UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Sustainable extension support to land reform beneficiaries in Zimbabwe (Mashonaland West)

By

Evans Muchesa

Submitted in partial fulfilment of the requirements for the degree

MSc (Agric): Agricultural Extension

in the

Department of Agricultural Economics, Extension and Rural Development

Faculty of Natural and Agricultural Sciences

at the

UNIVERSITY OF PRETORIA

2013

© University of Pretoria

DECLARATION

I declare that the dissertation, which I hereby submit for the degree Masters of Science in Agricultural Extension at the University of Pretoria is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Signature..... Date.....

© University of Pretoria

ABSTRACT

SUSTAINABLE EXTENSION SUPPORT TO LAND REFORM BENEFICIARIES IN ZIMBABWE (MASHONALAND WEST)

By

Evans Muchesa

Supervisor: Dr. J.B. Stevens

Department: Agricultural Economics, Extension and Rural Development

Degree: MSc (Agric): Agricultural Extension

ABSTRACT

The objectives of this study were to identify the extension needs of land reform beneficiaries (A1 and A2 farmers) for sustainable land reform, by describing and analyzing the current extension corporation and activities in newly resettled areas.

The study was carried out in three districts, namely Kadoma, Chegutu and Zvimba , situated in Mashonaland West province of Zimbabwe. The target population samples for the study comprised of A1 and A2 farmers (N=690) and the extension personnel in the three districts (N=68).

The study revealed that there is a distinct difference between A1 and A2 farmers regarding their socio-economic status, education level, farm size, land tenure status, and governance structure. 58.0% of A1 farmers farm on farm sizes that vary between 0.5 – 50ha, while 76.3% of A2 farmers received farm sizes between 51 - 200ha. A1 farmers mainly have obtained only primary level education, while 57.3% of A2 farmers obtained post matric education. In general the A1 farmer households are bigger with 16.2% of the households bigger than 10 members compared to A2 farmers where 31% of the households are smaller than three household members.

A1 farmers use permits as tenure instruments which allows them to farm and communally share grazing areas and water sources. A2 farmers use offer letters and

© University of Pretoria

99-year lease which allows them to exclusively use resources on their farms. The tenure instruments that apply to A1 farmers have limitations as farmers cannot use them to borrow operational capital since the land is considered state land. In general A1 farmers are less satisfied than A2 farmers with the current land reform program implemented by the government.

According to farmers (A1 and A2) the major constraints preventing them to farm optimally are: frequent droughts, inadequate financial credit, poor availability of production inputs, poor extension services, poor farming knowledge and no farming equipment. Farmers perceived the following stumbling blocks in order of priority to the current land reform program: inadequate credit facilities, unstable political situation, corruption and inefficient extension services.

48.0% of extension officers in the three districts (Chegutu, Kadoma, Zvimba) are between the age of 18-30 years, 64.2% of the extension officers have obtained only a certificate in agriculture, which is causing problems in the role they play as technical advisors to farmers. 86.6% of the extension officers have never attended in-service training to attend to their skills development. The average ratio of extension officer to farmer is 1:250-300, which is internationally acceptable for efficient extension delivery.

T&V and FSRE extension approaches are the popular approaches extension staff use, although they are in general not satisfied with these extension approaches being used, due to the little financial support government provides to execute these approaches. There is also very little monitoring of application of the various extension approaches by the department, and there is a lack of commitment on the part of the government. 72.0% extension officers indicated that they have at least weekly contact with farmers, mainly through group meetings. Extension officers perceived their technical as well as extension knowledge to be adequate for efficient extension delivery.

The major constraints being faced by extension officers in the three districts are: lack of operational budgets, lack of production inputs for farmers, lack of

© University of Pretoria

commitment on the part of the farmers and government, low level of farmers' knowledge about farming practices and climate change. Extension officers perceived the following stumbling blocks in priority order to the current land reform program: corruption, lack of planning, lack of coordination among stakeholder and political interference.

A negotiated transition for a land reform program is highly recommended. Proper selection of the land reform beneficiaries and human capital development is a critical component of a sustainable extension system. There is a need of greater participation of private role players in providing of inputs. For this to happen government should allow a free market system.

A gradual transformation of extension to self finance system is needed. A levy can be imposed on A2 farmers who are in a stronger economic position, so as to finance some of the operations of extension.

Due to difference in socio-economic status between A1 and A2 farmers, a tailor made extension support system needs to be implemented, taking into consideration these differences. There is a need for programmed extension with expected and measurable outputs, which offers options and problem solving strategies, facilitate decision-making and technology adaptation, and a need of attracting more private players in the agricultural extension arena. Also there is a need to employ more female extension officers, so as to improve participation of female farmers and offer in-service training for extension officers is much needed.

© University of Pretoria

ACKNOWLEDGEMENTS

Firstly I would like to acknowledge Jehovah God for his amazing grace. I would like to thank Dr. Stevens for his immense guidance and contributions to this project, Ms Joyce Jordan from the department of Statistics, Ms Traceyleigh Pienaar for her contributions and my family (Nyasha, Evana, Kudakwashe, Munashe, Simplisio, Gladys-Heather, Tendai, Jane and Sophia)

I would like to dedicate this project to my late parents Christopher (2001) and Gladys (2006) Muchesa.

© University of Pretoria

TABLE OF CONTENTS

DECLARATION ..... **i**
ABSTRACT ..... **ii**
ACKNOWLEDGEMENTS ..... **v**
TABLE OF CONTENT ..... **vi**
APPENDIX ..... **ix**
LIST OF FIGURES ..... **ix**
LIST OF TABLES ..... **ix**
ABBREVIATION AND ACRONYMS ..... **xii**

CHAPTER 1: INTRODUCTION **1**
1.1 Background 1
1.2 Problem statement 3
1.3 Purpose statement 5
1.4 Research objectives 5
1.5 Importance and benefits of the study 6
1.6 Structure of the research 6

CHAPTER 2: LAND REFORM PROCESS IN ZIMBABWE **7**
2.1 Introduction 7
2.2 Agro-ecological zones of Zimbabwe 7
2.3 Post Independent Land and Agrarian Reforms in Zimbabwe 9
2.4 State Based Market Land Reform (1980-1996) 10
2.5 Fast Track Land Reform Program (FTLRP) (1997-2009) 13
2.6 Land tenure system and rights used for land reform 15
2.7 Land reform programs in Southern Africa(South Africa, Namibia and Malawi) 16
2.7.1 Land reform in South Africa 16
2.7.2 Land reform in Namibia 18
2.7.3 Land reform in Malawi 20

CHAPTER 3: APPROACHES TO SUSTAINABLE AGRICULTURE SUPPORT AND MANAGING OF RISK IN FARMING **22**
3.1 Introduction 22
3.2 Programmed extension activities as a way of sustainable support 22

© University of Pretoria

3.3 Marketing extension approach..... 25
3.3.1 The role of marketing in sustainable extension support..... 26
3.3.2 Importance of traders in marketing extension 27
3.4 Farm management extension approach 28
3.5 Privatization of extension for sustainable agriculture 30
3.6 Management of risk in farming as way to achieve a sustainable agriculture system..... 31

CHAPTER 4: THE ROLE AND FUNCTIONS OF AGRICULTURAL EXTENSION SERVICES IN ZIMBABWE 36
4.1 Introduction..... 36
4.2 Public extension services 36
4.3 NGO extension..... 39
4.4 Private sector extension 40

CHAPTER 5: RESEARCH METHODOLOGY..... 42
5.1 Introduction..... 42
5.2 Area and districts of study..... 42
5.3 Quantitative data 43
5.4 Qualitative data 43
5.5 Sampling 43
5.6 Data collection..... 45
5.7 Pilot testing..... 46
5.8 Data analysis..... 46

CHAPTER 6: FARMERS PERCEPTION OF THE LAND REFORM PROCESS 47
6.1 Introduction 47
6.2 Farm sizes in the three districts (Chegutu, Zvimba and Kadoma) 49
6.3 Gender 48
6.4 Educational level 49
6.5 Household size and composition 49
6.6 Perceived main sources of household income 51
6.7 Reasons for farming 53
6.8 Farming enterprises 54
6.9 Perceived farming knowledge 55
6.10 Farmer experience 56

© University of Pretoria

6.11 Perceived satisfaction with the current land acquisition model..... 56
6.12 Perceived satisfaction with governance structures selected for settlement of farmers 57
6.13 Perceived satisfaction with the role of various organisations and institutions in the settlement of farmers 60
6.14 Perceived satisfaction with the frequency of contact with departmental Extension officers 66
6.15 Perceived knowledge level of departmental extension officers in farmer groups 67
6.16 Perceived technical knowledge of extension staff 68
6.17 Farmer participation in farmer group meetings..... 69
6.18 Perceived constraints preventing farmers to farm optimally..... 72
6.19 Perceived stumbling blocks to the current land reform program..... 73
6.20 Conclusion..... 74

CHAPTER 7: EXTENSION PERCEPTION OF THE LAND REFORM PROCESS 77
7.1 Introduction 77
7.2 Age of Extension Officers in the three districts (Chegutu, Zvimba and Kadoma)..... 77
7.3 Gender 78
7.4 Qualifications and field of specialisation 79
7.5 Experience 81
7.6 In-service training 81
7.7 Availability of new technologies for extension officers 83
7.8 Ratio of farmers and extension officers as per district 84
7.9 Extension approaches 85
7.10 Perceived satisfaction with the current extension approaches 97
7.11 Extension contact with farmers 88
7.12 Preferred extension methods by extension workers 89
7.13 Perceived satisfaction with intervention given to farmers 90
7.14 Perceived level of extension knowledge to support farmers' groups 91
7.15 Perceived level of technical knowledge to support farmers 92
7.16 Perceived major constraints for a sustainable extension support..... 93
7.17 Perceived stumbling blocks to the current land reform program 94
7.18 Conclusions 95

© University of Pretoria

CHAPTER 8: DISCUSSIONS AND RECOMMENDATIONS **97**
8.1 Introduction..... 97
8.2 Support for the hypothesis..... 97
8.3 Perceptions of farmers regarding the land reform process..... 98
8.4 Perceptions of farmers regarding the extension system..... 99
8.5 Perceptions of extension regarding services to A1 and A2 farmers..... 99
8.6 The gaps in the extension delivery system..... 100
8.7 Recommendations..... 101

LIST OF REFERENCES **105**

APPENDIX A (QUESTIONNAIRE A & B)..... **111**

© University of Pretoria

LIST OF FIGURES

Figure 3.1 Livelihood Assets (Worth, 2006)..... 26
Figure 3.2 Essential elements of risk analysis (Kahan, 2007) 36
Figure 5.1 Mashonaland West province (Google Maps) 43
Figure 8.1 Agriculture Excellence Model (Duvel, 2005)..... 107

LIST OF TABLES

Table 2.1 Agro-ecological zones of Zimbabwe (Ministry of Agriculture, 2006)..... 8
Table 2.2 Land ownership pattern in Zimbabwe at Independence in 1980 (FAO/WFP, 2003) 10
Table 2.3 Land purchased by the state for resettlement, 1980–1989 (Palmer, 1990) 11
Table 2.4 Beneficiaries of the Land Reform Programme as per province (May 2003, FAO/WFP)..... 14
Table 2.5 Total Transfers under South African land reform from 1994 – 2006 (Manenzhe, 2007)..... 18
Table 2.6 Redistribution of land in Namibia 1980 – 2005 (Manenzhe, 2007)..... 19
Table 5.1 Number of A1 and A2 farmers in Kadoma, Chegutu and Zvimba districts of Mashonaland West (Chigumira, 2006) 44
Table 6.1 Farm sizes for A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690) 48
Table 6.2 Gender in A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690) 48
Table 6.3 Educational levels of A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690) 49
Table 6.4 Household size for A1 and A2 farmers (N=690) 50
Table 6.5 Distribution of household members' according to age and gender (N=690) 50
Table 6.6 Perceived importance of farming as a source of household income in the three districts (N=690) 51
Table 6.7 Perception of off farm employment as a source of Household income in the three districts (N=690) 52
Table 6.8 Perceived contribution of pension as a source of household income (N=690) 53
Table 6.9 Perceived reasons for farming (N=690) 53

© University of Pretoria

Table 6.10 Farming enterprises in the three districts (N=690) 54
Table 6.11 Frequency of crop types grown by A1 and A2 farmers (N=690)..... 55
Table 6.12 Perceived farming knowledge (N=690) 55
Table 6.13 Farming experience of A1 and A2 farmers (N=690) 56
Table 6.14 Farmers rating of their satisfaction with current land acquisition model (N=690) 57
Table 6.15 Governance structure applied for the settlement of A1 and A2 farmers (N=690) 59
Table 6.16 Perceived satisfaction with the current governance structure selected for land reform (N=690)..... 59
Table 6.17 Perceived importance of Agricultural Bank of Zimbabwe (N=690)..... 62
Table 6.18 Perceived importance of Marketing Boards (N=690) 63
Table 6.19 Perceived importance of NGOs (N=690) 64
Table 6.20 Perceived importance of Agricultural Colleges N=690..... 65
Table 6.21 Perceived importance of Farmers Unions (N=690) 66
Table 6.22 Contact with the Extension Officer (N=690) 66
Table 6.23 Perceived satisfaction of contact between farmer and extension officers (N=690) 67
Table 6.24 Perceived level of extensions` knowledge in the farmer group Functions (N=690) 68
Table 6.25 Perceived technical knowledge of extension officers on agriculture (N=690) 69
Table 6.26 Farmers affiliation with farmer groups (N=690) 70
Table 6.27 Farmers' affiliation to the different types of farmer groups (N=690)..... 71
Table 6.28 Perceived participation in groups (N=690) 72
Table 6.29 Perceived constraints preventing farmers to farm optimally (N=690)..... 73
Table 6.30 Perceived stumbling blocks to the current land reform program (N=690) 74
Table 6.31 Summary table for A1 and A2 farmers (N=690) 75
Table 7.1 Age groups (N=67) 78
Table 7.2 Gender of extension officers in the three districts (N=67) 79
Table 7.3 Education qualification of extension officers (N=67) 80
Table 7.4 Field of specialization (N=67) 80
Table 7.5 Experience of extension officers in the three districts (Chegutu, Kadoma and Zvimba) (N=67) 81
Table 7.6 Times per year sent for in-service training (N=67) 82

© University of Pretoria

Table 7.7 Perceived importance of regular in-service training (N=67) 83
Table 7.8 Availability of new technologies for extension officers through department (N=67) 84
Table 7.9 Proposed Agricultural Extension Officer: Farmer Ratios (NDA, 2004) 84
Table 7.10 Total number of extension officers and Total number of farmers served (N=67) 85
Table 7.11 Extension approaches used in the three districts (Kadoma, Chegutu and Zvimba) (N=67)..... 86
Table 7.12 Satisfaction with current extension approach (N=67) 88
Table 7.13 Contact with farmers (N=67) 89
Table 7.14 Preferred method of contact (N=67) 90
Table 7.15 Perceived satisfaction with intervention given to farmers (N=67)..... 91
Table 7.16 Level of knowledge to help farmers' groups (N=67) 92
Table 7.17 Extension technical knowledge (N=67) 93
Table 7.18 Perceived major constraints by extension officers in the three districts (Chegutu, Kadoma and Zvimba) (N=67) 94
Table 7.19 Summary table for extension officers in the three districts (Chegutu, Kadoma and Zvimba) 95

© University of Pretoria

ABBREVIATION AND ACRONYMS

A1	Newly settled small farms (A1 model)
A2	Newly settled medium to large farms (A2 model)
AEO	Agriculture Extension Officer
AEW	Agricultural Extension Worker
AFC	Agricultural Finance Corporation
AGRITEX	Department of Agricultural Technical and Extension Services
CA	Communal Agriculture sector
CRLR	Commission on Restitution of Land Rights
DAEO	District Agriculture Extension Officer
FAO	Food and Agriculture Organization of the United Nations
FSRE	Farming Systems Research and Extension
FTLRP	Fast Track Land Reform Program
GDAA	Group Development Area Approach
LSC	Large Scale Commercial
MFTS	Master Farmer Training Schemes
NFRE	Non Farming Rural Economy
PAEO	Provincial Agriculture Extension Officer
PEA	Participatory Extension Approach
RLGA	Radio Listening Group Approach
SLA	Sustainable Livelihood Approach
SLAG	Settlement Land Acquisition Grant
SSC	Small Scale Commercial
SSCF	Small-Scale Commercial Farm
T&V	Training and Visit System
UNCSD	United Nation Commission of Sustainable Development
UZ	University of Zimbabwe
WFP	World Food Programme
ZFC	Zimbabwe Fertilizer Company
ZCFU	Zimbabwe Commercial Farmers Union
NDA	National Department of Agriculture South Africa

© University of Pretoria

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND

Agriculture is the backbone of Zimbabwe's economy, and contributes about 14.0% of Gross Domestic Product (GDP), provides employment for 70% of the population, and produces 60% of all raw materials for industry. Further, about 45% of the country's exports are of agricultural origin. Accordingly, a healthy agricultural sector in Zimbabwe can contribute immensely to the economic recovery of the country (FAO, 2012).

The aim of land reform in post-independence Zimbabwe was to redress past land alienation, by promoting equal access to land for the majority of the population. The programme was to provide: land to the landless, decongest rural areas, redress historical landholding imbalances and facilitate the establishment of indigenous commercial farmers (Chimanikire, 2010).

The land-reform programme in Zimbabwe was first initiated just after independence in 1980. The first phase referred to as Market Based Land Reform was implemented from 1980 to 1998. During this phase approximately 3.5 million hectares of land were acquired by the Government on which 71 000 indigenous families were resettled (Chimanikire, 2010:6). The second phase of the Market Based Land Reform was initiated in 1997. During this phase only 0.17 million hectares was acquired for the resettlement of 4 697 families (FAO/WFP, 2009).

The Fast Track Resettlement phase was officially launched on the 14th of July 2000. This phase of land reform was characterised by land invasions, violence and hostile takeovers (FAO/WFP, 2009). According to Chimanikire (2010), the land reform programme in Zimbabwe to date has left approximately only 200 active large-scale commercial farms operating in their original land holding. Since 2001 the large-scale farms have been subdivided and converted into A1 model farms (small subsistence

© University of Pretoria

farmers) and A2 model farms (commercial medium and large farmers). Many of A1 and A2 farmers lack access to capital and other production inputs, which contributes to severe under-utilization of land resources and low production. Due to these reasons there has been a significant decline in national dairy and export beef herds, and other agricultural output exports (FAO/WFP, 2009).

Kinsey (1999), highlights that Zimbabwe's land reform programme, which was first introduced in 1980, has been widely criticized, both from within government and by outside observers. He further argues that land reform programmes which involve large-scale human resettlement are unlikely to become apparent in less than a generation. The long `pay-back' time of land reform programme periods, undoubtedly contribute to why funding agencies seldom become directly involved with land redistribution programmes.

Chitiga & Mabugu (2008) are of the opinion that Zimbabwe has suffered immensely as a result of this badly orchestrated land reform process, although land reform can potentially increase average household incomes, improve income distribution and as a consequence reduce poverty.

The public agricultural extension system in Zimbabwe developed through the merging of the Department of Agricultural Research and Specialist Services (DR&SS) and Extension and Technical Department (Agritex) to form what is now called the Department of Agricultural Research and Extension (AREX) (Government of Zimbabwe, 2009:56). The department of AREX is led by a director, supported by three deputy directors each responsible of an operational area. The director reports to a principal director, based at ministry headquarters. The department has a total of 16 research and service stations and institutes, with 16 sub-stations. Extension is provided throughout the eight (8) provincial offices, supported by 57 district offices, with frontline staff based in the extension wards.

The function of AREX in the agricultural sector in Zimbabwe is to provide appropriate agricultural technical, professional and other support services to the resettled farmers. They establish and maintain strategic alliances, linkages, partnerships and

© University of Pretoria

networks with stakeholders (Non-governmental Organisations) and regional and international agricultural research and development agencies. The departments advise policy makers on matters related to research, extension and rural development and facilitate agricultural resources for the farming community, with the assistance of farmer unions (Zimbabwe Farmers Union and Zimbabwe Commercial Farmers Union).

Various extension methods are used by the public extension system namely: Group Development Area Approach, Master Farmer Training Schemes, Radio Listening Group Approach, Training and Visit System, and the Farming Systems Research and Extension (Hanyani-Mlambo, 2002).

The extension methods used by NGOs and private companies to serve land reform beneficiaries include; Market-Oriented Extension Approaches, and Commodity-Based Advisory Systems. These extension approaches are mostly promoted by private companies which then buy tobacco and cotton as a support mechanism to their contract farmers. The Farmer Field School (FFS) approach is used by NGOs to assist small-scale farmers to adopt new approaches in agriculture, such as the use of Integrated Pest Management (IPM) (FAO, 2012).

1.2 PROBLEM STATEMENT

According to Groenewald, (2003) the conditions for successful land reform program are based on the following conditions;

- A proper institutional framework involving all relevant public and private bodies: the role and tasks of each should be clear, and also relationships between institutions.
- Proper fiscal planning is essential.
- Potentially successful farmers must be selected and given a special support, including extension and adult education. Existing extension services are generally not adequate, particularly in the fields of finance and marketing.

© University of Pretoria

- Complimentary services and infrastructure are needed in the form of improved access to financial services, markets and inputs and also improved transport, health, communications and other infrastructure.
- As not all functions can be done at the same time, proper prioritizing is needed to optimize the process.
- Land tenure reform is usually necessary; property rights and security of tenure are at the core of the matter.

Chimanikire (2010) asserts that because of the Fast-Track Resettlement programme, there was no proper institutional framework and proper programme designed for successful implementation of the land reform program. Hanyani-Mlambo (2012) explains that for a successful land reform programme, there is need of proper institutional framework which involves all stakeholders in the agriculture industry, adequate financing of the programme and the creation of infrastructure which support farmers like markets, financing and a proper tenure system.

The unsatisfactory extension support to newly resettled farmers by the extension department is a major concern, as there are notable differences in extension support requirements of A1 and A2 farmers. In addition these resettled areas are former commercial farming areas, which once provided most of the much needed food for the country and for export. Because of this, there is a strong need of intensive support for these farmers. This would suggest that restructuring of public extension services in these newly resettled areas is required (Hanyani-Mlambo, 2002:68).

It is evident from the literature that in Zimbabwe there was little planning or contingency steps taken to cater for the new categories of farmers which emerged as a result of the Fast Track Land Reform. The extension system management and methodology of service delivery are inappropriate for the unique set of needs of A1 and A2 farmers. It highlights a wider problem of poor institutional design of the agricultural extension programs being employed in Zimbabwe (Picciotto & Andersons, 1997).

© University of Pretoria

Picciotto & Andersons (1997) postulate that agricultural policy makers and extension practitioners need to go far deeper in finding a holistic approach to extension programs, which strengthens farmers' capacities and facilitates their achievement of sustainable agricultural production.

There have been a number of valuable studies in land reform and agriculture extension (Lebert, 2003, Kinsey, 1999, Chitiga and Mabugu, 2008, Hanyani-Mlambo, 2002 and Chimanikire, 2010), all of which present evidence on conditions for a successful land reform and effective extension systems. However, none of these studies provide literature on the requirements for a sustainable extension support to the land reform beneficiaries.

1.3 PURPOSE STATEMENT

The aim of the study was to describe and determine the effectiveness of the current extension support to newly established A1 and A2 farmers in Zimbabwe and to identify possible shortcomings in the present extension service delivery systems. The study also aimed to identify some of the knowledge support needs of newly settled farmers. Meeting these informational needs would enable farmers to contribute more effectively to the agricultural sector, enabling it to once again become key to the country’s economic stability and growth.

1.4 RESEARCH OBJECTIVES

The following are the objectives of the study;

- To identify the extension needs of newly settled farmers for sustainable land reform.
- To describe and analyse current extension activities in newly resettled areas.
- To identify shortcomings in the current system of delivering extension services aimed at addressing the needs of land reform beneficiaries.
- To draft some recommendations for policy-making and development-support for sustainable land reform.

© University of Pretoria

The following hypothesis was set for the study:

- H_0 = Differential needs and perceptions regarding extension support exists between A1 and A2 Farmers.

1.5 IMPORTANCE AND BENEFITS OF THE STUDY

The importance of the study is to contribute to academic literature on the developmental processes of land reform and innovative extension delivery systems, with specific reference to land reform and extension support in Africa.

1.6 STRUCTURE OF THE REPORT

- *Chapter 1* introduces the background information of the study, problem statement, research objectives and the importance of the study.
- *Chapter 2 to 4* provide a literature review of the land reform process in Zimbabwe from 1980 to present day, land reform programs in Southern Africa (South Africa, Namibia and Malawi), approaches to sustainable agriculture support and managing risk in farming (chapter 3) and the role and functions of agricultural extension services in Zimbabwe (chapter 4).
- *Chapter 5* outlines the research methodology, and a brief overview of the research area and districts of study, sampling methods, data collection and data analysis.
- *Chapter 6* outlines the farmers' perception of the land reform process, also profiles farmers gender, education and socioeconomic status.
- *Chapter 7* outlines the extensions perception of the land reform process including their perception regarding the quality of extension delivery systems and perceived problems and obstacles inherent to them.
- *Chapter 8* consists of concluding remarks recommendations for policy makers.

© University of Pretoria

CHAPTER 2
LAND REFORM PROCESS IN ZIMBABWE

2.1 INTRODUCTION

The colonization of Zimbabwe began in the early 1890s, with the pioneer, Cecil John Rhodes, crossing over north of Limpopo. This was motivated by gold discoveries in Johannesburg in the 1870s (Mutisi, 2008).The British South Africa Company (BSA) was a commercial company given concessions from the British authorities to explore of minerals in the region. The company established its first settlements of Europeans at Fort Salisbury (now Harare); the land was set aside and pegged out as farms. As result of the company unable to profit from gold exploitation, and the company then encouraged the European settlers to farm (Chimanikire, 2010).

During the first decade of the European settlement in Zimbabwe, African people resident in the area at the time rebelled against the forced alienation from the land. This led to an internal war between colonist and native forces erupting in 1896. The conflict was named Chimurenga and this rebellion lasted through into 1897, when the Africans were ultimately defeated (Kinsey, 1999).

In 1951 the Native Land Husbandry Act was passed, which aimed to limit the number of livestock housed in a designated space as well as introducing soil and water conservation methods (Chimanikire, 2010). In the 1960s a civil war broke out, which is known as the second Chimurenga. The war lasted for almost two decades before negotiations for a settlement began late 1970s, and the Lanchester agreement was drafted in 1979 (Kinsey, 1999).

2.2 AGRO-ECOLOGICAL ZONES OF ZIMBABWE

Zimbabwe is a landlocked country with a total land area of 39.6 million hectares of which 33.3 million hectares (85%) is agricultural land. The remaining area consists of national parks, state forests and urban land. The agricultural sector is strongly

© University of Pretoria

diversified; producing 23 types of both food and cash crops, and has a vibrant livestock industry (FAO, 2009)

Table 2.1 Agro-ecological zones of Zimbabwe (Ministry of Agriculture, 2006)

Natural Region	Area ($Km^{2)}$	Rainfall ($mm\ yr^{-1)}$	Farming System
I	7 000	>1 000	Specialized & diversified farming
II/IIB	58 00	750 – 1 000	Intensive farming
III	72 900	650 – 800	Semi- intensive farming
IV	147 800	450 – 650	Semi-extensive farming
V	104 400	< 450	Extensive farming

The land is divided into five agro-ecological zones known as natural regions on the basis of soil type and climatic factors (Mathemera, 1997; MOA, 2006) Table 2.1 shows the different natural regions and the characteristics of it. The research area (Mashonaland West) mostly falls under the natural regions I, II and V. These natural regions (NR) are defined to relate to climatic conditions, soils and appropriate farming systems specific to each region. The agricultural potential of the regions declines from NR I to NR V.

- *Natural Region I* lies in the eastern side of the country and is characterized by high precipitation (above 1000mm per year) and low temperatures, high altitudes and steep slopes. This region is suitable for specialised intensive livestock and crop production and occupies only 2% of the total agricultural land (Mathemera, 1997).

- *Natural Region II/IIB* is found in the middle northern side of the country and is characterized by fairly reliable rainfalls ranging from 750 to 900 mm per annum. This region comprises 15% of total land designated for agriculture and intensive grain production and livestock production (MOA, 2006).

- *Natural Region III* is found mostly in the mid-altitude areas of the country. The region is characterized by annual rainfall ranging from 650 to 800 mm, mid-season dry spells and high temperatures. It occupies about 18% of the total agricultural land. Agricultural activities in this region include semi-extensive

© University of Pretoria

livestock production, small scale ranching and growing drought resistant crops (MOA, 2006).

- *Natural Region IV* is the largest region occupying 38% of the agricultural land area. It is located in the low-lying areas in the north and south of the country and has an annual rainfall ranging from 450 to 650 mm. The agricultural activities in this region include semi-extensive livestock production and growing drought resistant crops (MOA, 2006).

- *Natural Region V* is the agro-ecologically poorest region in Zimbabwe. It is located in the low-lying areas in both the north and south of the country, occupying 27% of the country's agricultural land (MOA, 2006). It experiences a highly erratic rainfall pattern with average precipitation of less than 450 mm per year. The commercial farmers of this region practice extensive beef production and cattle ranching. The smallholder farmers are mostly involved in livestock and crop production with maize and small grains as the dominant crops (FAO, 2009).

2.3 POST INDEPENDENT LAND AND AGRARIAN REFORMS IN ZIMBABWE

The aim of the land reform process in post independence from 1980 to 2009 was to readdress past land alienation, by promoting equal access to land for the majority of the population. The programme aimed to provide land to the landless, a situation which was created by the Land Apportionment Act of 1930 and then further exacerbated by the Land Husbandry Act of 1951 (Chimanikire, 2010).

© University of Pretoria

Table 2.2 Land ownership pattern in Zimbabwe at Independence in 1980 (FAO/WFP, 2003)

Sector	Million hectares	% of total
Large-scale commercial	15.5	39.1
Small-scale commercial	1.4	3.5
Communal	16.4	41.4
National parks and urban	6.0	15.2
State land	0.3	0.8
Total	**39.6**	**100.0**

Table 2.2 shows the land ownership pattern of Zimbabwe at the time of independence in 1980. 39% of the farming sector was comprised of large-scale commercial farms while 41% was occupied by communal farmers. Zimbabwe has implemented various land reform models, beginning with a market based land reform programme (1980-1996) which received very little international support. This is in contrast to other, similar market assisted land reform programs implemented in other developing nations (e.g. Brazil and Colombia whom received major external interventions and inputs of resources for their programs) (Chimanikire, 2010).

The failures/weaknesses of the market based land reform program to change the distribution of land in Zimbabwe after independence led the government to shift towards a compulsory land acquisition framework The primary reason for the failure of the market based land reform program was that it was heavily under-resourced (Chimanikire, 2010).

2.4 STATE CENTRED MARKET BASED LAND REFORM: 1980 - 1996

The state centred market land reform program was launched in 1980 where land was purchased by the state from willing sellers and then redistributed to beneficiaries. The private sector did the initial identification of the land for resettlement with the government being the buyer (Chimanikire, 2010).

Government then distributed the land to selected beneficiaries, mainly through its district officials under the direct supervision of central government. Acquisition of

© University of Pretoria

land through "willing seller willing buyer agreements[1]" was relatively untroubled during the period from 1981 to 1983. Further, a substantial number of farms had been abandoned during the war, and many more farms put on the market as many white farmers emigrated after the declaration of independence. However, after 1983 there was a significant decline in the number of farms that were available for selling (Chimanikire, 2010:13).

Table 2.3 below illustrates the agricultural land (in hectares) being purchased by the government between 1980 till 1989. More land was purchased by government during the period 1980 to 1983, with a total of 2 063 317 hectares redistributed *(*Palmer, 1990).

Table 2.3 Land purchased by the state for resettlement, 1980–1989 *(*Palmer, 1990)

Financial year	Land (hectares)	Financial year	Land (hectares)
1980/1981	223 196	1985/1986	85 167
1981/1982	900 196	1986/1987	133 515
1982/1983	939 925	1987/1988	20 319
1983/1984	159 866	total 1988	2 538 262
1984/1985	75 058	total 1989	2 713 725

After 1983 very few farms came onto the market in their entirety. This made advance planning on the part of the government difficult. Farmers with larger farms, rather than selling outright, held onto their core productive land and sold off marginal land holdings. This was motivated by the increase in land prices due to post war political stability, and increased demand through the government market based land reform approach. Under the new land reform policy, White farmers wanting to sell land were legally obliged to offer it to the state first. If the state was not interested in buying the land, a "no present interest" certificate valid for one year was issued. This then enabled the seller to dispose of the land on the private market (Lebert, 2003).

[1] Willing seller willing buyer agreements is when willing sellers (private owner) have discretionary powers to choose to sell their land at market or market related prices to the highest bidder or buyer of choice (Johnson,2005).

© University of Pretoria

The State Centred Market Based Land Reform Program handled the settlement of the beneficiaries by applying of four models (Government of Zimbabwe, 2004) :

- *Model A – (Intensive Settlement on an Individual Family Basis):* In this model, land was acquired by the state (usually in the form of large commercial estates), and then divided to two smaller plots which were then redistributed to beneficiaries. Tenure was granted through issuing of three permits on an annual basis: one for settlement, one for cultivation and one for grazing. This model facilitated more than 80 percent of the land reform in the 1980s and 1990s. The beneficiaries received both crop land (10 to 65 hectares) as well as access to communal grazing (55 hectares or the equivalent, depending on the agro-ecological region). A final contingency of this model was that black settlers (beneficiaries) who received land had to give up their rights to land in the communal areas they came from.

- *Model B – Village Settlement with Cooperative Farming:* Model B was designed to purchase existing large commercial farms and cooperatively organize farm production. In this model decision making would occur through a committee. Credit was accessed by the cooperative, and the farm income was distributed either to individual families or allocated for farm development. Approximately 50 such cooperative schemes were set up, although many subsequently failed (Chimanikire, 2010).

- *State Farms with Out-Growers (Model C):* This model was not extensively implemented, as it involved the intensive resettlement of farmers around core estates. It was assumed that the estate will assist the new settlers with services like administration and training; in return the beneficiaries provided labour on the estate. Cropping land within this scheme was allocated on an individual basis, with the new farmers in addition gaining access to grazing land, which was managed communally. A professional farm manager managed the core estate (Chimanikire, 2010).

© University of Pretoria

- *Commercial Grazing for Communal Areas (Model D):* Under Model D, which was implemented in the arid south regions of Zimbabwe, commercial ranches were acquired adjacent to communal land. Livestock is then bought to farm with on the commercial ranches. The aim was that this would enable communal farmers to reduce grazing pressure on existing communal lands (Chimanikire, 2010).

2.5 FAST TRACK LAND REFORM PROGRAME (1997- 2009)

The second phase of the land reform started officially in 1997, commencing with gazetting of 1 471 farms for compulsory acquisition. The Government of Zimbabwe initiated a process of radical land reform, premised on extensive compulsory land acquisition and redistribution. The Fast Track Land Reform programme (FTLRP) was officially launched in July 2000 as part of the second phase of land reform. This phase was characterised by land invasions, compulsory acquisitions where farms were taken from white commercial farmers, private companies and absentee landlords (Lebert, 2003; Moyo, 2001).

The second phase of resettlement had two different types of resettlement regimes (Mushimbo 2005):

- The first regime was called: Model A1 and intended to depopulate the communal areas. This regime of land redistribution targeted land-limited farmers in communal areas. The model was based on the existing communal area organization where the communal farmers produce mainly for food security or subsistence

- Model A2 is the commercial settlement design made up of the small, medium and the large-scale commercial settlements. This was intended to establish a group of black commercial farmers.

© University of Pretoria

Table 2.4 Beneficiaries of the Land Reform Programme as per province (May 2003, FAO/WFP)

Province	No. of Gazetted farms	Area in ha	Number of beneficiaries	
			A1 model	A2 model
Manicaland	644	588 028	20 023	1 405
Mashonaland Central	754	833 287	26 541	4 011
Mashonaland East	1 182	1 133 473	26 252	8 133
Mashonaland West	1 381	2 190 290	37 801	12 198
Masvingo	404	1 646 920	41 001	988
Matabeleland North	565	1 738 446	15 819	195
Matabeleland South	403	1 366 824	16 458	224
Midlands	621	1 164 492	21 928	1 511
Total	**5 954**	**10 661 760**	**205 823**	**28 665**

Table 2.4 illustrates the number of mainly white owned farms as per province gazetted and the redistribution and also the total area distributed amongst A1 and A2 farmers. The Government of Zimbabwe (2000:78) stated that the main objectives of the FTLRP was to speed up the identification of at least five million hectares of land for compulsory acquisition for resettlement, to accelerate the planning and demarcation of acquired land and settler emplacement on this land, and to provide limited basic infrastructure and farmer support services.

Zikhali (2008) explains that the tenure arrangements within the FTLRP entails permits for Model A1 beneficiaries and a 99-year lease. Similar permits are issued for Model A2 beneficiaries with an option to purchase the land. Uncertainties regarding tenure arrangements within the FTLRP have resulted in tenure insecurity among FTLRP beneficiaries, and ownership disputes. In addition, the use of different sets of regulations, administration and policies on multiple tenure systems created grounds for conflicts that have adversely impacted agricultural production.

Moyo (2004) further elaborates that, under the FTLRP, the production of the four main commercial field crops produced in Zimbabwe namely; wheat, tobacco, soybeans and sunflower, declined because of reduced area plantings; low production output levels. The decreased production output levels resulted from low uptake and use of land; and were further compounded because of inexperienced

© University of Pretoria

and under resourced new farmers. The main crops produced by smallholder farmers including maize, small grains, groundnuts and cotton also showed a decline in total production despite the marginal increase in area planted.

2.6 LAND TENURE SYSTEM LAND RIGHTS USED FOR LAND REFORM

The following are the current tenure instruments which have been implemented in Zimbabwe since the resettlement of farmers in the first and second land reform programmes (Rukuni, 2012);

- *Freehold Title* – Freehold title was used mostly during the first phase of land reform in Zimbabwe. Most of the farmers who were resettled in the first phase were awarded title deeds. However, this tenure instrument was not used in the second phase of land reform. Freehold tenure has use, transfer, exclusion and enforcement rights.
- *Short-term leases* – Short-term lease was used in the first phase of land reform, mainly for small-scale commercial farmers. These leases have use and exclusion rights only.
- *99-Year Leases* – 99-year leases are used for A2 resettlement, but so far very few A2 farmers have been awarded the 99-year leases. These leases have use and exclusion rights only. The farmer can make use of the land up to 99 years, with the option to further renew the lease.
- *Offer letters* – Offer letters are for A2 resettlement farmers, who then have to apply for a 99-year lease. Under the Offer Letters, farmers are given use and exclusion rights but are mandated to apply for a 99-year lease. The offer letter indicates the individual have been offered land.
- *Permits* – Permits are utilised under the model “A” old resettlement and the A1 Fast Track resettlement. These have use and exclusion rights.

The Land Rights defined (Rukuni, 2012);

- *Use rights* – these include the rights to grow crops, trees, make permanent improvements on the farm.
- *Transfer rights* – these defined the rights to sell, give, mortgage, lease and rent the farm.

© University of Pretoria

- *Exclusion rights* – defined the rights to exclude others from using the land.
- *Enforcement rights* – defined the rights to provision guarantee of use, transfer, and exclusion rights and to resolve disputes.

The Government of Zimbabwe is seeking to improve the current tenure system and security which will allow farmers to use their land as collateral security. Presently, the 99 year lease is still not adequate for financing purposes, as banks do not accept these 99 year leases or any other of the tenure instruments as collateral apart from registered title deeds (Rukuni, 2012).

2.7 LAND REFORM PROGRAMS IN SOUTHERN AFRICAN COUNTRIES (SOUTH AFRICA, NAMIBIA AND MALAWI)

2.7.1 LAND REFORM IN SOUTH AFRICA

The Land Act of 1913 institutionalised the land dispossession of Africans, creating communal land tenure administered by traditional leaders. These former homelands covered about 13.9% of South Africa by 1991. South Africa transferred over 6.8 million hectares of land to people dispossessed under apartheid between 1994 and 2011, and this represents 27% of the South African government's target of transferring 24.5 million hectares by 2014 (Ntsebeza, 2010).

According to Gordon (1997), land reform in South Africa took place in the form of the three programs:

- *Land Restitution*- which allows that persons or communities whose land was dispossessed by the apartheid laws or practices from 1913 to submit claims for restitution (return of land) or compensation (usually financial). The invitation to submit claims had a cut-off date of March 1999. By the cut-off date in 2004 ,68 878 restitution claims by individuals and communities were lodged with the Land Claims Commission of which 72% of the claims were in the urban areas with the remainder in rural areas (Vink and Kirsten, 2006).

© University of Pretoria

By 2000, 36 489 claims were settled which involved about 85 000 households. In total, compensation of R1.2 billion was awarded by December 2002. For rural claimants the restitution mainly took the form of the return of land. Approximately 571 232 hectares were restituted by December 2002 (Cousins, 2009). By March 2010 the commission on restitution of land Rights (CRLR) had settled approximately 96% of the restitution claims lodged since 1996 (DRDLR, 2010).

- *Land Redistribution*- the emphasis of land redistribution was to provide the disadvantaged and the poor with land for housing and small scale farming purposes. The state assists communities and applicants to purchase land from landholders and make land acquisition grants available. This program is based on a "willing buyer and willing seller" arrangement. Between 1995 and 1999 it was done mainly through the Settlement Land Acquisition Grant (SLAG) which allocated R16 000 cash grant to each beneficiriary to be used for the purchase of land on the open market (Cousins, 2009). SLAG was replaced in 2001 with the LRAD program (Land Redistribution for Agricultural Development) where beneficiaries could access between R20 000 and R100 000 depending on their own contribution.

- *Land Tenure Reform* aims to provide people with secure tenure where they live or farm, to prevent arbitrary evictions and fulfil the constitutional requirement that all South Africans have access to legally secure tenure in land. In order to address the tenure insecurity of labour tenants and farm worker, specific legislation has been enacted and is being used to prevent evictions by owners of the commercial farmland on which these categories of people live. The Land Reform (Labour Tenants) Act, 1996 (Act No. 3 of 1996) provides for the protection of the rights of labour tenants and gives them the right to claim land.

© University of Pretoria

Table 2.5 Total land transfers under South African Land Reform from 1994 – 2006 (Manenzhe, 2007)

Programme	Ha	Contribution in %
Redistribution	1 477 956	43.8
Restitution	1 007 247	29.9
State Land disposal	761 524	22.6
Tenure reform	126 519	3.7
	3 373 326	**100**

Table 2.5 shows the total land transferred in each land reform program from 1994 to 2006. Government and stakeholders acknowledged that there are huge challenges being faced in the land reform implementation in South Africa. Some of the challenges include the slow pace of land delivery which is failing to meet the expectations of the stakeholders as the market based land reform which operates on the "willing seller willing buyer" approach, usually has inflated land prices, which makes it costly. Due to poor extension support after resettlement and corruption has seen the land reform program in South Africa, losing millions of rands and due non-productivity in the resettled farms de-railing the land reform process (Manenzhe, 2007).

2.7.2 LAND REFORM IN NAMIBIA

Namibia gained independence in March 1990 from Germany, and the country inherited a colonial division of which the white farmers, owned approximately 50% of the country's agricultural land (Brigitte, 2010).

The Land Reform program in Namibia was aimed at improving the lives of dispossessed previously disadvantaged Namibians. The farms, which are obtained by the government for resettlement purposes, are split into several sections, and then dozens of families are resettled on the previously whole single farm. The transfer of commercial agricultural land is not conducted directly by government, but the would-be-farmers obtain farms privately or through affirmative action loans in such cases, the "willing buyer willing seller" principle applies (Brigitte, 2009).

© University of Pretoria

Table 2.6 shows the redistribution of land in Namibia as from 1980 – 2005 , Land reform in Namibia is mainly based on the land redistribution program A total of 969 farms have been redistributed to the previously disadvantaged Namibians since 1980 - 2005 by means of private transactions, and some through government-facilitated loans.

Table 2.6 Redistribution of land in Namibia 1980 – 2005 (Manenzhe, 2007)

Year	Type of acquisition	No. of farm redistributed	Total Area (Ha)
1980-1990	Representative Authorities	181	980 260
1991 - 2005	Resettlement	163	993 841
1992 - 2005	Affirmative Action Loan Scheme	624	3 470 000
	Total	**969**	**5444 101**

The program in mainly modelled on “willing buyer willing seller” model, the same problems found in other countries in southern African countries like South Africa of inflated land prices making the land costly is the main impediment to a faster land reform process (Manenzhe, 2007).

According to Brigitte, (2009) Namibia's land reform process is based on three strategies, outlined by the Agricultural Land Reform Act of 1995 which are;

- *Willing buyer-willing seller principle* - the Namibian government buys farms from commercial farmers on the willing buyer-willing seller principle and distributes to previously disadvantaged people. A state-owned bank, grants loans with interest at below market rates to this previously disadvantaged population for capital to purchase land and for infrastructure development.

- *Communal land* - the state divides state land into small units and the redistribution of the land is done by the traditional leaders.

- *Expropriation of commercial farms* - in 2005 the Namibian government began expropriation of commercial farms. Although by 2008, only five farms had in fact been expropriated. A further 30 farm owners have received letters asking

© University of Pretoria

them to sell to government which has instilled fear in the white farming community and discouraged further investment.

According to Brigitte (2010), from 1990 to 2007, the government of Namibia resettled approximately 800 black farmers on land bought for redistribution. This represents approximately 12% of commercial farmland in the country.

2.7.3 LAND REFORM IN MALAWI

The British colonial settlers categorised land into public land, private land and customary land. After independence in 1965 the government of Malawi passed the 1965 Land act. This Act did not challenge the land classifications of private land, public land and customary land introduced under British colonial rule. Essentially, it operated only to transfer power from one ruling authority to another, by replacing the governor and commissioners who previously exercised power on behalf of the British sovereign, with minister of the Malawi government (Muchopa, 2003).

According to Madola (2003) an attempt at genuine land reform was made in Malawi by enacting a land law (The Tenure Act) in 1967. The purpose of the Act was to make provision for the registration of title to land. The policy was to privatise customary land through the introduction of freehold tenure, as a means of promoting agricultural development. The Customary Land Development Act (CLD) and the Local Land Boards (LLB) Acts were also enacted to enforce that purpose.

Madola (2003) states that approximately 60 percent of land in Malawi is customary, meaning that the land is untitled and administered by the national government, with local communities allowed traditional user rights. In 2002 the government of Malawi set up a new land policy, which provides small landholders with tenure rights. The process allows small farmers to register customary land as private property. Attempts to boost the productivity of smallholder farmers were made through the introduction of a farm input subsidy program, however funding for this program has been cut as a result of their ongoing national financial crisis.

© University of Pretoria

Madola (2003) states that land problems in Malawi emanate from residual effects of colonial land policy, high population to land ratio, fragmented and uneconomic family holdings, poor utilization of leasehold estates, under utilization of land available, and land scarcity resulting from corrupt administrative practices.

© University of Pretoria

CHAPTER 3
APPROACHES TO SUSTAINABLE AGRICULTURAL SUPPORT AND MANAGING OF RISK IN FARMING

3.1 INTRODUCTION

UNCSD (2007:68) defines sustainability as "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs". There are three basic principles that are applicable when offering sustainable extension support. The first principle: *Participation* consists of the process of technology identification, development and transfer, centred on the consideration with farmers' views and inputs. Secondly, the principle of *Integration*, which involves a process where researchers, extension agents, and farmers continuously interact in solving of problems on the farm. Lastly, the principle of *Environmental* awareness among farmers, extension and all other role players in agriculture. Environmental awareness is however relatively low among land reform beneficiaries and therefore degradation and deforestation in areas of resettlement is high (Asiabaka, 2001).

3.2 PROGRAMMED EXTENSION ACTIVITIES AS WAY OF SUSTAINABLE SUPPORT

Programmed extension is a systematic, rational, and pragmatic approach to planning, implementing, managing, monitoring, and evaluating regular programmes of an agricultural extension services (FAO, WFP & IFAD, 2012).

According to Terblanche (2004), applying programmed extension delivery can be a way to establish a sustainable extension support. The following levels 1 to 7 can be used to increase accountability and effective coordination in extension programmes;

- *Level 1* – Inputs: This includes personnel, equipment, expertise and finance provided by extension.
- *Level 2* – Activities: includes methods of delivery or methods which are going to be used by extension.

© University of Pretoria

- *Level 3* – People involvement: the programme should ensure participation of people, which are the farmers.
- *Level 4* – Reactions: the response of the targeted farmers with regards to methods used.
- *Level 5* – KASA (Knowledge, Aspiration, Skills and Attitude) change: by giving the farmers relevant knowledge, changes their aspirations, skills and attitudes.
- *Level 6* – Practice change; have farmers adopted and applied the knowledge and skills.
- *Level 7* – End results these are the expected outcome of the extension program; for example was there any change in farmers' behaviour, or was there an increase in farmers` production.

Worth (2006) asserts that extension officers require a framework of operation so as to ensure that services rendered are relevant to the farmers targeted by the extension service and aligned to the stated priorities. He describes the Sustainable Livelihood Approach (SLA), as a means to sustainable extension support. This approach provides a useful learning framework, with positive implications for extension. SLA was developed with the objectives, scope, and priorities for development, in order to address poverty and development. It operates with understanding that farmers exist within a system of household systems, community systems, social systems and livelihood systems.

Worth (2006) explains that this approach finds practical ways to investigate individual and collective social and economic advancement. It recognizes information which is relevant to that advancement and engages the farmers in the entire process of sustainable development. He noted that a livelihood is only sustainable when it can "cope and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base" (Worth, 2006).

The framework of the sustainable livelihood approach is structured around these following key principles (Worth, 2006):

© University of Pretoria

- *People-centred:* the choices farmers make, given their unique circumstances. An understanding of how farmers sustain their lives and the choices they make makes this point a departure for sustainable livelihood approaches.
- *Participatory:* It is better to work with people, using participatory methods to analyze their livelihoods rather than extracting information at a distance.
- *Holistic:* Farmers do not live "discretely defined" lives, but they live within complex systems with multiple strategies for living and are usually integrated parts of larger socio-economic systems outside their individual or family lives.
- *Differentiation:* Households are unique and differ from one another, and likewise the members of a single household differ from one another. Understanding the variations that exists enables tailoring of interventions to make them better able to meet individualised extension needs.
- *Dynamic:* Observe that livelihoods are dynamic and vulnerable to ever changing socio-economic, environmental and cultural influences. The understanding the ever-changing landscape fosters the development of interventions which allow flexibility and adaptability.
- *Building on strengths:* A sustainable approach "starts with people's strengths not needs", which implies that recognition of everyone's potential, and the community's "natural" capabilities.
- *Macro-micro links*: Sustainable livelihood strategies dissolve with the distinction between micro-macro development activities. Usually there is a bias toward either micro or macro level interventions when taking into consideration development policy and action. Worth (2006) argued that government policy (macro) needs to be informed by the local level (micro) and *vice versa.*

This approach provides useful framework which can be utilised for developing extension models, identifying learning and training requirements for farmers as well as to identifying opportunities for adjustments to current agricultural extension.

© University of Pretoria

Figure 3.1, describes the important aspects of livelihoods assets; namely the financial capital, physical capital, social capital, natural capital, and human capital required to sustain a livelihood.

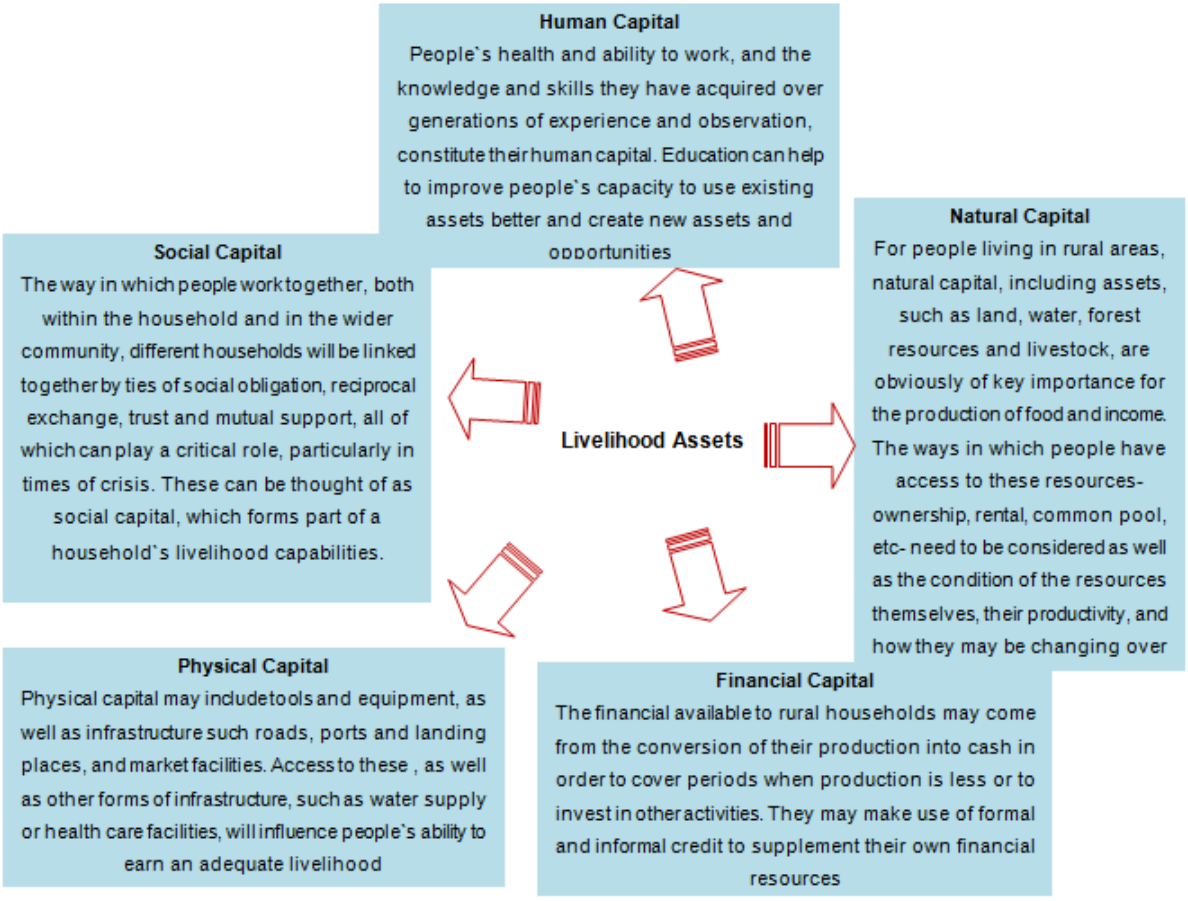

Figure 3.1 Livelihood assets (Worth, 2006)

Livelihood assets these are assets people use to pursue their livelihood strategies; they consist of physical, financial, human, social capital , and environmental. They are also referred to as capitals and generally as resources. Livelihood assets defines the options available to a household, and also constraints on a household in pursuit of their livelihoods (FAO, 2012).

3.3. MARKETING EXTENSION APPROACH

Studies have shown that marketing and farm management extension approaches are feasible and a pragmatic way for implementing sustainable extension support (Kahan 2007). The following important points are applicable for following a marketing extension approach:

© University of Pretoria

- Marketing process should be customer oriented.
- Agricultural marketing is a commercial process which provides farmers, transporters, traders and processors with a profit
- It is advisable to identify buyers
- It is advisable to understand what customers want in terms of products and how they want to be supplied.
- It is advisable operate a production-marketing chain that delivers the right products at the right time.
- It also assists in generate sufficient profit so as to continue to operate.

3.3.1 THE ROLE OF MARKETING IN SUSTAINABLE EXTENSION SUPPORT

According to Kahan (2007) most farmers view themselves as “price takers”, assuming that they have no control over prices and have to accept whatever is offered. This is because they do not know how to find buyers nor how market demand is changing and which products are the most profitable to cultivate. They do not have an understanding how to improve on the prices they receive and therefore how to effectively increase the profitability of their production.

Marketing needs a strong incentive in order to increase the value of rural trade, because, as logic dictates, increased sales should lead to increased profits. Traders and other rural businesses can also assist farmers in identrifying new markets and lowering their costs. This leads to improved production opportunities and higher incomes for farmers (Dixie, 2005). Identifying of new markets, advising on technologies and improving understanding of markets are ways in which extension workers assist farmers to increase sales (Shepherd, 2007)

Dixie (2005) explains that as farmers become more market oriented, extension workers need to be in a position to advise them not only on how to grow crops but also on how to market them. Hence knowledge of produce handling and beneficiation, storage and packaging is also essential for the extensionist. The role of extension is to help farmers become better informed about the markets, so as to enable them to make decisions which improve their marketing skills and access.

© University of Pretoria

However, extension officer should not instruct farmers what to produce for selling, as commercial decisions like these should be made by the farmers themselves. (Kahan, 2007).

Promotion of competition, provision of market information and improvement of market infrastructure are powerful ways to ensure good returns for farmers. Extension officers should aim to help farmers farm more profitably. Improving prices and profitability has more impact on farmer incomes than increasing production. Increasing production often involves greater risks, so farmers should aim to achieve a balance between profit and risk (Shepherd, 2007).

3.3.2 IMPORTANCE OF TRADERS IN MARKETING EXTENSION

Crawford (1997) asserts that it is often not understood how important traders are. The more dynamic the trading sector and the greater the competition between traders, the greater will be the volume of produce taken out of the farming areas and incomes returned to the farming community. Long-term relationships between farmers and traders are important. If traders are consistently making good profit, more traders would be attracted into buying and selling the same products. Traders are therefore to be encouraged and supported, not criticised.

According to Dixie (2005) it is beneficial to both traders and farmers to establish long term business relationships. Traders usually conduct business with clients with whom they have worked for years. However, farmers often neglect or fail to nurture long-term relationships with traders because of slightly higher prices offered potential new buyers. This can be risky as new buyers, as a tactic, will generally offer excellent prices initially in order to secure supply and market share. There is no guarantee that they will continue to pay more. Kahan (2007) is of the opinion that for agricultural marketing arrangements to continue over a long period, it should be financially sustainable to both parties.

© University of Pretoria

3.4 FARM MANAGEMENT EXTENSION APPROACH

'Farm management' focuses on taking decisions that are concerned with the operation of the farm as a business. In this way it includes a number of functions: observation, diagnosis, choice between alternatives, accepting responsibility, taking action and controlling. An understanding of economics is required to select and combine farm enterprises and allocate resources efficiently (Kahan, 2007). According to Crawford (1997) the key feature of farm management is the broad scope of what is involved. The emphasis is on the task of combination of resources and markets and on produce marketing. Under the farm management approach to extension, farmers' marketing decisions are just as important as decisions about production.

Kahan (2007) define Farm Management Extension as "any formal method or procedure that is employed to generate information used by a decision-maker to analyse and specify possible solutions and to monitor and evaluate the progress and effectiveness of a solution that was chosen and implemented".

According to Kahan (2007) management techniques are relevant in generating information that can be used to solve problems in any given decision making situation. Farm management extension advice has two main elements:

i) To prompt farmers to consider and manage their farms as a business
ii) Prioritizing and directing agricultural extension activities.

Farm management extension approaches make use of informal adult education strategies; including formalized training programmes, coaching, mentoring and counselling practices regarding agricultural management practices (Kahan, 2007). This approach helps to assist farmers in identifying and analysing problems more effectively, and to alter their solution seeking behaviours. The main objective of offering "Farm management extension" is to make farmers think through their choices rather than providing prescriptive ready-made solutions (Dixie, 2005).

© University of Pretoria

Poon (2001) is of the opinion that farm management extension covers technical as well as economic aspects of extension support. The aim is to ensure that farmers make the most from the scarce resources under their control. In this way farm management extension approaches should be incorporated into general agricultural extension. Shepherd (2007) says it is not enough to identify solutions to farm management problems. The solutions need to be effectively disseminated to farmers and appropriate methods must be developed to ensure broad outreach combined with cost-effectiveness.

Kahan (2007) gives examples of ways to disseminate solutions which include pilot farms, pilot areas and farm model plans. These farm management methods should be used mainly, but not exclusively, to orientate agricultural extension work. Pilot farms are used for demonstration purposes so as to illustrate to groups of farmers selected problems and solutions to farm management. Pilot farms should be chosen based on their degree of representativeness of the majority of categories of farms in the area.

Farm model plans should be drawn up between the extension worker and farmer using farm business planning methods. Groups of farmers should visit the pilot farms where farm plans and technical and economic aspects are analyzed. The message and learning's produced through these planning and analysis processes should be conveyed to farmers by both extension workers and lead farmers (Shepherd, 2007).

The development of area based extension programmes should cover an entire season or calendar year. The critical point is the need to establish priorities for extension work at local level. Farm management is an analytical tool to enable extension services and research organizations to prioritise their areas of work (Shepherd, 2007).

Farm management specialists are required for this extension approach to ensure that extension workers achieve broad outreach among farmers. Elementary tools and methods should be used for farm data collection and analysis. Individual training

© University of Pretoria

methods should be used in the training of farmer leaders who can influence other farmers in the same locality (Shepherd, 2007).

3.5 "PRIVATIZATION" OF EXTENSION FOR SUSTAINABLE AGRICULTURE

Elements of privatization and diversification in extension services are increasingly being witnessed worldwide. Developed countries, such as Britain, France and the Netherlands, have made huge steps towards complete privatization of their services, and other countries like Chile and the People's Republic of China have moved to new contractual extension arrangements (Kahan, 2007).

According to Shepherd (2007) there are various approaches to offering private extension to farmers:

- *Share cropping systems*: the farmers provide the land, labour while extension worker provides the input and advice. The extension workers with contacts can easily obtain inputs, even on credit. All other costs, for example, such as labour can be shared. The advantages are as follow (Shepherd, 2007):
    - Cropping fields may serve as a demonstration plot for other farmers in the community,
    - Extension workers have a personal interest which may well motivate them to do their best,
    - Extension workers can work on this basis with multiple farmers

- *Extension contract system:* The extension firm may provide input and advice to a single farmer or a group of farmers. Input costs are recovered after harvest and compensation is given by the farmer. If the harvest falls below the agreed target as a result of poor recommendations, or late supply of inputs, the compensation is proportionately reduced (Shepherd, 2007).

- *Village extension contract system:* An agricultural advisory committee consisting of representatives of farmers at the village level and hired a consultant. The consultant works for the village as mutually agreed upon by

© University of Pretoria

committee and consultant. The committee collects money from villagers based on a set of predetermined criteria, such as area cultivated, crop produced in order to pay for consultancy. (Shepherd, 2007).

- *Contract farming:* An agribusiness firm provides inputs, technology and supervises production. The farmer is obliged to sell produce, as specified in quality, at a premium price only to the agribusiness firm. (Shepherd, 2007).

- *Public extension through private delivery:* Agricultural consultancy firms are graded and certified by a government agency. Depending on consultancy capacity, extension services are awarded to competitive bidders at different levels, i.e. state, district, and village. The cost of the service is shared between government and clients (Shepherd, 2007).

- *Voucher system:* Farmers are not provided with public extension service, but are given vouchers depending upon the size of land, type of enterprise and type of information needed. Farmers can use these vouchers to obtain services from any agricultural consultancy or firm, whether public or private (Shepherd, 2007).

3.6 MANAGEMENT OF RISK IN FARMING AS WAY TO ACHIEVE A SUSTAINABLE AGRICULTURE SYSTEM

Farmers are usually exposed to the unpredictable weather patterns, fluctuating market prices and diseases. Farmers are always confronted with uncertainty, as they do not always have all the relevant information on issues such as weather patterns over a season; or prices they will receive for produce sold (Kahan, 2007). The majority of these risks are often not under the control of farmers, therefore extension needs to develop ways to help farmers cope with and manage uncertainty (Dixie, 2005). Marongwe (2008) explains that at the beginning of a season, farmers need to decide on risk aversion decisions. These decisions may appear simple, but for each decision there are many possible consequences. At the time the decision is made, the outcome is uncertain, when the chance or probability of an outcome is known in

© University of Pretoria

advance this is called *risk.* When the chance of a given outcome is not known in advance this is called *uncertainty*.

Changes in government policies often pose as a risk and have a major impact on farm income and production (Shepherd, 2007). The more complex the risk is, the more difficult it becomes for farmers to make an informed decision. For effective decision making, farmers need information on multiple aspects of the farming business. A farmers need to find ways of dealing with risk and protecting himself from the uncertainties of the future (Connolly *et al*., 1999).

Eicher (2007) explains that farmers' attitudes toward risk differ in the degree to which they accept the risk. Some farmers are willing to accept greater risk than others. Attitudes to risk are often related to the financial stability of the farmer, and influence whether or not they would be prepared to accept a small gain or loss. Ngomane (2005) highlights that by its very nature farming is risky and farmers continuously live with risks, making decisions every day that affect their farming operations. Weather conditions can change and prices at the time of harvest can drop. Hired labour may not be available at peak times; machinery and equipment could break down when most needed; draught animals might die; and government policy can change overnight. All of these changes are examples of the risks that farmers face in managing their farm as a business.

Kahan (2007) maintains that market liberalization and globalization has increased the risk in Farming, with smallholder farmers having become especially vulnerable. A casual approach to farming, even if it is for means of producing food for household consumption only, is no longer viable. Farmers need to acquire more professional skills, not only in basic production but also in farm business management. He postulates that the most common sources of risk in farming can categorised into five risk areas: production, marketing, financial, institutional, human and technical risk.

- An example of *production risk* is equipment. A farmer's tractor may break down during the production season resulting in an inability to harvest in time, thus effecting yields.

© University of Pretoria

- *Marketing risk* changes in prices is beyond the control of any individual farmer. The price of farm products is affected by the supply of a product, demand for the product, and the cost of production. According to Kinsey (1999:87), the supply of a product is affected by a combination of production decisions made by farmers as a group, by weather and other factors that influence yields. Demand for a product is affected by consumer preference, consumers' income levels, and the strength of the general economy, product supply, and price of competing products.
- *Financial risk* occurs when money is borrowed to finance the farm business. This risk can be caused by uncertainty about future interest rates, a lender's willingness and ability to continue to provide funds when needed, and the ability of the farmer to generate the income necessary for loan repayment.
- *Institutional risk* refers to unpredictable changes in the provision of services from institutions that support farming. Such institutions can be both formal and informal and include banks, cooperatives, marketing organizations, NGOs, input dealers and government extension services. Part of institutional risk is the uncertainty of government policy effecting farming, such as price support and subsidies (Crawford, 1997)
- *Human and personal risk* refers to the risks to the farm business that result from a reduction in human resources caused by factors such as illness or death or an adverse personal situation in the farm family. Accidents, illness and death can disrupt farm performance (Kahan, 2007).
- *Environmental and social risks* refers to the systematic integration of environmental and social considerations into the operations an institution or an entity.

According to Kahan (2007) the different types of risk often need to be considered together. The degree of risk associated with an action depends in part, on the ability to predict what will happen in the future. Risk occurs because of unexpected changes, if farmers are able to understand and predict the patterns and trends throughout the year, the changes that occur may not be as risky (Gálvez-Nogales, 2010).

© University of Pretoria

Connolly *et al.* (1999) explains that skilful farmers generally do not become involved in high risk activities unless there is a chance of making a higher return and increasing profits, so potentially profitable situations need to be managed as carefully as possible. Good risk management involves anticipating potential problems and planning to reduce their detrimental effects. Farrington (2002) believes that extension workers should assist farmers in improving their risk management skills, by equipping them with the skills needed to recognize and understand their problems and the potential risks involved, so as to assist them in making better farm management decisions. Marongwe (2008) is of opinion that successful farmers are generally more competitive and therefore generate more profit through a good understanding of the farming environment and strong skills in risk management. By dealing with risk more effectively, better farming opportunities arise.

Gálvez-Nogales (2010) asserts that farmers are quite often dissatisfied with the outcomes of their decisions, because of the unanticipated consequences of changes which take place between the time the decision is made and the time the outcome of that decision is realized. This is because farmers operate within a complex network of socio-environmental state and so the outcomes themselves also depend on the decisions of others and future events that are beyond the control of the farmer. For effective decisions to be taken, farmers need to have all the necessary information regarding the input prices, output prices and yields, as well as other technical data.

In Figure 3.2 Kahan (2007) illustrates his conceptual framework on how farmers should evaluate and plan so as to reduce risk. This conceptual framework includes the following actions:

- Reflecting on and evaluating selected opportunities,
- Setting up goals and objectives,
- Exploring opportunities for meeting goals and objectives,
- Evaluating opportunities and alternatives,
- Selecting opportunities and alternatives
- Planning and implementing the selected opportunities and alternatives.
- The process is a continuous activity.

© University of Pretoria

Figure 3.2 Essential elements of risk analysis (Kahan, 2007)

According to Kahan (2007) risk analysis is a technique which is used to identify and assess factors and mitigate so as to achieve set goals. Risk assessment is a major element of risk analysis, and this technique helps to define preventive measures to reduce the probability of these factors from occurring. Identifying countermeasures to successfully deal with constraints when they develop so as to avert possible negative impact is of utmost importance.

© University of Pretoria

CHAPTER 4
THE ROLE AND FUNCTIONS OF AGRICULTURAL EXTENSION SERVICES IN ZIMBABWE

4.1 INTRODUCTION

Hanyani-Mlambo (2002) states there is a diverse extension focus in Zimbabwe, and in many other countries within the developing world. Agricultural extension services include both community development activities and advice services to farmers.

According to Anderson and Picclotto (1997) six decades ago agricultural extension organizations in most of Africa, represented the administrative traditions of the former colonial powers. The agricultural support services and extension services were designed mainly to support producing and marketing of the export commodities.

Private extension service in Zimbabwe is generally provided by inputs companies Zimbabwe Fertilizer Company (ZFC), Farmers Unions (Zimbabwe Farmers Union) and contract farming most often from processing companies like the National Brewery and cotton companies (Hanyani-Mlambo, 2002).

4.2 PUBLIC EXTENSION SERVICES

Agricultural extension in Zimbabwe was first introduced by Emory D. Alvord in 1927, when he started out with nine agricultural demonstration workers. Later the Department of Conservation and Extension (Conex) and the Department of Agricultural Development (Devag) were established (Hanyani-Mlambo, 2002).

These organisations had the institutional mandate to provide advisory services to white large-scale commercial farmers, and later broadened to service black smallholder farming communities. At independence in 1980, the Department of Agricultural, Technical and Extension Services (Agritex) was formed as an

© University of Pretoria

amalgamation of Conex and Devag. Agritex, by policy design, has concentrated its efforts to provide agricultural extension services to the smallholder farming sector as an institutional mandate, while servicing large-scale commercial farmers on request.

Agricultural Extension in Zimbabwe developed through the merging of the Department of Agricultural Research and Specialist Services (DR&SS) and Extension and Technical Department (Agritex) to form what is now called the Department of Agricultural Research and Extension (AREX) (Hanyani-Mlambo, 2002). AREX is broadly aimed at rural and broader economic development. Therefore, it is difficult to make a clear distinction between extension and non-extension activities.

AREX is led by a director followed by three deputy directors each responsible of a specific operational area. The director reports to a principal director, based at ministry headquarters. The Department has 16 research and services stations and institutes, with 16 sub-stations. Extension is provided through eight provincial offices, supported by 57 district offices, with frontline staff based in the extension wards (Government of Zimbabwe, 2009).

According to the Government of Zimbabwe (2009) the following extension approaches are used in Zimbabwe:

- *The Group Development Area Approach*: This approach is said to been have been used throughout the 1960s and most of the 1970s, with the establishment of group development areas (GDAs) in the Mashonaland East Province in Murewa and Mutoko areas (Connolly *at el*., 2000). The GDA approach is based on a specific geographic location/area and a project approach was followed. This was achieved through the participation of the community in which the local people provide the labour while the government or donors provide the necessary inputs (Hanyani-Mlambo, 2002).

- *Master Farmer Training Schemes:* The Master Farmer training schemes originated in the 1930s, with the aim to develop competent farmers. The objective of master farmer training was to spread modern and scientific

© University of Pretoria

farming techniques in communal areas by training selected successful farmers in the intended farming technique. These farmers will then help to diffuse the techniques to rest of the farmers in their communities (MOA, 2009). The trainings were widely criticized for benefiting mostly only the only "better farmers" (Mutimba, 1997) in Hanyani-Mlambo (2002).

- *The Radio Listening Group approach (RLG):* This approach has been tried in Chimhanda and Nswazi communal areas (Mudiwa, 1997). It involves the gathering of farmers together in groups to listen to radio programs. The radio programme usually addresses either specific geographic areas or the whole country, depending on the diversity of the farming regions of that country. The type of messages broadcasted by the radio stations were in form of agricultural topics and agriculture experts interviews (Hanyani-Mlambo, 2002).

- *The Training and Visit system (T&V):* An extension management system which was developed for the World Bank by Daniel Benor (Benor and Harrison, 1977). The aim is to upgrade the technical content of field extension activities by training and constant follow up by extension. Simultaneously, making agents' activities more knowable and therefore more accessible to farmers. In Zimbabwe, the system was modified to use extension groups instead of contact farmers which farmers, who are visited as groups (Hanyani-Mlambo, 2002).

- *Farming Systems Research and Extension (FSRE):* Is an interrelated matrix of soils, plants, animals, implements, labour and capital. These interdependent farming enterprises are used in developing farm household systems. By understanding dominant enterprises and most common farming systems and analysis of linkages between these different farming systems. The approach was developed as a response to failure of different types of prescriptive agricultural development models, such as the T&V. This was precipitated by the realization that many of the recommended technologies, even though technically sound, do not always have socio-cultural significance,

© University of Pretoria

and may not align with the individualized objectives and socioeconomic circumstances of smallholder farmers. Further, may not even be relevant at times to the agro-ecological conditions of the region/place where implementation is being attempted (Mettrick, 1993).

Apart from above mentioned, some relatively new agricultural extension approaches have come into use in Zimbabwe, such as the Participatory Rural Appraisal method, the Rapid Rural Appraisals Participatory Learning Approach, Participatory Technology Development, Farmer Field Schools, Innovative Farmer Workshops and Look-and-Learn Tours (Connolly at el., 2000)

AREX has little data regarding the total number of farmers served per year or farmer demographics. Large-scale commercial farmers perceive AREX as generally not competent to provide advisory services to their Subsector. The majority of the commercial farmers rely mainly on support services from private Agro-based companies. Technologies recommend by AREX is mostly those that was introduced 15 to 20 years ago. Inappropriate technology is most detrimental in the low-rainfall and marginal agro-ecological zones (Regions III to V). The problem of unavailability of new technology has been compounded by the difficult economic conditions experienced across the country (Mudimu, 1998).

In terms of funding, a small budget is allocated to the Extension Department which has also impacted logistic needs like transport. There has also been an extensive exodus of qualified extension personnel leading to a major brain drain. The government responded by introducing a two year fast tracked agriculture certificate to recruit more extension personnel. Most of the extension personnel recruited by this two year fast tracked programme are not as competent and knowledgeable in either agriculture or extension (FAO/WFP, 2010).

4.3 NGO EXTENSION

Other organizations that provide agricultural services to large-scale and smallholder farmers are Non Governmental Organisations (NGOs) and other community-based

© University of Pretoria

agricultural production-oriented projects. The current relationship between AREX and NGO`s rely on that, AREX are used as a technical service to back-up to NGO-funded projects. AREX mobilizes the farmers, helps organize them so they can receive the service and, working hand-in-hand with project staff provides advisory services to both project staff and farmers (FAO/WFP, 2010).

NGO`s are more vibrant actors in all rural development in Zimbabwe. NGO`s are relatively well endowed with financial resources for their programmes, aided their greater mobility and drive for participatory approaches. NGO`s serve farmers through farmer training and workshops, one on one and group extension. They assist in the formation of cooperatives in farming areas. The coverage of NGO`s extension is, however, relatively limited as they cover a smaller area compared to the ministry extension. That being said, their presence and impact is significant. The NGO extension personnel farmer ratios vary and are generally determined by the amount of funds in the project. The NGO`s are often accused of promoting donor-dependency, and their rural development programmes have been criticized for lack of sustainability (FAO/WFP, 2010).

4.4 PRIVATE SECTOR EXTENSION

Private companies that supply agro-chemical inputs participate in agricultural extension directly and indirectly as a part of a marketing strategy to increase farmers' awareness of products, achieve a competitive edge and increase market share (FAO/WFP, 2010).

These actors include seed companies, fertilizer manufacturers, as well as pesticide and herbicide companies. In these instances, AREX mobilizes and organizes the farming community, and facilitate the commercial extension services provided by private companies. The heavy reliance on AREX for organising and mobilizing farming communities by the private sector, makes it a principal actor in the local extension system. The pitfall to this approach is that the weaknesses and constraints of the extension department have repercussions throughout the private extension system (FAO/WFP, 2010).

© University of Pretoria

These private organisations usually have an agronomist who works side by side with public extension. They usually work with targeted farmers and funding for the extension support is catered for by these organisations (FAO/WFP, 2010).

© University of Pretoria

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter presents the research methodology deployed in the study, as being carried out in Mashonaland West. This chapter outlines the methods used to collect primary and secondary data. Primary data refers to data that is collected specifically for the research project being undertaken, while secondary data refers to data by people other than the researcher in question. The two primary data types collect are qualitative (semi-structured interviews) and quantitative (using a structured questionnaire) (Saunders et al., 2007).

5.2 AREA AND DISTRICTS OF STUDY

The study was conducted in Mashonaland West a province of Zimbabwe with a total area of 57 441 km² and a population of approximately 1.2 million (MOA, 2002). Chinhoyi is the capital of the province. The province is divided into six districts: Chegutu, Hurungwe, Kadoma, Kariba, Makonde and Zvimba. The study was carried out in three districts namely Kadoma, Chegutu and Zvimba indicated Figure 5.1.

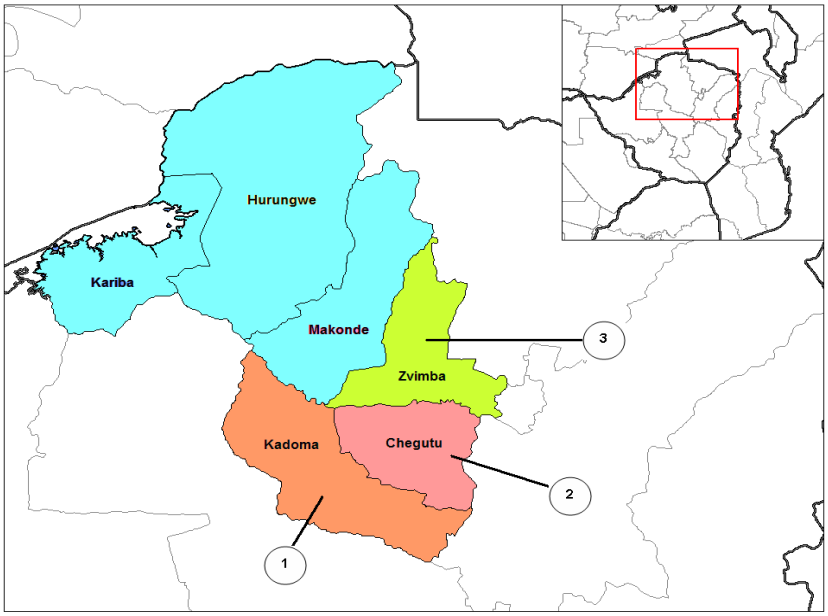

Figure 5.1 Mashonaland West province (Google Maps)

© University of Pretoria

5.3 QUANTITATIVE DATA

Quantitative research refers to the systematic empirical investigation of phenomena via statistical or computational techniques (Saunder et al., 2007). The researcher collects empirical data and quantify the data more explicitly to address the research questions. Primary data were collected directly from respondents through group interviews with a total of 68 group interviews (50 groups of A1 farmers and 18 groups of A2 farmers). The respondents were assembled in a series of groups, on average 10 respondents were assembled in each group according to the farmer categories A1 and A2. Farmers were grouped so as to make the data collection efficient and fast. Structured interviews were used to collect quantifiable data (Saunder et al., 2007).

Informed consent for participation in the interview was explained to the respondents and necessary instructions for completing the survey were given. Each question was explained to respondents before they were requested to complete the questionnaire. Farmers who could not read or write were attended individually, which included further clarifying questions and translations into the Shona language. A total of nine experienced enumerators assisted the researcher to collect data and translate questionnaires from English language to Shona language during the interviews where necessary in the three districts.

The initial data collection efforts revealed that farmers were reluctant to participate in the interviews when visited in their homes. This was because farmers were afraid to participate in a political interview. So the questionnaires were distributed during fortnight farmers' meetings and farmer field days. The questionnaire was administered from May to July for both the farmer and extension questionnaires.

5.4 QUALITATIVE METHODS

Qualitative data were collected through focus group discussions, respondents were assembled in groups according to their farmer categories (A1 and A2), and these discussions involved questions on farmer’s opinions on land reform and extension.

© University of Pretoria

As the researcher interacted with the respondents and travel through the resettlement area system observations was done, checking the livelihoods of farmers and semi-structured interviews were done at randomly selected farmer in the resettlement areas (Saunder et al., 2007).

5.5 SAMPLING

The 690 farmers identified in the survey in the three districts were selected on the basis of they are settled in former commercial farming areas, and they fall either under A1 and A2 farmer categories. In Chegutu 199 farmers were surveyed (59 A2 farmers and 140 A1 farmers), Kadoma 216 farmers were surveyed (51 A2 farmers and 166 A1 farmers) and Zvimba 274 farmers were surveyed (80 A2 farmers and 194 A1 farmers). The respondents were also convenience sampled which is a non-probability sampling technique, where subjects are selected because of their convenient accessibility and proximity (Saunder et al., 2007).

Cluster sampling was used where selected respondents were grouped ('clusters'). Clustering reduces travel and administrative costs, as an interviewer can make a single trip to visit several respondents in one block (Dolnicar, 2003). Table 5.1 below shows the average population size of A1 and A2 farmers in the three districts of Chegutu, Kadoma and Zvimba as of 2005.

Table 5.1 Number of A1 and A2 farmers in Kadoma, Chegutu and Zvimba districts of Mashonaland West (Muzondo, 2007)

District	Settlement Type	
	A1	A2
Chegutu	3470	523
Kadoma	2508	340
Zvimba	4400	847
Total	**10 378**	**1710**

The sample size for A1 farmers was influenced by the following factors:

- Because of the small land size mostly 5ha and smaller there is a higher concentration of A1 farmers in the respective areas, which made A1 farmer more accessible.
- The governance structure of A1 farmers is in the form of the traditional village system which is headed by the Village head and a Chief that makes it easier

© University of Pretoria

to mobilize farmers, when you follow the proper channels of authority (the Chief and the Village head).

The sample size for A2 farmers was the influence of the following factors:

- A2 farmers have a relatively bigger land size, which is mostly 50ha and bigger, making A2 farmer more dispersed.
- The governance structures of A2 farmers are directly through the Ministry of Lands, Land Reform and Resettlement and enjoy ownership rights and exclusive rights to use the land. This in turn makes it hard to mobilize A2 farmers and accessing their property.

A total of 67 frontline extension personnel in three districts were interviewed. Extension officers were selected on the basis that they work in the Ministry of Agriculture, and they serve under the three districts of study which are Kadoma, Chegutu and Zvimba.

Convenience sampling for extension was used , only extension officers found at duty stations, fortnight farmer meetings and farmer field days were considered. The sample size per each district of extension personnel are as follows: Chegutu 22, Kadoma 20 and then Zvimba 25 respondents.

5.6 DATA COLLECTION

Quantitative data were collected by the use of a structured questionnaire so as to collect relevant primary data from farmers and extension staff (Appendix A) The structure of the questionnaire is composed of Likert scale questions, open ended questions and multiple-choice questions (Mertens, 2005).

Qualitative data were collected through focus group discussions, respondents were assembled in groups according to their farmer categories (A1 and A2), and these discussions involved questions on farmer's opinions on land reform and extension. As the researcher interacted with the respondents and travel through the resettlement area systematic observations was done, through checking the livelihoods of farmers (Saunder et al., 2007).

© University of Pretoria

5.7 PILOT TESTING

A pilot survey was carried out, using a convenience sample of 12 A1 farmers and ten A2 farmers. The purposes of which were to test the interview guide and evaluate, firstly the most appropriate number of participants and, secondly the length of time required to obtain rich and meaningful data. This was also executed to ensure that the questionnaire was clear and that it had both construct validity and reliability (Mertens, 2005). The pilot testing of the questionnaire for farmers was done in April 2011 at Maple Leaf Farm (A2 settled farm) and Franshoek Farm (A1 settled farm).

The pilot testing of the questionnaire used for interviewing of extensionist done during the last week of April 2011 at the Norton AREX offices which is under the Chegutu district. A sample of eight extension officers were interviewed using convenience sampling. The interview guide for both farmers and extension required no alterations as the questions were understood and answered satisfactorily.

5.8 DATA ANAYLSIS

The questions in the questionnaire were structured and had coded responses. The data were first entered into an Excel worksheet and cleaned by checking for capturing errors. The data were further cleaned and refined by the University of Pretoria, Department of Statistics. The SAS Statistical package was used to analyze the data. Chi-square test was used to establish the associations between farmer categories (A1 and A2) and extension personnel districts (Chegutu, Kadoma and Zvimba) (Saunder et al., 2007).

The qualitative data was examined and interpreted via forming an impression and the impressions were structured and then coded in quantitative form. Then were entered into the Excel spreadsheet with the rest of the coded responses from the questionnaire.

© University of Pretoria

CHAPTER 6
FARMERS PERCEPTION OF THE LAND REFORM PROCESS

6.1 INTRODUCTION

This chapter describes the findings on farmers' perceptions regarding the land reform process and extension support. It provides an overview of the two farmer categories (A1 and A2) in the three districts of Chegutu, Zvimba and Kadoma. The overview constitutes farm sizes; general perceived satisfaction of farmers' resettlement, external support rendered to farmers, extension advisory services and perceived constraints in farmer settlement.

6.2 Farm sizes in the three districts (Chegutu, Zvimba and Kadoma)

Table 6.1 shows the different farm sizes allocated to A1 and A2 farmers respectively. 58% of A1 farmers are settled on farm sizes that vary between 0.5ha and 50ha, while 76.3% of A2 farmers are settled on farm sizes ranging between 51 and 200ha. Only 6.8% of A1 farmers are settled on farm sizes ranging between 151 and 200ha, and these farmers are referred to as self-contained A1 farmers, since they do not use communal pastures and resources. These farmers experience the same privileges as A2 farmers but are farming under the authority of a traditional village authority, and therefore use permits for land tenure. 4.2% of A2 farmers are farming on less than 10ha and are known as peri-urban farms, since they are usually located close to a water source and used for intensive agriculture (mainly horticulture). The difference in farm size allocated to A1 and A2 farmer categories, is statistically significant (χ^2=81.28; df=4; p=0. 0005).

© University of Pretoria

Table 6.1 Farm sizes for A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690)

Settlement category			Farm Size (ha)					Total
			< 10	10-50	51-100	101-150	151-200	
	A1	Count	108	187	116	55	34	500
		Row %	21.6%	37.4%	23.2%	11.0%	6.8%	100.0%
		Std. Residual	2.6	1.9	-1.2	-3.0	-1.2	
	A2	Count	8	37	63	58	24	190
		Row %	4.2%	19.5%	33.2%	30.5%	12.6%	100.0%
		Std. Residual	-4.2	-3.1	2.0	4.8	2.0	
Total		**Count**	**116**	**224**	**179**	**113**	**58**	**690**
		Row %	**16.8%**	**32.5%**	**25.9%**	**16.4%**	**8.4%**	**100.0%**

6.3 Gender

Table 6.2 illustrates that 56.0% of A1 farmers are males, in comparison to 76.8% of A2 farmers. The lower percentage of female A2 farmers (23.2%) in proportion to male farmers is mainly due to their restricted participation in the political arena. Since A2 farmers mainly consist of beneficiaries with strong political ties to the ruling government. These differences in gender between A1 and A2 farmers is statistically significant (χ^2= 25.319; df=1; p=0. 0005).

Table 6.2 Gender in A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690)

Settlement category			Gender		Total
			Male	Female	
	A1	Count	280	220	500
		Row %	56.0%	44.0%	100.0%
		Std. Residual	-1.6	2.1	
	A2	Count	146	44	190
		Row %	76.8%	23.2%	100.0%
		Std. Residual	2.6	-3.4	
Total		**Count**	**426**	**264**	**690**
		Row %	**61.7%**	**38.3%**	**100.0%**

© University of Pretoria

6.4 Educational level

Education is acknowledged as one of the foremost agencies of acculturation and renewal and therefore important for future training (Gonzales, 2000). Table 6.3 shows substantial differences in the education level between A1 and A2 farmers (χ^2=64.373; df=5; p=0.0005). 60.0% of A1 farmers have an Advanced level[2] (A-level) and lower educational level, while 57.3% of A2 farmers have obtained post A-level/metric qualifications like certificates, diplomas and degrees.

Table 6.3 Educational levels of A1 and A2 farmers in the three districts (Chegutu, Zvimba and Kadoma) (N=690)

Settlement category			Highest level of education						Total
			Primary[3]	O-level	A-level[1]	Certificate	Diploma	Degree	
	A1	Count	130	92	78	103	82	15	500
		Row %	26.0%	18.4%	15.6%	20.6%	16.4%	3.0%	100.0%
		Std. Residual	2.7	1.1	-1.4	.2	-1.5	-2.3	
	A2	Count	12	21	48	36	51	22	190
		Row %	6.3%	11.1%	25.3%	18.9%	26.8%	11.6%	100.0%
		Std. Residual	-4.3	-1.8	2.3	-.4	2.4	3.7	
Total		**Count**	**142**	**113**	**126**	**139**	**133**	**37**	**690**
		Row %	**20.6%**	**16.4%**	**18.3%**	**20.1%**	**19.3%**	**5.4%**	**100.0%**

6.5 Household size and composition

Haviland, (2003:68) defines a household as "*the basic residential unit in which economic production, consumption, inheritance, child rearing, and shelter are organized and carried out".* Table 6.4 shows the average household size for A1 and A2 farmer categories. 11.6% of A2 farmer households exist of more than five household members, in comparison to 50.2% A1 households bigger than five household members. This illustrates that the average household size of A2 and A1 farmers differ statistically (χ^2= 125.149; df=5; p=0.0005). Education, household

[2] Advanced level (A level) is the entry qualification for university entry and is equivalent to Grade 12.

[3] Primary Education in Zimbabwe is from Grade 1 to Grade 7; at Grade 7 one writes entry exams to Form 1 which is secondary level entry point.

© University of Pretoria

income and the lifestyle choices of farmers are possible factors which could contribute to this tendency.

Table 6.4 Household size for A1 and A2 farmers (N=690)

Settlement category			Size of the household						Total
			Fewer than 3	4	5	6	8	10 and more	
	A1	Count	54	108	87	45	125	81	500
		Row %	10.8%	21.6%	17.4%	9.0%	25.0%	16.2%	100.0%
		Std. Residual	-3.0	-1.8	-.6	-.5	3.6	2.9	
	A2	Count	58	69	41	22	0	0	190
		Row %	30.5%	36.3%	21.6%	11.6%	.0%	.0%	100.0%
		Std. Residual	4.9	2.9	1.0	.8	-5.9	-4.7	
Total		**Count**	**112**	**177**	**128**	**67**	**125**	**81**	**690**
			16.2%	**25.7%**	**18.6%**	**9.7%**	**18.1%**	**11.7%**	**100%**

Table 6.5 illustrates the differences between A1 and A2 farmer households with regard to the age and gender distribution of household members. 80% of A2 male household members are 40 years and younger in comparison to the 57% male A1 farmers. 77% of the A2 females are younger than 40 years in comparison to the 48% A1 female household members. These are interesting data since it illustrates that more A2 male and female farmers belonging to the *economic active category* than A1 male and female farmers, which may also impact on the agricultural productivity of these two groups.

Table 6.5 Distribution of household members' according to age and gender (N=690)

				Age Group (Years)						Total
				<21	21 - 30	31 - 40	41 - 50	51 - 60	>60 years	
	A1	Male	Count	69	62	37	85	33	12	298
			Row %	23.20%	20.90%	12.40%	28.40%	11.10%	3.90%	100.0%
		Female	Count	30	36	29	73	22	11	202
			Row %	15.30%	17.80%	14.40%	36.10%	10.90%	5.40%	100.00%
	A2	Male	Count	11	55	20	11	6	5	108
			Row %	9.70%	51.30%	18.60%	10.60%	5.30%	4.40%	100.0
		Female	Count	9	31	22	11	5	4	82
			Row %	11.80%	37.60%	27.10%	12.90%	5.90%	4.70%	100.0%
Total			**Count**	**120**	**184**	**108**	**180**	**66**	**32**	**690**

© University of Pretoria

6.6 Perceived main sources of household income

Farming as a household income contributor

Off-farm (non-farm) income refers to the portion of farm household income acquired off the farm, which includes non-farm wages and salaries, pensions, and interest income earned by farm families. Off-farm income accounts for over 90% of farm operator household income in many family farms in Africa (Haviland, 2003).

Table 6.6 reflects that 51.4% of A2 farmers perceived farming as a major contributor to the household income (score of 4 or higher) in comparison to the 68% A1 farmers. The 51.4% A2 farmers perceiving farming as a main contributor to their household income are mainly full-time farmers with no alternative sources of household income. These differences in perception of farming as an important contributor of household income between A1 and A2 farmers is statistically significant (X_i^2= 30.872; df=4; p=0. 0005).

Table 6.6 Perceived importance of farming as a source of household income in the three districts (N=690)

Settlement category			Main sources of income: Farming					Total
			Least contribution	2	3	4	Major contribution	
	A1	Count	16	42	33	97	92	280
		Row %	5.7%	15.0%	11.8%	34.6%	32.9%	100.0%
		Std. Residual	-.4	.3	-2.6	2.3	-.2	
	A2	Count	13	24	52	30	64	183
		Row %	7.1%	13.1%	28.4%	16.4%	35.0%	100.0%
		Std. Residual	.5	-.4	3.2	-2.9	.3	
Total		**Count**	**29**	**66**	**85**	**127**	**156**	**463**
		Row %	**6.3%**	**14.3%**	**18.4%**	**27.4%**	**33.7%**	**100.0%**

© University of Pretoria

Off-farm income as household income contributor

50% A2 farmers perceive off-farm earned wages as a major contributor to household income (score of >3) in comparison to 40% A1 farmers. The difference in perception of the importance of off-farm wages as a contributor to household income is statistically significant (X^2= 63.896; df=4; p=0. 0005). Currently the unemployment rate in Zimbabwe is 95.0% (CIA World Factbook, 2012), and therefore chances that farmers will find an off-farm job is relatively small.

Table 6.7 Perception of off farm employment as a contributor of household income in the three districts (N=690)

Settlement category			Main sources of income: Wages from off farm employment					Total
			Least contribution	2	3	4	Major contribution	
	A1	Count	22	164	75	108	66	435
		Row %	5.1%	37.7%	17.2%	24.8%	15.2%	100.0%
		Std. Residual	-1.0	2.8	-1.5	1.2	-2.6	
	A2	Count	17	25	52	29	64	187
		Row %	9.1%	13.4%	27.8%	15.5%	34.2%	100.0%
		Std. Residual	1.5	-4.2	2.2	-1.9	4.0	
Total		**Count**	**39**	**189**	**127**	**137**	**130**	**622**
		Row %	**6.3%**	**30.4%**	**20.4%**	**22.0%**	**20.9%**	**100.0%**

Pension as a contributor to household income

Table 6.8 illustrates that pension is only perceived to be an important contributor to the household income for A1 farmers. This is mainly due the relatively high percentage of A2 farmers that are relatively young as being reflected in Table 6.5. These differences are statistically significant (X^2= 14.369; df=3; p=0. 0005). State pension in Zimbabwe is only in the form of accumulated contributions from employment then the annuities are paid out after retirement at the age of 60.

© University of Pretoria

Table 6.8 Perceived contribution of pension as a source of household income (N=690)

Settlement category			Main sources of income: Pension				
			Least contribution	2	3	4	Total
	A1	Count	72	33	28	18	151
		Row %	47.7%	21.9%	18.5%	11.9%	100.0%
		Std. Residual	.1	-1.0	.6	.5	
	A2	Count	8	11	0	0	19
		Row %	42.1%	57.9%	.0%	.0%	100.0%
		Std. Residual	-.3	2.7	-1.8	-1.4	
Total		**Count**	**80**	**44**	**28**	**18**	**170**
			47.0%	**25.9%**	**16.5%**	**10.6%**	**100.0%**

6.7 Reasons for farming

Respondents were asked to reflect on the main reasons why they are involved in farming. Table 6.9 illustrates that 67% of A1 farmers perceive farming to sustain household food security, in comparison to the 82% A2 farmers who are farming with the objective to earn additional household income. These different reasons for involvement in farming between A1 and A2 farmers are statistically significant (χ^2 =202. 40; df=2; p=0. 0001). This illustrates that A1 have different reasons for farming.

Table 6.9 Perceived reasons for farming (N=690)

Settlement category			Main reasons for farming			
			Source of income	Food security	To secure the land	Total
	A1	Count	133	334	33	500
		Row %	26.6%	66.8%	6.6%	100.0%
		Std. Residual	-5.2	5.2	-1.1	
	A2	Count	155	13	22	190
		Row %	81.6%	6.8%	11.6%	100.0%
		Std. Residual	8.5	-8.4	1.8	
Total		**Count**	**288**	**347**	**55**	**690**
		Row %	**41.7%**	**50.3%**	**8.0%**	**100.0%**

© University of Pretoria

6.8 Farming enterprises

Current land use patterns are usually the result of factors like quality of land resources, climate and socio-economic factors (Vink, 1975). The present land use in Mashonaland West illustrates that marginally more A1 farmers (64%) are involved in crop farming than A2 farmers (57%), while it appears that a stronger tendency exists for more A2 farmers (26%) to be involved in livestock farming (Table 6.10).

Table 6.10 Farming enterprises in the three districts (N=690)

Settlement category			Main farming enterprises				Total
			Livestock	Crop production	Mixed farming	Household food production	
	A1	Count	60	318	55	67	500
		Row %	12.1%	63.6%	11.1%	13.3%	100.0%
	A2	Count	49	108	33	0	190
		Row %	25.8%	56.8%	17.4%	.0%	100.0%
Total		**Count**	**109**	**426**	**88**	**67**	**690**

Crop farming in Zimbabwe comprises of cash crop enterprises (cotton, tobacco and coffee) and food crop enterprises (wheat, maize, sorghum and rapoko) (Scoones et al., 2010). Table 6.11 shows the frequency of crop types grown by A1 and A2 farmers respectively in Mashonaland West. All A1 and A2 farmers grow maize, since it is regarded as a staple food crop for many households and also an important market crop. For 72% of the A1 farmers the growing of vegetables is an important crop enterprise, followed by cotton (39%) and sunflower (36.2%). Amongst A2 farmers, apart from growing maize, they also engage in the growing of soybean (53.7%), wheat (45.3%) and vegetables (44.7%). The difference between the crop types grown by A1 and A2 farmers also reflects the tendency that A2 farmers are mainly commercial farmers while A1 farmers mainly produce crops for household food security reasons.

© University of Pretoria

Table 6.11 Frequency of crop types grown by A1 and A2 farmers (N=690)

	Total number of farmers (A1 and A2) growing the crop					
Types of crops grown	**No. of A1 (n=500)**	**%**	**No. of A2 (n=190)**	**%**	**Total count**	**Total %**
Maize	500	100	190	100	690	100
Wheat	21	4.2	86	45.3	107	15.5
Soybean	32	6.4	102	53.7	134	19.4
Sugar beans	103	20.6	64	33.6	167	24.2
Tobacco	89	17.8	46	24.2	135	19.6
Sorghum	40	8.0	8	4.2	48	6.9
Cotton	195	39.0	50	26.3	245	35.5
Vegetables	359	71.8	85	44.7	444	64.3
Sunflower	181	36.2	54	28.4	235	34.0

6.9 Perceived farming knowledge

Table 6.12 indicates the perceived farming knowledge of the two farmer categories (A1 and A2). 58.0% A1 farmers perceived their farming knowledge to be relatively low (between one and two on a 4-point semantic scale), while 51% A2 farmers perceived their farming knowledge above average (a score of 3 on a 4-point semantic scale). This implies that from an extension support point of view the need for knowledge support amongst A1 farmers is greater than amongst A2 farmers. These differences in perception of A1 and A2 farmers on their farming knowledge are statistically significant (X^2= 9.101; df=2; p=0. 011).

Table 6.12 Perceived farming knowledge (N=690)

Settlement category			Level of farming knowledge			Total
			Very low level	2	3	
	A1	Count	103	187	210	500
		Row %	20.6%	37.4%	42.0%	100.0%
		Std. Residual	-.4	1.3	-.8	
	A2	Count	45	48	97	190
		Row %	23.7%	25.3%	51.1%	100.0%
		Std. Residual	.7	-2.1	1.4	
Total		Count	148	235	307	690
		Row %	21.4%	34.1%	44.5%	100.0%

© University of Pretoria

6.10 Farmer experience

Table 6.13 illustrates that 41.2% of A1 farmers have 6-10 years farming experience, which is likely to be because a large number A1 farmers were settled initially under the Fast Track Resettlement Program (FTRP)[4]. In comparison 67% of A2 farmers have less than 6 years farming experience. These differences in farming experience between A1 and A2 farmers are statistically significant ($X2$= 11.049; df=2; p<0.005). Implication for extensive support service is that the Extension Department should consider farmers` experiences in regards to farming when planning a support system.

Table 6.13 Farming experience of A1 and A2 farmers (N=690)

Settlement category			Experience as a farmer			Total
			Less than 3 years	3 - 6 years	6 - 10 years	
	A1	Count	184	110	206	500
		Row %	36.8%	22.0%	41.2%	100.0%
		Std. Residual	.4	-1.5	.8	
	A2	Count	62	65	63	190
		Row %	32.6%	34.2%	33.2%	100.0%
		Std. Residual	-.7	2.4	-1.3	
Total		Count	246	175	269	690
		Row %	35.7%	25.4%	39.0%	100.0%

6.11 Perceived satisfaction with the current land acquisition model

Table 6.14 shows the general perceptions of newly resettled farmers regarding the land reform programme applied in Zimbabwe. Seventy one percent of A2 farmers are satisfied (score of 3 and above) with the current land acquisition model, while only 51% A1 farmers indicated their satisfaction with the current land acquisition model. The difference in perceived satisfaction between A1 and A2 farmers with regard to implementation of the current land reform program is statistically significant (X^2 =43. 41; df=3; p<0.0001).

[4] The Fast Track Resettlement Program marked the second phase of resettlement in Zimbabwe and was characterised by land invasion and violent. The A1 farmers were the first to occupy land, and then followed by the settlement of A2 farmers (Chimanikire, 2010).

© University of Pretoria

Table 6.14 Farmers rating of their satisfaction with current land acquisition model (N=690)

Settlement category			Satisfaction with current land acquisition model				Total
			Not satisfied	2	3	4	
	A1	Count	132	115	184	69	500
		Row %	26.4%	23.0%	36.8%	13.8%	100.0%
		Std. Residual	2.9	-.1	-.9	-1.7	
	A2	Count	10	45	87	48	190
		Row %	5.3%	23.7%	45.8%	25.3%	100.0%
		Std. Residual	-4.7	.1	1.4	2.8	
Total		Count	142	160	271	117	690
		Row %	20.6%	23.2%	39.3%	17.0%	100.0%

The main reasons provided by A2 farmers for their satisfaction with the current land reform programme are:

- Settlement on farms with relatively high fertile soil
- Farms are closely situated to water sources and
- Farms are relatively large in farm size.

Main reasons provided by A1 farmers for their relatively low rating of satisfaction for the current land acquisition model include:

- Received relative small land size,
- Poor/marginal agricultural land and
- Dissatisfaction with the corruption and nepotism of government officials.

The A2 farmers who indicated their dissatisfaction with the current land reform model, raised issues like poor preparation and planning of the resettlement process and settlement on relatively marginal soils.

6.12 Perceived satisfaction with governance structures selected for settlement of farmers

Governance is the process of governing and it relates to decisions that define expectations, grant power, or verify performance. It is made up of either a separate process or as a part of management and leadership processes. These processes

© University of Pretoria

and systems are typically administered by a government or a corporate body (Harris, 2000).

There are two types of governance structures adopted in the Fast Track Land Reform (FTLR) which commenced officially in 2000 namely:

- Communal governance structure implies governance by a traditional leadership (village head /chief) and is administered through the Ministry of Local Governance the tenure instrument used in this instance is a permit system.
- Leasehold governance structure implies governance governed through the Ministry of Lands, Land Reform and Resettlement and Rural Council. Tenure instruments used in this type of governance structure are 99-year lease and offer letter (Chimanikire, 2010).

There is another governance structure which was adopted before the FTLR in 2000 and is also found in the resettlement areas. Trusts are administered by the Ministry of Lands, Land Reform and Resettlement. Trusts are collective individuals operating under one farm; the tenure instrument used is a permit with individual names of the beneficiaries on the permit and is run by a board. There are few farms still operating under trusts because of internal squabbles between the beneficiaries and very low production. So most of the farming operating under trusts were converted to individual A1 farms whose governance structure is communal (Chimanikire, 2010).

96% of A1 farmers make use of a communal governance structure, while all of the A2 farmers use the leasehold governance structure (Table 6.15), 4.0% of the A1 farmers still operate under trusts.

© University of Pretoria

Table 6.15 Governance structure applied for the settlement of A1 and A2 farmers (N=690)

Settlement category			Governance structure used for settlement of farmers			Total
			Trusts	Communal	Leasehold	
	A1	Count	20	480	0	500
		% within Settlement category	4.0%	96.0%	.0%	100.0%
		Std. Residual	1.4	7.1	-11.7	
	A2	Count	0	0	190	190
		% within Settlement category	.0%	.0%	100.0%	100.0%
		Std. Residual	-2.3	-11.5	19.0	
Total		Count	20	480	190	690
		% within Settlement category	2.9%	69.6%	27.5%	100.0%

Table 6.16 illustrates that 81.4% of A1 farmers on 5 point semantic scale indicated they were not satisfied with the current governance structure applied. 74.5% of A2 farmers however indicated they were very satisfied (rating 4 and 5 on a 5 point semantic scale) with the leasehold governance structure applied (Table 6.16). The difference in satisfaction with the current governance structures applied to the two farmer categories (A1 and A2) is statistically significant (χ^2=513.336; df=4; p<0.0001).

Table 6.16 Perceived satisfaction with the current governance structure selected for land reform (N=690)

Settlement category			Satisfaction with the current governance structure selected for land reform					Total
			Not satisfied	2	3	4	Very satisfied	
	A1	Count	157	250	93	0	0	500
		%within Settlement category	31.4%	50.0%	18.6%	.0%	.0%	100.0%
		Std. Residual	4.1	5.1	-.9	-9.1	-4.4	
	A2	Count	0	0	48	115	27	190
		%within Settlement category	.0%	.0%	25.3%	60.5%	14.2%	100.0%
		Std. Residual	-6.6	-8.3	1.5	14.8	7.2	
Total		Count	157	250	141	115	27	690
		%within Settlement category	22.8%	36.2%	20.4%	16.7%	3.9%	100.0%

© University of Pretoria

A2 farmers were in general satisfied with the current governance structure because:

- In general they receive, through the leasehold governance structure, more government support,
- They also received relative bigger farms for farming
- In general A2 farmers are more politically connected and therefore have less bureaucratic structures to negotiate when government support and services are required

The main reasons for the 81.0 % of A1 farmers (score <2) (Table 6.16) that are not satisfied with the current governance structure are :

- A1 farmers receive limited entitlement to land – they use permits as tenure instrument , and land is perceived to be state land (23.8%).
- Boundary conflicts (22.2%) – in A1 resettlement areas because of the poor land demarcations therefore farmers tend to argue over land boundaries.
- Corruption and over exploitation of resources (24.2%)

6.13 Perceived satisfaction with the role of various organisations and institutions in the settlement of farmers

Zimbabwean economy is a controlled economy where much of the activity is controlled through a government policy rather than by the free market (FAO, 2010). This in turn creates monopolies including the establishment of marketing boards and the Agriculture Bank of Zimbabwe where participation of role-players like commercial banks are limited due to the strict control by the Reserve Bank.

Monopoly has only a single seller, while a perfectly competitive market has many sellers. According to Riley (2006), monopolies exist where governments want to regulate the price and output. The major inefficiencies associated with monopolies include (Riley, 2006):

- Allocative inefficiency - allocative efficiency is a type of economic efficiency in which producers produce only those types of goods and services that are more desirable in the society and also in high demand. When there is an allocative inefficiency prices are generally higher and output lower, in comparison to a market with low barriers to entry and have many producers.

© University of Pretoria

- Weakened market forces - if consumers of a product have many alternatives, producers serve their customers efficiently in order to stay in business. If there are no competing products, the monopolist do not to worry a lot about losing customers by poor service or poor quality.
- There is no price discrimination.

In the Land Reform Program of Zimbabwe the following organisations and institutions play an important farmer supportive role:

- Agriculture Bank of Zimbabwe.
- Marketing Boards.
- Non Governmental Organisation (NGO`s).
- Agriculture Colleges.
- Farmer Unions.

The establishment of formal institutional linkages and informal networks have emerged around interventions of farmer support. Some linkages have been departmentalised within certain organizations. AREX, for instance, collaborates with NGOs involved in socio-economic issues, commercial banks and other actors such as Seed-Co (seed company) and Agri-foods (animal feed company) with whom they have common areas of interest (FAO/WFP, 2009).

- ***Agricultural Bank of Zimbabwe***

Table 6.17 illustrates the perceived importance of the Agricultural Bank of Zimbabwe (AgriBank) as a role player for the two farmer categories (A1 and A2). 37.5% of A1 farmers perceived the support provided by the AgriBank not important (lower than a score of 3), in comparison to 51% A2 farmers who perceived the bank to play an important role (> 3 score). A possible reason for this tendency is that A1 farmers in general find it difficult to access financial services from the AgriBank, due to the collateral required in order to access loans. This difference in perceived satisfaction between A1 and A2 farmers regarding the importance of Agricultural Bank of Zimbabwe is statistically significant (X^2= 97.632; df=4; p<0.0001).

© University of Pretoria

Table 6.17 Perceived importance of Agricultural Bank of Zimbabwe (N=690)

Settlement category			Role player: AgriBank					Total
			Least important	2	3	4	Most important	
	A1	Count	119	47	132	133	12	443
		% within Settlement category	26.9%	10.6%	29.8%	30.0%	2.7%	100.0%
		Std. Residual	3.9	.2	-1.1	-.4	-3.6	
	A2	Count	0	18	75	63	34	190
		% within Settlement category	.0%	9.5%	39.5%	33.2%	17.9%	100.0%
		Std. Residual	-6.0	-.3	1.6	.5	5.4	
Total		Count	119	65	207	196	46	633
		% within Settlement category	18.8%	10.3%	32.7%	31.0%	7.3%	100.0%

- ***Marketing Boards***

Marketing boards in Zimbabwe receive funding from government in the form of an agricultural subsidy, and are state corporations under the control of the Ministry of Agriculture. They are responsible for buying produce from farmers, most notably with crops such as maize, where they are the only ones mandated to buy from farmers (GoZ, 2004). Table 6.18 shows that 75.6% A1 farmers are not satisfied with the role of the Marketing Boards (score of <3 points on 5 point semantic scale) in the settlement of new farmers, in comparison to 73% A2 farmers who are not satisfied (score of <3 points on 5 point semantic scale). Both farmer categories are not satisfied with the way marketing boards due to the handling of payment for their produce (usually late), the low trading prices they receive and high levels of corruption.

© University of Pretoria

Table 6.18 Perceived importance of Marketing Boards (N=690)

Settlement category			Role player: Marketing Boards					Total
			Least important	2	3	4	Most important	
	A1	Count	35	130	182	112	0	459
		% within Settlement category	7.6%	28.3%	39.7%	24.4%	.0%	100.0%
		Std. Residual	-3.4	-1.7	2.8	2.7	-3.3	
	A2	Count	50	80	24	9	15	178
		% within Settlement category	28.1%	44.9%	13.5%	5.1%	8.4%	100.0%
		Std. Residual	5.4	2.8	-4.4	-4.3	5.3	
Total		Count	85	210	206	121	15	637
		% within Settlement category	13.3%	33.0%	32.3%	19.0%	2.4%	100.0%

- ***Non-Governmental Organisations (NGO`s)***

"A non-governmental organization (NGO) is a legally constituted organization created by natural or legal persons that operate independently from any form of government" (Berthoud, 2001). NGOs which operate in resettled areas in Zimbabwe include: Oxfam, Catholic Relief, WFP (World Food Programme) and Heifer International. These organisations assist farmers with food relief, inputs and farmer training.

Table 6.19 shows the differential perceptions regarding the role of Non-Governmental Organisations (NGOs) by the two farmer categories (A1 and A2). 69% of A1 farmers are of the opinion that NGOs play an important role (score of >3 points on 5 point semantic scale) in agriculture, because of the assistance and food donations given to them during drought seasons. In comparison none of the A2 farmers perceived NGOs as important for agriculture development, mainly because they are not part of the target audience of the NGOs. This difference in perception between A1 and A2 farmers is statistically significant (X^2= 370.575; df=4; p<0.0001).

© University of Pretoria

Table 6.19 Perceived importance of NGOs (N=690)

Settlement category			Role player: NGOs					Total
			Least important	2	3	4	Most important	
	A1	Count	0	0	153	157	185	495
		% within: Settlement category	.0%	.0%	30.9%	31.7%	37.4%	100.0%
		Std. Residual	-5.4	-4.8	-.7	2.5	2.7	
	A2	Count	36	28	44	0	0	108
		% within Settlement category	33.3%	25.9%	40.7%	.0%	.0%	100.0%
		Std. Residual	11.6	10.3	1.5	-5.3	-5.8	
Total		Count	36	28	197	157	185	603
		% within Settlement category	6.0%	4.6%	32.7%	26.0%	30.7%	100.0%

- ***Agriculture Colleges***

According to FAO (2010) higher agricultural education contributes to the growth and transformation of production agriculture, though it often fails to adjust and manage curricula that respond to the changes affecting agriculture and the rural space. The focus of agricultural colleges is mainly on providing education and services aimed at professional development of responsibilities for agriculture and rural development.

Agriculture Colleges have a direct role to play in poverty alleviation. Education is a key factor in sustainable agriculture development (FAO, 2010). In this context the role of Agriculture Colleges in Zimbabwe is to assist A1 and A2 farmers through the offering of training, and support with land use planning and agribusiness project proposal drafting.

A1 farmers perceive the role of Agricultural Colleges as important for agriculture development, while none of the A2 farmers share the same opinion (Table 6.20). A possible reason for this tendency is that A1 farmers in general have limited access to new information, and therefore perceive agricultural colleges as an important source of information. It is expected from agriculture students, as part of their internship, to assist small scale farmers with preparing of a business project proposal and planning of agriculture enterprises. A2 farmers on the other hand have more access to a variety of information sources and in general have little contact with Agriculture

© University of Pretoria

Colleges. A2 farmers also generally perceive college students as unqualified and inexperienced, and therefore not able to attend to their information needs. The difference in perception is statistically significant (X^2= 475.000; df=4; p<0.0001).

Table 6.20 Perceived importance of Agricultural Colleges N=475

Settlement category			Role player: Agricultural colleges					Total
			Least important	2	3	4	Most important	
	A1	Count	0	0	153	157	113	423
		% within Settlement category	.0%	.0%	36.2%	37.1%	26.7%	100.0%
		Std. Residual	-5.7	-3.8	1.4	1.5	1.2	
	A2	Count	36	16	0	0	0	52
		% within Settlement category	69.2%	30.8%	.0%	.0%	.0%	100.0%
		Std. Residual	16.1	10.8	-4.1	-4.1	-3.5	
Total		Count	36	16	153	157	113	475
		% within Settlement category	7.6%	3.4%	32.2%	33.1%	23.8%	100.0%

- ***Farmers Unions (FU)***

Farmers Unions are democratic organisations representing farmers and growers in Zimbabwe. Their objective is to promote the interests of the farmers, provide advice and to articulate farmers' aspirations, problems and views relating to agriculture. FUs also negotiate with finance and marketing institutions on behalf of farmers to attain affordable credit (ZCFU, 2009).

Table 6.21 shows that 89.1% of A1 farmers perceived farmers unions as not important (score <3 points), because farmer unions in their respective areas are perceived to be not well organised and therefore less effective in addressing farmers' concerns. In comparison 73.1% of A2 farmers perceived farmers' unions as relatively important (score >3 points) role players in resettlement. This opinion is mainly because the majority of A2 farmers are paid-up members of the unions and therefore have access to the use of farmer union structures to propagate their own farming agendas. The difference of A1 and A2 farmers' perception is statistically significant (X^2= 243.917; df=3; p<0.0001).

© University of Pretoria

Table 6.21 Perceived importance of Farmers Unions (N=690)

Settlement category			Role player: Farmer Unions				Total
			Least important	2	3	Most important	
	A1	Count	175	63	29	0	267
		% within Settlement category	65.5%	23.6%	10.9%	.0%	100.0%
		Std. Residual	7.2	-.4	-6.5	-2.8	
	A2	Count	0	51	126	13	190
		% within Settlement category	.0%	26.8%	66.3%	6.8%	100.0%
		Std. Residual	-8.5	.5	7.7	3.3	
Total		Count	175	114	155	13	457
		% within Settlement category	38.3%	24.9%	33.9%	2.8%	100.0%

6.14 Perceived satisfaction with the frequency of contact with departmental extension officers

Table 6.22 illustrates the frequency of contact between extension officers and the farmers (A1 and A2). 48.2% of A1 and 53.2% A2 farmers make contact with extension officers every second month, and only 14.8% and 12.1% of the farmers have contact with extension weekly. The extension contact with the farmers is relatively low due to transport problems experienced by the extension officers.

Table 6.22 Contact with the Extension Officer (N=690)

Settlement category			Frequency				Total
			Weekly	Monthly	Every fortnight	Every second month	
	A1	Count	74	123	62	241	500
		Row %	14.8%	24.6%	12.4%	48.2%	100.0%
		Std. Residual	.4	1.3	-1.2	-.4	
	A2	Count	23	28	38	101	190
		Row %	12.1%	14.7%	20.0%	53.2%	100.0%
		Std. Residual	-.7	-2.1	2.0	.7	
Total		Count	97	151	100	342	690
		Row %	14.1%	21.9%	14.5%	49.6%	100.0%

Both A1 and A2 farmers are not satisfied with the frequency of extension contact. 94.2% of A1 farmers are not satisfied (score <3 on 5 point semantic scale) with the frequency of extension contact in comparison to the 92.2% of A2 farmers (Table

© University of Pretoria

6.23). The main reasons provided for these high levels of dissatisfaction are that the frequency of contact is insufficient to address farmer needs, and when extension personnel actually visit the farm they usually lack the competency to adequately address the farmers' problems.

Table 6.23 Perceived satisfaction of farmers regarding contact with extension officers (N=690)

Settlement category			Satisfaction with frequency of contact between farmer & EO			Total
			Not satisfied	2	3	
	A1	Count	303	168	29	500
		Row %	60.6%	33.6%	5.8%	100.0%
		Std. Residual	.6	.0	-1.6	
	A2	Count	102	63	25	190
		Row %	53.7%	33.2%	13.2%	100.0%
		Std. Residual	-.9	-.1	2.6	
Total		Count	405	231	54	690
		Row %	58.7%	33.5%	7.8%	100.0%

6.15 Perceived knowledge level of departmental extension officers in farmer groups

Table 6.24 illustrates respondents' perceptions of the ability of extension staff to help farmers with group mobilisation and functioning. Both farmer categories (A1 and A2) expressed very low confidence level in extension officers` ability to help them with group mobilisation and facilitation. The reasons provided for this low rating are:

- They possess little knowledge in group mobilisation techniques
- Their involvement in groups is limited due to lack of knowledge regarding farmer group functioning
- General lack of motivation amongst extension personnel

© University of Pretoria

Table 6.24 Perceived level of extensions` knowledge in the farmer group functions (N=690)

Settlement category			Knowledge level of extension personnel to help the farmer group?			Total
			Not knowledgeable	2	3	
	A1	Count	202	189	109	500
		Row %	40.4%	37.8%	21.8%	100.0%
		Std. Residual	-.7	.0	1.0	
	A2	Count	90	72	28	190
		Row %	47.4%	37.9%	14.7%	100.0%
		Std. Residual	1.1	.0	-1.6	
Total		Count	292	261	137	690
		Row %	42.3%	37.8%	19.9%	100.0%

6.16 Perceived technical knowledge of extension staff

Extension officers' levels of technical knowledge are critical to agriculture development and the settlement of farmers. Table 6.25 shows the perceived levels of technical knowledge of extension officers, as experienced by the various farmer categories. 31.2% of A1 and 26.3% A2 farmers perceive the technical knowledge level of extension personnel as above average (score of >3 on five point semantic scale). Therefore it appears that both farmer categories (A1 and A2) are relatively unsatisfied with the technical knowledge levels of extension personnel. Those that are not satisfied with the technical knowledge level of extension personnel raised the following reasons for this:

- They seldom solve agricultural technical problems (67.1%).
- They lack answers to most of the questions being asked (32.9%).

© University of Pretoria

Table 6.25 Perceived technical knowledge of extension officers on agriculture (N=690)

Settlement category			Technical knowledge level of extension personnel				Total
			Not knowledgeable	2	3	4	
	A1	Count	57	89	198	156	500
		Row %	11.4%	17.8%	39.6%	31.2%	100.0%
		Std. Residual	.0	.1	-.5	.6	
	A2	Count	22	33	85	50	190
		Row %	11.6%	17.4%	44.7%	26.3%	100.0%
		Std. Residual	.1	-.1	.8	-.9	
Total		Count	79	122	283	206	690
		Row %	11.4%	17.7%	41.0%	29.9%	100.0%

6.17 Farmer participation in farmer group meetings

The establishment of farmer groups, as an approach of community mobilization, is not new. It is drawn from the traditional practice of working together to help a neighbour raise the roof of a house, or working as a group during the planting or harvesting season.

Table 6.26 shows that 32% of A1 farmers are registered to a farmer group in comparison to 44% of A2 farmers. The number of farmers registered to farmer groups statistically differ between A1 and A2 farmers (X^2= 7.944; df=1; p<0.005). Although comparatively more A2 farmers belong to a farmer group, both farmer categories showed a relatively low numbers of farmer group membership. Possible reasons for this tendency could be that farmers are of the opinion that farmer groups can easily be turned into political groups.

© University of Pretoria

Table 6.26 Farmers affiliation with farmer groups (N=690)

Settlement category			Do you belong to any farmer group in your area?		Total
			Yes	No	
	A1	Count	161	339	500
		Row %	32.2%	67.8%	100.0%
		Std. Residual	-1.2	.9	
	A2	Count	83	107	190
		Row %	43.7%	56.3%	100.0%
		Std. Residual	1.9	-1.4	
Total		Count	244	446	690
		Row %	35.4%	64.6%	100.0%

The 44% of the A2 farmers who indicated that they belong to farmer groups have organised themselves mainly into micro-financing groups to raise funds to finance inputs like machinery, on-farm developments and marketing. Input groups collectively contribute money for the sole purpose of bulk buying of farm inputs like seeds and fertilizers, and in so doing are better able to negotiate for a discount. In Zimbabwe, Stokvels are commonly known as Rounds/Round groups where members contribute money monthly to a single member, operating cyclically. These Stokvels operate as micro-lending societies so as to raise funds to purchase machinery, inputs and other farm developments. The monthly contribution differs from group to group. Marketing groups are mainly formed to facilitate marketing of produce by passing the traders and have a good price negotiating platform.

Table 6.27 illustrates that. 42.5% of A1 farmers are registered with the “input group”, while 44.4% are registered to a “stokvel group”. In comparison 58.5% of A2 farmers are registered to a stokvel group / round group (Micro-financing societies), while 26.8% are registered to input groups. A relatively small percentage of farmers (A1 and A2) are registered with marketing groups.

© University of Pretoria

Table 6.27 Farmers' affiliation to the different types of farmer groups (N=690)

Settlement category			Type of group			Total
			Input group	Stokvel	Marketing group	
	A1	Count	68	71	21	160
		Row %	42.5%	44.4%	13.1%	100.0%
		Std. Residual	1.1	-.9	-.2	
	A2	Count	22	48	12	82
		Row %	26.8%	58.5%	14.6%	100.0%
		Std. Residual	-1.5	1.2	.2	
Total		Count	90	119	33	242
		Row %	37.2%	49.2%	13.6%	100.0%

Participation by group members create increased social interaction and interdependence between members of a group. To accomplish the assigned tasks there should be dependence to some degree, on the outputs of other members of the group; this in turn ensures the survival and security of the group (Moyo, 2004). Table 6.28 clearly illustrates that both categories of farmer are not participating in the current farming groups. 78.8% of A1 farmers and 73.2% of A2 farmers do participate at a very low level in farmer group meetings. The reasons for the poor participation are unknown, but should be of major concern to extension officers and group facilitators working with farmer groups. The participation levels of farmers in the input and stokvel groups depend on the availability of production inputs (fertilizers and seeds) in the country as this impact on the ability of farmers to contribute to a specific stokvel or input group.

© University of Pretoria

Table 6.28 Perceived participation in groups (N=690)

Settlement category			To what extent do you participate in these groups?				
			Very low participation	2	3	4	Total
	A1	Count	190	204	84	22	500
		Row %	38.0%	40.8%	16.8%	4.4%	100.0%
		Std. Residual	-.1	.7	-1.4	1.5	
	A2	Count	75	64	51	0	190
		Row %	39.5%	33.7%	26.8%	.0%	100.0%
		Std. Residual	.2	-1.1	2.3	-2.5	
Total		Count	265	268	135	22	690
		% within Settlement category	38.4%	38.8%	19.6%	3.2%	100.0%

6.18 Perceived constraints preventing farmers to farm optimally

In agricultural development it is important to identify the felt needs of farmers. This part of the research report shows the ranking of the most notable problems that prevents optimum farming practices amongst A1 and A2 farmers. A1 and A2 farmers are affected by different constraints which prevent them, in various ways, from farm optimally.

Table 6.29 shows that the unavailability of production inputs affects both categories of farmers but A2 farmers are the most affected. Therefore 46.3% A2 farmers ranked this as the major constraint that prevents them from optimal farming production in comparison to the 33.2% of A1 farmers.

Frequent droughts and the lack of adequate financial credit availability are ranked by both categories of farmers as important reasons for them not achieving their farming potential.

© University of Pretoria

Table 6.29 Perceived constraints preventing farmers to farm optimally (N=690)

A1				A2			
Rank		**n**	**%**	**Rank**		**n**	**%**
1	Unavailability of farming inputs	166	33.2	1	Unavailability of farming inputs	88	46.3
2	Frequent droughts	124	24.8	2	Frequent droughts	44	23.2
3	No adequate financial credit available	95	19.0	3	No adequate financial credit	31	16.3
4	Unavailability of farming equipment	63	12.6	4	Poor extension services	10	5.3
5	Poor extension services	43	8.6	4	Poor farming knowledge	10	5.3
6	Poor farming knowledge	9	1.8	5	Unavailability of farming equipment	7	3.7
Total		690	100.0			190	100.0

6.19 Perceived stumbling blocks to the current land reform program

Table 6.30 shows that the three major stumbling blocks affecting A1 farmers in priority order were identified:

- Inadequate credit facilities (24%),
- Unstable political situation (23%) and
- Corruption (22%).

A2 farmers identified the following three obstacles (in order of priority) as their main hindrances in the land reform program:

- Unstable political situation (44%),
- Inadequate credit facilities (23%) and
- Inappropriate farmer training (16%).

The difference in perception regarding the stumbling blocks of the current land reform program affecting A1 and A2 farmers is statistically significant (X^2= 20.612; df=2; p=0.001).

© University of Pretoria

Table 6.30 Perceived stumbling blocks to the current land reform program (N=690)

A1				A2			
Rank		**n**	**%**	**Rank**		**n**	**%**
1	Inadequate credit facilities	119	23.8	1	Unstable political situation	84	44.2
2	Unstable political Situation	115	23.0	2	Inadequate credit facilities	43	22.6
3	Corruption	110	22.0	3	Inappropriate farmer training	31	16.3
4	Inefficient extension services	88	17.6	4	Small land size	22	11.1
5	No appropriate farmer training	44	8.8	4	Corruption	8	4.3
6	Small land size	24	4.8	5	Inefficient extension services	3	1.6
Total		500	100.0			190	100.0

6.19 Conclusions

This baseline study of the profile of A1 and A2 farmers revealed interesting differences between these two farmer categories. The socio-economic indicators show that A2 farmers have a relatively higher status than A1 farmers. These indicators are bigger farm sizes, higher off-farm income, higher educational levels and higher levels of political connectedness. These differences are illustrated in the summary table presented below and this will also have major consequences regarding the post settlement support required.

© University of Pretoria

Table 6.31 Summary Table for A1 and A2 farmers (N=690)

	A1	A2
Land Size (X^2=81.28; df=4; p=0. 0005).	58.0% farm sizes between 0.5 - 50ha	76.3 % farm sizes between 51-200ha
Gender X2= 25.319; df=1; p=0. 0005	56.0% are male	76.8% are male
Educational level (X2=64.373; df=5; p=0.0005)	26.0% obtained a primary level education	11.6% obtained a degree level education
Household size (X2= 125.149; df=5; p=0.0005)	16.2% of A1 farmers have a household size above 10>	30.5% of A2 have size of household less than 3 members.
Main sources of household income (Using a semantic scale of 1-5) Farming as a source of household income - (X^2= 30.872; df=4; p=0. 0005) Off-farm income as a source of household income - (X^2= 63.896; df=4; p=0. 0005)	68.0% A1 farmers' perceived farming as a major contributor to the household income (score of 3 or higher). 40.0% A1 farmers perceive earned wages from off farm employment as a major contributor to household income (score of 3 or higher)	51.4% of A2 farmers perceived farming as a major contributor to the household income (score of 3 or higher). 50% A2 farmers perceive earned wages from off farm employment as a major contributor to household income (score of 3 or higher)
Farming enterprises	Crop production 63.6% Livestock 12.1% Mixed Farming 11.1%	Crop production 56.8% Livestock 25.8% Mixed Farming 17.4
Perceived farming knowledge (Using a semantic scale of 1-5;(X^2= 9.101; df=2; p=0. 011)	58.0% perceived their farming knowledge below average.	51% perceived farming knowledge above average (>3 score).
Farmer experience (X2= 11.049; df=2; p<0.005)	41.2% of A1 farmers indicated that they have between 6-10 years farming experience.	33.2% of A2 farmers indicated that they have between 6- 10 years farming experience.
Perceived satisfaction with the current land acquisition model **(**Using a semantic scale of 1-5; (X^2 =43. 41; df=3; p<0.0001)	49.0% of A1 farmers rated 1 and 2, meaning they are not satisfied with the current acquisition model	71.1% of A2 farmers rated 4 and 5 meaning they are satisfied with the current acquisition model
Governance structure. (X^2 =513. 336; df=4; p<0.0001)	96.0% of A1 farmers indicated they are under communal governance structure.	100% of A2 farmers indicated they are under leasehold governance and tenure structure, where they report directly to the Rural Council and Ministry of Lands.
Perceived satisfaction with governance structures selected for settlement of farmers. (Using the semantic scale of 1-5)	81.4% of A1 farmers are not satisfied with the current governance structure (<3).	75.0% of A2 farmers are satisfied with the current governance structure (>3).

© University of Pretoria

Perceived satisfaction with the frequency of contact with extension (Using a semantic scale of 1-5)	94.2% of A1 are not satisfied with extension contact (<3)	92.2% of A2 farmers are not satisfied with e xtension contact (<3).
Farmer participation in farmer group meetings (X^2= 7.944; df=1; p<0.005).	32.2% of A1 farmers are registered to a farmer group.	44% of A2 farmers are registered to a farmer group.
Perceived technical knowledge of extension staff. **(**Using the semantic scale of 1-5)	31.2% of A1 farmers perceive the technical knowledge of extension as above average (score of >3).	26.3% of A2 farmers perceive the technical knowledge of extension as above average (score of >3).
Major constraints preventing farmers to farm optimally (In order of priority)	• Unavailability of farming inputs • Frequent droughts • No adequate financial credit available • Unavailability of farming equipment • Poor extension services • Poor farming knowledge	• Unavailability of farming inputs • Frequent droughts • No adequate financial credit available • Poor farming knowledge • Poor extension services • Unavailability of farming equipment
Perceived stumbling blocks to the current land reform program. (X^2= 20.612; df=2; p=0. 001).	In order of priority include; • Inadequate credit facilities • Unstable political situation • Corruption • Inefficient extension services • No appropriate farme training • Small land size	In order of priority include; • Unstable political suitution • Inadequate credit facilities • Inappropriate farmer training • Small land size • Inefficient extension services.

© University of Pretoria

CHAPTER 7
EXTENSION PERCEPTION OF THE LAND REFORM PROCESS

7.1 INTRODUCTION

This chapter describes the findings on the extension personnel' perceptions regarding the land reform process and the extension support they deliver. It provides an overview of the profile of extension officers in the three districts of Chegutu, Zvimba and Kadoma where the study took place. The results revealed the perceptions of extension staff regarding satisfaction with current extension approaches; level of extension and technical knowledge, major constraints for rendering of sustainable extension support, stumbling blocks of the current land reform programme and the role of post settlement support.

7.2 Age of Extension Officers in the three districts (Chegutu, Zvimba and Kadoma)

Table 7.1 shows 48% of extension officers in the three districts are younger than 30 years, while 9.0% of the extension staff is above the age of 60 years and close to retirement. A large number of extension officers, 73.2% are under the age of 40. This has been contributed to by the failing economy in the country, which has resulted in a massive brain drain of qualified extension staff. A large proportion of officers younger than 30 years have limited extension experience. The biggest percentage of extension officers older than 60 years is currently employed in Zvimba, which raise challenges to the extension management in this area.

© University of Pretoria

Table 7.1 Age groups (N=67)

			Age groups					Total
			<30	31-40	41-50	51-60	60>	
	Kadoma	Count	7	6	3	1	0	17
		Row %	41.2%	35.3%	17.6%	5.9%	.0%	100.0%
		Std. Residual	-.4	.8	.9	-.2	-1.2	
	Chegutu	Count	11	6	3	3	0	23
		Row %	47.8%	26.1%	13.0%	13.0%	.0%	100.0%
		Std. Residual	.0	.1	.4	1.0	-1.4	
	Zvimba	Count	14	5	1	1	6	27
		Row %	51.9%	18.5%	3.7%	3.7%	22.2%	100.0%
		Std. Residual	.3	-.7	-1.1	-.7	2.3	
Total		Count	32	17	7	5	6	67
		Row %	47.8%	25.4%	10.4%	7.5%	9.0%	100.0%

7.3 Gender

Krogh (1988), reports that farmers in Syria (82.5%) and Nigeria (65.6%) preferred female extension workers. The reason given for this was women farmers are hesitant to speak up in meetings in front of male extension agents. In Zimbabwe women constitute 61% of the farmers in the communal areas and comprise at least 70% of the labour force in these areas (FAO, 2007). Table 7.2 illustrates the composition of gender amongst extension officers. There is a considerably larger number of male extension officers (65.7%) forming part of the current extension corps. It is clear that gender equity has not been addressed to any significant degree in the extension department. This could impact on agricultural production as female farmers` participation will be limited in the presence of male extension agents.

© University of Pretoria

Table 7.2 Gender of extension officers in the three districts (N=67)

			Gender		Total
			Male	**Female**	
	Kadoma	Count	13	4	17
		Row %	76.5%	23.5%	100.0%
		Std. Residual	.5	-.8	
	Chegutu	Count	14	9	23
		Row %	60.9%	39.1%	100.0%
		Std. Residual	-.3	.4	
	Zvimba	Count	17	10	27
		Row %	63.0%	37.0%	100.0%
		Std. Residual	-.2	.2	
Total		Count	44	23	67
		Row %	65.7%	34.3%	100.0%

7.4 Qualifications and field of specialisation

According to FAO (2010), the job of extension personnel requires sound technical knowledge and skills, commitment and a general willingness to educate farmers. The recruitment and selection of appropriate extension personnel are considered very important and the success of extension greatly depends upon the selection of qualified and motivated personnel (FAO, 2010). Table 7.3 shows the education levels of extension officers. 64.0% of extension officers employed in the three districts have a certificate in agriculture, while 24% have obtained an agricultural diploma. A certificate in agriculture can be obtained within two years, while an additional year of study is required for an agriculture diploma.

In Zvimba, 7.4% of the extension officers have only obtained an A-level or metric qualification. Because of the relative high percentage of extension officers with an agricultural certificate as qualification, they generally possess limited technical knowledge in agriculture and are often capable of executing their duties adequately.

© University of Pretoria

Table 7.3 Education qualification of extension officers (N=67)

			Highest qualification				Total
			A-level	Certificate	Diploma	Degree	
	Kadoma	Count	0	12	5	0	17
		Row %	.0%	70.6%	29.4%	.0%	100.0%
		Std. Residual	-.7	.3	.5	-1.2	
	Chegutu	Count	0	15	6	2	23
		Row %	.0%	65.2%	26.1%	8.7%	100.0%
		Std. Residual	-.8	.1	.2	.0	
	Zvimba	Count	2	16	5	4	27
		Row %	7.4%	59.3%	18.5%	14.8%	100.0%
		Std. Residual	1.3	-.3	-.6	1.0	
Total		Count	2	43	16	6	67
		Row %	3.0%	64.2%	23.9%	9.0%	100.0%

Table 7.4 establishes the field of specialisation of extension officers in the three districts. 89.6% of Extension Officers indicated that they have obtained specialised training in agriculture, while the rest specialised in agriculture economics and crop science. None of the extension officers illustrated any specialisation in agriculture extension; this means that there are no extension officers who have a professional know-how on delivering effectively extension programmes.

Table 7.4 Field of specialization of extension officers in the three districts (N=67)

			Field of specialization			Total
			Agricultural Economics	Agriculture	Crop Science	
	Kadoma	Count	0	17	0	17
		Row %	.0%	100.0%	.0%	100.0%
		Std. Residual	-1.0	.5	-.9	
	Chegutu	Count	1	21	1	23
		Row %	4.3%	91.3%	4.3%	100.0%
		Std. Residual	-.3	.1	.0	
	Zvimba	Count	3	22	2	27
		Row %	11.1%	81.5%	7.4%	100.0%
		Std. Residual	1.1	-.4	.7	
Total		Count	4	60	3	67
		Row %	6.0%	89.6%	4.5%	100.0%

© University of Pretoria

7.5 Experience

Zimbabwe faces a huge task in stemming the exodus of professionals to other countries within Africa and overseas. The best way to curtail the high rates of skilled labour migration is by addressing the economic rudiments of the country which in turn improve living standards. Regrettably, most skilled Zimbabweans are very pessimistic about the likelihood of this happening in the foreseeable future (Crush, 2002).

Table 7.5 illustrates that a huge proportion (55.3%) of the current extension cadre in the three districts have less than two years working experience. This is mainly attributed to large intakes at agricultural colleges and fast track programs to counter the brain in the department. This inevitably affects the quality of services offered by the extension department, which will be substandard.

Table 7.5 Experience of extension officers in the three districts (Chegutu, Kadoma and Zvimba) (N=67)

			Experience of Extension Officers				Total
			Less than one year	1 - 2 years	3 - 4- years	Above 6 years	
	Kadoma	Count	5	6	5	1	17
		Row %	29.4%	35.3%	29.4%	5.9%	100.0%
		Std. Residual	.3	.4	-.1	-.8	
	Chegutu	Count	5	9	5	4	23
		Row %	21.7%	39.1%	21.7%	17.4%	100.0%
		Std. Residual	-.3	.8	-.8	.5	
	Zvimba	Count	7	5	11	4	27
		Row %	25.9%	18.5%	40.7%	14.8%	100.0%
		Std. Residual	.1	-1.1	.9	.2	
Total		Count	17	20	21	9	67
		Row %	25.4%	29.9%	31.3%	13.4%	100.0%

7.6 In-service training

“In-service training is provided to help employees develop their skills in a specific discipline or occupation and is usually conducted during a break in the individual's work schedule.” (Sil 1999). Table 7.6 shows the frequency in a year an extension

© University of Pretoria

officer is sent for in service training across the three districts. 86.6% of extension officers have never been sent for service training. This is mainly because departments` limited financial resources available to send staff for in-service training, which has implications for the quality of services provided by the extension officers. Because extension officers are not regularly sent for in-service training, their skill levels remain low, which in turn impacts negatively on their performance.

The most common in-service training offered by the extension department, are career or development training and on-the-job training. The career or development trainings are usually offered to senior staff and are designed to upgrade the knowledge, skills, and ability of employees to help them assume greater responsibility in higher positions. The on-the-job training is usually provided by senior officers or the subject-matter specialists to the subordinate field staff (FAO, 2010).

Table 7.6 Frequency of attending in-service training by extension officers (N=67)

			Times per year sent for in-service training		Total
			Once	Never	
	Kadoma	Count	3	14	17
		Row %	17.6%	82.4%	100.0%
		Std. Residual	.5	-.2	
	Chegutu	Count	2	21	23
		Row %	8.7%	91.3%	100.0%
		Std. Residual	-.6	.2	
	Zvimba	Count	4	23	27
		Row %	14.8%	85.2%	100.0%
		Std. Residual	.2	-.1	
Total		Count	9	58	67
		Row %	13.4%	86.6%	100.0%

Table 7.7 shows the perceived importance of attending regular in-service training, by using a 5-point semantic scale. 82.1% of the extension personnel rated regular attendance of in-service training opportunities as important (score of >4 points). Extension officers perceive in-service training as of paramount importance for self development to position them better for their career. The main reasons for this perception are:

© University of Pretoria

- To keeps one up to date with new information.
- Training refreshes and gives extension officers a chance to rise up the organization rank.
- Builds confidence, the fact that in-service training helps to build the extension officers confidence in delivering extension services.
- Helps to standardise and maintain quality standards of extension service delivery. As extension officers have the know-how of executing extension programs.
- In service training increase the morale of the extension officers this in turn they are more motivated.

Table 7.7 Perceived importance of regular in-service training (N=67)

			The importance of offering regular in-service training			Total
			3	4	Very important	
	Kadoma	Count	5	4	8	17
		Row %	90%	23.5%	47.1%	100.0%
		Std. Residual	1.1	.0	-.6	
	Chegutu	Count	3	6	14	23
		Row %	91.2%	26.1%	60.9%	100.0%
		Std. Residual	-.6	.2	.2	
	Zvimba	Count	4	6	17	27
		Row %	93.0%	22.2%	63.0%	100.0%
		Std. Residual	-.4	-.2	.3	
Total		Count	12	16	39	67
		Row %	17.9%	23.9%	58.2%	100.0%

7.7 Availability of new technologies for Extension Officers.

According to a study done by the FAO (2010), “AGRITEX is only able to recommend technologies that were made available to the agriculture industry 15 to 20 years ago”. This opinion is also shared by the extension officers where 91% of them perceived that new technologies and information are barely available to extension staff in the extension department (scoring <3 points on a 5 point semantic scale) (Table 7.8). This has implications on the confidence of extension staff regarding the

© University of Pretoria

trustworthiness of technologies, which they will be using hence it affects the extension delivery system.

Table 7.8 Availability of new technologies for extension officers through department (N=67)

			Availability of new technologies for EO through department			Total
			Rarely available	2	3	
	Kadoma	Count	11	6	0	17
		Row %	64.7%	35.3%	.0%	100.0%
		Std. Residual	.4	.1	-1.2	
	Chegutu	Count	13	7	3	23
		Row %	56.5%	30.4%	13.0%	100.0%
		Std. Residual	.0	-.3	.7	
	Zvimba	Count	14	10	3	27
		Row %	51.9%	37.0%	11.1%	100.0%
		Std. Residual	-.3	.2	.4	
Total		Count	38	23	6	67
		Row %	56.7%	34.3%	9.0%	100.0%

7.8 Ratio of farmers and extension officers as per district

According to FAO (2010) the primary indicator used for measuring the intensity of extension coverage in a country is the extension agent to farmer ratio. The recommended ratio as being indicated in Table 7.9 illustrates the recommended ratio of extension to farmer, the ratio varies between the nature of farming operation (crops, livestock and mixed).

Table 7.9 Proposed Agricultural Extension Officer: Farmer Ratios (NDA, 2005)

Scale of operation	Nature of operation/farming		
	Crops	Livestock	Mixed
Subsistence and household	1:400	1:500	1:500
Semi-commercial	1:250	1:250	1:300
Market oriented and large scale commercial	1:500	1:500	1:500

© University of Pretoria

Table 7.10 shows the number of extension staff in each district versus the number of farmers they serve. Zvimba has the largest deployment of extension officers, indicated by a considerable number of extension officers (48.1%) serving between 200 - 250 farmers each. The farmer ratio in resettlement areas is commendable and according to Table 7.9, this is because there has a large deployment of extension officers due to the government`s intention to increase production in these areas.

Table 7.10 Ratio of extension officers: farmers in the three districts (N=67)

		Ratio of extension officer : Farmer	
District	**No. of extension officers**	**No. of farmers 200-250**	**No. of farmers 251-300**
Kadoma	86	23.5%	76.5%
Chegutu	92	30.4%	69.6%
Zvimba	116	48.1%	59.9%

7.9 Extension approaches

According to Axinn (1988) "The success of an agricultural extension program tends to be directly related to the extent to which the approach fits the program goals for which it was established". Training and Visit Extension (T&V), Radio Listening Group (RLG) approach and Group Development Area Approach, are not stand alone approaches , but just one way to organize ministry-based extension and they need to be selected according to program goals of the extension department (Mudiwa, 1997).

Table 7.11 is providing an overview of the frequency of application of the main extension approaches by extension officers when serving farmers in the three districts.

© University of Pretoria

Table 7.11 Frequency of use of extension approaches in the three districts (Kadoma, Chegutu and Zvimba) (N=67)

		Frequency of use of extension approach					
District	**Approaches Used**	**Least used**	**2**	**3**	**4**	**Frequently used**	**Total**
Kadoma	Radio Listener Group	94.1%	5.9%	0%	0%	0%	100.0%
	T & V	17.6%	17.6%	64.8%	0%	0%	100.0%
	FSRE	11.8%	58.8%	29.4%	0%	0%	100.0%
	GDA	52.9%	47.1	0%	0%	0%	100.0%
Chegutu	Radio Listener Group	87.0%	13.9%	0%	0%	0%	100.0%
	T & V	17.4%	17.4%	52.2%	13.0%	0%	100.0%
	FSRE	8.7%	26.1%	43.1%	21.7%	0%	100.0%
	GDA	39.1%	39.1%	21.7%	0%	0%	100.0%
Zvimba	Radio Listener Group	88.9%	11.1%	0%	0%	0%	100.0%
	T & V	7.4%	14.8%	59.3%	18.5%	0%	100.0%
	FSRE	11.9%	29.9%	32.8%	23.9%	1.5%	100.0%
	GDA	25.9%	40.8%	33.3%	0%	0%	100.0%

- ***The Radio listening group (RLG) approach***

This approach entails the assembly of farmers into groups to listen to radio programs that address either specific geographic areas or the whole nation, depending on the heterogeneity of the farming regions (Mudiwa, 1997). Table 7.11 shows that Radio Listening Group approach (RLG), is least used in the three districts by the extension officers respectively in Kadoma, Chegutu and Zvimba. RLG approach is not very popular among the extension officer because there are no community radio stations in the resettlement areas and the national radio stations have few agricultural programs.

- ***Training and Visit system approach***

In this approach, "proven agricultural practices" promoted by either international or national research centres are offered, packages of practical recommendations. These recommended practices are then passed down the extension organization's

© University of Pretoria

hierarchy from subject matter specialists to agricultural extension officers. Extension officers then pass the recommendations to contact farmers, who then diffuse to other farmers (FAO, 2010). Table 7.11 shows that the T&V approach is relatively popular amongst extension extension staff with 77.8%, 65.2% and 64.3%, and of the extension officers respectively for Zvimba, Chegutu and Kadoma, using this approach.

- ***Farming systems research and extension (FSRE)***

The FSRE approach is centred on problem solving, and is a systems-oriented, interdisciplinary, farmer-oriented and iterative. It emphasizes the role of controlled diagnosis and on-farm trials as a way of facilitating linkages among the farmers, researchers and extension workers (Hanyani-Mlambo, 2002). Table 7.11 shows that the Farming System Research and Extension is used by 65.2%, 58.2% and 29.4%, of the extension officers respectively for Chegutu, Zvimba and Kadoma on a regular basis (score of 3 and more on a 5-point semantic scale). However , these results may be somewhat inflated especially in Chegutu and Zvimba as some of the extension officers did not fully understand this approach.

- ***Group Development Area Approach (GDA)***

The GDA approach is based on area and project development principles through community participation in which they provide labour while government or donors provide the necessary inputs. It is commonly known as “food for work” (Hanyani-Mlambo, 2002). Table 7.11 shows that 21.7% and 33.3% extension officers respectively from Chegutu and Kadoma use this approach on a regular basis (score of 3 and more on a 5-point semantic scale). According to extension officers in Zvimba, GDA approach is not used at all in the district.

7.10 Perceived satisfaction with current extension approaches

Table 7.12 shows extension officers perceived satisfaction with the current extension approach applied in there are measured by using a five point semantic scale (1=not

© University of Pretoria

satisfied; 5=very satisfied). 49.3% of extension officers are not satisfied with the current extension approach applied by the ministry, which has direct implications on extension delivery since extension personnel are not fully engaged. The reasons provided for this general perception include:

- There is very little financial support from the government (22.4%) to support effective implementation of these extension approaches.
- There is very little monitoring of the application of the various extension approaches by the department (25.4%).
- There is no commitment of the government and policy makers to upgrade the current extension system (52.2%).

Extension staff from Kadoma has the lowest level of satisfaction with the use of the extension approaches followed by Chegutu and Zvimba.

Table 7.12 Perceived satisfaction with current extension approach (N=67)

			Satisfaction with current extension approach		Total
			2	3	
	Kadoma	Count	13	4	17
		Row %	76.5%	23.5%	100.0%
		Std. Residual	1.6	-1.6	
	Chegutu	Count	10	13	23
		Row %d	43.5%	56.5%	100.0%
		Std. Residual	-.4	.4	
	Zvimba	Count	10	17	27
		Row %	37.0%	63.0%	100.0%
		Std. Residual	-.9	.9	
Total		Count	33	34	67
		Row %	49.3%	50.7%	100.0%

7.11 Extension contact with farmers

Table 7.13 shows the frequency of extension officers contact with farmers, in the three districts. 72.0% of the extension officers indicated they have at least weekly contact with farmers. This finding is largely different from the opinion of farmers as described in Chapters 6, where 14.1% of the farmers indicating having a weekly contact with extension. In Kadoma 88.2% of extension officers indicated to have

© University of Pretoria

weekly contact with farmers, since this area has has more A1 farmers, who are easy to mobilize.

Table 7.13 Frequency of extension contact with farmers (N=67)

			Contact			
			Weekly	Monthly	Fortnight	Total
	Kadoma	Count	15	2	0	17
		Row %	88.2%	11.8%	.0%	100.0%
		Std. Residual	.8	-1.1	-.7	
	Chegutu	Count	14	9	0	23
		Row %	60.9%	39.1%	.0%	100.0%
		Std. Residual	-.6	1.3	-.8	
	Zvimba	Count	19	6	2	27
		Row %	70.4%	22.2%	7.4%	100.0%
		Std. Residual	-.1	-.3	1.3	
Total		Count	48	17	2	67
		Row %	71.6%	25.4%	3.0%	100.0%

7.12 Preferred extension methods

The establishment of farmer groups is an extension strategy geared towards better farmer mobilization. It encompasses the idea of using participatory approaches in development (Kitetu, 2005).

Table 7.14 shows that 53.7% of the extension officers in the three districts prefer group contact to individual farmer contact. A considerable number of extension officers in Kadoma (64.7%) and Chegutu (60.9%) prefer group contact as an extension method due to the fact that T&V and FSRE extension approaches are very popular in these areas.

© University of Pretoria

Table 7.14 Preferred method of extension contact (N=67)

			Preferred method of contact		
			Group	Both(Group & One on One)	Total
	Kadoma	Count	11	6	17
		Row %	64.7%	35.3%	100.0%
		Std. Residual	.6	-.7	
	Chegutu	Count	14	9	23
		Row %	60.9%	39.1%	100.0%
		Std. Residual	.5	-.5	
	Zvimba	Count	11	16	27
		Row %	40.7%	59.3%	100.0%
		Std. Residual	-.9	1.0	
Total		Count	36	31	67
		Row %	53.7%	46.3%	100.0%

7.13 Perceived satisfaction with intervention given to farmers

Table 7.15 illustrates that 92.5% of extension officers in three districts are not satisfied with the intervention given to farmers due to the following reasons:

- The intervention is not meeting the intended outcome of increasing production because intervention process is heavily underfunded.
- There is no clarity about organisational direction; there are no clear goals and objectives.
- Extension at district level does not have the proper infrastructure to support farmers i.e. computers and resource centres.
- There is too much political interference that makes it hard for extension officers to work in resettlement areas.
- The extension officers are not satisfied with the quality of service matters which includes their salary, allowances and benefits.
- There is little new information and technology available for farmers.

© University of Pretoria

Table 7.15 Perceived satisfaction with intervention given to farmers (N=67)

			Is intervention appropriate for settlement of farmers		Total
			Yes	No	
	Kadoma	Count	4	13	17
		Row %	23.5%	76.5%	100.0%
		Std. Residual	2.4	-.7	
	Chegutu	Count	0	23	23
		Row %	.0%	100.0%	100.0%
		Std. Residual	-1.3	.4	
	Zvimba	Count	1	26	27
		Row %	3.7%	96.3%	100.0%
		Std. Residual	-.7	.2	
Total		Count	5	62	67
		Row %	7.5%	92.5%	100.0%

7.14 Perceived level of extension knowledge to support farmers' groups

Table 7.16 illustrates extension officers perceived level of knowledge to support farmers' groups by using a 5 point semantic scale. 56.8% of extension officers are of the opinion that they are well equipped regarding their group facilitation knowledge (score of >3). The reasons for the rating include:

- Extension officers are of the opinion they have relatively good knowledge in supporting farmer groups but lack training in group functioning and facilitation.
- The extension officers are also of the opinion they cannot fully rate their competency in group functioning and facilitation because there are few groups in their areas.
- Because 50.0% of the extension officers have less than five years experience in extension, there is a need for in-service training on group facilitation knowledge.
- None of the extension officers have been trained in extension, so they do not possess group facilitation skills.

© University of Pretoria

Table 7.16 Perceived level of extension knowledge to help farmers' groups (N=67)

			Level of knowledge to help farmers' group			
			3	4	Very knowledgeable	Total
	Kadoma	Count	16	1	0	17
		Row %	94.1%	5.9%	.0%	100.0%
		Std. Residual	3.2	-1.7	-2.2	
	Chegutu	Count	6	9	8	23
		Row %	26.1%	39.1%	34.8%	100.0%
		Std. Residual	-1.3	1.0	.6	
	Zvimba	Count	7	9	11	27
		Row %	25.9%	33.3%	40.7%	100.0%
		Std. Residual	-1.4	.5	1.2	
Total		Count	29	19	19	67
		Row %	43.3%	28.4%	28.4%	100.0%

7.15 Perceived level of technical knowledge support to farmers

Table 7.17 illustrates the perceived level of agriculture technical knowledge of the extension officers in the three districts. 85.1% extension officers rated their technical knowledge on agriculture to be above average (score of >3). The reasons for the ratings by the extension officers include:

- Comfortable with the technical knowledge they have and no need of training (29.9%).
- 55.2% of the extension staff are comfortable with their technical knowledge , but are of the opinion that they need further in-service training.
- 14.9% of the extension staff moderately comfortable with their technical knowledge, but are of the opinion that they need to go back to college and upgrade their qualifications.

The main reason for many of the extension officers who are not comfortable with their agricultural technical knowledge is because of the fact that 64.2% have only obtained a certificate in agriculture (Table 7.3).

© University of Pretoria

Extension officers from Zvimba perceive they have good extension and technical knowledge followed by Chegutu and Kadoma. Possible reasons for this tendency include:

- Zvimba has the highest percentage of experienced extension officers (17.4%) followed by Chegutu with 14.8%.
- There are more graduated extension officers in Zvimba (14.8%), than in Chegutu (8.7%) and Kadoma (0%) (Table 7.3).

Table 7.17 Perceived technical knowledge of extension officers (N=67)

			Technical knowledge			
			3	4	Very knowledgeable	Total
	Kadoma	Count	5	12	0	17
		Row %	29.4%	70.6%	.0%	100.0%
		Std. Residual	1.5	.9	-2.3	
	Chegutu	Count	2	16	5	23
		Row %	8.7%	69.6%	21.7%	100.0%
		Std. Residual	-.8	.9	-.7	
	Zvimba	Count	3	9	15	27
		Row %	11.1%	33.3%	55.6%	100.0%
		Std. Residual	-.5	-1.5	2.4	
Total		Count	10	37	20	67
		Row %	14.9%	55.2%	29.9%	100.0%

7.16 Perceived major constraints for a sustainable extension support

Table 7.18 illustrates the major constraints faced by extension officer in the three districts in order to provide the necessary extension support to farmers.

© University of Pretoria

Table 7.18 Perceived major constraints for sustainable extension support in the three districts (Chegutu, Kadoma and Zvimba) (N=67)

Rank	Reasons	n	%
1	Finance	26.0	38.8%
2	Lack of inputs for farmers	16.0	23.9%
3	Lack of commitment on part of the farmers and government	11.0	16.4%
4	Farmers lack of farming knowledge	8.0	11.9%
5	Climate change	6.0	9.0%
	Total	67.0	100.0%

- *Lack of Finance*: the Department of Extension Services (AGRITEX) is faced with acute funding shortages, which hinders extension delivery services (38.8%).
- *Lack of inputs for farmers:* farmers do not have adequate inputs to farm successfully (23.9%).
- *Lack of commitment on the part of farmers and government:* there is no strong political willingness to help farmers and the AGRITEX is compounded by the fact that farmers are perceived not to be motivated to farm efficiently (16.4%).
- *Lack of farming knowledge on the part of farmers*: farmers do not have the required knowledge to farm efficiently (11.9%)
- *Climate change:* climate change has contributed to unpredictable and extreme weather patterns contributing to decline in agricultural productivity (9.0%).

7.17 Perceived stumbling blocks to the current land reform program

Extension staff perceived the following stumbling blocks to the execution of the current land reform program:

- *Corruption:* there are high levels of corruption amongst government officials, and stakeholders in the land reform process. This is compounded by the allocation of markedly few resources to the program (26.9%).
- *Lack of planning:* lack of planning on the part of government due to the nature of the land reform (fast track), which meant that most of the operations were done by trial and error (26.9%).

© University of Pretoria

- *Lack of coordination amongst stakeholders:* there is no coordinated effort to achieve a clear goal so stakeholders tend to pull in different directions (23.9%).
- *Political interference:* there a great deal political interference in the program, which heavily affects service delivery (22.3%).

7.18 Conclusions

This baseline study involved profiling extension personnel and assessing the skills available in the department of extension to execute a sustainable extension support. Table 7.19 provides a summary of findings in this regard.

7.19 Summary: Profiling of extension officers in the three districts (Chegutu, Kadoma and Zvimba)

	Extension in the three Districts (Chegutu, Kadoma, Zvimba)
Age	48.0% of extension officers are <30 years
Gender	65.7% extension officers are male, could impact on the quality of extension delivery to female farmers.
Qualifications	64.2% of extension officers have obtained a certificate, while 24% obtained an agriculture diploma. None of the extension officers received any specific training in agriculture extension.
Experience	55.3% of extension officers have less than two years working experience.
In-service training	86.6% of extension officers have never attended any in-service training.
Availability of new technologies for Extension officers	91.0% of extension officers is of opinion that AGRITEX is advising farmers on the use of old technology (15-20 years).
Ratio of farmers and extension officers as per district	66.0% of extension officers serve in the range of one extension officer to 251 - 300 farmers, while the rest serve in the range of 200 – 250 farmers.
Extension approaches	• Zvimba: 77.5% of extension officers use T&V; 58.2% use FSRE. • Chegutu :65.2% of extension officers use T&V; 64.8% use FSRE. • Kadoma: 64.8% of extension officers use T&V; 29.4% use FSRE. • The RLG extension method is not very popular amongst extension officers.

© University of Pretoria

Extension contact method	72% extension officers indicated that they have weekly contact with farmers. 54% of the respondents prefer to make contact with farmers through group meetings (group contact).
Perceived satisfaction with interventions given to farmers	92.5% Extension Officers said the current extension interventions are not appropriate for the development of farmers.
Perceived satisfaction with the current extension approaches	49.0% of extension officers are not satisfied with the current extension approaches they apply.
Perceived level of technical knowledge to support farmers	85.0% of extension officers rated their technical knowledge above average (score >3).
Perceived level of extension knowledge to support farmers	56.8% of extension officers are of the opinion that they are well equipped regarding group facilitation knowledge (score >3).
Perceived major constraints for a sustainable extension support (Order of priority)	• Finance • Lack of farmer inputs • Lack of commitment on part of the farmers and government • Farmers lack farming knowledge • Climate change
Perceived stumbling blocks to the current land reform program (Order of priority)	• Corruption • Political interference • Lack of planning • No coordination from stakeholders

© University of Pretoria

CHAPTER 8
DISCUSSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter consists of six divisions namely the support of the hypothesis, the perception of farmers regarding the land reform process, the perception of farmers regarding the extension system, the perception of extension regarding services to A1 and A2 farmers followed by the gap in the extension delivery system and finally recommendations.

8.2 SUPPORT FOR THE HYPOTHESIS

According to the study there is evidence to support that there are differential needs and perceptions regarding extension support between A1 and A2 farmers. The study shows that A2 farmers have bigger land sizes than A1 farmers. 58.0% of A1 farmers have farm sizes between 0.5 – 50ha, while 76.3% of A2 farmers have farm sizes between 51 – 200ha. The difference in farm size between A1 and A2 farmers is statistically significant (χ^2=81.28; df=4; p=0. 0005). There is a small difference in land use pattern between A1 and A2 farmers. 64.0% of A1 farmers are involved in crop farming, while 57.0% A2 farmers are also involved in crop production. It also appears from the results that a stronger tendency exists for more A2 farmers (26%) to be involved in livestock farming. The reason being A2 farmers have bigger land size which allows them to do livestock farming, and also because of their socio-economic status they are able to buy livestock for production.

The need for knowledge support amongst A1 farmers is greater than amongst A2 farmers, the difference in perception of A1 and A2 farmers on their farming knowledge is statistically significant (χ^2= 9.101; df=2; p=0. 011). A2 farmers are more educated compared to A1 farmers, where 11.6% of A2 farmers have obtained a degree level education, compared to 26.0% of A1 farmers having only primary level education.

© University of Pretoria

Most of the A1 farmers perceive farming as a major contributor to household income than A2 farmers, 68.0% of A1 farmers perceive farming as a major contributor to household income compared to only 51.4% of A2 perceiving farming as a major contributor to the household income. The difference in perception regarding farming as a major contributor to the household income between A1 and A2 farmers is statistically significant (X^2=30.872; df=4; p=0. 0005).

50.0% A2 farmers have off-farm income from earned wages contributing to their household income compared to A1 farmer. Only 40% of A1 farmers have off-farm earned wages as a major contributor to household income.The difference in off-farm income earned wages between A1 and A2 farmers is statistically significant (X^2= 63.896; df=4; p=0. 0005).

Sixty seven percent of A1 farmers farm to sustain household food security and 82.0% of the A2 farmers farm with an objective to earn additional income, the difference in reasons for farming between A1 and A2 farmers are statistically significant (X^2 =202. 40; df=2; p=0. 000).

The study confirms there is difference between A1 and A2 farmers in regards to: farm size, land use pattern, the need for knowledge support from the extension, educational level, reliance on farming income, off-farm income, and reasons for farming. This confirms the hypothesis that there are differential needs and perceptions regarding extension services support between A1 and A2 farmers.

8.3 PERCEPTIONS OF FARMERS REGARDING THE LAND REFORM PROCESS

96.0% of A1 farmers are administered under the communal governance structure, while all A2 farmers are administered under the leasehold governance structure. 81.4% A1 farmers are not satisfied with the current governance structure, while 75.0% A2 farmers are very satisfied with the current governance structure.

© University of Pretoria

A large number of A2 farmers (71.0%) are satisfied with the current land acquisition model compared to only 51% A1 farmers indicated their satisfaction with the current land acquisition model. The difference in satisfaction between A1 and A2 farmers with regard to implementation of the current land reform program is statistically significant (X^2 =43. 41; df=3; p<0.0001). Both A1 and A2 farmer perceive the same stumbling blocks to the current land reform program, which are inadequate credit facilities, unstable political situation and corruption.

8.4 PERCEPTIONS OF FARMERS REGARDING THE EXTENSION SYSTEM

According to the study both A1 and A2 farmers are not satisfied with the frequency of extension contact. A considerable percentage of both A1 and A2 farmers perceive the technical knowledge of extension personnel as below average (31.2% of A1 and 26.3% A2 farmers respectively). More A2 farmers are registered to groups compared to A1 farmers , 32% of A1 farmers are registered to a farmer group in comparison to 44% of A2 farmers. Both farmer categories (A1 and A2) expressed very low confidence level in extension officers` ability to help them with group mobilisation and facilitation.

A1 and A2 farmers are faced with the same constraints preventing them to farm optimally which include frequent droughts, no adequate financial credit, unavailability of farming inputs, poor extension services, poor farming knowledge by farmers themselves and no farming equipment.

8.5 PERCEPTION OF EXTENSION WORKERS REGARDING SERVICES TO A1 AND A2 FARMERS

According to the study none of the extension officers indicated having any specific training in agricultural extension. 64.2% of the extension officers in the three districts have only obtained a certificate in agriculture, with 55.3% of the extension officers having less than two years working experience. 86.6% of the extension officers never attended any in-service training.

© University of Pretoria

Majority number of extension officers (91.0%) share the opinion that AGRITEX is mainly using old technology (15-20 years old). The extension approaches being used extensively in the three districts include: Farming System Research and Extension (FSRE) and Training and Visit (T&V) approaches, while Group Development Area (GDA) is averagely used in Chegutu and Zvimba and least being used in Kadoma. The extension officers are not satisfied with the extension approaches being used, giving reasons of little financial support by the government to execute these approaches, and also there is little monitoring and lack of commitment on the part of the government.

Contrary to low contact figures indicated by farmers, 72.0% of the extension officers are of opinion they have a weekly contact with farmers. Major constraints perceived by extension officers for rendering a sustainable extension support include; lack of finance, lack of inputs, lack of commitment on the part of the farmers and government, lack farming knowledge by farmers and climate change. Also according to the extension officers the stumbling blocks to the current land reform program include corruption, political interference, lack of planning and no coordination between stakeholders.

8.6 THE GAPS IN THE EXTENSION DELIVERY SYSTEM

According to the study the gaps in the current extension delivering system include:

- *Weak technical and extension knowledge among the extension staff*: None of the extension officers received specialised training in agriculture extension, although 56.8% of extension officers are of the opinion they are well equipped regarding their group facilitation knowledge. Both farmer A1 and A2 farmers expressed very low confidence level in extension officers` ability to help them with group mobilisation and facilitation. 85.1% extension officers rated their technical knowledge on agriculture to be above average, while the majority of farmers perceived their technical knowledge level to be inadequate.

- *Inadequate support of extension staff for delivering of extension services*: 86.6% of extension officers have never been sent to an in service training, and 91% of

© University of Pretoria

the extension officers perceive that new technologies and information are barely available in the extension department. 49.3% of extension officers are not satisfied with the current extension approach applied by the ministry. 92.5% of extension officers in three districts are not satisfied with the intervention given to farmers. Extension officers indicated that the lack of finance by the Department of Extension Services (AGRITEX) to carry out extension activities, is regarded as a huge stumbling block for sustainable extension support.

- *The land acquisition model, posed challenges in the governance structure and tenure system:* Seventy one percent of A2 farmers are satisfied with the current land acquisition model because they are more politically connected , have bigger land size and enjoy exclusive land use rights. Only 51% A1 farmers indicated their satisfaction with the current land acquisition model because they have small land holdings and usually is on marginalized and poor farming areas and the communal governance structure used for the A1 farmers increases competition for resources and it is hard to secure a loan by using an A1 permit (tenure instrument).

  Ninety one percent of A1 farmers make use of a communal governance structure, while all of the A2 farmers use the leasehold governance structure. According to extension officers corruption among government officials and leadership, the lack of planning at the land reform process, lack of coordination amongst stakeholders, and intense political interference pose challenges to the land reform process and the extension support system.

8.7 RECOMMENDATIONS

A properly planned implementation plan and policy of the land reform program is of the essence for a sustainable agriculture sector in Zimbabwe. A negotiated transition for a land reform program is highly recommended, and proper selection of the land reform beneficiaries and human capital development is a critical component of a sustainable extension system.

© University of Pretoria

The current land tenure instrument being used by both A1 and A2 farmers , need to be formatted so that they can be able to use them as collateral. A gradual transformation of extension services to self finance some of its operations are needed. A levy can be imposed on A2 farmers who are in a stronger economic position, so as to finance some of the extension operations , like the buying of vehicles or motorcycles.

Extension staff should be supported, through in-service trainings and providing means of transport. There is a need of computerising district and sub-district offices, this can assist in building of an updated database of farmers, and there is a need to establish resource centres for farmers. An agricultural extension qualification should be introduced at agriculture colleges and universities in Zimbabwe, not only teaching extension only as a module. There is also a need to employ more female extension officers, so as to improve participation of female farmers, and also frequent farmer training should be done.

There is a need of greater participation of all private role players in supply of inputs. For this to happen government should allow the free market system, by dissolving the marketing boards for example the Grain Marketing Board of Zimbabwe (GMB).

Participatory and programmed extension approaches with expected and measurable out-puts should be established. These extension programs should be designed to offer options and problem solving strategies, facilitate decision-making and technology adaptation.

The establishment of an Agricultural Extension Excellence Model is recommended (see Figure 8.1). It runs from stage one to stage five and can be used for as an extension tool at a local and national level, the tool is cyclic and can be tailor made to suit the existing local conditions and is participatory in nature.

© University of Pretoria

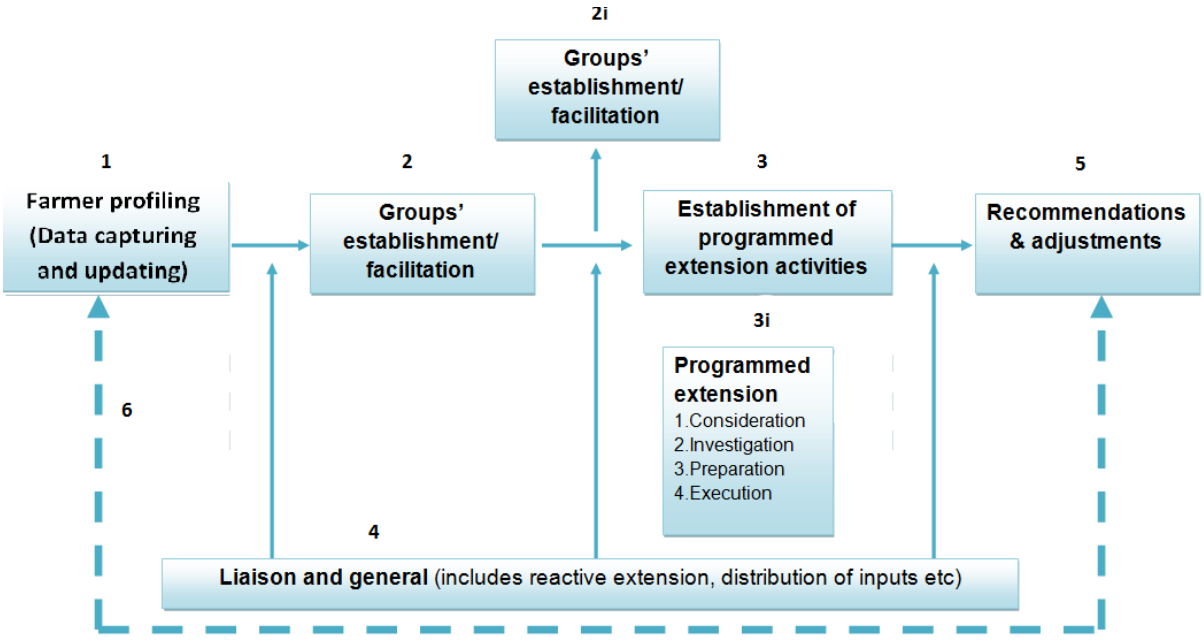

Figure 8.1 Agriculture Excellence Model (Duvel, 2005)

The tool is explained as follows:

Stage 1 –Farmer profiling and capturing -data Capture of each farmer's detail - total hectares, gender, level of education, yield.

Stage 2 - Group Establishment/facilitation - establishment of working groups which facilitates sharing of information and participation.

Stage 2i-strengthening/ Creation of linkages between private sector and the government.

Stage 3 - Development and establishment of an extension programme.

Stage 3i - Programmed Extension Development- 1. Consideration, 2- Investigation, 3-preparation, 4-Execution and 5-Evaluation.

Stage 4- Liaison and General which covers distribution of inputs from government and tasks related.

Stage 5 - Recommendations and report writing.

Stage 6 – The cyclic stage were everything goes back to stage 1 and the process is done again updating farmer profile and group facilitation.

The Agriculture Excellence Model (AEM) will ensure that there is a coordinated and programmed extension support to the land reform beneficiaries in Zimbabwe. Farmer profiling entails a known clientele, and this can be used for planning purposes.

© University of Pretoria

- Group establishment and facilitation increases extension and farmer contact, also increasing farmer participation. The extension system should foster linkages between farmers and other role players in the agricultural system.

- The establishment of a programmed extension services increases accountability, and extension services impact can easily be measured. This will ensure a sustainable extension support to the farmers.

© University of Pretoria

LIST OF REFERENCES

Amanor, K. & Farrington, J., 1991. *NGOs and agricultural technology development. In W. M. Rivera & D. J. Gustafson (Eds.),* Agricultural extension: Worldwide institutional evolution and forces for change. Amsterdam: Elsevier.

Anseeuw, W. & Mathebula, F., 2005. *Linking land reform to sustainable development: the case of Molemole's land reform projects.* WKKF-University of Pretoria project, Pretoria, SA. 725. University of Pretoria, Unpublished.

Axinn, N.W., 1998. *Small farms in Nepal: a farming systems approach to description*, Rural Life Associates, Kathmandu, Nepal.

Berthoud, R., 2001. *'Teenage births to ethnic minority mothers'*, Population Trends 104.

Blackburn, D. J. & Vist, D. L., 1984*, Historical roots and philosophy of extension*. In D. J. Blackburn (Ed.), Extension handbook (1st Ed.). Guelph, Ontario: University of Guelph.

Bne Saad, M. H. A. Al-h. , 1990. *An analysis of the needs and problems of Iraqi farm women:* Implications for agricultural extension services. Unpublished doctoral thesis, University College, Dublin.

Brigitte, W., 2010. *"Land ministry tests new farm acquisition model".* The Namibian.

Chimanikire, D.P., 2010. *Land Reform in Zimbabwe*. Paper presented at the Delphe Sustainable Farming Initiative, the role of the Agricultural Colleges and the way forward Conference, 14th-18th March 2010, South Africa.

Chitiga, M & Mabugu, R., 2008. *Evaluating the Impact of Land Redistribution*: A CGE on Land Reform and Resettlement, Harare, Zimbabwe.

© University of Pretoria

CIA, 2012. *World Factbook*, Centre of the Study of Intelligence, Washington. DC. accessed on [15-06-2012] at https://www.cia.gov/library/publications/the-world-factbook/geos/zi.html.

Connolly, M. & Hagmann, J., 2000. *Communal and institutional transformation in public agricultural services in Zimbabwe –Lessons from the 90's, in Services for Rural Development:* Newsletter of an emerging platform on services within Division 'Rural Development' in GTZ, Issue No. 5, December 2000, pp. 18-23. GTZ, Eschborn, Germany.

Connolly, M.M & Danda, E.T.,1999. *Transforming State Agricultural Extension Services in Zimbabwe. In Participation in Sector Programmes*. Proceedings of a Regional Forum 20 –23 September, 1999. Lusaka, Zambia. GTZ Sector Network for Rural Development / IFAD.

Crawford, I. M., 1997. *Agricultural and Food Marketing Management,* Food and Agriculture Organization of the United Nations Rome.

Crush J., 2002, The global raiders: nationalism, globalization and the South African brain drain, *Journal of International Affairs* 56 147-72.

Dixie, G., 2005. *Horticultural Marketing, Marketing extension guide 5,* Food and Agriculture Organization of the United Nations Rome.

Dolnicar, S., 2003. Using cluster analysis for market segmentation – *typical misconceptions,established methodological weaknesses and some recommendations for improvement.* Australas J Mark Res 11(2):5–12.

Dunteman, G.E., 1989. *Principal Components Analysis.* Sage University Paper Series on quantitative applications in Social Science, Newbury Park, C.A.

© University of Pretoria

DÜVEL, G.H. 1998. Monitoring extension: A cognition oriented approach towards extension. *South African Journal For Agricultural Extension,* 27. DÜVEL, G.H., 2002. Evaluation and research of extension. Course material.

DÜVEL, G.H. 2005. *Principles, realities and challenges regarding institutional linkages for participatory extension and rural development in South Africa*. South African Journal for Agricultural Extension,34(2):188-200.

Eicher, C.K., 2007a. *Agricultural extension in Africa and Asia; literature review.* New York,Cornell University.

Evenson.R.E., 2000. *Economic Impacts Of Agricultural Research And Extension. Handbook of Agricultural Economics*, Elsevier Science. Yale University.

FAO & WFP, 2009. *Special Report: Crop and Food Supply Assessment Mission to Zimbabwe,* [ONLINE], Available at http://www.fao.org/giews/ [Accessed on 2010-06-12].

FAO, 2007. *Building Partnership for Technology Generation, Assessment and sharing in Agriculture among West Balkan Countries*. Skopje. Macendonia.

FAO, 1990. *Report of the global consultation on agricultural extension*. Rome: FAO.

FAO, 2010. *Facing the Challenges of Climate Change and Food Security:* the Role of Research, Extension and Communication for Development, Rome.

FAO, WFP & IFAD., 2012. The State of Food Insecurity in the World 2012. *Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition.* Rome, FAO.

Farrington, J., Christoplus, I., Kidd, A.D. & Beckman, M., 2002. Can Extension Contribute to Rural Poverty Reduction? *Journal of Extension Systems*, Issue No. 204.

© University of Pretoria

Gálvez-Nogales, E., 2010. *Agro-based cluster in developing countries: Staying competitive in a globalised economy.* Agricultural Management, Marketing and Finance occasional paper, FAO.

Gonzalez, A., 2000. "The Acquisition and Labor Market Value of Four English Skills: NewEvidence from Nals." *Contemporary Economic Policy,* 18(3), 259-269.

Gordon, R., 1998. Structural Adjustment and Women in Zimbabwe: Effects and Prospects", *Canadian Journal of Development Studies*: 245-63.

Government of Zimbabwe, 2006. *National A2 Land Audit Report*, Ministry of lands, Harare, Zimbabwe.

Government of the Republic of Zimbabwe., 2004. *Support to NEPAD–CAADP implementation.* [ONLINE] http://www.fao.org/tc/tca/pdf/spfs-SADC.pdf. [Accessed 2010-06-28].

Government of Zimbabwe. 2003*. Presidential Land Review Committee (PLRC).* Harare.[ONLINE] http://www.sarpn.org.za/documents/d0000622/index.php [Accessed on 2010-07-03].

Groenewald, J. A., 2003. *Conditions for successful land reform in Africa,* Paper presented at Pre-IAAE-Conference on African Agricultural Economics, August 13-14, 2003, Bloemfontein, South Africa.

Gustafson, D. J., 1990. Developing extension within a complex institutional arena. *Journal of Extension Systems*, 8 (1),87-99.

Hanyani-Mlambo, B.T., 2002. *Strengthening the Pluralistic Agricultural Extension System:* A Zimbabwe Case Study, Agricultural Research Council (ARC), Zimbabwe. Downloaded on www.fao.org/DOCREP/005/AC913E/ac913e00.htm.

Harris, P.L., 2000. *The work of the imagination*. Oxford: Blackwell.

© University of Pretoria

Haviland,W.A., 2003. *Anthropology*, 10th Ed, Wadsworth, page 68.

Hollinger, F., 2004, *Financing Agricultural Term Investments, Issue No.7*, Food and Agriculture Organization of the United Nations (FAO), http://www.gtz.de/agriservice/resources/newsletter/nl_5.pdf[02/08/2010].

Jibba, K.B 2009. *The nature and influence of management on the performance of the Ethiopian public agricultural extension service, with special reference to Oromia Region,* DPhil thesis, University of Pretoria, Pretoria, viewed yymmdd < http://upetd.up.ac.za/thesis/available/etd-06042010-015507/.

Jock, R., Anderson, R.J, & Picclotto, R., 1997. Reconsidering Agricultural Extension, *The World Bank Observer vol 12.* No. 2 pp. 249-59, Downloaded from http://www.oxfordjournals.org at University of Pretoria on June 24, 2010.

Johnson, E., 2005. *Revisiting the "Willing Buyer, Willing Seller"*. Principle.University of StellenboschPresentation for the Land Law Forum, 16 August 2005.

Jones, G. E., 1979. *The original agricultural advisory service: Lord Clarendon's practical instructors in mid-nineteenth century Ireland.* In Proceedings of the 4th international seminar on extension education. Dublin: University College, Department of Agricultural Extension.

Kahan, G.D ., 2007a. *Farm management extension services: a review of global experience, Agricultural Management, Marketing and Finance Service* (AGSF)Rural Infrastructure and Agro-Industries Division, Agricultural Management, Marketing and Finance occasional paper 21, Food and Agriculture Organization of the United Nations Rome.

Kahan, G. D., 2007b. *Agricultural Management, Marketing and Finance Service* (AGSF).

© University of Pretoria

Kinsey, B.H., 1999. 'Land Reform, Growth and Equity: Emerging Evidence from Zimbabwe's Resettlement Programme', *Journal of Southern African Studies,* 25: 2,173 — 196.[ONLINE] Downloaded on http://www.informaworld.com/smpp/title~content=t713436095 on [10-06-2010].

Krogh, E., 1988. Zimbabwe Forestry project II- *Involvement of Women in Rural Afforestation.* World Bank, Washington, D.C.

Kitetu, C.W., 2005. *Farmer Groups as a way of Mobilising Citizen Participation in Development: an example from Kenya*, Paper to be presented at the 11th General assembly. Maputo 6th–10th December 2005.

Lebert, T., 2003. *An introduction to land and agrarian reform in Zimbabwe.* National Land Committee, South Africa.

Madola, S., 2003. *Review of Land Policy Reforms in Malawi*, FANRPAN Discussion Paper, February, 2003.

Manenzhe, T. & Lahiff, E., 2007. *Restitution and post-settlement support: Three case studies from Limpopo.* Research Report no. 30, August 2007. PLAAS, University of the Western Cape.[ONLINE] Downloaded on http://repository.uwc.ac.za/xmlui/handle/10566/80 on [21-08-2011]

Matere, C and Mulatu, W., 2002. *Agricultural extension reform in Africa: Insights and lessons from livestock disease control in South-West Ethiopia,* Socio-economics and Policy Research Working Paper 46, International Livestock Research Institute, Nairobi, Kenya.

Mertens, D. M., 2005. *Research and evaluation in education and psychology*: Integrating diversity with quantitative, qualitative, and mixed methods. Thousand Oaks, CA: Sage.

© University of Pretoria

Moyo, S., 2001. The Political Economy of Land Acquisition and Redistribution in Zimbabwe, 1990-1999, *Journal of Southern African Studies*, Vol. 26, No. 1 (Mar., 2000), Published by: Taylor & Francis, Ltd. Stable URL: http://www.jstor.org/stable/2637547, Accessed: 18/06/2010 03:11

Moyo, S., 2004. *Overall Impacts of the Fast Track Land Reform Programme*. Prepared for the Review of the Zimbabwean Agricultural Sector following the Implementation of the Land Reform Project Funded by the European Union, AIAS, Harare.

Muchopa, C. L., 2003. Dialogue Volume 3 Issue 2: *Enhancing trade through harmonization of SPS measures: Experience from the Southern African Development Community,* FANRPAN. [ONLINE] Downloaded on http:// www.fanrpan.org/themes/food_systems/, Accessed; 24/06/2010, 04:46.

Mudiwa, M.B., 1997. *A comparative evaluation of selected agricultural extension approaches tried by AGRITEX in Zimbabwe*. University of Zimbabwe. (unpublished M.Sc. thesis).

Mutisi.C., 2009. *Situation analysis of agricultural research and Training and support strategies for the national Agricultural research system in Zimbabwe*, phase 3 Report, Faculty of Agriculture University of Zimbabwe.

Nagel, U. J., 1997. Alternative Approaches to Organizing Extension, in Swanson, B. *"Improving Agricultural Extension: A Reference Manual"* (3rd Edition)" FAO.

NDA, 2004. Progress Report: *The Implementation Of The Comprehensive Agriculture Support Programme (CASP),* [Downloaded on the 12-09-2012, at http://www.nda.agric.za/docs/CASP/CASP%20Report_31%20August.pdf].

© University of Pretoria

NDA, 2005. *Norms and standards for Extension and Advisory Services in Agriculture.* [Downloaded on the 16-02-2012 on http://www.nda.agric.za /doaDev/sideMenu/educationAndTraining/NORMS_AND_STANDARD_BOOKLET.pdf].

Ngomane, T., 2006. Research and Extension Processes and Practises in Relation to Smallholder Agriculture in Africa: Present, Past, to Present. *South African Journal of Extension,* 35(2): 200-216.

Ntsebeza, L. with Ruth Hall (eds.)., 2007*. The Land Question in South Africa: the Challenge of Transformation and Redistribution*. Cape Town: HSRC Press.

Omamo,S.W., Kagwanja ,J., Reid ,R.,d'Ieteren,G.,Ndiwa ,N.,Nyabenge, M., Microsimulation Application to Zimbabwe. *Journal of African Economies,* vol 039 (1-23) [ONLINE] Downloaded from http://jae.oxfordjournals.org at University of Pretoria on [31-05- 2010].

Poon.B, 2001. *A Guide to the Establishment of Market Information Services,* FAO, Rome.Rural Infrastructure and Agro-Industries Division, Food and Agriculture Organization of the United Nations Rome.

Riley, P.J., 2006, *When 'inner working models' don't work: Attachment styles, teacher aggression and research taboos,* Proceedings of the 2006 Joint Conference of the Australian Psychological Society (APS) and the New Zealand Psychological Society (NZPsS), 26 - 30 September, 2006, The Australian Psychological Society Ltd, Melbourne, Australia, pp. 355-359.

Saunders, M., Lewis, P. and Thornhill, A., 2007. *Research methods for business students*. 4th ed. London: Prentice Hall.

Scoones, I., Marongwe, N., Mavedzenge, B., Murimbarimba, F., Mahenehene, J and Sukume, C., 2010. *Zimbabwe's Land Reform: Myths and Realities.* Oxford: James Currey; Harare: Weaver Press; Johannesburg: Jacana.

© University of Pretoria

Shepherd. W. A., 2007. A guide to MARKETING COSTS and how to calculate them, Agricultural Management, Marketing and Finance Service Rural Infrastructure and Agro-Industries Division, *Food and Agriculture Organization of The United Nations Rome.* Synthesis of a Six-Country Study. ODI Agricultural Research & Extension Network.

Sil. 1999, *Sil Internal Annual Report*, URL: http://www 01.sil.org/sil/annualreport /inde_1999.html.

Terblanché, S.E., 2007. Towards professionalism in agricultural extension: The professional registration of Extensionists in South Africa, A dream or reality? The role of SASAE. *South African Journal for Agricultural Extension*,36:144-169.

Terblanché, S.E., 2008. The role of a mentorship program as a key factor in land reform projects. *Research and Development Program,* University of Pretoria, Unpublished.

UNDP., 1991. Agricultural extension programme advisory note. New York: United Nations Development Programme.

UNCSD., 2007. Framing sustainable development. the Brundtland Report.

Vincent, V. and Thomas, R.G., 1960. An agricultural survey of Southern Rhodesia: *Part I: agro-ecological survey.* Government Printer, Salisbury.

Vink, N. & Kirsten, J., 2004. Agriculture in the national economy, in: Nieuwoudt L & Groenewald J (eds.). *The challenge of change: agriculture, land and the South African economy.* Pietermaritzburg: University of Natal Press.

Vink A. P., 1975. Land use, Rural, *Agriculture: Economic aspects,* Springer-Verlag, Berlin and New York.

© University of Pretoria

Worth, S. H., 2006. 'Agriflection: A Learning Model for Agricultural Extension in South Africa', *The Journal of Agricultural Education and Extension*, 3, 179 — 193, [ONLINE] downloaded://dx.doi.org/10.1080/13892240600915488.[24/07/2010]

ZCFU., 2009. Why join a farmers Union? *ZCFU Farmers Magazine, June Issue.*

ZCFU., 2009. Extension services are paramount to farmer productivity, *ZCFU Magazine, September Issue.*

Zikhali, P., 2008. Fast Track Land Reform and Agricultural Productivity in Zimbabwe, Working Papers in Economics No. 322, University of Gothenburg [ONLINE] Downloaded on 03/09/2010 at http://hdl.handle.net/2077/18362.

© University of Pretoria

APPENDIX A

QUESTIONNAIRE A & B

© University of Pretoria

APPENDIX A

SURVEY QUSTIONNAIRE

FARMER QUESTIONNAIRE

Thank you for participation in this survey, your contribution is greatly appreciated.

Respondent No_____

1.0 Resettlement Category

A1	(1)
A2	(2)

[ ] V1

2.0 District

Kadoma	(1)
Chegutu	(2)
Zvimba	(3)

[ ] V2

3.0 Size of the Farm

Write the actual size	

V3

4.0 Profile of the Farmer

4.1 Age [ ] V4

4.2 Gender

Male	(1)
Female	(2)

[ ] V5

5.0 What is your highest level of Education

Please write your exact Qualification	

[ ] V6

6.0 What is the size of your household? [ ] V7

7.0 Size of the household [ ] V8

8.0 Indicate the composition of the household

Age (yrs)	Male	Female
<20	V9	V10
21-30	V11	V12
31-40	V13	V14
41-50	V15	V16
51-60	V17	V18
>60	V19	V20

9.0 What are your major sources of income to the household? Please rate them using the scale 1 to 5 in regards to contribution to the total income (1- being the least and 5 being the major).

© University of Pretoria

Source of income	Rating (1-5)	
Farming		V21
Wages from employment		V22
Pension		V23
Agricultural Trading		V24
Social Grants		V25
Other_____		V26

10.0 What are your main reasons for farming?

_____
_____
_____
_____
_____ V27
_____
_____

11.0 What are your main farming enterprises that you are involved with?

Livestock		V28
Crop production		V29
Mixed farming		V31
Household food production		V32

V33

12.0 What crops do you plant on the farm?

13.0 Please indicate your experience as farmer?

<1 year	(1)
1-3 years	(2)
4-6 years	(3)
7-9 years	(4)
>10 years	(5)

[ ] V34

14.0 Are you a fulltime or a part-time farmer?

Fulltime	(1)
Part-time	(2)

[ ] V35

15.0 Please rate your level of your farming knowledge on a 5 point scale?

1	2	3	4	5

Very low level Very high level

[ ] V36

16.0 Please use the 5 point scale to rate your satisfaction with the current land acquisition model (1 = not satisfied at all and 5= very satisfied).

© University of Pretoria

1	2	3	4	5

Not satisfied Very satisfied

Your rating [ ] V37

17.0 Please write down your main reason for this specific rating.

_____
_____
_____
_____
_____
_____
_____
_____ V38

18.0 What governance structure was selected for the settlement of farmers?

_____ V39

19.0 Please use the 5 point scale to rate your satisfaction with the current governance structure selected for land reform (1 = not satisfied at all and 5= very satisfied).

1	2	3	4	5

Not satisfied Very satisfied

Your rating [ ] V40

20.0 Please write down your main reason for this specific rating.

_____
_____
_____
_____
_____
_____ V41

21.0 List the main role players that played a role in the settlement of new farmers? Also rate their importance using the scale 1-5 (1= least importance and 5 = very important)

Role Player	Rating(1-5)	
		V42
		V43
		V44

© University of Pretoria

22.0 Please write down your main reason for this specific rating.

V45

23.0 How often do you have contact with the extension personnel?

Weekly	(1)
Monthly	(2)
Bi-Monthly	(3)
Every Second Month	(4)
Less frequent	(5)

V46

23.0 Please use the 5 point scale to rate your satisfaction with the frequency of contact between extension officer and the farmer (1 = not satisfied at all and 5= very satisfied).

1	2	3	4	5

Not satisfied — Very satisfied

Your rating V43

24.0 Please write down your main reason for this specific rating.

V44

25.0 Do you belong to any farmer groups in your area?

Yes	(1)
No	(2)

V45

26.0 If “yes” what kind of a group is it? (For example a Stokvel/Round, Inputs groups, marketing group etc)

V46

29.0 To what extent do you participate in these groups? Please use the 5 point scale to rate your level of participation in the group(s) (1 = do not participate at all and 5= very much participate).

© University of Pretoria

1	2	3	4	5

Do not participate all — Very much participate

Your rating ☐ V49

30.0 Please write down your main reason for this specific rating.

_____
_____
_____
_____
_____
_____ V50

31.0 How do you rate the knowledge level of the extension personnel in your area to help with the mobilizing and effective function of a farmer group? (1-not knowledgeable and 5- very knowledgeable)?

1	2	3	4	5

Not knowledgeable — Very knowledgeable

Your rating ☐ V51

32.0 Please write down your reasons for your rating.

_____
_____
_____
_____
_____
_____ V52

33.0 How do you rate the technical knowledge level of extension personnel in your area? (1- not knowledgeable and 5 – very knowledgeable)?

1	2	3	4	5

Not knowledgeable — Very knowledgeable

Your rating ☐ V53

© University of Pretoria

34.0 Please write down your reasons for your rating.

V54

35.0 Please rate your satisfaction with the current extension support regarding land use planning (1= not satisfied and 5 =very satisfied).

1	2	3	4	5

Not satisfied Very satisfied

Your rating ☐ V55

36.0 Please write down your reasons for your rating.

V55

37.0 Please rate your satisfaction with the current extension support regarding the drafting of a business plan for the farm (1= not satisfied and 5 =very satisfied).

1	2	3	4	5

Not satisfied Very satisfied

Your rating ☐ V56

38.0 Please write down your reasons for your rating.

V57

39.0 List in order of priority the major constraints that prevent you from farming optimally?

V58

© University of Pretoria

40.0 In your own opinion, what are the major hindrances to land reform program in Zimbabwe?(List in order of priority)

_____
_____
_____
_____
_____

V59

© University of Pretoria

APPENDIX A(2)

SURVEY QUSTIONNAIRE

EXTENSION QUESTIONNAIRE

Thank you for participation in this survey, your contribution is greatly appreciated.

Respondent No_____

1.0 Profile of Extension Official

2.0 Age [ ] V1

3.0 Gender

Male	(1)
Female	(2)

[ ] V2

4.0 District

Kadoma	(1)
Chegutu	(2)
Zvimba	(3)

V3

5.0 What is your highest qualification? Please write in the box below.

[ ] V4

6.0 What is your field of specialization?

[ ] V5

7.0 Where were you trained?

[ ] V6

8.0 Please indicate your experience as an extensionist?

<1 year	(1)
1-2 years	(2)
3-4years	(3)
5-6years	(4)
>7years	(5)

[ ] V7

9.0 What is your current position in the department?

[ ] V8

10.0How many times are you sent for in-service trainings in a year? [ ] V9

© University of Pretoria

11.0 How important is the offering of regular in-service training for you as en extensionists (scale 1-5)

1	2	3	4	5

Not that important — Very important

Your rating ☐ V10

12.0 Please write down your reasons for your rating.

_____
_____
_____
_____
_____
_____ V11

13.0 How available is new technologies / new information for the extension personnel through the department?
(1= rarely available and 5 = very often available)

1	2	3	4	5

Rarely available — Very often available

Your rating ☐ V12

14.0 What is the total number of extension officials in your area? ☐ V13

15.0 How many farmers (total number) do you serve in your area? ☐ V14

16.0 What are the extension approaches you use in your area? Please select from the list and rate the frequency of use in your area (1 = least used and 5 = frequently used).

Extension Method	Frequency (%)	
Radio listening group approach		V15
Training and visit system		V16
Farming system research &extension		V17
Master farmer training schemes		V18
Group Development Area approach		V19
Other_____		V20

17.0 How often do you have contact with the farmers in your specific area?

Weekly	(1)
Monthly	(2)
Bi-Monthly	(3)
Every Second Month	(4)
Less frequent	(5)

☐ V21

© University of Pretoria

18.0 What method of contact do you prefer to interact with the farmers?

Method		Frequency used (%)
Individual	(1)	
Group	(2)	
Both	(3)	

V22

19.0 Do you think that the frequency and level of your intervention with farmers is appropriate for the sustainable settlement of new farmers?

Yes	
No	

V23

19.0 Please give reasons for your response

_____
_____
_____
_____
_____

V24

21.0 Please rate your level of knowledge to help farmers with the mobilizing and effective functioning of farmer groups (1= not knowledgeable and 5 =very knowledgeable).

1	2	3	4	5

Not knowledgeable — Very knowledgeable

Your rating ☐ V25

Please write down your main reason for this specific rating.

_____
_____
_____
_____
_____
_____
_____

V26

23.0 Please rate your level of technical knowledge that you can offer to farmers for decision making (1= not knowledgeable and 5 =very knowledgeable).

1	2	3	4	5

Not knowledgeable — Very knowledgeable

Your rating ☐ V27

© University of Pretoria

24.0 Please write down your main reason for this specific rating.

V28

25.0 Please rate your ability to help farmers with the planning of their land use before settlement on the new farm (1= not knowledgeable and 5 =very knowledgeable).

1	2	3	4	5

Not knowledgeable — Very knowledgeable

Your rating ☐ V30

26.0 Please give reasons for your response

V31

27.0 Please rate your ability to help farmers with the planning of their farming business during settlement on the new farm (1= not knowledgeable and 5 =very knowledgeable).

1	2	3	4	5

not knowledgeable — Very knowledgeable

Your response ☐ V32

28.0 Please give reasons for your response

V33

© University of Pretoria

29.0 Please rate your level of satisfaction with the current extension approach and support rendered to the farmers?

1	2	3	4	5

Not satisfied — Very satisfied

Your rating ☐ V34

30.0 Please give reasons for your response

_____ V35

31.0 List it in order of priority the major constraints that prevent farmers from farming optimally? (In priority order)

_____ V36

32.0 In your own opinion, what are the major hindrances to land reform program in Zimbabwe?

_____ V37

© University of Pretoria