TOPIC: A STUDY OF CONSTRAINTS SMALL-SCALE COTTON FARMERS FACE IN LOAN REPAYMENT:
THE CASE OF MONZE FARMERS

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A STUDY OF CONSTRAINTS SMALL-SCALE COTTON FARMERS FACE IN REPAYING LOANS IN FULL:
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By

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ABSTRACT

A STUDY OF CONSTRAINTS SMALL-SCALE COTTON FARMERS FACE IN REPAYING LOANS IN FULL.

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This study was designed to establish non-producer price constraints that deter small-scale cotton farmers from meeting their loan obligations. The study was initiated to establish constraints that can supplement factors such as low producer prices that deter small- scale cotton farmers from meeting their loan obligations.

The stud specifically focused on those farmers whose loan repayment records in out-grower schemes were low. The rationale of the study was to establish the constraints and later recommend interventions that would enhance good performance. The specific objectives of the study were to establish the optimum loan size for the small-scale cotton farmers that they would manage to meet the loan obligation. In addition, the study was conducted to have an insight on the attitude of the farmers on the loan.

To achieve the objectives of the study, primary and empirical data was collected through a structured questionnaire. To supplement primary data secondary data was collected from research reports, agricultural bulletins and other publications to enrich the study. Primary data was analysed using the Statistical Package for Social Sciences (SPSS). The enterprise budget was generated using Microsoft Excel.

The findings of the study show that farmers fail to meet their loan obligations due to low yields per hectare. Most farmers in Monze get on average 600kg per hectare, which is far below the national average yield of 800kg per hectare. This low yield interprets into low Gross Margins of less than K350, 000 the average Gross Margin in the country. The study revealed that yields are low due to inadequate knowledge by farmers on new and efficient technology in cotton production. For example, most farmers have not adopted the new sprayer ulva + a more efficient sprayer than the knap sack sprayer.

ACKNOWLEDGEMENT

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ACRONYMS

GMB: Grain Marketing Board

NAMBOARD: National Agricultural Marketing Board

LINTCO: Lint Company of Zambia

SPSS: Statistical Package for Social Sciences

PRA: Participatory Rural Appraisal

FGD: Focus Group Discussion

NGOs: Non- Governmental Organizations

N/A: Not Applicable

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

About 90% of the seed cotton ginned in 1997 was produced by farmers participating in outgrower schemes (Kahkonen & leathers 1999). And according to Cotton Ginners Association of Zambia (1999), out of the total loan disbursements of 1998/9 amounting to US $8,803,400 only 65.2% was repaid to the creditor companies.

Credit facilities in cotton production have been passed from government controlled companies to now private companies under the liberalized market system. In fact the problem of loan repayment has also been passed from then government controlled command economy to the liberalized market economy.

In 1966, the Grain Marketing Board (GMB) was the first national marketing organization to have the responsibility of producing and marketing of seed cotton in Zambia.

This responsibility was passed on to National Agricultural Marketing Board (NAMBOARD), when it was established in 1969.

In 1975 NAMBOARD and Ministry of Agriculture and Water Development examined ways and means to encourage cotton production in Zambia in order to reduce imports of lint.

A cotton project was carried out to identify farmers, provide them with extension services and help them acquire cotton inputs on credit. The new project encouraged many farmers to start growing cotton. The number of cotton growers increased from 42,001 in 1975 to 102,152 in 1977 (Phiri 2000).

In March 1978, government established a separate company responsible for cotton production and marketing. The company was called the Lint Company of Zambia (LINTCO) and had the following objectives.

i)   To improve and increase the production of cotton by mobilizing farmers in the country and providing them with inputs, through an input credit scheme.

ii)   To improve technical and extension services to cotton farmers and to open up new areas for cotton growing.

iii)   To provide a market for cotton growers and to process domestically produced seed cotton.

For 17 years Lintco had a monopoly in buying seed cotton on behalf of government. In 1995/96 Lonrho Cotton became the largest ginnery in the country after buying three of the Lintco ginneries

To meet their capacity requirements, Lonrho cotton established an out grower program to provide participating farmers with extension and inputs. In 1998/99 the company invested US$ 3 million in some 120,000 farmers in the four provinces where cotton is mostly grown. These provinces are Eastern, Central, Lusaka and Southern provinces.

In May 2000 Dunavant cotton (Z) Ltd. took over the operations of Lonrho cotton, and invested over US$ 8 million in some 88,000 small-scale farmers. Dunavant cotton (Z) Ltd. though holds the largest market but is not the only private company in cotton.

Liberalization of the economy has brought competition and a number of private companies small and big have entered the cotton industry. Clarke cotton based in Chipata Eastern Province bought the Chipata gunnery from Lintco and is equally supporting farmers through loans.

Other companies include China – Mulungushi in Kabwe, Amaka holdings in Kabwe, Mukuba and Swarp Spinning in Ndola and Continental cotton in Kalomo, Southern Province. These companies are also known to run out grower schemes.

However, although loan recovery has shown an improvement in the case of Dunavant cotton (Z) Ltd., it still remains a big problem. Hence there is need to identify the real problems farmers encounter in the farming system that deter them from repaying loans. Many studies have been done to generate useful information to help alleviate the problem of loan repayment among small-scale farmers but with little improvement. Factors such as low producer- price have been cited as the major cause of loan default in most studies but this study sought to investigate non producer- price factors.

1.2 Statement of the Problem

Credit or loan to small-scale farmers let alone commercial farmers is one of the most dominant source of financing production in agriculture. According to the Food Security Research Project Working Paper No.1 for March 2000, (Improving Smallholder and Agribusiness Opportunities in Zambia's Cotton Sector) farmers in outgrower schemes produced about 90% of the seed cotton ginned in 1997. However, companies that support these outgrower schemes fail to recover all the loans due to

several factors, some of which will be investigated in this research study. In 1997 the paper shows that only 69.6% of the total loan disbursements were recovered

For example in the 1999/2000 production year Dunavant Cotton (Z) Ltd. recovered about 80% of the total loan (Dunavant Production Year Plan 2000). This means that about 20.0% of the investment was lost. This in turn implies that investment in the proceeding years will reduce and ultimately cotton production may also go down. This entails that income for the firm may reduce thus restricting expansion of the industry in the long run. This study will seek to come up with recommendations that will help reduce the problem of not repaying loans in full.

1.3 Rationale of the study

The study will provide results to show the constraints that deter farmers from repaying loans acquired from credit companies. It has been assumed that if farmers can be assisted to discover better means and methods of reducing loan burdens credit companies will also benefit by recovering most of the loans given to farmers through out-grower schemes or otherwise.

The study will achieve this by estimating an optimum loan size for the small sale cotton farmer that the loan recovery agent will recover without many difficulties.

This will in turn help credit companies adequately recover loans.

If farmers would be developed to reach levels where they would be able to repay all their loans, benefits would be enormous. Firstly, small-scale cotton growers would progress from subsistent to emergent farmers. Secondly, loan recovery agents would enjoy the full benefits from commission. This would improve their family livelihood. For example he/she would be in a position to send his/her children to school and start

small businesses such as retail shops. The business creates employment for the rural community. Credit companies would also increase their investment by covering more farmers and this would make such companies increase market share. In the long run more people would be employed as the companies grow thereby reducing unemployment in the country.

1.4 Objectives of the Study
1.4.1 General Objective.
The primary objective of the study was to determine the major non-producer price constraints faced by small-scale farmers in repaying cotton loans.

1.4.2 Specific Objectives
- To estimate the optimum loan size for small-scale cotton farmers.

- To determine the small-scale farmer's perspective on loans.

- To find out whether farmers repay loans from other crops in full.

CHAPTER TWO

2.1 LITERATURE REVIEW

Phiri (2000) studied the factors influencing defaulting on contracted cotton by small-scale growers. In his study he defined defaulting or default as selling of contracted cotton to buyers who did not contract the farmers.

Phiri found that farmers default as a result of:

i)   High prices offered by other buyers (side buyers) relative to prices offered by contractors.

ii)   Low yields and low gross margins

iii) Lack of enforcement of contracts. For instance, none of the farmers who he interviewed indicated that the defaulted were punished, except that they were not allowed to do business with the contracting firm in the following season.

Phiri did not investigate factors that deter non-defaulting farmers from repaying loans in full, which is the objective of this research. Phiri also, did not try to come up with the optimum loan size, which is the second objective of this research.

Soko (1996) studied the small-scale farmer under contract farming. In his work he discovered that farmers did not have the knowledge of the penalty of defaulting and most of the farmers did not sign the contract forms. Soko also found out that extension services were necessary to assist farmers to identify and analyze their production problems and to become aware for opportunities for improvement. However, Soko did not indicate if lack of knowledge on penalty for default and lack of signing contract forms had an effect on default.

Chiyobe (1993) conducted a study on the potential of contract marketing, and its role in increasing farmers' income in Zambia. His findings were that contracted cotton

was being sold to other buyers and cotton was being sold to companies through third parties, making it difficult for firms to collect what is due to them from contracted small-scale farmers.

The World Bank (1980), examined the role of credit in the Third World Countries and established that credit is now one of the largest component in agricultural financing. Often credit is the key element in modernization of agriculture.

It removes a financial constraint and facilitates the adoption of new technologies. Therefore, it is an integral part of the process of commercialization of the economy. However, no amount of credit can guarantee higher productivity or incomes among the rural poor. Success in this respect depends on many factors including the availability of complementary inputs and services, sound credit policies, well-managed institutions and appropriate delivery channels.

Mungaila (1992) evaluated factors that influence seed quality and income of small-scale cotton farmers. His major finding was that with the liberalization of the economy, the number of private companies involved in production and marketing of cotton have increased. However, most of these cotton buyers were not providing inputs, credit and extension services as a way of promoting cotton production.

However, in his study/research he did not outline constraints that small-scale cotton growers face in loan repayment, which is the objective of this study.

Michelo (1987) investigated the factors that affect loan recovery rate. He found out that the factors that have a negative effect a loan recovering include:

i)   Lack of scrutiny to determine honest farmers and farmers who were able to pay.

ii)   Farmers elude because of loopholes in the system (thus the system of Agro-Finance Market).

iii)   Lack of maintained lender-borrower interests (thus no supervision of credit).

From these findings, it is clear that the study looked at external factors. Hence the need to look at constraints farmers face under the new phenomenon of out-grower schemes.

Agricultural credit should therefore be made part of an integrated approach to agricultural development and be linked to agricultural services, without supervision and extension services, credit is of limited use because farmers are unable to fully utilize the money allocated to them (Uma J Lele 1974). Usually, maximum results are obtained when extension and credit are used together.

Another important part that has to be coordinated with credit is marketing. Marketing is closely linked to credit as it involves the supply of inputs to farmers and the buying of the farmers' produce. Only if the farm requisites of the right type and quality are available on time at fair prices will the productive element of credit increase.

Another constraint affecting the use of agricultural credit by small-scale farmers is the security for loans as the assets, which small-scale farmers have, are not accepted as securing by most credit agencies.

Muzorewa (1975) argued that lenders of money need assurance that their money will be paid back. Therefore, lenders look for customers with marketable assets. This makes it difficult for small-scale farmers to secure loans. This further makes it difficult for the lending institutions to lend large loan amounts to the small-scale farmers.

Rice (1973) found that co-operatives, Credit Unions, Commercial Banks and supervised credit agencies have the same problem of default, low production impact, and drift toward a large farm clientele.

However the above studies especially those by the University of Zambia students do not give the constraints small-scale cotton growers face in repaying loans. Most of the studies allude to the fact that small-scale farmers default contracts as a result of contracting firms offering low producer prices. However, statistics show that even in areas such as Choma and Monze where side buyers are few or are non-existent farmers still fail to repay their loans. This is the area of concern for this study. This study seeks to find the constraints farmers face with or without the presence of side buyers and establish the optimum loan size for the farmer under the new phenomenon of out-grower scheme such as one the Dunavant cotton (Z) Ltd. introduced in 1999/2000 season.

CHAPTER THREE

3.O METHODOLOGY

3.1 Research Type and Design

The research was in the form of a descriptive research that enabled the researcher gather an accurate account of the factors that deter cotton small-scale farmers repay loans in full. Means and frequencies have been generated (after data was collected) using the Statistical Package for Social Sciences (SPSS). Microsoft Excel was also used to generate enterprise gross margin budgets. The budgets assisted to critically analyze the profitability of cotton production as a business venture.

3.2 Source of Data and Sampling

Convenient sampling method a non probability sampling procedure was used to come up with a sample of 50 respondents. Sampling was done randomly among farmers who were organized by Dunavant Cotton (Z) Ltd. for a training workshop. This was done at the Monze Farm Institute. It was intended that the sample would be large enough and representative to match the available resources.

Monze was chosen because of its proximity to Lusaka, its poor loan records (2000 Dunavant Production Plan and Report) and that, there are fewer side buyers other than Dunavant Cotton (Z) Ltd. To avoid duplicating work such as a study on factors influencing defaulting done in Mumbwa, Monze was the best area to carry out this kind of this study.

Primary data was collected using the method of structured questionnaires and through one to one interviews with stakeholders. Secondary data was also collected from reports, journals, and publications to enrich the research.

Both qualitative and quantitative data were equally helpful in achieving the objectives of study. Secondary data was also incorporated to enrich the research.

3.3 Data Analysis

With respect to PRA, the data derived from the questionnaires administered within the study area were analyzed to generate frequencies using SPSSx. 9.0 windows version. The frequencies were used to describe the different variables from the questionnaires. For qualitative data arising form personal interviews and focus group discussions, descriptive analysis was done to interpret the data.

3.4 Limitations of the study.

The major limitation of this study was with respect to the non-existence of the proper records and sampling frames for the target group. Hence only convenient random sampling was done to select the sample to proceed with the research. The only records of farmers were the farmer registers kept by Dunavant Cotton Ltd.

The other limitation was that research funds were not adequate for a thorough study and hence the flaws in the report should not be a surprise. For example, the question requires that it be pre-tested to confirm its suitability to the desired insights and information.

CHAPTER FOUR
4.0 RESULTS AND DISCUSSION OF FINDINGS.
4.1 Age distribution

Results from the study show that the age distribution of the small – scale cotton farmers comprise 20% of the population in the range of 20-30 years, 56% of the population in the range of 31-40 years and 20% in the range of 41-50 years and only 4% above 50 years of age.

The results indicate that the majority of the farmers are young and youthful with enough energy to farm and repay loans. However, results show that loans could not be paid in full with youthful farmers in the area. See the analysis in the table below.

Table 1: Age Distribution.

Age	Frequency	Percent
20-30	10	20
31-40	28	56
41-50	10	20
>50	2	4
Total	50	100

Source: Field survey data (2001)

4.2 Education level

The majority of the farmers in the target area can be said to literate following results obtained. Results show that 80% of the farmers have reached secondary school level, and interestingly 8% have reached tertiary education levels.

However the results on loan repayment indicate that a good proportion of the farmers did not repay their loans in full. By inference it can be said that education level has not direct influence on the ability to repay loans in full. The table below show that

despite the high literate levels among the farmers only a small proportion managed to repay loans in full.

Table 2: Educational level

Level	Frequency	Percent
Primary	6	12
Secondary	40	80
Tertiary	4	8
Total	50	100

Source: Field survey data (2001)

Cross tabulation results of the above factors against the factors that made the farmers to repay loans in full are given in the analysis and interpretation below.

4.3 Age against factors that made farmers fail to repay loans in full.

Results in the cross tabulation analysis show that the majority of the age group of 20-30 years failed to repay due to low yields. The tables of the cross tabulation analysis below show that 40% of these farmers failed to repay due to low yields per hectare of cotton cultivated. However, a good proportion said that they fail to repay due to low producer price and this represented 30% of these farmers while 20% alluded to other factors.

Table 3: Age against factors that made farmers fail to repay in full

	Low Price	High Labor	Low Yield	Other factors
Age 20 - 30	30%	10%	40%	20%
31- 40	10.7%	10.7%	71%	7.1%
41 - 50	30%	10%	50%	10%
< 50	0	0	100%	0

4.4 Sex against factors that make farmers fail to repay loans in full.

The interpretation of the results show that 56% of the male farmers failed to repay loans due to low yields while only 28% of them alluded the failure to low producer price. This is consistent with the other results that show that farmers fail to repay to meet their loan obligations due to low yields per hectare and the low producer prices offered. The responses from the female farmers also show that farmers fail to repay loans in full due to low yields obtained per hectare of cotton cultivated. The table below give the analysis. The analysis show that 68% of the female farmers failed to meet their loan obligations due to low yields though 16% alluded to high labor requirement associated with cotton production. The table below gives the analysis.

Table 4: Sex against factors that make farmers fail to repay loans in full

		Low Price	High Labor	Low Yield	Other factors
Sex	Male	28%	4.0%	56%	8%
	Female	8%	16%	68%	8%

Source: Field Survey data (2001)

4.5 Education level against factors that make farmers fail to repay loans in full.

The results of the analysis of cross tabulation of education level against factors that make farmers fail to meet their loan obligation show that following. Across the education boundary results indicate that most farmers fail to repay loans in full due to low yields. The majority of the farmers who have reached primary level, which make 66.7% said that they failed to repay the loan in full due to poor yields. Equally the majority of farmers who have been to secondary indicated that they obtain low yields which interprets into low Gross margins and hence cannot repay the loans in full. In this category 60% of the farmers said that they failed to repay loans in full due to low yields though other farmers referred to other factors such as low producer price and high labor requirement. The results on the farmers who have reached the college level

also indicate that the majority failed to meet the loan obligations due to low yields obtained per hectare. The results show that 75% of these farmers failed to repay due to low yields and 25% failed due to low producer price. The table below gives the analysis of the above discussion.

Table 5: Education level against factors that make farmers fail to repay in loans full.

	Low Price	High labor	Low yield	Other Factors
Primary	16.7%	16.7%	66.7%	0%
Secondary	17.5%	10%	60%	12.5%
College	25%	0%	75%	0%

Source: **Field survey data (2001)**

4.6 Duration in farming, landownership and tenancy

The results indicate that the majority of the farmers are not new in farming. Results show that 56% of them have been farming for over 8 years, 20% for 5-7 years and 16% for 2-4 years and only 8% for lee than 2 years. The results indicate that most farmers are experienced and should have clearly set their objectives.

Results also indicate that most of the land is either owned by Chief or individual households. This represents a cumulative frequency of 70%. Only 22% of the land is rented to tenants who pay rental either in cash or by yields agreed upon by the two parties, only 8% of land is under the state. Results show that most landlords prefer to be paid in cash and not in kind. The tables 6, 7 and 8 below give the results in the above analysis.

Table 6: Farmers' duration in farming

Duration	Frequency	Percent
<2 yrs	4	8
2-4yrs	8	16
5-7yrs	10	20
>8yrs	28	56
Total	50	100

Source: Field survey data (2001)

Table 7: Land ownership

Owner	Frequency	Percent
Chief	22	44
State	11	22
Landlord	4	8
Household	13	26
Total	50	100

Source: Field survey data (2001)

Table 8: form of rentals

Form	Frequency	Percent
N/A	32	64
Cash	15	30
Yield	3	6
Total	50	100

Source: Field survey data (2001)

4.7 Type of power used on the farm.

The majority of the farmers use human power from own households and this represents 60% of the responses. 30% use hired human power and only 105 use animal draught power. Despite this scenario more than 50% of the farmers grow three or more cash crops which usually are produced with assistance of loans. These results are shown in table 9 below.

Table 9: Type of power used

Type	Frequency	Percent
Household	30	60
Animal	5	10
Hired human	15	30
Total	50	100

Source: Field survey data (2001)

4.8 Loan repayment in other cash crops.

The results show that out of the total number of farmers interviewed 56% obtained loans from other companies and organizations for other cash crops. Out of these, 62% managed to repay the said loans in full. They attributed this to high producer prices and high yields in relative terms. The tables 10 and 11 have the detail data on these claims.

Table 10: Loan repayment in other cash crops

Response	Frequency	Percent
N/A	16	32
Yes	31	62
No	3	6
Total	50	100

Source: Field survey data (2001)

Table 11: factors that influence loan repayment in other cash crops

Factor	Frequency	Percent
High price	11	22
Less labor	3	6
High yield	30	60
Other	6	12
Total	50	100

Source: field survey data (2001)

4.9 Loan repayment in cotton and factors that constrain farmers from repaying loans.

Out of the total number of respondents interviewed 84% consented to the fact that they get loans to increase production without which they would not. Out of the 84% of the farmers who obtained loans in the 2000/1 season, 66% failed to repay the loans in full. The failure was attributed to factors that include; low yield, low producer prices and high labor. The general objective of this study was to establish the major non-producer price factors that deter farmers to repay loans in full. This study or research has established that the major non-producer price that deters farmers to repay

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loans is the low yield per hectare of seed cotton. The results from the interviews indicate that based on farmers recall the yield per hectare is on average as low as 600kg per hectare. This is much lower than the average yield of the country of 800kg per hectare which is not also good for the farmers to get good returns for labor and other inputs (FSRP 2001). Results from the study show that 62% of farmers had low yields even though 18% attributed the failure to repay loans to low producer prices and 10% to high labor cost 62% is justification enough to establish that the major constrain is the low yield. The results are shown in table 12 below.

Table 12: Factors that deter farmers from repaying cotton loans in full.

Factor	Frequency	Percent
Low price	9	18
High labor	5	10
Low yield	31	62
Other	5	10
Total	50	100

Source: Field survey data (2001)

To supplement these findings rapid rural appraisal technique by way of Focus Group Discussion (FGD) was carried out. This was done to address the issue of causality, why yields are low in the area. The results from the FGD showed that seed cotton yields are low due to the following variables.

(i)   Inadequate pest management skills. Most farmers indicated that pests continue to be a problem. This could be attributed to continued use of the inefficient knapsack sprayer. A knapsack sprayer produces big drops hence reducing chance of capturing most pests in the field. In addition most farmers could not distinguish predators which are friends to them from pests. Predators are

helpful to the crop because they feed on pests, especially aphids. According to Burges M., pest attacks significantly reduce yields.

(ii)   Late planting, and insufficient weed control

The FGD revealed that most farmers prefer to plant maize earlier than cotton. This situation compromises seed cotton yields because cotton is a long period crop that requires 5 months to mature and be ready for harvest. The discussion also revealed that weeding maize is preferred to ensure food security.

(iii)   Status of the soil

The majority of the farmers indicated that they did not Know the pH of their soils when literature show that low pH reduces seed cotton yields significantly. According to McPhillips (1977, p. 44) results from a trial at Monze where an application of 700kg/ha of lime increased yield of seed cotton from 820Kg/ha to 1620Kg/ha in the first season and from 980kg/ha to 1250Kg/ha in the second season after application. In addition a paper entitled Economic Aspects of agricultural liming in Zambia, 1987, p. 85 indicate that cotton can be considered to be acidity susceptible and be expected to respond to liming on soils with low pH levels. The table below gives the FGD results.

Table 13: Focus Group Discussion results

Variable	Response
Seed cotton yield/ha	More than 70% of the farmers get an average of 10-15 wool packs, on average weighing 60-70Kg/bag
Time of planting	The majority of the farmers plant maize first despite it being a shorter period growing crop compared to cotton. Maize requires a much shorter period to mature than cotton.
Status of Soil	Most farmers did not know what pH is and the role it plays in crop production.
Weeding	Farmers which comprised the majority preferred to weed maize fields earlier than cotton fields.
Pest control	Farmers control pests using Knapsack sprayers that have been found inefficient. In addition farmers are hesitant to adopting the new + Ultra sprayer which is efficient.

Source: Focus group discussion (2001)

Table 14: Enterprise Budget Analysis (Gross Margin for Cotton)

All figures based on 1 hectare

Output		Small - scale		Medium Scale		large Scale	
Yield	Kgs	800		1500		2,000	
output	Kwacha	760,000		1,425,000		1,900,000	
Variable Cost	Unit	Amount	Cost	Amount	Cost	Amount	Cost
Seed	Kg	15	6,690	15	9,570	15	9,570
Basal Fert	Pkts	0	0	4	255,200	6	382,800
Top dress	Pkts	0	0	0	0	2	125,000
Herbicide	Lt	0	0	0	0	1	31,875
Insecticide 1	Lt	1	24,302	1	24,302	1	24,302
Insecticide 2	Lt	0.3	3,527	0.5	5,878	1	11,756
Labor	Mdays	90	270,000	70	210,000	65	195,000
Insurance		0	0	0	0	0	0
Tractor hire	Hrs	0	0	5	350,000	0	0
Own tractor	Hrs	0	0	0	0	8	400,000
Oxen hire	Hrs	1	60,000	0	0	0	0
Combine hire	Ha	0	0	0	0	0	0
Transport & packing	Kg	800	16,000	1500	30,000	2000	40,000
Irrigation water	Mlt	0	0	0	0	0	0
Total Variable Cost			380,519		884,950		1,220,303
GROSS MARGIN			379,481		540,050		679,697
Break Even Yield	Kg		401		932		1,285
GM return on variable costs			100%		61%		56%
GM Return to labor	Kwacha		7,216		10,715		13,457
Break-Even price	Kwacha		476		590		610

Source FSRP / AAC 20 Dec-01.

Gross Margin budget shows very low gross margin for the Small-scale farmer.

4.10 Output gains from conservation farming

The table below shows secondary data that confirms that yield in cotton are low and should be improved if farmers are to benefit from cotton farming. The table shows results of an intervention that can assist farmers improve cotton yields in cotton and maize if farmers can practice conservation farming. This research also confirms that yields are low and constrain farmers in repaying loans in full.

Table 15: Output gains from conservation farming, 2001/2

Tillage	Cotton Yield*		Maize Yield*	
	Farmer estimate	Plot sample	Farmer estimate	aggregate
Basins	1,278	2,934	3,023	3,054
(n)	(25)	(67)	(92)	(92)
Hoe	986	2,125	4.549	3,062
(n)	(9)	(1)	(2)	(2)
Ripper	557	2,486	1,373	1,727
(n)	(17)	(17)	(33)	(33)
Plow	818	1,468	1,559	1,339
(n)	(47)	(43)	(77)	(77)
Average yield	909	2,375	2,213	2,189
Standard deviation	541	1,555	1,567	1,592
(n)	(99)	(128)	(205)	(205)

*yield in kg /ha

n =sample size

Source: IFPRI/FSRP survey.

4.11 Optimal and Minimum hectarege farmers can handle profitably

The results show that the majority of the small-scale farmers in Monze feel that they can profitably handle a minimum of 2-4ha of cotton. The results show that 62% of the farmers feel that they can profitably cultivate 2-4ha of cotton. The results in table 5.3 also show that the majority cultivate four (4) hectares and below. Therefore, the size of hectarage cultivated cannot be said to be a constraint to repaying loans in full.

Table 16: Actual cotton hectarage cultivated

Hectare(s)	Frequency	Percent
<2ha	17	34
2-4ha	27	54
5-7ha	2	4
>8ha	4	8
Total	50	100

Source: Field survey data (2001)

Table 17: Minimum hectares farmers can cultivate profitably

Hectare	Frequency	Percent
<2	17	34
2-4	31	62
>8	2	4
Total	50	100

Source: Field survey data (2001)

4.12 Importance of repaying loans in full

The results indicate that 60% of the farmers feel that they should repay loans to ensure that companies recover their money to possibly give farmers loans in the next farming seasons. Twenty six percent (26%) feel that loans repaying loans assist farmers to continue producing at higher levels than they would produce without loans. This analysis indicates that farmers value the importance of repaying loans. The table below show these results.

Table 18: Importance of repaying loans in full

Benefit	Frequency	Percent
Farm profitably	13	26
Company continue in business	30	60
Many farmers to get loans	6	12
Farmers to progress	1	2
Total	50	100

Source: Field survey data (2001)

4.13 Improving loan records

Results show that farmers felt that they could improve their loan repaying ability by;

(i)   reducing the number of cash crops grown per season to two

(ii)   getting adequate production and marketing information to assist them make informed decisions. This was also confirmed by farmers request for more training even though some had already received some training before.

Table 19: Improving loan records

Alternative	Frequency	Percent
Cotton and a crop	23	46
Reduce cotton ha	3	6
Adequate information	24	48
Total	50	100

Source; Field survey data (2001)

Table 20: Training need

Need	Frequency	Percent
Yes	50	100
No	0	0
Total	50	100

Source: Field survey data (2001)

4.14 Time when loans are given to the farmers

Most farmers indicated that loans are given on time and in time. Hence failure to repay loans cannot be tied to time loans are given. Seventy eighty percent (78%) of the farmers indicated that loans are given in time. In addition farmers said that the loan conditions are explained and made available to all farmers through the local agents.

Table 21: Time when loans are given to farmers

Time	Frequency	Percent
Given on time	39	78
Not on time	11	22
Total	50	100

Source: Field survey data (2001)

Table 22: Loan conditions available and explained

	Frequency	Percent
Available and explained	41	82
Available but not explained	7	14
Not available	2	4
Total	50	100

Source: Field survey data (2001)

4.15 Obtaining another loan from same company

The majority of respondents felt that getting another loan is a good idea despite failing to repay the loans in full. Eighty six percent (86%) indicated that they would get more loans from the same company. This is an indication that farmers are willing to repay the loans but constraints such as low yield that results in low gross margins hinder farmers from repaying loans in full. Table 23: shows these results.

Table 23: Obtaining loan from same company

	Frequency	Percent
Yes, good conditions	43	86
Yes, inputs given on time	7	14
Total	50	100

Source: Field survey data (200)

CHAPTER FIVE
5.0 CONCLUSIONS AND RECOMMENDATIONS
5.1 Conclusions
Several conclusions can be drawn from this research. First and foremost, the research has established that the major constraint that hinder small-scale cotton farmers from repaying loans in full is the depressed yield potential of the two cotton varieties, Chureza and F-135. On average based on farmers' recall a hectare gives a farmer 800Kg/ha. This yield gives a farmer a maximum gross margin of K379, 482. This low income can also act as a disincentive to the farmer to put in his best. This low yield compounded by low producer price makes it difficult for the farmer to repay the loan in full. This point need to be emphasized further because under the current economic environment of globalization and world market, the farmer has no choice but to receive the price detected by the world market forces of demand and supply. In fact Zambia is a small producer of cotton hence cannot influence the price as the supply is insignificant.

Therefore, the Zambian farmer can only improve farm income by improved yield/ha and/or increased hectarage. The causality why seed cotton yield/ha was low has also been established. Low yields result from, among the other factors, poor pest management, lack of knowledge of status of soil e.g., pH, late planting due to preference for maize and insufficient weeding. For these factors to be addressed adequately farmers indicated that they need more training either by companies in cotton, the government or other stakeholders such as the Non Governmental Organizations (NGOs).

Specifically, the research has also established that the minimum hectarage for the small-scale cotton farmers for cotton should range from 2 to 4 hectares. However this is the same hectarage most farmers cultivate, hectarage is not one of the constraints to farmers for failing to repay loans in full.

5.2 Recommendations

Results from this research compel me to make the following recommendations;

(i) Farmers need to more extension services to improve knowledge on better agricultural practices. The research has revealed that most farmers still lack on knowledge on effective pest management and control, early planting and weed control.

(ii) Yields can improve over time through conservation farming. The paper entitled successes of African agriculture states that farmers practicing conservation farming improved their cotton yields. Yields improved from 800kg/ha to 98okg/ha.

(iii) Farmers should cultivate a maximum of 3ha of cotton to ensure full repayment of loans.

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QUESTIONNAIRE

TOPIC: A STUDY OF CONSTRAINT SMALL-SCALE COTTON FARMERS

FACE IN REPAYING LOANS IN FULL:

A CASE STUDY OF MONZE FARMERS

BY

MAXWELL MUMBA

UNZA   2002

Province..

Operational Area..............................

Village/Locality...............................

General Information (Farmer)

1. Age   (1) 20-30   (2) 31-40 (3) 41-50 (4) above 50

2. Sex   1. Male
           2. Female

3. Education Level   1. Primary
                      2. Secondary
                      3. College
                      4. University
                      5. No formal School

4. Marital Status   1. Single (Never married)
                      2. Married
                      3. Widowed
                      4. Divorced
                      5. Separated
                      6. In polygamous Union

5. Occupation: 1. Farmer
                      2. Distributor
                      3. Other/specify

6. Registration Number:................/.../..............

SPECIFIC INFORMATION.

1. For how long have you been farming

    1. Less than 2 years
    2. 2 – 4 years
    3. 5 – 7 years
    4. 8 years and above.

2. Who owns the land you cultivate

    1. Chief
    2. State
    3. Landlord
    4. Own land

3. Do you pay rent for this land.

    1. Yes   2. No

4. If yes to question (3) in what form is the rent.

    1. Cash   2. Yield   3. N/A

5. Is the rent that you pay fair or affordable

    1. Yes 2. No   3. N/A

What is the total area of farmland in ha.

    1. Less than 2 ha
    2. 2 – 4 ha
    3. 5 – 7 ha
    4. 8 ha and above

How many crops do you grow for cash sale

    1. One
    2. Two
    3. Three
    4. Four
    5. Five and above

What power do you mostly use for cultivating, applying fertilizer. weding and spraying your crops.

    1. Human power from household only
    2. Hired human power
    3. Animal draft power
    4. Tractor power
    5. Other/specify

Do you get loans for other crops other than cotton.

    1. Yes   2. No

Do you pay the loans in question 9 in full.

    1. Yes   2. No   3. N/A

If yes to question (10) how do you manage to pay in full.

    1. High producer price
    2. Less labour demanding
    3. High yield potential
    4. Other/specify

Do you also get loans for cotton.

    1. Yes 2. No

If yes to question (12) did you pay the loan in full in 2002 – 2001 season.

    1. Yes   2. No   3. N/A

If No to question (13) how much did you pay.

    1. Less than 50%
    2. 50 – 75%
    3. 76 - 99%

How many ha did you put on cotton.

    1. Less than 2 ha
    2. 2 – 4 ha
    3. 5 – 7 ha
    4. 8 ha and above

16. What made you fail to repay 100% of the loan.

    1. Low producer price
    2. High labour demanding
    3. Inadequate instructions from loan agent for cotton husbandry.
    4. Low yield due to adverse weather
    5. Other specify

17. What is the hectarage that you feel you can handle for cotton to repay the loan in full.

    1. Less than 2
    2. 2 – ha
    3. 5 – ha
    4. 8 hand above

18. Why do you think its important to repay cotton loans in full.

    1. Enable farmer to continue in farming profitably
    2. Enable credit company remain in business
    3. Enable more farmers get loans
    4. Enable farmer grow and expand
    5. Other specify

19. What do loan help you achieve.

    1. Send children to school
    2. Buy farm animals
    3. Buy farming implements
    4. Increase size of farm
    5. Other specify

20. What do you think you should do to improve your loan repaying record.

    1. Grow cotton and one other cash crop only
    2. Reduce on hectarage
    3. Get adequate instructions from loan agent on good husbandry.
    4. Other specify

21. What do you think credit companies should do to assist a farmer repay loans in full.

    1. Offer high produce price
    2. Engage efficient and effective local based private loan agent.
    3. Other specify.

22. Do you think you need training to resolve problems in your crop production.

    ....
    ....
    ....
    ....

23. Have you attended any training programme.

    1. Yes   2. No

24. If yes how did the training help you.

    ....
    ....

25. Was the loan in cotton given to you in time.

    1. Given on time   2. Not given on time   3. Time given not important

26. If the loan was not given in time how did it affect your plans?

....

....

....

27. Was the loan you got adequate to meet your requirements.

    1. Adequate   2. Not Adequate

28. Where the conditions of the loan made available to you when you applied.

    1. Made available and explained
    2. Made available and not explained
    3. Not made available.

29. How are these conditions? Please explain.

....

....

....

30. How difficult is it to meet the conditions of repayment of loan in question (29).

....

....

....

31. From which Organisation/Company did you get the loan for cotton.

    1. Dunavant Zambia Limited
    2. Amaka
    3. Clark
    4. China – Mulungushi
    5. Other/specify

32. Do you think there is need to improve the conditions of the loans by the Organisation/Company.

    1. Yes   2. No

33. If yes explain

....

....

34. Do you think you will get another loan from the same Organisation. Explain the reason

....

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