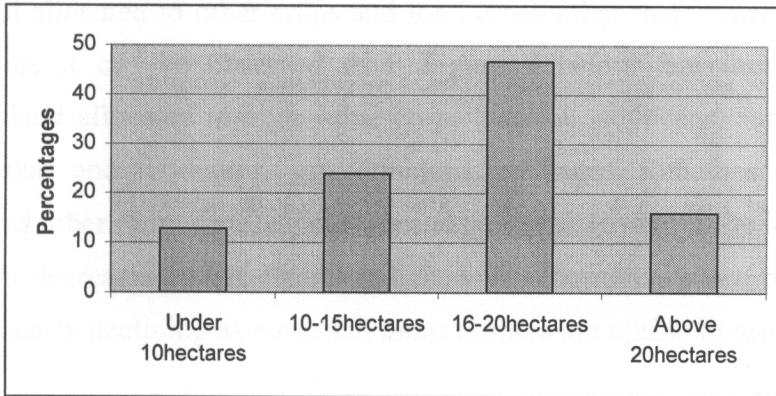
This section looks at crop diversification. This is the shifting from cultivating one single crop to cultivation of more than one crop per growing season or cultivating other valuable cash crops. To find out this, the survey looked at the amount of land households have and other types of crops in addition to maize farmers have been growing in the last five years. Also land allocation to the various crops, buyers of the crops, how respondent's benefits from the crops they grow and the reasons for crop diversifying were analyzed.

4.3.1 Farm Sizes in Hectares

In terms of size of land owned by households, Figure 7 below shows that 46.8% had farm sizes ranging between sixteen to twenty hectares of land, 24.2% had farms ranging between ten to fifteen hectares and 16.1% had above twenty hectares of land while the remaining 12.9% had below ten hectares of land. The general picture that emerged is that

the majority of the farmers interviewed had enough land to cultivate any combination of crops.

Figure 7: Farm Sizes in Hectares

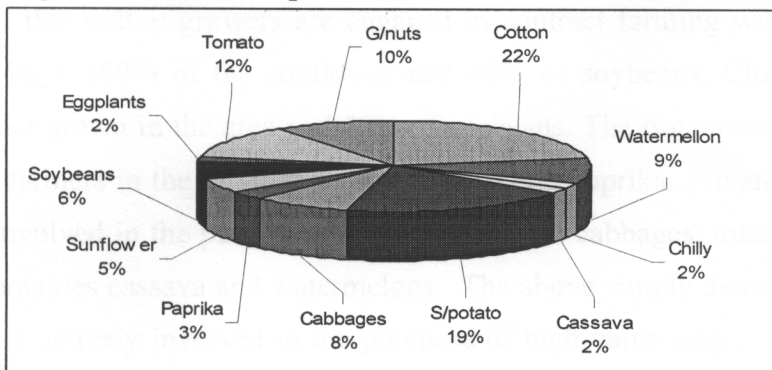


Source: Own Survey Data

4.3.2 Types of Crops Grown

All 124 household heads interviewed indicated that they cultivate maize. In order to understand the extent of crop diversification, a Figure 8 below shows that 46% are engaged in the production of exportable high value cash crops such as cotton, sunflower, paprika, groundnuts and soybeans. The majority (54%) are involved in production of vegetables such as cabbages, tomatoes, eggplants, watermelons, chilly as well as tubers such as sweet potatoes and cassava. This shows that farmers are not only relying on maize production as a source of income and food but also on other crops as well.

Figure 8: Other Crops Grown in Addition to Maize

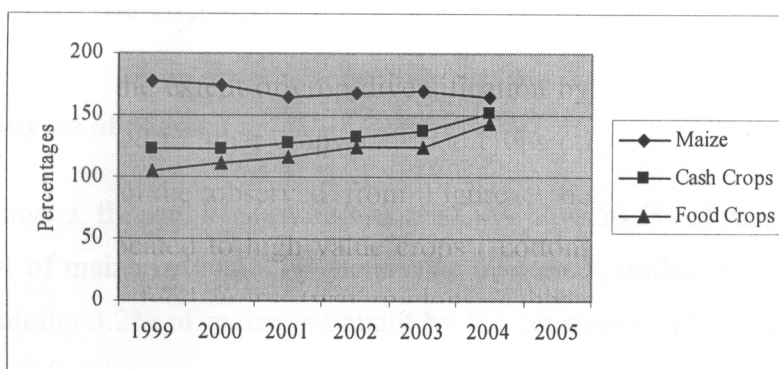


Source: Own Survey Data

4.3.3 Land Allocated to various Crops

In order to appreciate the extent of crop diversification by the farmer, it is important to look at the land allocated to other crops and food crops other than maize in the last five farming seasons. It can be observed from Figure 9 below that farmers have been increasing the land allocated to high value crops (cotton, soybeans, sunflower, ground nuts and paprika) and food crops (watermelons, cabbages, tomatoes, eggplants, and chilly) as well as tuber crops (sweet potatoes and cassava). However the land allocated to maize keeps on decreasing. This clearly indicates that the maize share of the total crop production is clearly declining as more and more farmers are opting to grow other crops.

Figure 9: Land Allocated to various Crops in the Last Five Years



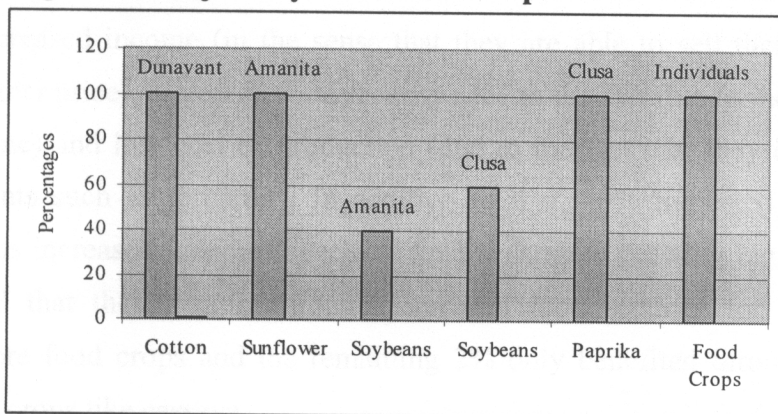
Source: Own Survey Data

4.3.4 Major Buyers of Cash Crops

Figure 10 below shows that Dunavant buys 100% of the cotton grown in the area. This is due to the fact that cotton growers are engaged in contract farming with the company. Amanita also buys 100% of the sunflower and 40% of soybeans. Clusa-Zambia buys 100% of paprika grown in the area and 60% of soybeans. The organization also engages some of these farmers in the production of soybeans and paprika. Private individuals are also actively involved in the purchase of other crops like cabbages, tomatoes, eggplants, chilly, sweet potatoes cassava and watermelons. The above simply demonstrates that the private sector is actively involved in the purchase of high value crops. This can also be attributed to the level of education attained by farmers. Since most of them have attained

college level of education and above, they are able to understand the importance of cultivating high value crops.

Figure10: Major Buyers of Cash Crops

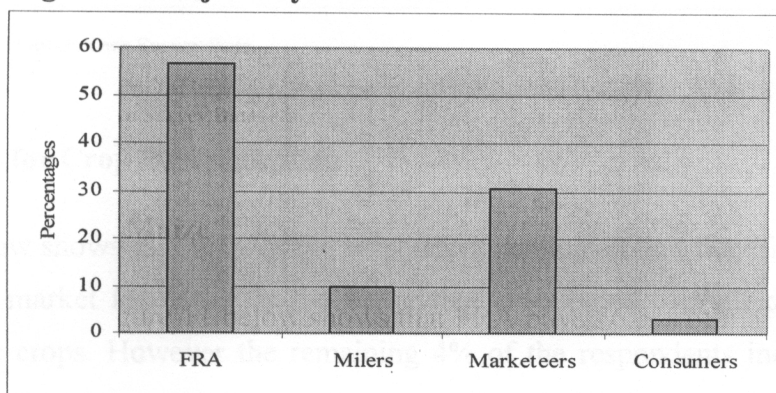


Source: Own Survey Data

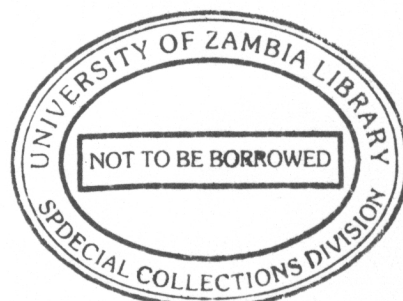
4.3.5 Major Buyers of Maize

As for maize buyers, figure 11 below shows that FRA buys 56.5% of maize grown by the farmers, 30.6% of maize is bought by the private marketers, millers buys 9.7% of maize while the remaining 3.2% of maize is bought by the consumers. Here FRA still remains the major buyer of maize.

Figure11: Major Buyers of Maize



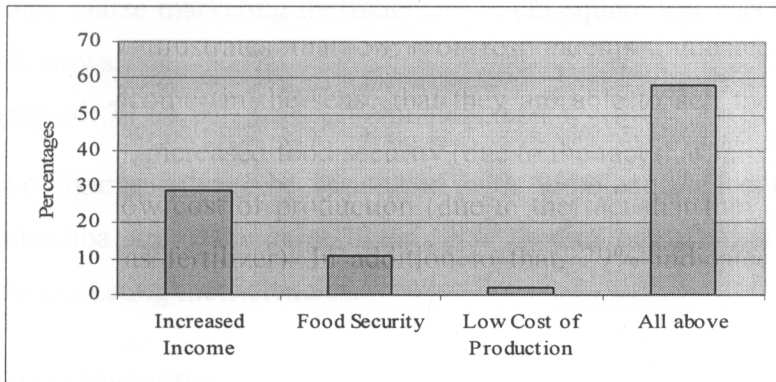
Source: Own Survey Data



4.3.6 Benefits Farmers Obtains from other Crops in Addition to Maize

To get a better understanding of why farmers keep on growing the above mentioned crops, Figure 12 below illustrates that 58% of respondents indicated the combined benefits of increased income (in the sense that they are able to sell their products at a reasonably higher price), increased food security (due to the fact that farmers have variety of food at home) and low cost of production (due to the fact that they do not to apply expensive inputs such as fertilizer). In addition to that, 29% indicated that they only benefit in terms increased income especially for the farmers growing high valued crops, 11% indicated that they benefit through increased food security for those who are cultivating more food crops and the remaining 2% only benefited through low cost of production for crops like cassava.

Figure 12: Benefits of Growing other Crops

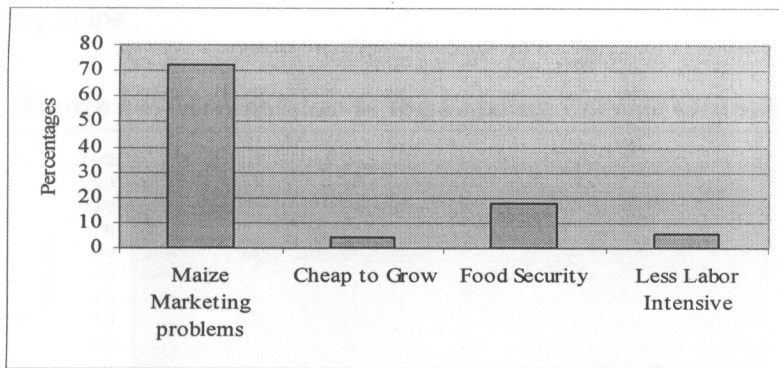


Source: Own Survey Data

4.3.7 Reasons for Crop Diversification

Figure 13 below shows that 72% of the respondents indicated that they face problems in finding ready market for maize as the factor that contributed to their decision to start growing other crops. However the remaining 4% of the respondents indicated that the crops they grow do not require expensive inputs like fertilizer, 18% indicated that they grow alternative crops for food security purposes, while 6% wanted to try out different crops which are less labor intensive like cassava.

Figure 13: Reasons for Cultivating other Crops in Addition to Maize



Source: Own Survey Data

4.3.8 Test Statistic

In order to substantiate whether maize producers have crop diversified into high value crops to overcome maize marketing inefficiencies, a chi-square test was carried out. The results were as follows:

$X^2_{(calculated)}$ Observed: 73.64, $X^2_{(alpha 0.99)}$ Tabulated: 6.64

From the above figures, it can be concluded with 99% confidence that small-scale farmers of Chisamba are crop diversifying into production of high value crop to overcome maize marketing inefficiencies.

4.4 Farmer Group Formation

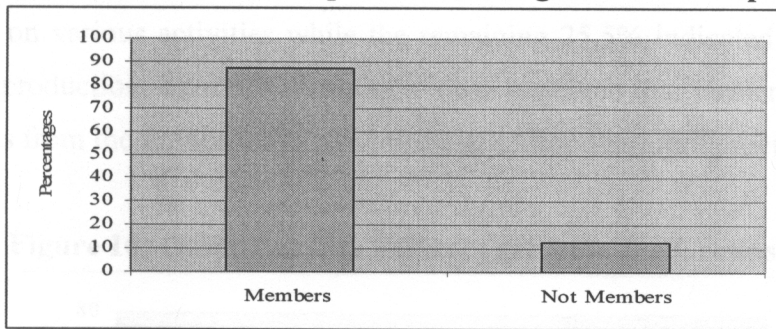
This section looks at whether farmers have formed farmer groups to enable them have bargaining power when negotiating for better price for their produce. To achieve this, the survey looked at the membership to the existing farmer groups, the reasons they formed farmer groups, and how farmers are benefiting from these farmer groups.

4.4.1 Membership to the Existing Farmer Groups

In order to assess how active these farmer groups are in Chisamba, the survey looked at the membership to the existing groups. Figure 14 below shows that 87% were members while remaining 13% were not members of any farmer group. Those who are not members include those who dropped out of the farmer groups and those who never just

joined the groups. This generally indicates that a larger number of farmers belong to the existing farmers groups.

Figure 14: Membership to the Existing Farmer Groups

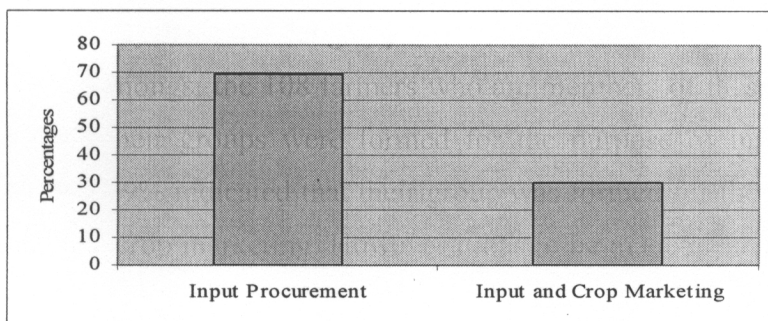


Source: Own Survey Data

4.4.2 Reasons Farmer Groups were Formed

In order to get an understanding of how these farmer groups operate, the survey went on to look at the reasons why these farmer groups were formed. It was observed as shown by Figure 15 below that amongst the 108 farmers who are members of these farmer groups, 69.1% indicated that their groups were formed for the purpose of input procurement while the remaining 30.9% indicated that their group was formed for the purpose of both input procurement and crop marketing. However it has to be made clear at this point that even if some groups were formed for the purpose of both input procurement and sale of farmers produce, farmers are not selling their produce using the groups. This could have been attributed to the fact that farmers are approached individually by the buyers and that they find it difficult to entrust their produce in the hands of their friends.

Figure 15: Reasons Farmer Groups were Formed

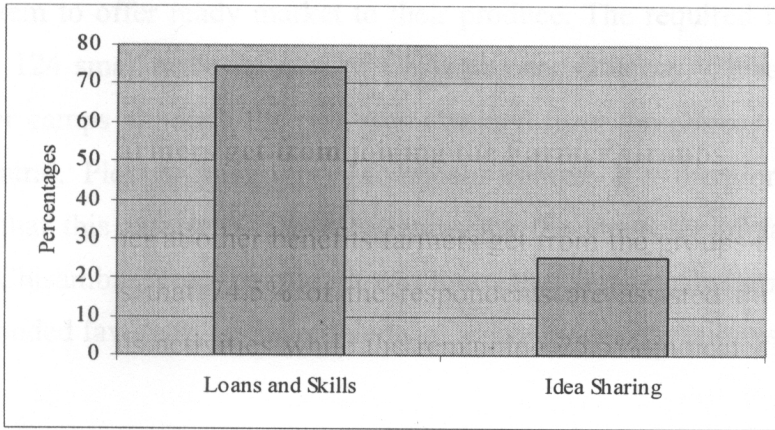


Source: Own Survey Data

4.4.3 Other Benefits Farmers get from joining the Farmer Groups

The survey looked further at other benefits farmers get from the groups they have joined. Figure 16 below shows that 74.5% of the respondents are assisted through loans and training skills on various activities while the remaining 25.5% indicated that they share ideas on crop production in groups. From this it can be observed that farmers obtain a great deal of benefits from the groups they have joined in addition to input procurement.

Figure 16: Other Benefits Farmers get from the Groups



Source: Own Survey Data

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter brings out the conclusions and recommendations based on the findings of the study. The findings and conclusions can be used by policy makers as a basis for consolidating future agricultural marketing reforms. This case study of Chisamba area was aimed at examining how small-scale farmers have responded to the failure of maize marketing system to offer ready market to their produce. The required information was obtained from 124 small-scale farmers of Chisamba constituency. Chisamba is divided into four major camps although the data was obtained from three areas, which includes Chisamba Central, Plough Mans and Momboshi camps. It's therefore important to indicate here that this information purely represents the character of farmers in these three areas of Chisamba. From the study it was found that small-scale farmers have by far and large responded favorably to the problems of maize marketing failures.

5.2 Conclusions

This sub-section highlights on the conclusions on crop diversification and farmer group's formation which were drawn from analysis.

5.2:1 Formation of Farmer Groups

From the sample of 124 farmers, 108 of them belong to farmer groups. This statistics shows that there is renewed interest in the formation of farmers groups although farmers don't use them to market their produce except input procurement. The farmer groups are also meeting other needs of their members by providing credit, training and advisory services to their members. If properly utilized, the farmer groups have the potential to help farmers be economically viable and sustainable entities under the liberalized markets.

5.2.2 Crop Diversification

Differentiated pricing has made maize production in some remote parts of Zambia uneconomic. As a coping strategy and in response to the maize marketing problems, small-scale farmers in Chisamba are diversifying into crops that they can easily find market for. Farmers are diversifying their crop base. The production of exportable high value crops like cotton, paprika, soybeans and sunflower is expanding given the favorable market prospects and out grower programmers from companies like Dunavant and Clusa Zambia. Combining the maize trend with the trend of other food crops and cash crops illustrates the shift by the small-scale agriculture activities after liberalization. In Chisamba, maize share of the total crop production is clearly declining as farmers are concentrating on the production of cash crops like cotton and paprika.

In addition, private companies like Dunavant are engaging these small-scale farmers in the production of cotton by providing them with all the necessary input and at the time of harvest the company collects the produce at the farm gate and this is very encouraging to the farmers as they are not incurring any transport cost as compared to what happens when they grow maize.

5.3 Recommendations

From the results of the survey above, it can be recommended that small-scale farmers may be better off focusing their efforts to growing crops that are on demand rather than putting more efforts on increasing the production of unprofitable crops like maize. Since the marketing of maize is currently problematic, it is suggested that extension workers should encourage small-scale farmers to give first priority to crops like sunflower, cotton and soybeans. This is because these crops have a reliable marketing support system through private sector-driven contract farming. Further, the government and NGOs involved in agriculture should impart marketing skills to small-scale farmers. This will enable them find market for their produce before they engage themselves in producing crops that at the end of the day will not be sold.

Another alternative available that may have longer term benefits is for the government to help small-scale farmers to build their own storage facilities so that they can be storing their maize and sale at the time when the price is high but they should also be aware of the possible costs of storage.

In addition farmers should be supported heavily especially those that are growing high value crops like paprika, soybeans, sunflower e.t.c, by providing them with input in the same way its done to maize. In this way, small-scale farmers will be graduating into commercial farmers and come up with way of sustaining themselves better in future.

Lastly consolidation of agricultural reforms in Zambia should therefore focus on overcoming some of the problems facing small-scale farmers and encourage the formation of stronger farmer group which will help farmers in negotiating the prices and finding markets. Government should put a deliberate policy in place which will encourage farmers to be selling their produce through the farmer groups. This will reduce chances of farmers being exploited by the buyer.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

The University of Zambia
School of Agricultural Sciences
Department of Agricultural Economics
P.O. box 32379

Dear respondent,

I have a pleasure of informing you that have been randomly selected to answer this questionnaire.

Iam a final year student at the University of Zambia in the school of agricultural sciences carrying out a research for my thesis. The study is on the response of small-scale farmers to the problems of maize marketing failures in Chisamba.

This information will be used strictly for academic purposes and the information given shall be treated as confidential

Your cooperation will be highly appreciated

Yours faithfully

.....

Dominic Chanda

Demographic Data

1 .Sex of the household head

- (1) Male [] []
(2) Female [] []

2 .Age of the household head _____ []

3. Marital status

- (1) Married []
(2) Single [] []
(3) Widowed []
(4) Divorced []

4. Number of household member:

- (1) Males [] []
(2) Females [] []

5. Level of education

- (1) None []
(2) Primary [] []
(3) Secondary []
(4) College/University []

Crop Diversification

6. What is the size of your farm?[]

7. For how long have you been involved in farming?.....[]

8. What cropping patterns/systems have you been practicing?

- (1) Mono cropping go to 16 []
(2) Mixed cropping go to 9-15

9 If the answer is (2), indicate the crops you have been growing and potential buyer of the crops for the last six (6) years.

Crop/year	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5
	size	size	size	size	size	

10. For these crops apart from maize, have you been able to find market easily?

- (1) Yes go to 12-15
 (2) No go to 11

11 If the answer to the question (10) is no, why do you grow them? - go to 13

.....

12. Do you think growing these crops is better than growing maize?

- (1) Yes go to 13-15
 (2) No go to 14

13. If the answer to question 12 is yes, what benefits do you get from growing these crops?

- (1) Increased food security
 (2) Increased income
 (3) Low cost of production
 (4) All of the above

14. Was the decision to start growing these crops as a result the failure of maize marketing system?

- (1) Yes go to 16
 (2) No go to 15

15. If the answer is no, give reasons

.....

Farmer Group Formation

16. Are you aware of the existence of any farmer group in this area? []
- (1) Yes [] go to 17 []
- (2) No [] end here
- 17 If yes, what is the name of the group? []
-
18. Are you a member of this group? []
- (1) Yes [] go to 20 – 24 []
- (2) No [] go to 19
- 19 if the answer to question 18 is no, why? []
-
- 20 If the answer to question (18) is yes, how many are you in the group? []
-
- 21 Why was this group formed? []
- (1) For crop marketing purposes []
- (2) Input procurement
- (3) Market research
- (4) All above
- 22 What other benefits do you get from this group? []
- (1) We are assisted in terms of loans []
- (2) Exchange of ideas of crop production
- (3) Other specify
23. Was your joining of this farmer group as a result of the failure of maize marketing system to offer ready market? []
- (1) Yes [] end here []
- (2) No [] go to 24
24. If no give your own reasons... end here []
-